

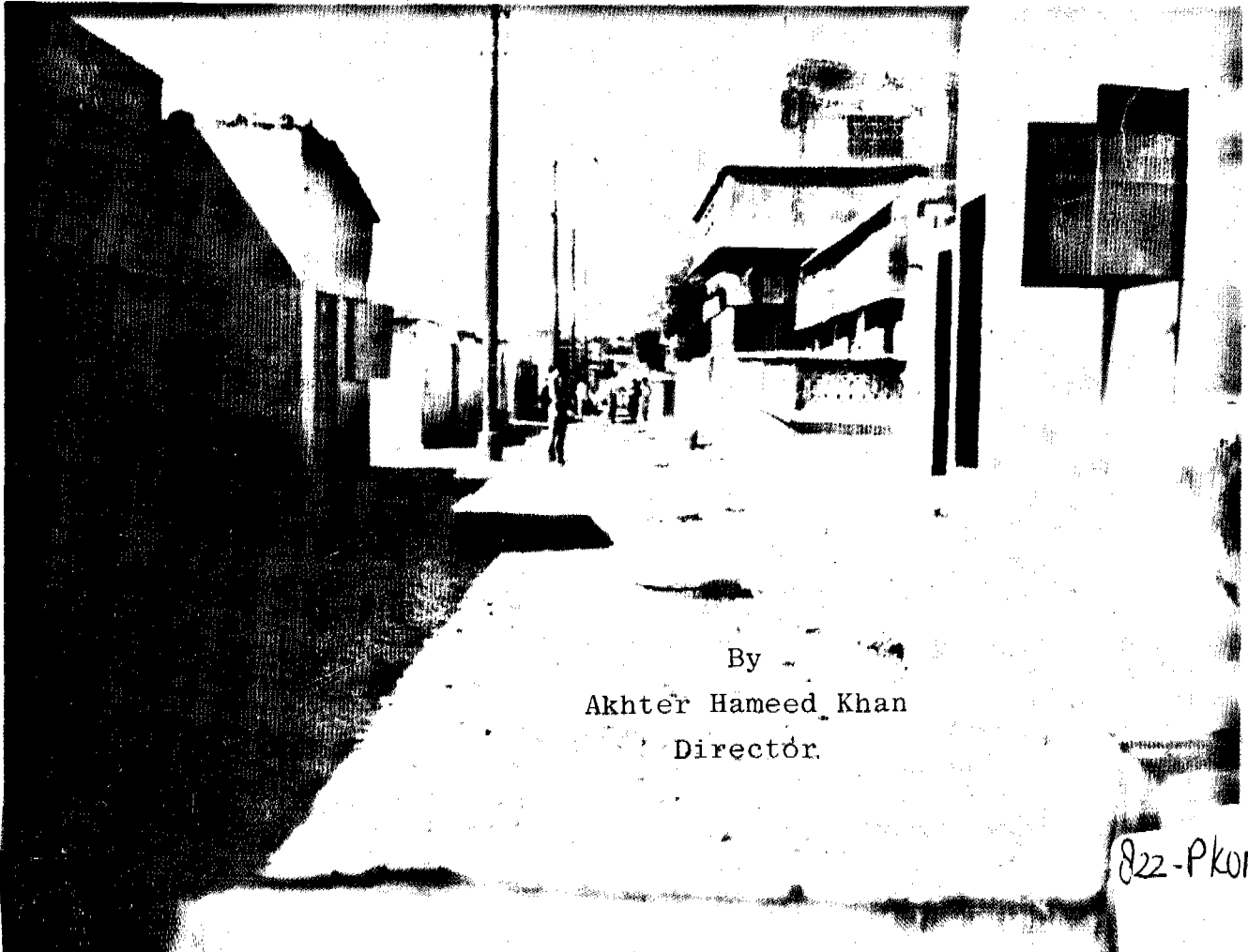
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# IRANGI PILOT PROJECT PROGRESS REPORTS JULY 1983 - MARCH 1985



IMPROVEMENT THROUGH PEOPLE'S PARTICIPATION:



By  
Akhter Hameed Khan  
Director.

822-PKOR853703

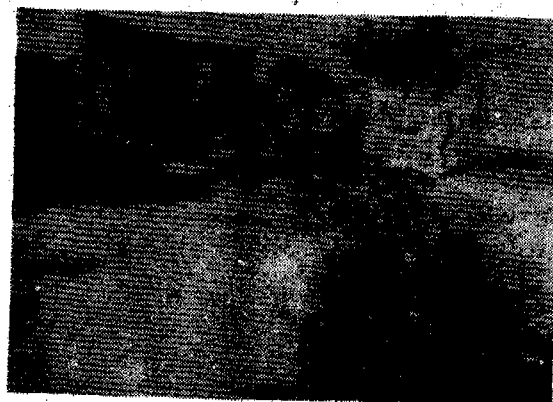
Quarterly progress reports, volume II  
July 1983 to March 1985

Orangi Pilot Project

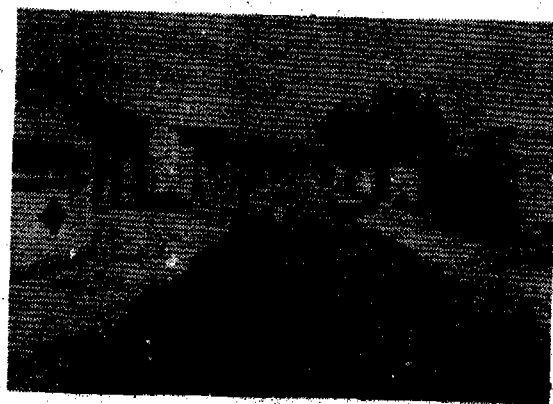
Self-financed self-managed integrated community  
development project

Director : Akhter Hameed Khan

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A lane in Mominabad without sewerage system



The lane improved by people's own efforts  
and OPP's technical assistance

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## Introduction

In April this year the Orangi Pilot Project completed 5th year of its integrated community development work. During these five years, it has been able to establish various methodologies and models of alternative (low-cost) development approaches to the problems of Orangi, which include from physical improvement of houses and lanes to health education and care to income-generating programmes. In doing so it has had both its successes and failures.

However, while the failures have been short-term setbacks (eg, water drilling programme, home-schools, Benarasi silk weaver's cooperative), its success has been the demonstration that where government support is lacking or inadequate for a low-income area, the people of these areas, if effectively organized and technically assisted, have the capacity to meet many of their needs through their own resources and local expertise.

OPP's three most successful programmes have been the low-cost sanitation programme, women's health education programme, and the women work centres. And while all these three programmes reflect people's ability and keenness to work without dependence on outside help, this ability has been most successfully demonstrated by the low-cost sanitation programme.

From October 1981, when the first OPP-designed underground sewerage line was laid in Hanifabad by the people on a self-financed and self-managed basis, to June 1985, low-cost sewerage lines have been built by the people in 1457 lanes.<sup>1</sup> And every week the number of

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<sup>1</sup> Out of these 1,457 OPP-designed lanes, 612 lanes have been supervised by the OPP staff while 845 lanes have been supervised by the residents themselves.

lanes undertaking construction of OPP-designed sewerage lines is increasing.

The success of the sanitation programme lies in the fact that a) a low-cost model has been developed without compromising on the quality of construction or function, affordable and widely accepted by the residents; b) the cost of construction has been reduced to less than a third of the contractor's rate; c) that its beneficiaries upto June 1985 have been 24,436 houses;<sup>2</sup> d) the cost of home latrines, lane sewerage and secondary (collector) drains at OPP's reduced rates estimated (upto June 1985) to be Rs 25,441,000 (or US \$1,590,000) has been borne entirely by the beneficiaries (lane residents); e) lane sanitation has become an effective entry point for women's health education and care and for a number of other programmes such as home vegetable garden, tree plantation in the lanes, garbage disposal, and so on; and f) finally and most importantly, the process of fulfilling a much-wanted and long-neglected need (sanitation) through their own efforts and resources, has given the people of Orangi the unique experience, the confidence and technical resource for fulfilling many other needs through similar collective and low-cost programmes.

In all its programmes, the most significant and noteworthy aspect has been OPP's method of organization and extension without which the programmes could have suffered from the same weaknesses and difficulties as do many conventional projects for low-income areas.<sup>3</sup> OPP has been able to translate its research findings into viable programmes through its extensive contacts with and feedback from the local people, and because of its carefully prepared extension material (slide shows,

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<sup>2</sup> On an average 7 people live in a household. Therefore, in terms of number of people, the beneficiaries have been 171,052.

<sup>3</sup> I have discussed in some detail the nature of OPP's organizational and extension method and the rationale behind it, in a monograph entitled "A case study in local participation and community development," (OPP, June 1984). Copies of the monograph are available in the OPP office and can be sent on request.

posters, leaflets, publication of case studies in the Urdu journal Orangi).

The organizational and extension success, in addition to the project's overall success, has been due largely to the vision, experience, and the carefully monitored and non-elitist approach of Dr. Akhter Hameed Khan, who is not only the director of the project but also its preceptor and a highly dedicated, perceptive and articulate activist himself. Here the role of OPP's social organizers and motivators has also been central, because without their leadership abilities and coherent approach to the programmes, it would have been very difficult to reach the people.

The contribution that OPP has made to development science through working in an area inhabited by more than a million people, <sup>4</sup> is considerable. This has given OPP the recognition internationally as one of the most effective and consequential developmental projects. OPP has been represented in numerous national and international conferences. Many visitors both from Pakistan and abroad have visited and continue to visit the project, and show great interest by way of spending time in the lanes of Orangi and by way of their offer of financial and technical support. In addition students from the Islamabad University, Free University Amsterdam, and the Imperial College London have spent full academic terms living in Orangi to study specific aspects of the project.

What has happened in Orangi is not the success story of OPP, although its role is central. It is the success story of the people of Orangi who, contrary to common beliefs, have shown an unusual capacity for collective effort and self-management, and have also clearly shown that they are not only keen to improve their condition, but that if shown a way, they are more than willing to do it as much as possible with their own money and time.

About the reports. As our readers would know every

---

<sup>4</sup> Government estimates for 1979 placed the population of Orangi at 800,000. The present population is estimated to be 1,100,000.

quarter a report in English is written by the Director (with the report on low-cost sanitation written by Joint Director, technical, Ms Perveen Rahman). These reports are cyclostyled and distributed. The present volume is a collection of these reports, 15th to 21st (July 1983 to March 1985). Volume 1 contains reports 1 to 14.

The reports in the present volume are being reproduced essentially in the original. The only change is in the financial statements where 'paisas' have been incorporated into the rupee figure (50 paisa or less = 0 Rs ; 51 paisa or more = 1 Rs). Consequently if there is any "discrepancy" to be found in the totals, it is because of this change.

Sami Mustafa

12 July 1985

15th progress report .

July-September 1983

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## Section I : General

### 1. Abnormal conditions

Rather abnormal conditions prevailed during the last three months - July, August and September - which slowed the pace of work. For several weeks election issues absorbed people's attention. We noticed that the improvement of sewerage and sanitation was much discussed. In Orangi it has now definitely become an important issue and the candidates have acknowledged it as such. The period was also abnormal for another reason as the project was trying to adjust itself to the new conditions created by restricting its area. However, the adjustment was completed during this quarter, and the elections have ended. Our area now consists of nine councillor's circles - 120, 121, 122, 123, 125, 126, 129, 130, 131. In circles 121 and 125, old councillors Mr Amir Nawab and Mr Mohammad Ahmed Siddiqui have been re-elected. They have been utilising the services of OPP most actively, and we look forward to wider cooperation with them, especially in connection with the improvement of big drains. We also look forward to meetings with the new councillors.

### 2. Collaboration with colleges

Two outstanding events of the last quarter are the selection of OPP and its Orangi area for collaborative research by the NED Engineering University and the Aga Khan Medical College. Students of the Engineering University have completed a comprehensive physical and social survey of all the lanes and drains in our area. This collaboration was arranged by Professor Arif Hasan and Ms Parveen Rahman. The methodology of the survey is described in section II. OPP and Orangi will benefit greatly from this survey. The students have completed a huge task in a short time and at a very low cost. We hope that the students have also benefited by coming into close contact with the problems of low-income katchi abadis. The second association has been established by the Dean of Aga Khan Medical College. Some mohallas of Orangi will be selected as a "module" for investigation, observation, and action research for the students of the course on community health. The advisor of the course, Dr Paradis and the teacher, Dr Samia Altaf, are visiting OPP and the mohallas, and Ms Zareen Majeed, Manager of women's programme is attending some of the community health classes at the Medical College. OPP is extremely fortunate in getting such assistance from such institutions of higher learning. We are reassured that our low-cost sanitation programme will continue to receive expert advice. Similarly we hope that in association with the Medical College we may be able to develop, over a period

An abstract of low-cost sanitation surveys and plans for lanes, from October 1981 till June 1983 is given below:

Requests received from

43 mohallas / 511 lanes

Survey completed

42 mohallas / 416 lanes

Maps, plans and estimates supplied

39 mohallas / 346 lanes

Details

No. of houses		7,635
Length of sewage lines	(rft)	131,506
No. of manholes		3,114
Total estimated cost	Rs	2,428,564

Averages

Area of house	Sq yd	124.17
Cost per house	Rs	318.08
Cost per sq yd	Rs	2.56
Cost per rft	Rs	18.47

Further details about the condition of the lanes, and the quality of work in each lane, have been obtained through the comprehensive survey done by the engineering students. These are being tabulated and will be reported later.

2. Work during July - August - September 1983

Survey completed

<u>Mohallas</u>	<u>Lanes</u>
Mominabad	2
Sector 5E	8
Sector 4A	1

Khyber colony	3
Husainabad	3
Sector 9-C-1	1
Sector 9E	4
Sector 1C	1
Sector 15D	4

---

(9) Total 27

Maps, plans and estimates supplied

<u>Mohallas</u>	<u>Lanes</u>
Mominabad	7
Sector 5E	0
Sector 9-C-1	1
Haryana colony	3
Sector 11 (Almustafa colony)	3
Sector 9E	3
Sector 15D	2
Sector 1C	1
Sector 4A	1
Husainabad	3
Khyber colony	3

---

(11) Total 36

Details of estimates

<u>Mohallas</u>	<u>Lanes</u>
No. of mohallas	11
No. of lanes	35
No. of houses	837
Length of sewage line rft	13,234

During the last months the following case studies and profiles were prepared:

Case studies

- \* Remarkable social work in Mujahid Colony
- \* Work in Husainabad

Profiles

- \* Zahoor Mustafa Khan of Mominabad
- \* Shamshad Ali of Alfatah Colony
- \* Mistri Mohammad Shareef of Mujahid colony.
- \* Mohammad Aslam of sector 9
- \* Ali Rahbar of Husainabad

**5. Research : Design**

5.1 Septic tank / T haudis. Fifteen of these T-haudis were under observation since February. They all seemed to be working quite well. We have now reduced the number under observation to only four. We can safely say that the design of the T-Haudi / septic tank / interceptor chamber has been successful. It has overcome the problem of shortage of water for full-fledged flushing. The bacterial action in the haudi dissolves solid matter and only a relatively clear liquid flows through the T-pipe into the manhole, thus preventing the choking of the pipe lines. The system of supply of T-pipes (which are not available in the market) to the lanes through our social organizers also seems to be working well. Information on the number of T-pipes supplied for haudis will be furnished in the next report.

5.2 The manhole design has proved efficient and inexpensive. It is being commonly adopted. Four new shutterings of these cylindrical manholes have been put in use in this quarter.

5.3 Sludge disposal. Two ideas were put forth by Professor Arif Hasan:

- Make a shallow tray about 6'x2'x1' at a suitably safe place, where the sludge can be disposed and sundried into fertilizer.
- Make a covered pit 3' in diameter and 3' deep, similarly situated, where the sludge would be converted into fertilizer by aerobic action.

Both ideas may be, in the opinion of social organisers, difficult to implement, as the houses are constructed very close to the nalas (big drains), and suitable dumping sites may not be easily found. Discussions are going on, and we feel that the pits will be constructed only at that time when the septic tanks will be full and the people will actually encounter the problem of sludge disposal.

5.4 Sludge pump. We are also trying to get another hand operated sludge pump. Mr Gavidia promised to give us an Italian pump, but it has not arrived as yet.

5.5 Fiber glass/p.v.c./sanitary elements. Due to the rising cost of cement, we are now researching on use of new materials for pipes, manholes, and septic tanks. Some basic data has been collected, but it is too early to come to any conclusions.

5.6 Open drains. Through personal observation we have realized the menace of open surface drains, which have been introduced in the planned area generally as a substitute for a sewerage system. The drawbacks have been outlined in a leaflet which has been distributed to the lane residents. They have been advised to take up the matter with their councillors.

## 6. Research : Comprehensive survey of our area

6.1 With the help of 16 students of NED Engineering University, we have organised a comprehensive survey of the area allotted to OPP. The survey began in July and was completed in September. As a result of this survey OPP will have fairly accurate physical maps of all the lanes, roads and drains, big and small. Besides, much other useful information will also become available. The mapping and tabulation will be completed in the next quarter. A monograph will then be compiled, describing the methodology of the survey, and containing the maps and tables.

6.2 The survey was conducted in two parts, A and B. Part A comprised physical survey and mapping of lanes, manholes and sectors, and included the following information.

Part A      Direction of slope

Key  
—>

Total no. of houses	O
Sewerage line (OPP)	<u>S.L.</u>
	OPP
Sewerage line (self)	<u>S.L.</u>
	Self
Water taps - functioning	F
Water taps not functioning	NF
Land use	
° Mosque	M
° School	Sch
° Hospital	H
° Shops	S
° Factory	F

Part B

Included information on the sanitary condition in the lanes.

1. Mohalla 2. Date 3. Team

Lane number

Underground drainage

Surface drainage

Functioning - satisfactory / unsatisfactory

Not started

Home water connections:

(a) Functioning (b) Not functioning.

Identification of defects.

I. Underground drainage

(a) Choked

(b) Level defect

(c) Broken manholes

(d) Broken manhole covers - number

(e) Direct house connections - number

(f) Leakage

## II. Surface drainage

(a) Choked

(b) Level defects

(c) Broken sides

(d) Broken covers - number

## 7. Research: Design of big drains (nalas)

7.1 Big drains - natural nalas. In Orangi the outlet of all internal lane drains is the natural nala. Uptil now sewerage lines have been laid in 225 lanes according to OPP maps, and in many other lanes by the people themselves. There is great pressure now for the improvement of the natural nalas. In previous months we received requests from councillors for plans and estimates of some nalas in their constituencies. From the very beginning we have been concerned with the development of the big drains, but in the absence of a total integrated plan of Orangi (with us or the authorities) there was no base for designing. In the design of a big drain we cannot proceed in independent units, like lanes, but have to deal with a totality.

7.2 First surveys. In the previous months we had started work on the overall map of sectors and circles in our project area, but the progress was very slow. This quarter, reinforced by help from engineering college students, we have been successful in completing the mapping. We now have accurate information on:

- \* number of houses
- \* slope of lanes
- \* dimension
- \* orientation of mohallas
- \* number of mohallas and lanes
- \* position of nalas

## 7.3 Methodology

(a) First the peripheral area of our katchi abadi was



marked out by means of identifying main road and taking their dimensions.

(b) The location of mohallas (named neighbourhoods) was identified in the base map.

(c) The maps of our katchi abadies, containing detailed dimensions of mohallas and lanes was then incorporated with the maps of planned areas, which were obtained from the Directorate of Katchi Abadies. Thus, like putting together a jigsaw puzzle, we have obtained a complete and detailed map of our project area. This will be cross-checked with the aerial survey map, if we can obtain it from the Directorate.

7.4 Alfatah big drain. The case of this mohalla has engaged our attention for three months, and therefore it is worth mentioning. In this mohalla, like many other mohallas, there is no direct outlet to the natural nala which is located at some distance. Thus the need arose of constructing a secondary drain leading to the nala. After mapping the entire Alfatah colony we saw that four steps were required for a complete sewerage system:

- The lane sewerage
- The secondary sewerage
- The sub-main sewerage
- The main nala

Some lucky lanes can be linked up directly with the nala, while some others can reach the nala through secondary lines. But in other cases a sub-main system is required to collect the flow and convey it to the nala.

The nala itself is linked with many mohallas. Thus the design can only be made after obtaining full information on (1) the slopes of mohallas, and (2) the quantity of discharge. Professor Arif Hasan has examined three alternatives for the sub-main sewerage: a) construction of a sedimentation tank in the middle; b) or a pumping station; or c) a shutter system. More investigation is being done as the designing of a sub-main drainage requires extensive research. And even after a satisfactory design has been discovered, another equally complicated task of social organisation of the beneficiaries for the purpose of lowering the cost and realizing it from them will have to be undertaken.

Section III : Women's programme

Ms Zareen Majeed (Manager)

1. General trends

The programme is expanding slowly but steadily. Contacts have been established and women's groups have been formed in eleven mohallas.

1.1 Women's groups are keenly interested in immunization and child care. The welfare of their children is obviously their first concern. They have shown less interest, as yet, in the training for prevention of disease. But we hope that gradually they will understand the importance of preventive knowledge.

1.2 The interest in kitchen gardens is encouraging and shows signs of growing.

1.3 The group in Husainabad has disintegrated, because it could not find an active organizer. Our experience shows that the vitality of a group depends on an active organizer.

1.4 In Islamnagar we have come across a highly organised women's group. Its name is Lujna Imanullah - Association of God's Maid-Servants. They hold their meetings in their mosque in Islamnagar. Here, along with religious and ethical education, the members are also given lectures on health, hygiene, sanitation and disease. The young girls have their own organisation. The Islamnagar group has taken our health and sanitation and other pamphlets and invited our team to attend their meetings.

1.5 The old home schools and first aid centres are showing signs of decay. Some have closed. But the new schools which are being set up only in improved lanes, with the full support of lane managers are growing.

1.6 The progress of our programme is best seen through the following tables.

2. Table 1: Contacts

<u>Serial</u>	<u>Mohalla</u>	<u>July</u>	<u>August</u>	<u>September</u>
1.	Mujahid colony 1	21	11	4

2.	Mujahid colony 2	7	7	4
3.	Hanifabad	20	10	7
4.	Shewan colony	19	9	13
5.	Islamia colony	24	31	
6.	Mecca Basti		1	
7.	Mominabad			
8.	Bijlinagar		20	10
9.	Alfatah colony		30	5
10.	Usmania colony		18	
11.	Islamnagar			5

3. Table 2: Women's group meetings

<u>Serial</u>	<u>Mohalla</u>	<u>July</u>	<u>August</u>	<u>September</u>
1.	Mujahid colony 1	28		22
2.	Mujahid colony 2	3 10	6 21	
3.	Hanifabad	20 27	10	
4.	Shewan colony	26	9 16	
5.	Islamia colony	19	31	
6.	Mecca Basti			
7.	Mominabad			
8.	Bijlinagar		27	10-24
9.	Alfatah colony			13
10.	Usmania colony		25	
11.	Islamnagar			12

4. Table 3: Kitchen gardens

<u>Serial</u>	<u>Mohalla</u>	<u>July</u>	<u>August</u>	<u>September</u>
1.	Mujahid colony 1	11	11+3	14
2.	Mujahid colony 2	10+4	14+1	15
3.	Hanifabad	3	9	9
4.	Shewan colony	3	3	3+3
5.	Islamia colony			2
6.	Mecca Basti			
7.	Mominabad			
8.	Bijlinagar			10
9.	Alfatah colony			
10.	Usmania colony			
11.	Islamnagar			
	Total	31	41	56

5. Table 4: Immunisation

<u>Serial</u>	<u>Mohalla</u>	<u>July</u>	<u>August</u>	<u>September</u>
1.	Mujahid colony 1			8
2.	Mujahid colony 2		11	
3.	Hanifabad	27		13

Inoculation

<u>Serial</u>	<u>Mohalla</u>	<u>No. of children</u>	<u>No. of vaccination</u>
1.	Hanifabad 1st date	42	94
2.	Mujahid colony 2	18	33
3.	Mujahid colony 1	29	60
4.	Hanifabad 2nd date	50	82
	Total	139	269

6. Table 5: Home schools - New (1983)

<u>Sr.</u>	<u>Month</u>	<u>Mohalla</u>	<u>Teacher</u>	<u>Children</u>	<u>Boys</u>	<u>Girls</u>
1.	August	Hanifabad	Ghulam Fatima	5	3	2
2.	May	Mujahid colony 1	Zeenat	20	8	12
3.	July	Mujahid colony 2	Rubina	25	15	10
4.	July	Shewan colony	Zebunnisa	14	10	4
5.	August	Mecca Basti	Kaneez	11	7	4
6.	September	Bijlinagar	Irshad	19	10	9
Total				94	53	41

7. Table 6: Home schools - Old

(Position in June 1983)

<u>Group</u>	<u>Date</u>	<u>Teacher (trained)</u>	<u>Schools</u>	<u>Teachers working</u>	<u>Children (total)</u>	<u>Girls</u>
1.	22-11-81	20	9	14	118	8
2.	16-12-81	18	2	4	68	5
3.	13-02-82	20	13	16	180	103
4.	13-02-82	20	9	10	82	50
5.	03-05-82	20	10	14	97	52
6.	12-11-82	10	5	7	62	32
7.	04-12-82	17	5	7	87	43
Total		125	53	72	694	363

Table 7

(Position in September 1983)

<u>Group</u>	<u>Date</u>	<u>Teacher (trained)</u>	<u>Schools</u>	<u>Teachers working</u>	<u>Children (total)</u>	<u>Girls</u>
1.	22-11-81	20	9	12	95	45
2.	16-12-81	18	2	4	38	23
3.	13-02-82	20	11	14	107	61
4.	13-02-82	20	9	9	96	54
5.	03-05-82	20	12	9	96	49
6.	12-11-82	10	5	3	41	24
7.	04-12-82	17	Closed for C.D.P.			
	Total	125	48	51	473	256

The decline is obvious. But in June, 5 schools with 7 teachers and 87 students were closed because they were located in the C.D.P. area.

Section IV : Gardening

Maulana Mahmood Vernalvi ( Manager )

1. General

1.1 In the beginning of this quarter we were working with four youth clubs with 42 members. These clubs took active part in the sanitation and gardening programmes. Mujahid Youth Club has eleven members all of whom have cultivated kitchen gardens. They assisted in the laying of water pipes for home connections. Ghousia Youth Club has twelve members. They helped in the digging of 65 pits for planting trees in the lanes. They are also running a coaching centre. The clubs in Mecca Basti and Hanifabad have participated in construction of sewage lines and tree plantation.

1.2 The gardening programme promotes the planting of trees and the cultivation of kitchen gardens. Its progress is shown in the tables given below

1.3 We are coming in contract with talented persons who have excellent kitchen gardens. There is Mr Iqbal in Bismillah colony. He hails from Murree. Formerly he drove a rickshaw. But now he has a shop. He had a vacant 200 yards plot in which he has grown many varieties of vegetables and fruit. His garden is in excellent condition. He also prepares compost which he uses for his plants.

2. Kitchen gardens

Since July kitchen gardens have been planted in the following mohallas:

Bismillah colony	30 houses
Hanifabad	5 houses
Mujahid colony	30 houses
Shewan colony	5 houses
Total	70 houses

Seeds and technical advice is supplied by OPP and the plots are frequently visited by our forester and gardener.

3. Tree plantation

In the last three months the following plantation was done:

Mohallas	12
Lanes	42
Trees planted	2,289
Inside houses	1,070
In a mosque	60
In a graveyard	200

The trees inside the houses and in the mosque compound are in very good condition as they are well-protected and well-cared for. But 50% of the seedlings in the lanes and the graveyard have been destroyed by children or goats. We are insisting on the erection of proper tree guards before planting. In Mujahid colony excellent tree guards have been prepared for 80 pits. There is great demand for fruit trees from individual homeowners, while the lane plantation is neglected.

4. Research - valuable plants

We have started research for introducing some valuable plants in the Orangi homes. Our gardener, Peer Syed, is growing the following for distribution at a small price to the women's groups and youth club members:

- Chinese tea
- Pan vines
- Ginger
- Grape vines
- Cardamon (ilaichi)

We have also written to the Faisalabad University for the supply of spores of edible mushrooms.



Section V : Financial statements

Particular	1983-84 1st quarter		Cumulative
	April 1980	June 1983	April 1980
	May 1983	August 1983	August 1983
<u>I. Opening balance</u>			
Bank	-	173,016	-
Cash	-	3,122	-
Sub-total	-	176,138	-
<u>II. Receipt</u>			
BCCI	3,194,220	400,000	3,594,220
Public contribution for wells	57,000	-	57,000
<u>Orangi</u> quarterly	8,998	850	9,848
Refund of loan	51,720	28,695	80,415
Other refunds	4,874	-	4,874
Sub-total	3,316,812	429,545	3,746,357
<u>III. Disbursement</u>			
Non-capital expenditure	1,809,425	390,430	2,199,855
Capital expenditure	1,155,304	23,650	1,178,954
Loans	175,486	-	175,486
Advances	459	260	199
Sub-total	3,140,674	414,340	3,555,014

IV. Closing balances

Bank balance	173,016	189,861	189,861
Cash balance	3,122	2,003	2,003
Sub-total	176,138	191,864	191,864

Disbursement	1983-84		
	1st quarter Cumulative		
Particular	April 1980	June 1983	April 1980
	May 1983	August 1983	August 1983

A. Non-capital expenditure

1. OPP office and contingencies	220,720	-	220,720
2. OPP office and transport	198,813	111,433	310,246
3. Budget and accounts	49,100	21,676	70,776
4. Training and administration	63,600	25,210	88,810
5. Research and evaluation	23,506	20,984	44,490
6. Library and documentation	23,352	8,394	31,746
7. Meeting and conferences	12,810	3,907	16,717
8. OPP consultants	127,100	18,491	145,591
9. Demonstration and experiments	125,488	4,085	129,553
10. Training	70,922	14,601	84,623
11. Other publications	48,214	32,793	81,007
12. <u>Orangi quarterly</u>	123,645	15,161	138,806
13. Audiovisual	16,322	19,716	36,038
14. Sanitation I	94,986	33,883	128,869
15. Sanitation II	57,251	23,122	80,373
16. Sanitation III	6,000	7,891	13,891

17. Mohalla tanzeem	59,375	7,256	66,631
18. Women's programme	30,105	7,900	38,005
19. Youth club	5,728	12,426	18,154
20. Water drilling	142,434	-	142,434
21. <u>Economic programme</u>	-	-	-
I. Haryana motor parts	4,500	-	4,500
II. Banarsi weavers programme	167,374	-	167,374
III. Women's workers cooperative group	10,000	-	10,000
IV. Leather workers cooperative group	10,000	-	10,000
V. Fret work	6,000	-	6,000
VI. Cooperative housing project	15,000	-	15,000
22. <u>Grant</u>			
I. All Orangi United Federation	80,300	-	80,300
II. Social Work Department	9,000		9,000
III. Bazam Arbab Sukhan	8,700	1,500	10,200
Total→A	1,809,424	390,429	2,199,854

B. Capital expenditure

Particular	1983-84 1st quarter		Cumulative
	April 1983 - May 1983	June 1983 - August 1983	April 1983 - August 1983
1. OPP office	457,870	23,650	481,520
2. Sanitation I	36,123	-	36,123
3. Sanitation II	21,209	-	21,209
4. Sanitation III	1,215	-	1,215
5. Water drilling	302,889	-	302,889
6. Audiovisual	175,885	-	175,885
7. Women's programme	7,500	-	7,500
8. Wells	152,612	-	152,612
Total→B	1,155,304	23,650	1,178,954
C. <u>Loans and advances</u>			
1. Loans	175,486	-	175,486
2. Advances	458	260	198
Total→C	175,945	260	175,684
 Total A+B+C	 3,140,674	 413,819	 3,554,493

Appendix

30th August 1983

To,

Mr. S. Memon,  
Project Director  
Orangi Development Board  
Karachi

Dear Mr. Memon,

Your visit last week was very encouraging.

In continuation of our conversation, I enclose a note on introducing low-cost sanitation in Orangi.

You suggested that we should present this approach to the Mayor and the Chief Engineer and also to Mr. Zakir Ali Khan of the Water and Sewerage Board. Do you think that my memorandum can serve as a basis for discussion. I can also bring Professor Arif Hasan with me and the sectoral maps and plans.

Yours Sincerely,

(Akhter Hameed Khan)  
Director-OPP

Low-cost Sanitation through Peoples Participation

1. During the last two years the Orangi Pilot Project has been trying to develop a model of low-cost sanitation. Its component are as follows:

- (a) Inside the house will be a pour-flush latrine.
- (b) It will be connected to a small septic tank (called haudi) with a PVC T-pipe.
- (c) Outside, in the lane, will be an underground sewage line, 6" to 9" cement pipes, with a manhole for three or four houses.
- (d) The haudies will be connected to the manholes. T-pipe in the haudies will prevent any solids from flowing into the sewage lines.
- (e) The sewage lines will also carry waste water from the houses. Thus the lane will remain clean and dry.

2. This pattern has become quite popular and several hundred lanes have constructed their "gutter lines", as they call them. More and more requests are being received by OPP from other lanes. The detailed figures can be seen in OPP's quarterly progress reports (in English) and the Urdu quarterly, Orangi.

3. The procedure is as follows:

i. OPP's social organizers hold meetings in mohallas and lanes, explaining to the residents the importance of house and lane sanitation, showing them the models of pour flush latrines, haudies, manholes and underground sewage lines, and also showing slides of the construction work in improved lanes.

ii. The social organizers further explain to the residents that if they are prepared to collect the cost of construction, OPP will arrange:

- (a) a survey, including measurement of levels; and
- (b) give them a plan and estimate.

OPP will also:

- (a) train the lane managers;
- (b) lend them trolleys and tools and shutterings; and
- (c) depute a plumber and a mason to supervise the work.

This technical and supervisory assistance and training is provided free by OPP. But the lane residents themselves have to provide the full cost of material and labour. They have also to organise and execute the work, as the OPP although it deputes skilled technicians to supervise the lane work, does not handle the lane money, and does not act as a contractor. OPP's primary purpose is to train the people and make them self-reliant.

4. The above low-cost sanitation programme has become popular on account of:

- (a) Its low cost; and
- (b) the effective technical training and assistance.

It has been possible to reduce the cost drastically for three reasons:

- (a) After much research, the designs of septic tank (haudis) and manholes have been simplified.
- (b) The provision of implements, shutterings, of technical supervision, and training of lane managers, has eliminated expensive contractors.
- (c) Thus the cost is reduced to the barest minimum for the purchase of material and hire of some unskilled labour.

Recent estimates show that per house contribution for an underground sewage line range from Rs 250 to Rs 400 and the per house contribution for a haudi is around Rs 150. These contributions are considered very reasonable and are being paid quite willingly.

5. For supporting the low-cost sanitation programme OPP has an adequate establishment.

- (a) Expert consultations of the highest calibre
- (b) A full time graduate of architecture
- (c) Three teams of surveyors
- (d) Draughtsmen
- (e) Team of plumber and mason
- (f) 4 social organizers

Besides, in the improved lanes, women's groups and youth clubs are also being organised by two teams of trainers.

The first team consists of a Lady Special Worker and two lady health visitors, and the second team of a social organiser, a forester and gardener.

6. After having developed a popular pattern for the improvement of houses and lanes, OPP is now ready to experiment at a higher level viz., the larger external drains. The nature of the experiment will be to find out:

- (a) a low-cost but efficient design;
- (b) secure the financial contribution of the beneficiaries; and
- (c) their participation in the management and execution of the plan of construction.

7. The reconstruction of the external drains cannot be undertaken without the approval and active support of the KMC and the Water and Sewerage Board. If this approval and support is forthcoming OPP can proceed as follows:

- (a) Survey whole sectors which constitute drainage units;
- (b) prepare maps of the lanes, their drains, and the external drains;
- (c) prepare plans and estimates of the internal as well as the external drains; and
- (d) present the maps, plans and estimates to KMC engineers, and the Orangi Development Board.
- (e) After approval by them, print and publish the plans for distribution to the beneficiaries;
- (f) hold meetings of the beneficiaries, explain the plans and estimates to them, and persuade them to participate in the management and financing of the work;
- (g) to organise project committees of the beneficiaries and train them; and
- (h) to provide technical supervision of the work.

8. It is requested that this approach of introducing low-cost sanitation through technically guided and socially organised popular participation may kindly be examined thoroughly by the KMC and Water and Sewerage Board.



OPP's experts should be given the opportunity to present the principles and practice of the programme in numerous houses and lanes of Orangi, which can be inspected by the engineers. OPP has also completed the survey of some sectors and is preparing plans and estimates of a few external drains. These will soon be ready for presentation.

9. It may be pointed out that popular participation may remove some of the major obstacles which hinder the improvement of katchi abadies.

Akhtar Hameed Khan  
Director-Orangi Pilot Project  
30th August 1983

16th progress report

October-December 1983

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## Section I: General

### 1. Visit to Gilgit

At the invitation of the Agha Khan Rural Support Programme (AKRSP) I went to Gilgit in October. This was my second visit, and I wrote a second report in which I have analysed the Gilgit rural situation, and suggested a system of village plans to be promoted and supported by AKRSP. The system would involve the development of five factors:

- \* Village organizations
- \* Physical infrastructure
- \* Increased productivity
- \* Credit and banking
- \* Processing and marketing

I have welcomed this opportunity of keeping in touch with my old field of rural development. The programme in Gilgit has primarily an economic orientation. In Orangi our primary concerns at present are health and education. But better livelihood and social welfare cannot be divorced; they must be combined. I hope that in the near future AKRSP would pay more attention to sanitation and OPP would pay more attention to livelihood.

### 2. New councillors

In November we tried to meet our new councillors. Our area includes eleven councillor's circles - 121 to 131. But only one mohalla of circle 123 and 124, and 3 mohallas of circle 127 are situated in our area. The newly elected councillors were very busy, and we found it quite difficult to get an appointment with them. I succeeded in establishing contact with only four of them at their homes. Three others visited our office. As indicated in our last report, the improvement of sewerage and sanitation was an important election issue, and the councillors who met with us wanted to know what assistance OPP could render in this respect. We explained to them our pattern of low-cost sanitation and our procedures, and the work that has been done at the house and lane level during the last year. We also told the councillors that we have recently completed a comprehensive survey of our entire area. Consequently we can supply to each of them a Circle Plan Book. This plan book will contain a map of their circle, and enlarged maps of every mohalla in the circle. It will also contain instruction booklets and leaflets on construction of septic tanks,



- \* carry out detailed investigations;
- \* prepare designs, maps and estimates;
- \* prepare list of beneficiaries;
- \* organise, with the help of circle councillors, beneficiarie's work committees; and
- \* after approval by KMC and KWSB supervise the work and provide tools and technical guidance to the work committees.

Moreover OPP could finance the preparation of a master plan for the drainage and sewage of its entire area.

3.4 I assured the Secretary that if he could arrange for this coordination, the residents of Orangi and their resources could be easily mobilised for the construction of an extensive drainage and sewage system.

#### 4. Meeting with M.D. Sewerage Board

Later I went to the office of Mr. Zakir Ali Khan, Managing Director, KWSB. As chief engineer of KMC he had already seen the sewage lines which were being constructed in the lanes. But that was a few months ago. Since then the OPP designs have been substantially improved. We showed to him, and to his chief engineers, our models for low-cost haudies (small septic tanks or interceptor chambers), manholes and pipes. We explained our procedure for social organization, surveying, mapping, estimation and technical guidance, and supply (on loan) of tools and shutterings. Samples of maps and estimates were presented to him, as well as samples of the circle plan books, and plans and estimates for secondary drains in Alfatah colony. When Mr. Zakir Ali Khan emphasised the need for a master drainage and sewage plan, and informed us that fortunatly a very senior and experienced public health engineer was available, we offered to contribute to the financing of the master plan investigation. Further we requested the deputation of a KWSB engineer to OPP to coordinate with KWSB this new organizational research and extension approach.

#### 5. Intensified efforts

During the coming months we will intensify our efforts for the construction of secondary drains. The situation in Orangi is rather peculiar. Generally the gradient is quite good and large numbers of natural nalas flow from the foothills

towards the Lyari river and the sea. Some of the lanes slope directly into a nala, while many others require an intermediary connecting channel, which we call the secondary drain. Dozens of such lanes are ready to lay the sewage lines in the lanes if the discharge can be carried through a secondary drain into the nala. As soon as the method of constructing secondary drains at low cost and through popular participation is established, the sanitation programme will expand rapidly. We hope that the new Secretary will help in solving this great problem. We hope the Sewerage Board's Managing Director would welcome popular participation. And we hope that the new councillors will provide honest leadership for the beneficiaries project committees.

## 6 Economic projects

6.1 Our record in respect of economic projects has been dismal. The big effort to start the rehabilitation of Benarasi weavers ended in failure. Smaller efforts to organise Haryana motor part makers or fretwork artisans or leather workers, were equally fruitless. The cooperative housing project was cut short. A women worker's cooperative group, started several months ago, is dormant for lack of demand for their products. The only successful effort seems to be the OPP employees consumer goods association. Its monthly transactions, i.e., wholesale purchase of consumer items and distribution to members, are growing steadily. (Details have been published in December issue of Orangi quarterly).

6.2 Economic distress evidently is quite common among Orangi families. We come across numerous cases. Women's group meetings frequently demand some income generating activity. In a very small way the kitchen garden programme fulfils this demand, and it is encouraging to note its steady growth. But we are planning to supplement it with a small scale battery system of poultry raising. Initial contacts have been made with the poultry training institute and a friendly owner of a large commercial firm.

## Section II : Low-cost sanitation

### 1. Work upto June 1983

This has been summarised in the 15th progress report (page 5). For the sake of continuity an abstract of surveys

and plans for lanes from October 1981 till June 1983 is again reproduced below:

- a. Requests received from  
43 mohallas / 511 lanes
- b. Survey completed  
42 mohallas / 418 lanes
- c. Maps, plans and estimates supplied  
39 mohallas / 346 lanes
- d. Details of estimates
 

No. of houses	7,635
Length of sewage lines rft	131,506
No. of manholes	3,114
Total estimated cost	Rs 2,428,564
- e. Averages
 

Area of house	Sq Yd	124.17
Cost per house	Rs	318.08
Cost per Sq Yd	Rs	2.56
Cost per rft	Rs	18.47

Upto June 1983, OPP was working in the entire Orangi township and after June only in half of the area.

2. Work from July to December 1983

2.1 Survey completed

<u>July-August-September</u>		<u>October-November-December</u>	
<u>Mohallas</u>	<u>Lanes</u>	<u>Mohallas</u>	<u>Lanes</u>
Mominabad	2	Sector 5E	1
Sector 5E	8	Khyber colony	3
Sector 4A	1	Sector 15D	5
Khyber colony	3	Sector 13D	3
Husainabad	3	Islamnagar	5
Sector 9C-1	1	Labourabad	5
Sector 9E	4	Sector 11A	11

Sector 1C	1	Sector 12L	1
Sector 15D	4	Sector 1A	2
		Sector 1D	1
		Sector 13E	2
Total = 9	27	11	39
Cumulative = 20 mohallas / 66 lanes			

**2.2 Maps, plans and estimates supplied, July to Dec, 1983**

<u>July to September</u>		<u>October to December</u>	
<u>Mohallas</u>	<u>Lanes</u>	<u>Mohallas</u>	<u>Lanes</u>
Nominabad	7	Khyber colony	4
Sector 5E	9	Sector 13D	2
Sector 9C-1	1	Sector 11A	3
Haryana	3	Sector 12L	1
Sector 11	3	Sector 15D	5
Sector 9E	3		
Sector 15D	2		
Sector 1C	1		
Sector 4	1		
Husainabad	3		
Khyber colony	3		
Total	11 36	5	15
Cumulative	16 51		

**2.3 Details of estimates**

	<u>July-Sept</u>	<u>Oct-Dec</u>	<u>Cumulative</u>
No. of mohallas	11	4	15
No. of lanes	35	15	50
No. of houses	837	248	1085



Length of sewage line rft	13,234	4,099	17,333
Manholes	442	144	586
Total estimated cost	Rs 247,273	91,148	338,689

Averages:

Cost per house	Rs 295.43	368.61
Cost per rft	18.68	22.30

2.4 Construction work in progress July to December 1983

<u>July to September</u>		<u>October to December</u>	
<u>Mohallas</u>	<u>Lanes</u>	<u>Mohallas</u>	<u>Lanes</u>
Madina Basti	11	Husainabad	4
Husainabad	2	Alfatah	2
Alfatah colony	14	Haryana	3
Sector 1-A	4	Khyber colony	2
		Sector 11-A	5
		Sector 12	1
		Sector 13	1
		Usmania	1
		Sector 13-D	1
		Sector 13-E	1
		Islamnagar	1
Total	4 31	9	22
Cumulative 13	53		

3. Supervision

(a) In many lanes the sewage lines cannot be constructed till the designs of secondary drains are completed. These require prolonged research and investigation.

(b) The two problems mentioned in the last report still persist, viz:

i. Insistence of some houseowners to make direct connection from the house to the manhole; and

ii. the low quality of manhole covers. Educative effort to overcome these problems have been intensified.

Another defect has been discovered. In some lanes a strong rohri base is not put under the manholes. A leaflet emphasising the importance of rohri, and also indicating the ratios of mixture, and the method of curing is being written for distribution.

The shutterings for manholes, which have caused trouble in some cases by making the thickness of manhole walls uneven are being improved by fixing an angle iron.

In view of the low quality material used by the lane people, we are recommending an increase in the thickness of walls from 3" to 4".

#### 4. Extension

4.1 We wrote in the last report that "we realize that the success of a popularly financed and popularly managed programme depends greatly on the training and education of the residents and the managers (and mistries) chosen by them. Therefore we are placing the major emphasis on extension work, the preparation and distribution of instruction sheets, pamphlets and posters as well as lane meetings". To the seven leaflets distributed in July-September, the following have been added in this quarter (October-December):

"Proper construction of manhole and haudi covers"

"Fixing a vent pipe in the haudi"

"Proper ratio of cement and bajri"

"Instructions for manhole maintenance"

4.2 Frequently the local mistries engaged by the lane managers are reluctant to follow the instructions, and try to introduce unnecessary and often harmful deviations. We have therefore started keeping records of the work of good and reliable mistries. There are now a dozen names in our register, whom we can recommend to the lane managers.

4.3 Two more case studies have been written:

"Cleaning of choked gutter line in 11-A;" and

"Construction of gutter line in 12-B."

4.4 More profiles have been written of new councillors and other activists. They are:

Mr Ghulam Sabir  
Mr Muhammed Ilyas  
Mr Afaq Shahid  
Mr Syed Irshad Ahmed  
Mr Mehar Muhammed  
Mr Syed Imtiaz Hussain  
Mr Abdul Ghafoor  
Mr Malik Muhammed Rafiq

We are also publishing in Orangi quarterly the views of Mr Amanullah, who is extremely critical of OPP's approach. He is convinced that OPP has failed completely and suggests that the entire staff should be dismissed, and the money thus saved distributed to the lane residents for construction work. He does not believe in research and extension.

5. Research : Design

5.1 Septic tank/haudies

The 4 haudies under observation since February 1983 are all working satisfactorily. Sixty-two more haudies have been constructed under our direct supervision in the following mohallas:

Mominabad	21
Madina Basti	15
Mujahid colony	5
Alfatah	3
Sector 11A	14
Husainabad	4

5.2 As mentioned earlier the following improvements are being suggested for manholes:

Laying of proper rohri base; and

Increase of thickness of walls from 3" to 4"

5.3 Quality of pipes: The cement concrete pipes used by the lane people are these which are commonly available

in the local market. Our clients belong to the lowest income groups. Hence their first concern is thrift. They cannot afford a capital-intensive construction. The preference naturally is for labour-intensive, capital saving alternatives. Hence even when superior quality pipes are available, the people generally prefer the cheaper variety. Our advice for the best quality would be discarded on the ground that it is beyond their means. We found that fibre-glass pipes are too costly. Our consultants have told us that the cement pipes are liable to corrosion and may have to be replaced after 12 to 15 years. The people have been informed accordingly. Their attitude is that they can bear the cost of future maintenance more easily than a bigger investment immediately.

#### 6. Research : Comprehensive survey

6.1 In the last report we have described the methodology of the survey. It has provided us with a large amount of very useful data. Here is an abstract of some of it:

Circles	121	122	123	124	125	126	127	128	129	130	131
Mohallas	7	8	1	1	6	8	3	5	13	4	11
Lanes	178	267	106	41	312	159	109	99	424	173	339
Houses	2739	4087	1524	5264	143	2492	1576	945	5150	2626	3988
No se- werage	119	127	40	29	140	119	109	57	296	49	136
Sewerage lines	52	140	66	12	172	40	0	42	128	124	203
OPP- design	0	60	5	0	71	12	0	25	96	0	7
Local design	59	80	61	12	101	28	0	17	32	124	196

#### Note

a. Circles 121, 123, 124 and 130 fall only partially in our area. A few mohallas of some other circles are also outside our area.

b. Rechecking of some mohalla's maps is still in progress. Hence some of the above figures about lanes and houses may have to be revised.

## 6.2 Highlights

OPP has approximately thirty-thousand houses in its area.

Out of 2207 lanes 1221 have no sewerage lines. The percentage of lanes without sewerage is 55.3%.

986 lanes have some kind of sewerage lines. This is 44.6% of the total lanes.

The figures indicate both the popularity of sanitation and the immensity of the task.

The sewage lines have become popular only recently and only in some of the mohallas.

In many cases the lane residents have been too impatient to wait for OPP designs and maps. They have proceeded on their own, often copying the work done in the adjoining lanes imperfectly.

Therefore the rectification work to be undertaken in respect of self-made lines is almost equal to new work and more difficult.

Even the so-called OPP lines need some rectification in many cases.

## 7. Research : Circle Plan Book

With the data collected through the comprehensive survey, OPP is compiling a plan book for each of the councillor's circle. Plan books have already been presented to councillors Muhammed Ahmed Siddiqui (125), Afaq Shahid (129) and Abrar Khan (131). Other councillors have asked for their copies which they will soon receive. The compilation of the plan book is a very laborious task. The plan books contain the following:

- \* Map of Orangi township, showing councillor's circles.
- \* Enlarged map of the councillor's circle showing mohallas and sectors.
- \* Enlarged maps of each mohalla, showing the lanes, roads and nalas.
- \* Each map contains information about number of houses in each lane, slope of the lane, and condition of sewerage, etc.

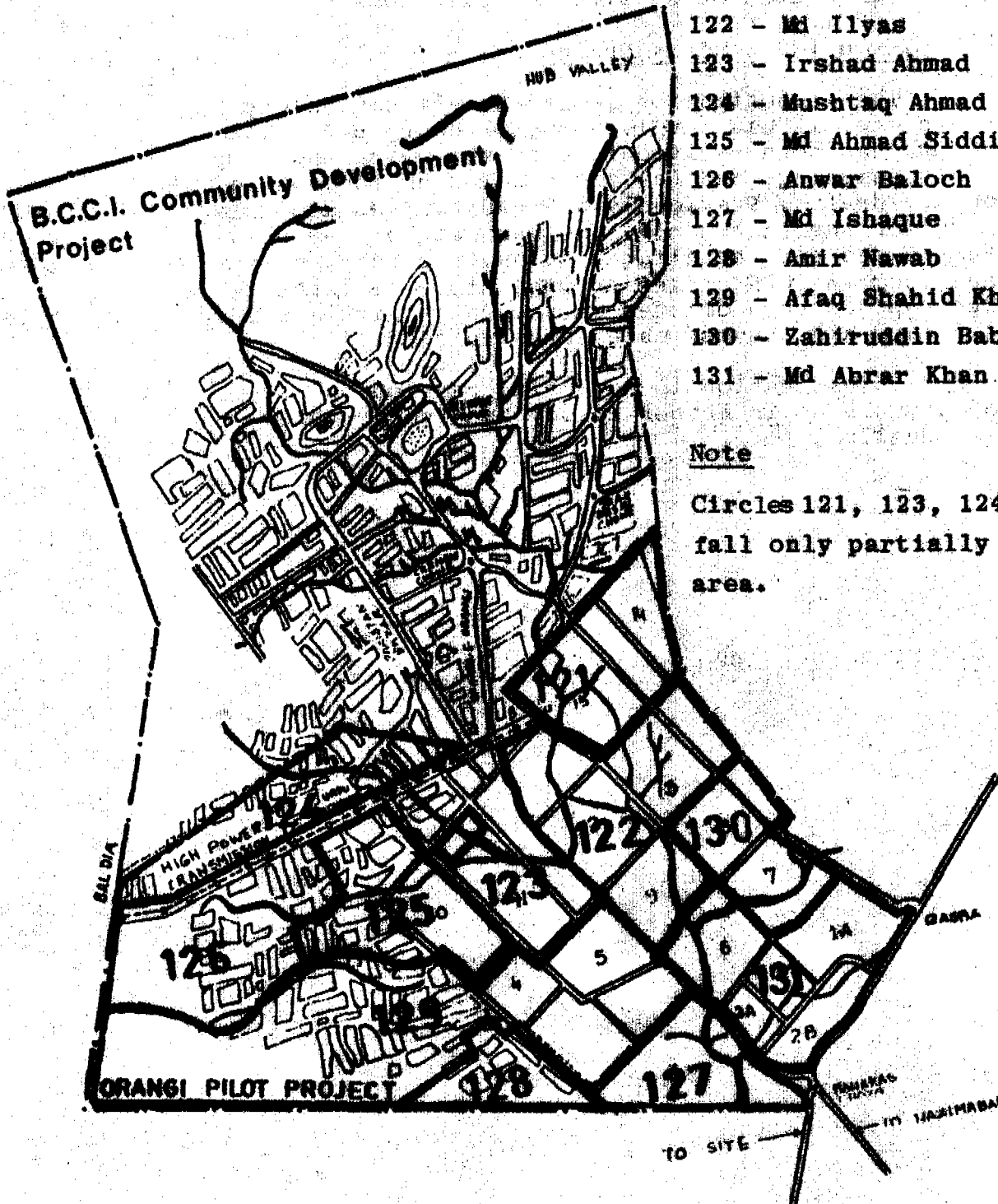
The plan books will be of great assistance to the councillors for the comprehensive development of the sewerage and drainage system in their circles. Instruction manuals and leaflets are enclosed with the plan book.

8. Research : Secondary drains

8.1 The investigation about the Alfatah colony is now complete. It has involved much labour. But at last a pattern has been evolved for (a) surveying and mapping, (b) for designing, and (c) for estimating the cost of the secondary drains. Previously OPP had evolved a simple pattern for the lanes only. The abstract of the plans and estimates for the Alfatah colony secondary drains may be had from the OPP office on request. The large scale design map has been omitted on account of its size. Only sketch maps and the estimates are included.

8.2 Investigation is now being carried on for the secondary drains in Khyber colony and two or three other mohallas.

MAP OF ORANGI



Circle Councillors

- 121 - Ghulam Sabir
- 122 - Md Ilyas
- 123 - Irshad Ahmad
- 124 - Mushtaq Ahmad
- 125 - Md Ahmad Siddiqui
- 126 - Anwar Baloch
- 127 - Md Ishaque
- 128 - Amir Nawab
- 129 - Afaq Shahid Khan
- 130 - Zahiruddin Babar
- 131 - Md Abrar Khan

Note

Circles 121, 123, 124, and 130 fall only partially in O.P.P. area.

Section III : Women's programme

1. Dr. Shameem has joined the OPP from 8th December as Joint Director for health and education. She is an experienced doctor as well as a renowned organizer. She is going out with the social organizers to contact as many lane activists as possible, and to persuade the male activists to promote women's programme in the lanes viz, establishment of women's groups, home schools, first aid and immunization centres. The old groups and centres are now well established, and the time has arrived to expand the programme. Dr. Shameem is also visiting the old groups and centres.

2. Main points during this quarter

\* No new group was formed although many new contacts were made.

\* In the old groups attendance was satisfactory. Women in Hanifabad are showing greater participation, and their number joining the group is increasing.

\* Immunization is being done at five centres, which are attracting more women and children.

\* The city Lions Club clinic in metroville, which is doing excellent work under the direction of Dr. Zafar Faruqui, has agreed to provide mobile clinical services to the women's groups in Mujahid colony, Hanifabad and Bijlinagar.

\* There is a growing interest in the kitchen garden programme as is evident from the table given below (3.3).

3. Tables

3.1 Women's group meetings from July to Dec. 1983

<u>Mohalla</u>	<u>No. of meetings</u>
Mujahid colony I	8
Mujahid colony II	5
Hanifabad	8
Shewan colony	8
Islamia colony	3
Mecca Basti	1
Mominabad	0



Bijlinagar	4
Alfatah colony	3
Usmania colony	1
Islamnagar	1
Labourabad	1
Mujahid colony III	2

Attendance ranges from ten to thirty.

3.2 Immunization : July to December 1983

<u>Mohalla</u>	<u>No. of children</u>	<u>Vaccination</u>
Hanifabad 1st date	42	94
Mujahid colony I 1st date	18	33
Mujahid colony II 1st date	29	60
Hanifabad 2nd date	50	82
Hanifabad 3rd date	50	101
Hanifabad 4th date	44	89
Mujahid colony II 2nd date	32	69
Mujahid colony III 3rd date	31	62
Mujahid colony I 2nd date	36	73
Mujahid colony I 3rd date	30	51
Shewan colony 1st date	17	32
Shewan colony 2nd date	17	34
Bijlinagar 1st date	17	34

3.3 Kitchen gardens

	<u>July-Sept</u>	<u>Oct-Dec</u>	<u>Cumulative</u>
Mujahid colony I	14	17	31
Mujahid colony II	15	12	27
Hanifabad	19	23	42
Shewan colony	6	-	6
Bijlinagar	10	-	10

Mecca Basti	2	10	12
Bismillah colony	34	-	34
Haryana colony	6	-	6
Mominabad	2	-	2
<b>Total (9)</b>	<b>108</b>	<b>62</b>	<b>170</b>

The kitchen gardens reported under youth clubs have been amalgamated with these figures.

#### 3.4 New home schools (20th Dec. 1983)

	<u>No. of children</u>	<u>Boys</u>	<u>Girls</u>
Hanifabad	8	5	3
Mujahid colony I	20	12	8
Mujahid colony II	15	9	6
Shewan colony	20	13	7
Mecca Basti	3	2	1
Bijlinagar	37	17	20
Mujahid colony III	20	12	8
<b>Total (7)</b>	<b>123</b>	<b>70</b>	<b>53</b>

- Note: 1. One new school was started in October.  
 2. Total number of children increased from 94 to 123 number of boys from 53 to 70 and number of girls from 41 to 53.  
 3. Number of children decreased from 5 to 3 in Mecca Basti and from 20 to 15 in Mujahid colony-I.

#### 3.5 Old home schools (20th Dec. 1983)

<u>Group</u>	<u>Schools</u>	<u>Teachers</u>	<u>Children</u>	<u>Girls</u>
1	8	12	95	48
2	2	4	46	30
3	11	14	114	55
4	10	10	104	43
5	9	12	88	57

6	3	5	49	29
Total 6	43	57	496	262

Compared to the position in September,

- \* Number of school decreased from 45 to 43.
- \* Number of students increased from 473 to 496.
- \* Number of teachers also increased from 51 to 57.

Section IV : Gardening

1. Youth clubs. Out of the four clubs, two more have become inactive. The others only helped in planting trees in Mujahid colony.

2. Kitchen gardens. The figures are shown in the amalgamated table in the women's programme section. Uptil now kitchen gardens have been started in 170 houses. The response is quite satisfactory. But there have been some complaints from some houses, that

- \* the seeds did not germinate;
- \* plants did not mature properly; and
- \* insect destroyed the plants.

These houses were visited. Generally the loss was due to their ignorance about methods of planting. Fresh instructions were given. We have started germination tests before distributing the seeds. Pesticides were spread to control insects.

3. Tree plantation

3.1 During autumn and winter tree plantation has been suspended except in a few cases where the homeowners were very keen to do it.

3.2 Most of the trees planted in the lanes and the graveyard have been destroyed. But elsewhere (in the houses, the enclosed mosque boundary and inside the tree guards), 75% have survived and are now growing well.

3.3 There is a complaint that the seedlings provided by OPP were too small.

4. In Mujahid colony an excellent tree guard has been designed which costs about 80 rupees. After the tree has grown the cement concrete guard can be dismantled (it is in rectangular pieces) and used elsewhere for several purposes. It is reported that in Mujahid colony, where trees have been planted along the roads, the value of plots and house rents has appreciated.

5. Tree plantation table since July 1983

No. of mohallas	14
No. of lanes	53

No. of houses	461
Total no. planted	2824
Trees in lanes	1074
Trees in houses	1405
Mosque boundary	60
Graveyard	200
Others	85

6. Valuable plants : research

Experimental cultivation of mushroom spores obtained from Faisalabad Agricultural University was not very successful. More information is being sought.

Pan cultivation is being done by us. Vines have also been distributed to five houses. In one house the vine died on account of neglect. But at our office and in other houses the vines are growing and multiplying.

Lemon grass or Chinese tea, as it is called in the Karachi nurseries, is also growing well in our experiments and in 7 homes.

Ginger and cardamon plants are also doing well. Cardamon plants have been distributed to nine homes, and ginger plants to two homes.

Section V : Financial statement

Audit report for the year 1st June 1982 to 31 May 1983 has been received from Messers Hyder and Company, chartered accountants. It contains figures for the previous two years also ie, from the very beginning of GPP. Copies have been sent to BCCI. The following are reproduced from the audit report:

Balance sheet on 31st May 1983

Income and expenditure 1981, 1982, 1983

Details of expenditure 1981, 1982, 1983

Balance sheet

Liabilities

Balance brought down by  
General fund a/c

824,879

Excess of income over  
expenditure

491,960

Total

1,316,839

Assets

Capital expenditure

GPP office and transport

367,930

Audiovisual

157,034

Special programme

323,445

Wells

As per schedule

152,612

Advances, loans and deposits

As per schedule

139,680

Cash and bank balance

Cash/Imprest

3,122

BCCI (a/c no. 1678)

8,908

NBP (a/c no. 282)

157,726

NBP (a/c no. 333)

8,382

176,138

Total

1,316,839

Income and expenditure 1981, 1982, 1983

Income

	<u>April 1980</u>	<u>June 1981</u>	<u>June 1982</u>
	<u>May 1981</u>	<u>May 1982</u>	<u>May 1983</u>
<u>Receipts, contribution and refunds:</u>			
B.C.C.I.	494,220	900,000	1,800,000
Public contribution wells	45,000	9,000	3,000
<u>Orangi quarterly</u>	-	-	8,998
Refund loan	-	16,921	-
Other refunds	-	-	-
Total	<u>539,220</u>	<u>925,921</u>	<u>1,811,998</u>

Cummulative

April 1980 - May 1983

B.C.C.I.	3,194,220
Public contribution wells	57,800
<u>Orangi quarterly</u>	8,998
Refund loan	16,921
Other refunds	-
Total	<u>3,277,139</u>

Expenditure

	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>Cummulative</u>
Contingencies and staff	62,915	157,805	-	220,720
OPP office and transport	-	-	268,448	268,448
Budget and accounts	-	-	49,100	49,100
Training and administration	-	-	63,600	63,600
Research and evaluation	-	-	23,506	23,506
Library and documentation	-	-	23,352	23,352
Meetings and conferences	341	4,657	7,812	12,810
Demonstration and experiment	25,600	11,969	87,899	125,468
Training	630	41,250	28,141	70,021
Orangi quarterly	18,900	47,800	57,545	123,645
Other publications	830	16,708	30,675	48,213
Audiovisual	-	12,160	22,987	35,147
Consultants	27,500	40,350	59,050	127,100
Sanitation I	-	14,173	85,483	99,656
Sanitation II	-	-	60,176	60,176
Sanitation III	-	-	6,121	6,121
Mohalla tanzim	-	-	59,375	59,375
Women programme	-	-	30,855	30,855
Youth club	-	-	5,728	5,728
Water drilling	-	15,463	163,964	179,427
Economic programme	-	49,580	180,215	229,795
Grant	51,050	40,950	6,000	98,000
	<u>187,766</u>	<u>452,496</u>	<u>1,326,037</u>	<u>1,960,299</u>
Excess of income over expenditure	-	824,878	491,960	1,316,839
<b>Total</b>	<b>187,766</b>	<b>1,277,375</b>	<b>1,811,998</b>	<b>3,277,139</b>



17th progress report

January-March 1984

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## Section 2 : Bird's eyeview of four years

### Four Years

In April 1984, OPP is four years old. Here is a bird's eyeview of the four years:

The first year was spent mostly on investigation. Contacts were made with official and non-official agencies, the activists and their associations. An office building was hired and a few core workers were recruited.

In the second year some programmes were selected. Previously the general direction had been fixed as institution building and the promotion of local organizations. OPP itself is a non-government organisation (NGO) and as such it could not compete with official agencies. Initially OPP decided to work with:

- \* the councillors;
- \* the All Orangi Federation;
- \* the Imam's association; and
- \* some schools.

At the same time it began to make a few demonstrations and experiments. In the second year it became clear that OPP's core workers should consist of social organisers and technicians. Their purpose should be to mobilize interested groups and support them with sound technical advice.

The Third year was a year of consolidation. Failures were recognized eg. the non-response or false response from councillors, imams and schools, or the handicaps of the so-called federation. However alongwith failures, some promising trends also emerged:

1. The concept of neighbourhood organisations (mohalla tanzeem) became tangible.
2. OPP's role as promoter of organisation and as technical advisor became clear.
3. The core workers began to acquire some competence.
4. OPP's contacts and goodwill increased. But the most significant feature was the development of the model of a low-cost sanitation programme which began to be adopted in many houses and lanes. It became OPP's most significant programme.

The third year also witnessed the collapse of two expensive programmes:

1. Water drilling
2. Benarsi weavers

The reasons for the collapse are given in the progress reports. Apart from the disappointment and disillusionment with our sociological and technical competence, the failure of these programmes caused a loss of half a million rupees. We console ourselves by admitting that we have learnt bitter lessons, acquired factual sociological insights, and also the necessary caution for careful planning.

We had high hopes in the fourth year. Failures and dead wood had been discarded and successful models had been discovered. These are:

- a. The low-cost sanitation for houses and lanes.
- b. An integrated programme for a neighbourhood consisting of:
  - \* Sanitation and sewerage
  - \* Training of women's groups for prevention of disease
  - \* Home schools and first aid centres
  - \* Immunization for children
  - \* Kitchen gardens

The capacity and competence of OPP's social organisers and technical advisors had further increased, as well as the goodwill of Orangi residents. UNCHS had offered to collaborate with OPP. We had good reasons to believe that our fourth year would be a year of expansion. Instead it became a year of crisis and contraction. That strange story may be read in our 14th, 15th and 16th progress reports. Last June OPP was asked to confine its activities only to the "planned" areas of Orangi, while the other half was assigned to a new BCCI-UNCHS project.

The restriction of our area and our budget during the fourth year proved a blessing in disguise. Relieved from the burden and stress of expansion, we concentrated on consolidation and improvement.

(a) The low-cost sanitation programme's three-fold aspects of research, extension and supervision were stream lined.

(b) The low-cost sanitation model was fully developed and widely adopted at the three levels of

- \* the house
- \* the lane
- \* the secondary drain

(c) Karachi Water and Sewerage Board was finally persuaded to prepare a master plan for Orangi (see below section II-1).

(d) The model of an integrated mohalla (neighbourhood) health and education program was further developed with its components of

- \* Sanitation and sewerage
- \* Women's groups
- \* Home schools, first aid centres
- \* Immunization
- \* Kitchen gardens

(e) As a consequence the goodwill of the residents of our area has further increased and simultaneously the competence of OPP's social organisers and technical advisers has also increased.

(f) Finally, in the fourth quarter of the fourth year, we have been able to turn our attention again towards economic programme (see below section II-7).

#### Fifth year

With the natural optimism of explorers and experimenters, we hope that the next year, our fifth year, will bring opportunities of not only further improvement but also of expansion.

## Section II : Highlights of the last quarter

### 1. At last a master plan

In February a meeting was held in the office of the Secretary of Housing, Town Planning and Local Government. The Mayor and Deputy Mayor of Karachi and the Managing Director of Water and Sewerage Board attended the meeting. It was decided that the Sewerage Board should arrange for the preparation of a master plan for Orangi, and highly qualified consultants should be engaged for this purpose. The Board has taken prompt action and invited tenders. At last we can hope for a coordinated plan which can ensure the future sanitation of Orangi. In the meanwhile OPP has been investigating intensively the drainage problems in sector 5, sector 11, sector 13, Usmania colony, Khyber colony and Mominabad. This investigation revealed the great severity of the problem. Since the arrival of water from the Hub river, the residents of Orangi are threatened with a new danger. In many places, on account of the absence of adequate drainage, underground water level is rising. Already the damage to the foundations of many houses is clearly evident. In a few cases shops and houses have been abandoned on account of waterlogging. Fortunately the investigation also revealed that the problem can be solved, that it is possible to design a low-cost underground sewerage system which will quickly discharge the waste water from the homes and the lanes into the main nalas. Our research indicated that not only low-cost designs of secondary or collector drains upto the main nala can be made, but also that the homeowners are quite willing to bear the extra cost of constructing these secondary drains in addition to the cost of the lane drains. They are willing to do so because they have realized that their lifetime investment in their houses must be protected. Our low-cost design shows them that, for example, to save a house of thirty or forty thousand rupees, the cost comes to three or four hundred rupees or a little more.

### 2. Secretary's second visit

On 15th March, Mr Manzoorul Hasan, Secretary Housing, Urban Planning and Local Government was gracious enough to come again to OPP's office, accompanied by Mr Baqi Siddiqui, Director Planning and Administration of Water and Sewerage Board. They examined the designs of drainage units of sector 5, and sector 11 F, and then visited the two sites where they saw:

a. the nature of the drainage problem and its seriousness;

b. its possible solution; and

c. the willingness of the homeowners to implement the sewerage design at their own expense. We were encouraged by our people's response, now we are still more encouraged by the response of our policy makers. We pointed to the Secretary that OPP's work was not intended to supplant the master plan, but to supplement it.

### 3. The model for secondary drains

In our last progress report (page 4) we had written: "The situation in Orangi is rather peculiar. Generally the gradient is quite good and large numbers of natural nalas (creeks) flow from the foothills towards the Lyari river and the sea. Some of the lanes slope directly into a nala, while many others require an intermediary connecting channel, which we call the secondary drain. Dozens of such lanes are ready to lay the sewage lines in the lanes if the discharge can be carried through a secondary drain into the nala. As soon as the method of constructing secondary drains at low cost and through popular participation is established, the sanitation programme will expand rapidly". We had promised to intensify our efforts for the construction of secondary drains. As a result of these intensified efforts a clear pattern has now emerged both for the preparation of technically sound low-cost designs and for the mobilization of whole clusters of lanes for the financing and construction of their secondary drains. In fact actual construction is going on already in several neighbourhoods, and other neighbourhoods are being surveyed. During the last quarter the self-financed and self-managed construction of secondary drains has been a most significant advance (for details see below section III-7).

### 4. Survey by engineering students

Students of the College of Architecture and the Engineering University first helped OPP to complete a survey of its area (see 16th PR). Now they are helping us in compiling a complete set of maps, which are required for a detailed and accurate planning of drainage and sewerage. Their help is very valuable, and their extra-ordinary dedication is inspiring. They assure us that they too are benefitting by this association with real field work in low-income settlements.

### 5. Survey by medical students

From next month 32 students of the Aga Khan Medical College will be coming twice a week to OPP's office in Orangi in order to conduct surveys in selected sectors. They will survey the clinical facilities, the incidence of common diseases, attitudes and opinions etc. We hope to give more specific details in our next progress report. We expect that the medical students will collect the necessary data for the planning of a viable low-cost health programme in the same way as the engineering students have collected the necessary data for the low-cost sanitation programme.

### 6. Professor Anzorena's report on Pakistani projects

Dr Jorge Anzorena is professor of architecture, Sophia University, Tokyo, Japan. He has specialised in the improvement of low-income settlements and katchi abadis. For several years he has been touring regularly in India, the Phillipines, Thailand, Sri Lanka, Bangladesh, Pakistan etc., to look at the efforts made by slum dwellers for their betterment. During his travels Professor Anzorena writes newsletters for circulation. He visited Pakistan and Orangi in January last and for two nights camped in our office like a Sadhu. In his February newsletter he has written about OPP, Qurratul Ain's Baldia Project, and the Catholic Society's housing project. On 12th March BBC in its evening Urdu programme gave a 15-minute report on the Orangi Pilot Project. On 19th March another 15 minute report was given on the AKRSP in Gilgit.

### 7. Economic programmes

Having consolidated our low-cost sanitation and basic health and education programmes, we have returned once more to the organisation of economic programmes. But, keeping in view the losses we have suffered in the past, we are proceeding very cautiously. During the last quarter some progress has been made which are as follows:

a. OPP employee's consumer cooperative is working steadily with its own capital and management. What benefits the members are deriving from cooperative action may be read in the Urdu Orangi quarterly.

b. The kitchen gardens in the Homes are increasing in number and some of them have become quite productive.

c. Poultry training has been imparted to OPP's forester, Inamullah Bhatti, and Moulvi Mahmood Vernalvi, manager gardening and both of them are now keeping twenty layers each in cages in their homes. Careful records are being maintained of the feed, the eggs, health etc., of the birds. If the experiments prove profitable other poultry keepers will be trained.

d. The above were small efforts. However we have started another programme which we expect will provide gainful employment to larger number of women. The main features of this programme are as follows:

- \* By now OPP has organised several women groups. Some members of these groups have been asking for sewing work. They have got their own machines.

- \* Last year OPP had promoted a women's work centre which owns ten machines, but has been dormant on account of lack of work.

- \* During February OPP contacted some factories, which agreed to give work to our centres. One factory gives grocery bag for sewing, another children's garments, and third aprons, and so on.

- \* OPP collects the job work from the factories, distributes it to the women centres, and finally takes it back to the factories.

- \* The entire amount of wages is handed over to the centres with the recommendation that the workers should pay a small commission to the organiser of the centre, who is also selected from the workers.

- \* Thus OPP is not involved in procurement or marketing and it does not have to make any capital investment or undertake any risk.

- \* The women workers get a steady supply of work and wages without exploitation by middlemen.

- \* Of course, at present a subsidy is involved in the provision of free services by OPP. But the subsidy is very small indeed, and similar to our general approach in respect of research and extension.

Tabulated results will be shown in the next progress report.



Section III : Low-cost sanitation (Perween Rahman)

1. General

(a) Work in the lanes have been slow mainly due to the fact that in many areas the primary need is for secondary drains. Infact our major preoccupation now are the secondary drains. Their design requires much time, numerous visits to the sites, drawing of scaled maps, obtaining the data on levels and number of houses. At this initial stage our progress is indeed slow, but we hope that in course of time it will gather speed.

(b) We are trying to procure scaled maps from the KDA and the Directorate of Katchi Abadies. Inspite of some hitches, fifty percent of the required maps have been procured, and the remaining will be procured shortly. Efforts are also being made to obtain aerial photographs of Orangi through the Water and Sewerage Board.

(c) Councillors of our area are now keenly interested in sewerage and sanitation. They are coming to our office for consultation and advice. Five of them, Mr Muhammed Ahmed Siddiqui, Mr Afaq Shahid, Mr Zaheeruddin Baber, Mr Anwer Baluch and Mr Muhammed Ilyas have sponsored considerable works in their circles.

2. Work from July 1983 to March 1984

2.1 Survey completed

<u>July - Sept. 1983</u>		<u>Oct. - Dec. 1983</u>		<u>Jan. - March 1984</u>	
<u>Mohalla</u>	<u>Lanes</u>	<u>Mohalla</u>	<u>Lanes</u>	<u>Mohalla</u>	<u>Lanes</u>
Mominabad	2	Sector 5E	1	Khyber colony	1
Sector 5E	8	Khyber colony	3	Sector 11A	2
Sector 4A	1	Sector 15D	5	Jamate M	9
Khyber colony	3	Sector 13D	3	Shewan	2
Hussainabad	2	Islamnagar	5	Sector 13F	5
Sector 9C-1	1	Labourabad	5	Mominabad	6
Sector 9E	4	Sector 11A	11	Khyber colony	3
Sector 1C	1	Sector 12L	1	Sector 13D	1
Sector 13D	4	Sector 1A	2	Sector 14B	3
		Sector 1D	1	Sector 10	1
		Sector 13E	2		
<b>Total 9</b>	<b>27</b>	<b>11</b>	<b>39</b>	<b>10</b>	<b>33</b>

Cumulative : 30 mohallas / 99 lanes

**2.2 Maps, plans and estimates supplied**

<u>July - Sept. 1983</u>		<u>Oct. - Dec. 1983</u>		<u>Jan. - March 1984</u>	
<u>Mohalla</u>	<u>Lanes</u>	<u>Mohalla</u>	<u>Lanes</u>	<u>Mohalla</u>	<u>Lanes</u>
Mominabad	7	Khyber colony	4	Khyber colony	5
Sector 5E	9	Sector 13D	2	Sector 11A	5
Sector 9C-1	1	Sector 11A	3	Labourabad	6
Haryana	3	Sector 12L	1	Sector 4F	1
Sector 11	3	Sector 15D	5	Sector 5	1
Sector 9E	3			Azadnagar	2
Sector 15D	2			Islamnagar	1
Sector 1C	1			Sector 13F	5
Sector 4	1				
Husainabad	3				
Khyber colony	3				
<b>Total 11</b>	<b>36</b>	<b>5</b>	<b>15</b>	<b>8</b>	<b>26</b>

Cumulative : 24 mohallas / 77 lanes

**2.3 Details of Estimates**

	<u>July</u>	<u>October</u>	<u>January</u>	<u>Cumulative</u>
	<u>Sept. 1983</u>	<u>Dec. 1983</u>	<u>March 1984</u>	
No. of mohallas	11	5	8	24
No. of lanes	35	15	26	77
No. of houses	437	248	497	1,582
Length of sewage lanes (rft)	13,234	4,099	7,684	25,017
No. of manholes	433	144	294	850
Total estimated cost (Rs)	247,373	91,148	150,416	488,935
<b><u>Averages</u></b>				
Cost per house	295.43	367.52	302.65	
Cost per rft	18.68	22.30	19.58	

2.4 Construction work in progress

<u>July - September 1983</u>		<u>Oct. - December 1983</u>		<u>Jan. - March 1984</u>	
<u>Mohalla</u>	<u>Lanes</u>	<u>Mohalla</u>	<u>Lanes</u>	<u>Mohalla</u>	<u>Lanes</u>
Madina Basti	11	Husainabad	4	Haryana	2
Husainabad	2	Alfatah	2	Khyber colony	3
Alfatah colony	14	Haryana	3	Sector 13D	5
Sector 1A	4	Khyber colony	2	Azad Nagar	1
		Sector 11A	5	Alsadaf	1
		Sector 12	1	Sector 13F	4
		Sector 13	1	Sector 15	1
		Usmania	1	Sector 14B	1
		Sector 13E	1	Ghousia colony	1
		Sector 13E	1	Usmania	1
		Islamnagar	1	Sector 13E	2
				Noorani Masjid	3
<b>Total 4</b>	<b>31</b>	<b>11</b>	<b>22</b>	<b>17</b>	<b>25</b>

Cumulative: 27 mohallas / 78 lanes

3. Supervision

3.1 The problems indentified in previous months, ie,

- \* Absence of rohri base
- \* Poor curing
- \* Use of improper bajri (gravel)
- \* Improper ratio of cement and steel rods in manhole cover
- \* Direct connections to manholes (ie, without T-pipe)

are being controlled. In recent works the insistence of people to make direct connections has been reduced to a remarkable extent. Azadnagar, Khyber colony, Usmania colony and Noorani mohalla residents have constructed their T-pipe haudis in quick succession. However 10% direct connections are still being reported.

**3.2 Two new problems have been identified.**

- a. Difficulty in excavation beyond 1' where rocky soil is encountered; and
- b. waterlogging causing extreme difficulty in construction of sewerage line, as well as harming the foundations of houses.

These are being investigated.

**4. Extension**

4.1 The following new leaflets have been written and distributed.

- "Improvement of lanes on self help basis"
- "How to keep your houses, lanes and mohallas clean"
- "Disposal of T-haudi sludge in compost pits"
- "Use of bajri in construction"
- "Method of checking T-haudis"
- "Construction of secondary drains"

This brings the total of leaflets written to 17. From February we have started a system of writing leaflets for each secondary drain cluster of lanes. The leaflet describes the need for the secondary drains, their designs, and their estimated costs. Two leaflets have been prepared on:

Usmania colony, and  
sector 5

**4.2 Case studies**

Seven more case studies have been written (bringing the total to 11).

- Work in Khyber colony-lanes 9 and 10
- Joint work in Ibrahim Ali Bhai School
- Work in sector 13F
- Work in sector 11A

Work in Noorani mahallah

Interview : Sarfraz Khan (Mason)

Work in sector 13F - Interview : Rafique (mason  
and contractor)

#### 4.3 Profiles

Six more profiles have been written (bringing the total to 19).

Mr Naseeruddin Ahmed

Mr Aminullah

Mr Ali Shan

Mr Sailab Khan

Mr Moia Ahmed

Mr Abdul Ghani

Note: Case studies and profiles are published in the Urdu Orangi quarterly.

#### 4.4 Training of masons

In view of the technical problems encountered in the construction of sewage lines we have started a programme of training masons as an extension means in addition to leaflets, posters, meetings and on-site instructions to managers and homeowners. We have noticed that any negligence on the part of masons results in faulty work.

The training begins with a lecture by Mr Ramzan Qureishy, manager sanitation I. This lecture points out all the important aspects involved in the construction and maintenance of sewerage lines. Visual aids are used: pamphlets, posters, sample models of concrete (of various ratios) both cured and uncured, samples of bajri of various quality, and plastic models of haudis, manholes and sewerage lines.

Two such training classes have been held, one in January and one in February. Altogether 14 masons have attended. As an incentive a training allowance of Rs 30 was paid to each of them. The following masons have been trained, and their names are being recommended to the lane managers:

Muhammed Yousuf	Sector 13
Abdul Ghaffar	Sector 13
Sarfraz	Azadnagar
Sadique Ismail	Mujahid colony
Badruzzaman	Sector 13
Rafique Sadiq	Sector 13
Muhammed Zaman	Khyber colony
Ghulam Rasul	Khyber colony
Maboodul Haque	Sector 13
Shamsuddin	Sector 13
Muhammed Rafiq	Mujahid colony
Akber Ali	Bijlinagar
Wilayat Khan	Usmania
Mir Badsha	Usmania

#### 4.5 Album of photographs

To aid us in explaining various stages of our work to lane managers and also to visitors we are compiling an album of still photographs. Due to our incompetence and carelessness the work has been delayed. We intend to be more strict with ourselves. Photographic records of work on-site are also being kept.

#### 5. Research : Design

##### 5.1 Shutterings

Out of 36 shutterings (31 of manholes, 5 of T-haudis), 22 shutterings (of manholes) requiring increase in wall thickness from 3" to 4" plus addition of hold clamps, have been rectified. Orders have been placed for the fabrication of 15 more shutterings (11 manhole and 4 T-haudis).

##### 5.2 T-haudi

The 4 T-haudis under observation from February 1983 are doing fine. A report was received that two of these

were filled up. But on investigation it was found that the haudis were not really full. In one case a plastic bag had got stuck in the outlet of the T-pipe. When it was removed the haudi functioned normally. The other haudi had approximately 1.25 cft of sediment, which was removed by the owner.

The home owners are willing to remove the sludge from their haudis. The need is to instruct them about the deposit of the sludge in a closed pit. The design of the pit, and the method of extracting and depositing the sludge have been explained in a leaflet. They have been advised not to throw the sludge into the open nala.

39 more T-haudis were constructed under OPP supervision, bringing the total to 101.

### 5.3 Quality of pipes

We have started meetings with pipe manufacturers of Orangi to promote improvement and quality control of pipes.

## 6. Research : Comprehensive survey

### 6.1 Maps

We have discovered 213 maps of Orangi prepared by a firm of consultants for the KDA and the Directorate of Katchi Abadies. Of these 45 have been identified, covering our area, while some more need identification. Tracing originals of the 45 ammonia print copies we have obtained is in progress. This is being done by students. OPP had to make a substantial investment in the procurement and tracing of these maps. But these maps will facilitate planning for a sewerage system both for OPP and the consultants engaged for the master plan. We have pointed out to the Secretary, Urban Planning and the Managing Director, Sewerage Board that OPP is qualified to be treated as the research wing of the Board.

### 6.2 Circle plan books

Five more circle plan books have been completed, bringing the total to seven. Four are left which will

be completed in April. The councillors have appreciated the gift of the circle plan books, and have made insistent demands in case of delay. Plan books have been handed over to councillors of the following circles; 121, 123, 125, 126, 129, 130, 131. Plan books will soon be supplied to councillors of circles 122, 124, 127, 128.

## 7. Research : Secondary drains

7.1 The system for the design, estimates and construction of secondary drains seems a little clearer now. We are still making further investigations on lowering the costs. It is realized that since secondary drains would carry excessive loads the pipes should be of high quality. From the very beginning of the secondary drains we are trying to persuade the residents to use pipes of the best quality. As yet our organisers are unsure that this advice will be accepted readily.

7.2 During this quarter the research and the design and estimates of the following mohallas have been completed:

Usmania colony

Sector 1A

Sector 5

Mr Fazli Karim, retired railway engineer, has worked very hard for two months, and surveyed every lane of the sector 5 unit, and prepared beautiful maps and charts. He has done all this work, inspite of illness, without any remuneration. Our surveyors and organisers have learnt many valuable lessons from him. Leaflets have been compiled, explaining the designs and costs to the residents of Usmania colony and sector 5 and they are now holding meetings to raise funds.

7.3 Research is going on in Mominabad, Gabol colony, 13 D/F and sector 4. In the next progress report we hope to present a table on secondary drains. Two engineering students are assisting in the secondary drain research. In view of the need for large number of copies of maps, we have purchased an ammonia printing machine. This will save us a lot of time.



Section IV : Women's programme

1. Low-cost health programme

Dr Shameem Zainuddin Khan has been visiting the women's groups and the lane managers. She has made many new contacts and started some new centres. She will guide the Agha Khan Medical College students in their survey of some sectors of Orangi and for this purpose she held several meetings with Dr Fauzia. Dr Shameem is also preparing a 12 lecture course on common diseases and their prevention for the women's groups. She will make the preventive training more systematic and theoretically sound. At the same time she is observing the health practices and attitudes prevalent in the homes. She has written a leaflet on washing of utensils. She has also written many profiles.

2. Women's programme

a. Much time was spent on the rectification of immunization records in order to satisfy the social welfare directorate. They are finally satisfied and have issued new supplies of vaccines.

b. There were fewer new contacts and fewer meetings. But a more systematic schedule has been prepared in order to coordinate with Dr Shameem's schedule.

c. A new programme of supplying job work from factories to women workers is being started. Its details will be given in the next progress report.

d. Some new posters and pamphlets have been written eg. on immunization, drinking water etc. For details see the Urdu Orangi.

e. There are now immunization centres at:

1. Hanifabad; 2. Mujahid colony; 3. Mujahid colony II; 4. Shewan colony; 5. Bijlinagar; 6. Labourabad; 7. Faqir colony. The programme is quite popular.

f. There are now 9 new home schools and first aid centres with 140 children, 78 boys and 62 girls, showing an increase of two centres and 17 children over the last report (December 1983).

g. In the old home schools:

Number of teachers fell from 57 to 51

Number of schools fell from 43 to 38

Number of children declined from 496 to 440

h. Kitchen gardens increased from 170 to 211. Women of three new mohallas, of Labourabad, Faqir colony and Hussainabad have joined, bringing number of mohallas to 12.

i. For further details on gardening see issues of Urdu Orangi.

Section V : Financial statement

1. In the last progress report we had included figures from the audit report for the year 1982-83. OPP's financial year begins from 1st June and ends on 31st May. The account section prepares monthly statements which are pasted on the office notice board. All our account books are open for inspection.

2. We have slightly rearranged the system of accounts according to sections, so that the expenditure in each section may be ascertained at a glance.

3. A statement of receipts and disbursement from 1st June 1983 to 1st March 1984 is presented below. It indicates clearly the expenditure for each section and also separately the amount spent on staff and operation. Further details are available in the account office.

Financial statement : June 1983 to March 1984

Receipts from BCCI                      Rs 1,500,000

Disbursement

<u>Sections</u>	<u>Staff</u>	<u>Operation</u>	<u>Total</u>
<u>I-General</u>			
Central office	36,341	71,303	107,644
Transport	59,932	124,814	183,946
Administration	88,438	-	88,438
Budget and accounts	67,814	-	67,814

Research and evaluation	48,697	-	48,697
Library and documentation	13,440	4,316	17,756
Meetings and conferences	-	10,723	10,723
Demonstration and experiments	-	29,296	29,296
Training	-	27,307	27,307
Total	314,662	266,959	581,621

II-Publication

<u>Orangi quarterly</u>	33,744	15,736	49,480
Other publications	-	98,874	98,874
Audiovisual	-	18,185	18,185
Total	33,744	132,795	166,539
III-Consultants	58,878	-	58,878

IV-Special programmes

a. Low-cost sanitation:

Central office	79,262	19,946	99,208
Sanitation I	33,783	-	33,783
Sanitation II )	47,625	3,541	51,166
Sanitation III )			
Total	160,670	23,487	184,157

b. Women's programme	31,436	-	31,436
c. Mohalla Tanzeem	43,168	-	43,168
d. Gardening	41,808	-	41,808

V-Economic programme		102,697	102,697
VI-Grants	4,500	-	4,500
VII-Capital expenditure		72,776	72,776
VIII-Provident and medical fund		68,878	68,878
Grand total	688,866	667,592	1,356,495

18th progress report  
April-June 1984

Contents:

- Section I : Budget and targets 1984 - 1985
- Section II : Progress of low-cost sanitation programme:  
impressions of a quick survey
- Section III : Waterlogging menace in Orangi
- Section IV : Low-cost sanitation programme
- Section V : Women's programme
- Section VI : Economic programme
- Section VII : Miscellaneous
- Section VIII: Financial statement: receipts  
and disbursement 1983 - 1984  
Budget 1984 - 1985

Section I : budget and targets for 1984 - 1985

1. Budget for 1984 - 1985

Last year, in May 1983, when OPP was separated from UNCHS, Mr Burney fixed OPP's budget allocation at Rs twenty lakhs for the year June 1983 to 31 May 1984. The same amount is being requested for the year 1984 - 85, with the addition of 10% increment on staff salaries (Total Rs 104,000) and 5% for inflation (Rs 100,000). Thus the total grant from BCCI for the current year comes to Rs 2,204,000.

The following detailed sheets have been sent to BCCI:

- \* Financial statement of receipts and disbursements - 1st June 1983 to 31st May 1984
- \* Budget and actuals 1983 - 84 and budget 1984 - 85
- \* Break up of above for staff and operation
- \* Separate sheets for each head showing monthly disbursements (1983 - 84). (This 39-page document is available on request from the OPP's budget and accounts section).

2. Justification : Work accomplished

- a. The 17th progress report gives a bird's eyeview of OPP's four years.
- b. To sum up: OPP is essentially a research and development (R & D) effort to discover viable models of popular organization programmes which could help the residents of katchi abadies to improve their conditions.
- c. One such model has been discovered and developed to a significant extent, viz, low-cost sanitation for improvement at three levels: House, lane, and secondary drains.
- d. This model has already been adopted in approximately five hundred lanes and ten thousand houses. Recently, the construction of secondary or collector drains has also started in many sectors (see section II).
- e. The fourth level, ie, the main nalas, still remains to be researched. But at last the KMC and the KWSB have been persuaded to prepare a master plan.

- f. An integrated model of mohalla tanzeem has also been developed. Its components are:

Sanitation and sewerage  
Women's groups  
Home schools and first aid centres  
Immunization  
Kitchen gardens

This model has been adopted as yet only in a few mohallas, but the number is increasing (see section V).

- g. OPP's assets are not only the popular models, sociological as well as technical, developed with great patience and labour, but also the growing competence and capacity of its core workers, (social organisers and technicians) and the immense goodwill of Orangi residents.

3. Targets for 1984 - 1985

- a. While maintaining the same level of staff and operational expenses, we hope that during this year the low-cost sanitation will be expanded to include:
- (i) 250 more lanes;
  - (ii) consisting of 5000 houses; and
  - (iii) 20 secondary drains.
- b. The quality of construction of septic tank haudies, underground pipe lines, manholes, and secondary drains will be improved.
- c. Hundreds of lane managers and dozens of masons will be trained in the construction and maintenance of sewerage lines.
- d. OPP will collaborate with the Karachi Water and Sewerage Board (KWSB) in the preparation of the Orangi sewerage master plan.
- e. The integrated mohalla tanzeem will be extended to include:
- (1) Upto 30 more women's groups with 1000 members;

- (ii) 30 more home schools and first aid centres serving 600 children;
  - (iii) 30 more immunization centres for 1000 children; and
  - (IV) 500 more kitchen gardens.
- f. Research will be conducted for developing a low-cost health model in collaboration with the Aga Khan Medical College.
  - g. Educative extension literature will be prepared on:
    - (i) Prevention of common diseases
    - (ii) Low-cost balanced diet
    - (iii) Case histories of prevention of disease, and also cure of disease through low-cost nutrition etc.
    - (iv) Survey of common diseases and health attitudes and opinions of low-income families
  - h. An economic programme will be organised to provide supplementary income to needy members of women's groups through work centres.

#### 4. Two proposals

In the first meeting of the Project Committee held on 31 December 1983, Mr Khan had made two proposals:

- a. The OPP may be turned into an institute for katchi abadies.
- b. That, if BCCI approves, the possibility of obtaining help from other donors may be explored. Mr Burney had said that both these proposals need discussion with Agha Saheb. A note was therefore sent to Mr Burney in January.

#### 5. Request for discussion as well as inspection

After four years of intensive efforts, thanks to the generous investment of more than 3 million rupees by BCCI, the Orangi Pilot Project has developed models of social organizations and low-cost technology, which are being widely adopted by Orangi residents and which are attracting the attention of local authorities as well as international experts (see Professor Anzorenas report).

It is urgently requested that during his next visit to Karachi Agha Saheb, the originator and sponsor of Orangi Pilot Project, should be gracious enough to spare:



- (a) Two hours for a visit to Orangi to talk with OPP workers and the lane managers and see the work done by them in the lanes; and
- (b) one hour for a discussion to review the OPP's progress in the last four years and the shape of its future progress.

Section II : Progress of low-cost sanitation programme

1. Impressions of a quick survey

From 16th June to 28th June, I visited all the lanes in sanitation I and II, where work was in progress. I saw the progress of low-cost sanitation programme in the following mohallas:

Councillor's circle 121 - Mr Ghulam Sabir

a. Mohalla 14B

Councillor's circle 122 - Mr Mohammed Ilyas

a. Mohammad Khan Baloch goth - 12L

b. 12L - OPP35

c. 13G

d. 13F

e. 13D

f. Gabol colony

Councillor's circle 123 - Mr Mohammad Irshad

a. 11A

Councillor's circle 125 - Mr Mohammad Ahmed Siddiqui

a. Mairajunnabi

b. Noor mohalla

c. Block 'B'

d. Alasadaf colony

e. Alfatah colony

f. Ghousia colony

Councillor's circle 126 - Mr Anwar Baloch

- a. Haryana colony
- b. Noorani mohalla
- c. Usmania colony
- d. Qaim Khani chowk

Councillor's circle 129 - Mr Afaq Shahid

- a. Azad Nagar
- b. Khyber colony
- c. Bijlinagar
- d. Jhelum colony
- e. Mujahid colony
- f. Qaid Awam colony
- g. Mominabad
- h. Sector

Councillor's circle 131 - Mr Mohammad Abrar Khan

- a. Islamia colony
- b. Sewan colony

The area covered by this quick survey was quite extensive: seven councillor's circles, and 28 mohallas. I present a very brief outline of my impressions, but later we will prepare a report which will serve as a benchmark. It will contain the following:

- (i) Map of each of the 28 mohallas. Obviously each of them seems to form one or two drainage and sewerage units.
- (ii) Maps and tables will show:
  - (a) Total numbers of lanes (and houses)
  - (b) Secondary drains required
  - (c) Sewerage lines constructed (in lanes)
  - (d) Sewerage lines under construction
  - (e) Secondary drains constructed
  - (f) Secondary drains under construction
  - (g) Lanes connected directly to nalas
  - (h) Lanes connected to secondary drains

- (i) Lanes not yet constructed
- (j) Secondary drains not yet constructed
- (iii) Remarks on:
  - (a) Approximate date of start of planning
  - (b) Progress of work
  - (c) Reasons for delay
  - (d) Reasons for quick progress
  - (e) Present position
  - (f) Mix of OPP design and self-design
  - (g) Quality of work
  - (h) Direct and T-haudi connections
  - (i) Expected completion of sewerage unit
- (iv) Maintenance - its quality, conditions and procedures.  
The benchmark survey will be followed by six monthly surveys which will provide most valuable technical, social and economic data.

2. Summary of impressions

The quick survey has given us five outstanding impressions:

- \* Widespread adoption of low-cost sanitation model
- \* Motivations for its adoption
- \* Variable progress
- \* Emergence of a sewerage system for Orangi
- \* Need for official recognition and encouragement

3. Widespread adoption of a low-cost sanitation model

OPP's research has shown that there are four levels for the development of sanitation in Orangi:

- \* The house - sanitary latrine and waste water disposal
- \* Underground sewerage in the lane with manholes
- \* Underground secondary or collector drains
- \* Large external drains or nalas

Perhaps there should be a fifth level viz, the treatment plants.

The survey shows that at three levels, namely the house, the lane and the secondary drains, the model has been accepted widely, in hundreds of lanes and thousand of houses. The homeowners have provided both the funds and the management for the construction of sanitary latrines, underground lane sewers, and underground secondary drains.

Instead of the inertia encountered two or three years ago, there is now a steady movement for the improvement of sanitation. Thus plans supplied many months previously are being implemented now. Construction in a few lanes soon leads to construction in other lanes. The residents have become aware of the linkage between the lanes, of the necessity of completing the whole unit of drainage. Pressure is put on the laggard lanes to which they have to yield. In one mohalla after another the whole unit has been planned and has either been completed (as in Mujahid colony, Mecca Basti, Medina Basti, Baloch goth) or is being gradually completed (as in Noorani mohalla, Mairajunabi colony, Qaim Khani chowk, block B, sector 11A, sector 13F).

#### 4. Motivations for adoption

- a. One impelling motivation is the breakdown of the bhangi (sweeper-scavenger) system. Bhangis are now both expensive and unreliable. The bucket latrine is no longer a manageable affair. Homeowners eagerly accept the opportunity of getting rid of the bhangi and the bucket.
- b. Another impelling reason is the breakdown of the soakpit system. In most places the soil is unsuitable for soaking, water tables have risen and soakpits are overflowing. With the density of population reached in Orangi (probably 200 persons per acre), and the amount of water being used (probably 4 gallons per person per day), there is no alternative to non-leaking underground sewerage and drainage pipe lines for waste disposal.
- c. The third impelling motivation is the high incidence of diseases like malaria, diarrhea, scabies and typhoid. These are not only painful, but are also financially disastrous. Young children are frequent sufferers. Families have begun to perceive the relationship between the absence of sanitation and the presence of disease. They have realized that it is preferable to make a small investment in sanitation rather than go on paying through their nose to the doctors (mostly quacks).

d. The annoyance of the bhangi, the overflowing soakpits, and losses caused by disease could have resulted in mere frustration, if the homeowners had not been shown an easily constructed low-cost sanitation model, the result of two years of research and extension by OPP. Infact, the lowering of cost and the simplification of construction, through social organization and technical extension, has been the critical motivation. Approximately the average cost per house (on a 100 sq.yard plot) is now as follows:

- \* Inside the house : sanitary latrine = Rs 200
- \* An interceptor septic tank (haudi with T-pipe outlet to the manhole) = Rs 200
- \* Per house contribution to the underground sewerage line in the lane (6" pipe, manholes for every 4 houses) Rs 300 to Rs 400

Total cost to a homeowner at 3 levels (house, lane, secondary drains) comes to Rs 800 to Rs 950.

To families who have invested between thirty to fifty thousand ruppes or more in a house on a 100 sq. yard plot the cost of 3 level sanitation, ie, an investment of less than Rs one thousand, appears quite reasonable being only 2% to 3% of the cost of their houses.

5. Another motive : Danger of waterlogging

Since the arrival of abundant water from the Hub dam, low lying areas of Orangi are threatened by the menace of waterlogging. The dimensions of this new menace are described in section three of our report. Here we may mention that homeowners are anxious to prevent damage to the foundations and walls of their houses caused by the rising watertable. They have invested all their savings in these buildings. They also clearly realize that waterlogging can be controlled only through a leakproof, quick flowing drainage. Therefore they are ready to make a further 2% or 3% investment to safeguard their lifetime saving. Awareness of the dangers of waterlogging has speeded up the construction of secondary drains. Previously we were generally told that the secondary drains should be built by the KMC. Now the residents of waterlogged areas are willing to take the matter into their own hands. Uncertain of being saved by a step-motherly KMC the homeowners are now willing to save themselves.

## 6. Varied progress

While confirming on the whole the fact of steady progress, a tour of the 28 mohallas also shows that the pace of work has varied in different mohallas.

- \* In some mohallas work has proceeded rapidly in a coordinated and comprehensive manner. Old examples are Mujahid colony and new examples are Baloch goth, Qaim Khani chowk and Noorani mohalla.
- \* In other mohallas there has been delay in starting the work, or suspension after improvement of a few lanes. However work has been resumed again and the target of improving every lane, and the completion of a coordinated sewerage system has not been abandoned. Examples are Alfatah and Alasadaf colonies (old) and Mairajunnabi and block B (new).
- \* The chief condition for quick and comprehensive work seems to be the quality of social organization. For instance in Baloch goth and Qaim Khani chowk, it is the existence of a closely knit clan or bradri with strong leaders. In Mujahid colony it is the existence of an active welfare association.
- \* Reasons for delay and suspensions are many: lack of cohesion, disputes, absence of good leaders. But one painful cause is the inability of the residents to pay their contribution in one instalment. In fact it is amazing how the work is kept going by scrounging funds by all sorts of devices. It is also amazing how the disputes are finally settled, the reluctant neighbours are persuaded, or the defiant ones are subdued and once more the delayed or suspended work is resumed.
- \* Mairajunnabi, block B, and sector 13F furnish examples of localities where the absence of drainage made the condition of the lanes and the houses unbearable and the residents were ultimately compelled to tackle the problem. It is obvious that on account of the vast volumes of waste water flowing out of the houses, the construction of sewer pipelines cannot be conveniently postponed.
- \* There is variation in the quality of work. In most lanes the work that is presently being done is of good quality. But examples of poor work can also be found.

One nagging problem is the refusal in some lanes to build T-handies (interceptor chambers) and instead to make direct connections from the latrines to the manholes. This is specially true of the old gutter lines. Another problem is the damage to manhole covers. At least 5% of the old covers are broken. But I saw two encouraging signs : (a) Most new constructions are being done according to OPP's specifications including T-handies for most houses. (b) The gutter lines are not allowed to remain choked. They are cleaned by collective effort. I came across several instances where contributions have been raised for making new manhole covers to replace the broken ones. Having made the sewer lines themselves, the lane residents have also learnt to maintain them.

7. A Sewerage system for Orangi: KMC should make a master plan

The residents of Orangi are willing to build, with their own money, and under their own management, a sanitation and drainage system at the three levels of the house, the lane and the collector or secondary drain. They are demonstrating the power and resourcefulness of popular participatory planning. But the system needs to be consummated by the KMC by preparing and implementing a master plan for the main nalas, the external drains, and the treatment plants. Keeping in view the menace of waterlogging, the reconstruction of the nalas should be started without any delay. KMC should recognize and reward the great efforts which the Orangi people are making in spite of their meagre resources, low incomes and severe economic hardship.

8. Recognition by KMC

Of course the best recognition by KMC of the popular planning by the people of Orangi would be an early implementation of a sewerage master plan for Orangi so that the pattern becomes complete at all the four levels. KMC can also officially acknowledge the peoples expenditure on lane and secondary drains as legitimate land development cost, and therefore deductible from the lease payment. Such an official acknowledgement will stimulate even greater participation.

Construction of lane and secondary drain sewerage through popular participation will have three advantages:

- \* It will be extremely economical;
- \* it will be done quickly; and
- \* the maintenance will be assured.

9. Enforcement of sanitary regulations

KMC's sanitary inspectors have generally overlooked violations of sanitary regulations. However they should now try to enforce atleast some of the regulations. There is a much greater awareness in the improved lanes of the need for control of filth. But in some lanes individual families are inclined to break the rules. If sanctions are applied against these negligent few, the sanitation conscious majority would be pleased and supportive. Similarly the garbage trucks should become more active.

Section III : Waterlogging menace in Orangi

1. A very serious menace is spreading in Orangi. This is waterlogging. In the past two years the problem has become acute. If steps are not taken immediately to remove the causes of waterlogging, the problem will become more and more acute. It is like a cancer which will grow rapidly. It cannot be ignored any longer. On the contrary it should be treated at once. While organising the construction of underground sewerage lines in the lanes, OPP workers have realized the seriousness of the problem of waterlogging. Certain sectors have been specially observed to ascertain the nature of this problem, and the extent of damage done by waterlogging. Case studies of sectors 11E, 13F and 5 were made as samples.

Fortunately, OPP's research shows that the problem can be solved, and also that the homeowners are quite willing to make the financial and organizational contribution to solve it at their level. However at a higher level, the KMC and KWSB must also make their contribution to save Orangi from a major disaster caused by the spread of waterlogging in the near future.

OPP has compiled a pamphlet outlining the nature of the problem of waterlogging, its consequences, its causes, and corrective measures. We have written it for the



information of the homeowners of Orangi as well as the councillors and officials of KMC and KWSB. OPP will continue its research and investigation of this problem and publish more pamphlets later on. In the meanwhile this pamphlet has also been translated into Urdu for wide distribution. It has been handed over personally to the editors of some newspapers, who have promised to send their reporters for investigation.

2. The contents of the pamphlet on waterlogging are as follows:

- \* Damages done by waterlogging: damage to houses, roads, health and social relationships
- \* Physical damage to houses: examples
- \* Obstruction to transport and business
- \* Damage to health
- \* Social damage
- \* Causes of waterlogging
- \* Disposal of waste water in Orangi
- \* Soil conditions - with diagram
- \* Supply of water from the Hub dam
- \* Solving the problem of waterlogging
- \* OPP's experimental designs
- \* Case study of waterlogging in sector 5
- \* Case study of waterlogging in sector 11E
- \* Case study of waterlogging in sector 13F

Maps showing designs for sectors 5, 11E and 13F are included, alongwith 16 photographs. The pamphlet is available on request from the OPP's office.

Section IV : Low-cost sanitation. (Perween Rahman)

1. General: Highlights of the quarter - April to June

1.1 This quarter our major preoccupation was the problem of waterlogging. A pamphlet was written, analysing the causes of the problem and its possible solution, drawing the attention of the KMC to expedite the preparation of a drainage and sewerage master plan for Orangi, and trying to persuade the homeowners to construct lane sewerage pipelines as well as the secondary drains for discharging all waste water into the big nalas (see section II above).

1.2 We have been agreeably surprised by the fact that the homeowners are quite willing to make the extra investment in secondary drain. We were afraid that it would be very difficult to persuade them to assume this responsibility in addition to the house and the lane sanitation. But the work on secondary drains is being undertaken extensively. In the month of June, 14 secondary drains were under construction in 11 mohallas:

Sector 13D	1
Sector 13G	1
Noorani mohalla	2
Usmania colony	1
Sector 12L	1
Merajunnabi colony	2
Mominabad	2
Sector 5	1
Qaim Khani chowk	1
Sector 11A	1
Sector 14B	1

1.3 The concept of starting from the micro level is proving to be practical. We are now witnessing a slow but steady progress from the lanes to the secondary drains, to the complete mohalla drainage unit. The technical progress is accompanied by the growth of social organisation.

- 1.4 An indication of the growing popular commitment to sanitation is provided by the comparison between last year's and this year's work in the month of Ramzan. During last Ramzan there was practically no work, while this year people in 33 lanes were eager to complete their gutter line before Eid.
- 1.5 A significant factor is the growing participation of women. In two lanes women have been appointed as managers. In others they have come out of their homes to supervise the work in the lane, and in some cases have worked with their own hands. This adds a new dimension to the sanitation programme. If the women come forward, supervision would become more efficient, because the women managers, unlike the men, are constantly present. In their presence the masons cannot be careless.
- 1.6 Secondary drains in Mominabad and sector 5 are being constructed, according to OPP's design, by KMC contractors. Councillor Afza Shahid has asked the contractors to work under OPP's supervision. While the work in Mominabad has been done according to specification, the work in sector 5 is of poor quality and defective. Here the contractor often ignores OPP's instructions.

## II. Work from July 1983 to June 1984

### Survey completed

- (a) From July 1983 to March 1984:  
30 mohallas / 99 lanes (see 17th progress report, page 8)
- (b) From April to June 1984:
- |                 |           |
|-----------------|-----------|
| mohallas 16     | Lanes 255 |
| Sector 5        | 50        |
| Sector 11E      | 47        |
| Gabol colony    | 64        |
| Usmania mohalla | 16        |
| Neorani Mohalla | 3         |
| Islamnagar      | 13        |

Sector 13G	13
Sector 13J	20
Sector 13H	11
Islamia colony	5
Mominabad	6
Sector 11A	3
Sector 10	1
Alfatah colony	1
Sector 12	1
Sector 14B	1

(c) Cumulative: Surveys completed in one year from July 1983 to June 1984:

Total 46 mohallas / 354 lanes

Note: The shift from individual lane plans to plans for the whole sector or mohalla can be seen clearly in the case of sectors 5, 11E, Gabol colony, Usmania mohalla, and sector 13J. It took 3 months to prepare the plan for sector 5 and Gabol colony.

Maps, plans and estimates supplied

(a) From July 1983 to March 1984 (see progress report 17, page 9)

24 mohallas / 77 lanes

(b) From April to June 1984

Mohallas 15	Lanes 209
Moor mohalla	1
Qaim Khani chowk	13
Alsadaf colony	1
Bijlinagar	1
Sector 11A	5
Sector 13D	2
Sector 14B	2
Sector 5	30
Gabol colony	42

Sector 11E	47
Sector 13G	13
Sector 13J	20
Sector 13H	11
Noorani mohalla	5
Mominabad	16

(c) Cumulative: From July 1983 to June 1984 (one year):  
39 mohallas / 286 lanes

Details of estimates

(a) From July 1983 to March 1984 (see progress report 17, page 9)

* No. of mohallas	24
* No. of lanes	77
* No. of houses	1,582
* Length of sewerage lines	25,017 rft
* No. of manholes	850
* Total estimated cost	Rs 488,835

Averages:

Cost per house	Rs 302.65
Cost per rft	Rs 19.58

(b) From April to June 1984

* No. of mohallas	15
* No. of lanes	209
* No. of houses	3,409
* Length of sewerage lines	57,552 rft
* No. of manholes	1,944
* Total estimated cost	Rs 1,403,793

**Averages:**

Cost per house	Rs 411.79
Cost per rft	Rs 24.39

(c) From July 1983 to June 1984 (one year)

* No. of mohallas	39
* No. of lanes	286
* No. of houses	4,991
* Length of sewerage line	82,569 rft
* No. of manholes	2,794
* Total estimated cost	Rs 1,892,628

**Averages:**

Cost per house	Rs 379.20
Cost per rft	Rs 22.92

**Construction work in progress**

(a) July to September 1983 = 4 mohallas / 31 lanes  
October to December 1983 = 11 mohallas / 22 lanes  
January to March 1984 = 12 mohallas / 25 lanes  
(see progress report 17 page 10)

(b) Work in progress: April - May - June 1984

Mohallas	Lanes
18	57
Sector 10	1
Qaim Khani chowk	6
Alsadaf colony	2
Noorani mohalla	4
Sector 14B	1
Sector 13D	1
Sector 11A	4
Islamia colony	4
Sewan colony	3
Medina Basti	2

Noor mohalla	8
Merajunnabi colony	6
Sector 12L - Baloch goth	8
Mominabad	2
Sector 13G	2
Sector no.5	1
Alfatah colony	1
Sector 12L	1

These tables show how the volume of work has increased.

### III. Supervision

Some additional problems encountered in this quarter were:

- (a) Maintenance of safe distance of sewerage line from water lines.
- (b) Maintenance of proper slope in long length of lines where the natural slope is small.
- (c) Coordination of slopes in secondary drains.
- (d) Leakage from joints.

Instructions, both verbal and written, are being given to lane managers and our own workers.

### IV. Extension

- (a) More leaflets have been written and distributed. These are:

"Save water lines from sewerage"  
"How to make the sewerage line safe in main roads"  
"Strong manhole covers"  
"Secondary drains sector 13"  
"Secondary drains - Gabol colony"  
"Filling up of T-haudies"  
"Base of manhole"

- "Earth filling for gutter line"
- "Method of filling"
- "Safeguarding the septic tank"
- "Method of manhole construction"
- "Connection of standposts waste water to manhole"

This brings the total of leaflets written to 29.

(b) New case studies have been written on the following:

- "Bad work in Sewan colony"
- "Good work in sector 10"
- "Good work in Islamnagar"
- "Waterlogging in sector 13F"
- "Waterlogging in sector 11A"
- "Waterlogging in sector 5"
- "Waterlogging in North Nazimabad"
- "Good manholes in Noor mohalla and Alsadaf colony"
- "Good work in Baloch goth"
- "Work in Merajunnabi"
- "Good work in sector 13G"
- "Problems and solutions in Noor mohalla"

This brings the total of case studies written to 23.

(c) New profiles have been written on the following  
(total = 29):

- Mr Khusha Khan
- Mr Aziz Khan
- Mr Mohammed Shareef
- Mr Haji Nisar
- Mr Ghulam Rasool Butt
- Mr Aqeel Zia
- Mr Mohammed Jafar
- Master Ghulam Mohiuddin
- Mr Najmuddin
- Mr Habibur Rahman Zia



- (d) Masons training - One more course was organised.
- (e) An album of photographs has been prepared and copies made. Work on some secondary drains has been video-taped.

V. Research

- (a) In view of the great demands, more shutterings for constructing T-haudies and manholes were made.

- (b) T-haudies

One T-haudi has filled up in Husainabad. It has not been cleaned by the residents. They are willing to pay for the services of a bhangi, but are not willing to handle the sludge themselves. We are trying to secure this service for them. The cleaning of filled up haudies is a problem whose solution has to be arranged.

However two haudies in Haryana were cleaned by the residents themselves and the sludge poured into the big nala.

- (c) Leaking of pipe joints

A small research was conducted to check the leakage. It was found that if our recommendations were followed the joints did not leak. It was also discovered that the joints were sealed by the powdery sludge and the grease flowing through the pipes. Trouble is caused only when the mason do not follow instructions.

- (d) Waterlogging

One pamphlet on waterlogging has been published. More research is being conducted.

- (e) Design of secondary drain with correct slope and limiting velocity. A research report has been prepared by NRD students Mansoor and Saleem.

Section V : Women's Programme

1. Change in approach

During the last six months much time was spent on the formation of women's groups and on trying to persuade them to hold regular meetings. The progress was very slow. Only nine groups were formed and in most of them the attendance was not punctual. Meetings were entirely dependent on the presence of OPP's training team, and the team had to wait for an hour or more for the arrival of the members. Thus the team spent one whole working day in collecting and advising one group only. Very often the meetings were unattentive to training and turned into gossip or grouse sessions. This is not the first time that our hopes of establishing stable groups and regular training meetings have ended in disappointment. Evidently at present conditions are too anarchic and our staff resources are too meagre to establish such groups.

In June we decided to change our approach. Instead of formation of groups we will now just hold lane meetings. Our training team consisting of the Lady Doctor, LHV, and gardening expert, will visit the lanes, where sanitation work has either been completed or is in progress. They will contact an activist, generally the lane manager, and the women will be invited to assemble in a house in the lane.

The "package" offered to them will be as follows:

- \* Further training about sanitation
- \* Leaflets and training about prevention of diseases
- \* Leaflets and training about low-cost nutrition
- \* Advice about water purification and supply of sulphur packets
- \* Immunization service for 6 diseases: polio, diphtheria, whooping cough, TB, typhoid and measles
- \* Supply of seeds and instructions for kitchen gardens

This lane meeting will be made brief and businesslike, so that the training team may be able to visit several lanes in one working day. Followup visits will be made next month or earlier if possible. Records of meetings with the number of attendance will be kept on cards, so that we may measure the interest and stability of the lane group. Figures of immunization, kitchen gardens, and water purification will also be compiled on lane basis to provide a statistical basis for the evaluation of the acceptance of the package by the lane group.

## 2. June figures for women's meeting

Following the new approach 16 lane meetings were held at the following places (figures in bracket show the number of women present):

- |                       |                             |
|-----------------------|-----------------------------|
| * Muslim Ideal school | * Kanwal centre (6)         |
| * Sector 5 (4)        | * Work centre sector 3 (12) |
| * Alsadaf I (40)      | * Alsadaf 2 (6)             |
| * Hanifabad (7)       | * Quaid colony (14)         |
| * Sewan colony (6)    | * Mominabad (4)             |
| * Azadnagar (12)      | * Mujahid colony (8)        |
| * Faqeer colony (12)  | * Sector 13G (9)            |
| * Noor mohalla (11)   | * Sector 12L (10)           |

Thus on 16 working days 177 women were contacted in 16 lanes, or perhaps from more lanes, and the package of advice explained to them. As compared to this number, the number of meetings held in April was 6, with a total of 109 women, and in May, 10 meetings were held with 139 women. We hope that the numbers will increase on account of the new approach and the advice imparted more extensively. There is no lack of motivated women as the sanitation work is always going on in 20 to 30 lanes every month.

## 3. Training in prevention of diseases

Leaflets have been printed on most of the common diseases, like diarrhea, malaria, scabies, measles, TB, influenza. These are distributed during the training lectures, besides other leaflets explain sanitary and hygienic practices, water purification, low-cost nutrition etc. Posters and leaflets on EPI (preventive immunization) are also being distributed. Whether the educative effort is bearing any fruit will be known after some time has elapsed and the incidence of disease ascertained through proper surveys. Simple water purification through putting a piece of sulphur in the water pots seems to be quite popular. In the month of June alone 38 packets were purchased by the women present in the meetings.

## 4. Immunization

Immunization is also quite popular. During June 177 children were given 405 inoculations in 15 mohallas as follows. (Figures in bracket are the number of children oblique the number of inoculations):

- |                       |                      |
|-----------------------|----------------------|
| * Alsadaf 1 (30 / 71) | * Alsadaf 2 (8 / 21) |
|-----------------------|----------------------|

- \* Hanifabad (12 / 28)
- \* Qaid Awam colony (16 / 34)
- \* Sewan colony (2 / 6)
- \* Azadnagar (20 / 49)
- \* Bijlinagar (11 / 33)
- \* Sector 13G (17 / 34)
- \* Labourabad (2 / 4)
- \* Sector 5 (6 / 10)
- \* Muslim Ideal School (16/36)
- \* Mominabad (3 / 4)
- \* Mujahid colony (3 / 6)
- \* Faqeer colony (21 / 43)
- \* Noor mohalla (10 / 26)

In May 135 children were given 289 inoculations in 7 centres - Hanifabad, Sewan colony, Azadnagar, Faqeer colony, Bijlinagar, Mujahid colony, and Labourabad.

In April 179 children were given 398 inoculations in 8 centres - Sector 11½, Hanifabad, sector 10½, Faqeer colony, Sewan colony, Bijlinagar, Labourabad and Mujahid colony.

In old centres approximately 200 children have been given the full course. Exact figures can be calculated from the detailed records which are being kept according to official directions.

##### 5. Kitchen gardens

In the month of June, during the women's meeting, 108 women, in 11 mohallas have taken seeds and instructions for growing vegetables in their homes. These mohallas are as follows:

- \* Noorani mohalla (21)
- \* Alsadaf colony (18)
- \* Sector 11A (7)
- \* Azadnagar 1 (11)
- \* Sector 5 (7)
- \* Azadnagar 2 (4)
- \* Sector 5 (6)
- \* Mairajunnabi (15)
- \* Alsadaf 2 (7)
- \* Hanifabad (6)
- \* Bijlinagar (6)

The number of homes participating in the gardening programme was 170 in December 1983, and 211 in March 1984. During April and May 1984, 61 more participants joined and during June 108 more participants joined the programme. The total number of participants is now 380.

One indicator of active interest in gardening is the purchase of potted plants from OPP's little experimental nursery. The following plants were sold during June:

Brinjal	8 pots @ Rs 5	= Rs 40
Mint	3 pots @ Rs 5	= Rs 15
Lemon grass	3 pots @ Rs 5	= Rs 15
Grape vines	8 pots @ Rs 8	= Rs 64
Cardamom	8 pots @ Rs 4	= Rs 32
Pan vines	1 pot @ Rs 5	= Rs 5
Total	31 pots	= Rs 171

The number of purchasers was 29. The potted plants were sold in the women's meetings.

Testing of seeds is carried out in our experimental nursery on the roof of our office. The attempt to grow mushrooms has proved unsuccessful. We may soon send our forester for training to Faisalabad University.

The experiment of poultry farming in 20 bird cages at the home of Inamullah, our forester, and Mahmud Vernalvi, manager gardening programme, is providing very useful data concerning the cost of feed, production of eggs, care of the birds and their health.

Three birds have died in each place. However the production of eggs is steady at an average of 16 eggs daily in each cage. In spite of the low prices of eggs during the summer months, there is still a slight margin of profit. But we have come to the conclusion that the care of the birds requires too much sophistication, and therefore the model cannot be recommended for wide duplication.

#### 6. Health survey

In May and June, 60 students of the Aga Khan Medical College, under the guidance of Dr Fouzia Qureishy, conducted a health survey in several Orangi mohallas. The students came in groups of 30 every Tuesday and Wednesday and conducted house to house survey from 10 am to 4 pm. As there were many girl students also they could interview the housewives inside the homes. The survey was completed in six weeks. Its results are being tabulated. We may be able to present them in our next report.

Section VI : Economic programme

1. Research findings

Four months of investigation and experimental efforts have given us a few insights in respect of a supplementary income programme for needy women.

(a) Karachi has become a big centre for the garment industry. One segment of this industry is highly sophisticated and mechanised. It produces articles like shirts etc. for the export market. These mechanised factories employ a small number of female workers within their premises, but do not depend on parttime work in homes. The other segment caters for the cheap export markets as well as the home market. A large number of articles are also produced - children's garments, shopping bags, towels, sundresses, maxis etc. Such factories employ fulltime male and female labour for part of the work, but also engage contractors who in their turn engage parttime home workers.

(b) There are dozens of contractors who bring piece work from the factories and the exporters and distribute it to a large number of Orangi women, collect the work from them, and pay their wages on per piece basis. Wages for cheap garments are quite low. For the women working parttime in their homes the wages are further depressed because:

- \* The contractor keeps a big percentage (often 50% or more) for himself out of the exporter's rate; and
- \* because a large cut is made for mechanical work which cannot be done in individual homes (eg, cutting, overlook etc.).

(c) When we contacted some exporters and factory owners, we found them sympathetic. However they insisted that in order to get work from them OPP should be in the same position as a contractor. Its centres should possess the necessary supporting machines. They should be equipped and organised like a contractor's establishment to ensure punctuality and quality of production. If OPP could sponsor properly equipped and well

organised work centres, the garment magnates are ready to supply enough work.

- (d) With regard to execution of work by women with their own machines in their own homes, through our experience of running two centres, one in sector 5 and the other in sector 11, we came to the following conclusions:
- i. To ensure quality and punctuality is not easy. Most parttime workers are inclined to be both slovenly and tardy.
  - ii. There is continuous grumbling about wages, especially in the beginning. There is neither any loyalty to OPP nor any sense of cooperation among themselves.
  - iii. The month of Ramzan and Eid provided a good excuse to the women for suspension of work, just when the manufacturers were pressing us hard to deliver in time.
  - iv. OPP could secure work for the centres not from the exporters or manufacturers, but only from contractors. OPP therefore was in the position of a subcontractor. Moreover as it did not possess supporting machines (overlock, juki, cutting) it got only stitching jobs, and was given low rates and short date lines.
  - v. In spite of all the handicaps, OPP's new experimental economic programme, started in March 1984, has been able to provide the following wages to approximately 50 women workers in its two centres:

March - April	Rs 6,000
May	Rs 3,067
June	Rs 2,233 (month of Ramzan)
Total	Rs 11,300

## 2. New setup

- (a) The centre in sector 5 has been furnished with the following machines:

Overlock 1  
Juki 2  
Sewing machines 10

This has required an investment of Rs thirty thousand. The organiser, Mrs Zahida Haq, has given 3 rooms of her house for the centre. It is very conveniently located. Upto 10 women can work in the centre itself, and another 50 women could be supplied with take home jobs.

(b) Agreement has been made with contractor Mohammad Hafeez, who already has a 4-year old establishment in Hanifabad. He has been giving jobs to 35 women, but as he did not have an overlock machine, he was dependent on other contractors who charged exorbitantly for the overlocking. OPP has supplied him an overlock machine and 6 electric sewing machines on a hire purchase basis. In return Mohammad Hafeez will:

- \* Increase the number of his clients to 60.
- \* Report to OPP the number of workers and wages paid every month.
- \* Deduct only a reasonable percentage from the wages for his establishment.
- \* Coordinate with the OPP's centre in sector 5 so that work may be exchanged and all the machines are fully utilised.

We have intentionally chosen to include a private contractor in order to make a comparison between two kinds of management. The next six months will show the results of these experimental approaches.

(c) Contacts are being made with the exporters and manufacturers by the manager and assistant manager of the economic programme. With the establishment of two properly equipped centres, one in sector 5 and the other in Hanifabad, they hope to secure large orders directly.

### 3. Other economic programmes

(a) Consumer cooperative is proceeding steadily with transactions of approximately Rs ten thousand per month. (For details see Orangi quarterly). A survey of the opinion of the members is being conducted.



- (b) Gardening: Growing of vegetables in the homes is becoming very popular. Recently we have found that some of the homes have started selling their surplus produce. In one week of June Mrs Sohail Ahmed sold her vegetables for Rs 47 (see story in Orangi quarterly). In many homes the daily income is more than five rupees.

Section VII : Miscellaneous

1. Mr Sami Mustafa has written "a case study in local participation and community development". It describes OPP's methodology for the low-cost sanitation model, and how it has evolved gradually. Reasons for making the lane as the unit of organisation are outlined. Motivations which have made adoption easy are described, as well as the management and implementation by the lane residents. OPP's method of research, extension and supervision is explained fully. The factors which promote self-management and self-finance are analysed. It is pointed out how people's consensus is created and local know-how is developed. Finally it is shown how larger units are growing to manage the secondary drains.

Mr Mustafa's case study is an excellent summary of OPP's research and development effort, and a useful benchmark of its present methodology. The 29 page pamphlet is available on request from OPP's office.

2. The Director OPP was invited by the AKRSP as a consultant, for a third visit, from April 17 to April 30. The report of this 3rd visit is also available on request from the OPP office.

3. Many other invitations are being received:

- (a) For Keynote address to APWA conference of Quetta.
- (b) For a katchi abadi improvement conference at Bandung.
- (c) Seminar on urban development, Administrative Staff College, Lahore.
- (d) Seminar on rural development, Peshawar Academy.

The seminar at Bandung will be attended by Ms Perween Rahman and Mr Sami Mustafa. The Director will write papers for the Lahore and Peshawar seminars.

Section VIII (1) : Financial statement June 1983 - May 1984

Receipts from BCCI Rs 2,000,000

Disbursement	Staff	Operation	Total
<b>I. General</b>			
1. Central office	48,074	87,907	135,981
2. Transport	80,253	153,063	233,316
3. Administration	102,632	-	102,632
4. Budget and accounts	89,105	-	89,105
5. Research and evaluation	61,613	-	61,613
6. Library and documentation	13,440	4,752	18,192
7. Meetings and conferences	-	14,477	14,477
8. Demonstration and experiments	-	39,678	39,678
9. Training	-	33,832	33,832
Total	395,117	333,710	728,828
<b>II. Publication</b>			
1. Grangi	46,419	25,774	72,193
2. Other publications	-	102,138	102,138
3. Audiovisual	-	20,499	20,499
Total	46,419	148,411	194,830
<b>III. Consultants</b>			
	78,459	-	78,459
<b>IV. Special programme (a) Low-cost sanitation</b>			
1. Central office	104,234	20,085	124,319

Disbursement	Staff	Operation	Total
2. Sanitation I	46,209	-	46,209
3. Sanitation II and III	65,052	3,541	68,593
Total:	215,495	23,626	239,121
(b) Women programmes	51,656	-	51,656
(c) Mohalla Tanzeem	60,970	-	60,970
(d) Gardening	56,499	-	56,499
V. <u>Economic programme</u>	-	102,697	102,697
VI. <u>Grants</u>	-	6,000	6,000
VII. <u>Capital expenditure</u>	-	357,174	357,174
VIII. <u>Provident and medical fund</u>	-	97,820	97,820
Grand-total	904,615	1,069,440	1,974,056

Section VIII (2) : Budget and actuals

Head	Budget 1983-1984	Actual 1983-1984	Budget 1984-1985
I. <u>General</u>			
1. Central office	106,000	135,981	129,812
2. Transport	257,160	233,316	258,432
3. Administration	73,840	102,632	85,165
4. Budget and accounts	99,000	89,105	100,164
5. Research and experiment	86,000	61,613	87,928
6. Library and document- ation	30,000	18,192	29,200

7. Meeting and conference	13,000	14,477	19,000
8. Demonstration and experiment	40,000	39,678	40,000
9. Training	25,000	33,832	25,000
<b>Total</b>	<b>730,000</b>	<b>728,828</b>	<b>774,701</b>
<b>II. <u>Publication</u></b>			
1. <u>Orangi</u>	93,000	72,193	104,724
2. Other publications	25,000	102,138	50,000
3. Audiovisual	15,000	20,499	20,000
<b>Total</b>	<b>133,000</b>	<b>194,830</b>	<b>174,724</b>
<b>III. <u>Consultants</u></b>	<b>100,000</b>	<b>78,459</b>	<b>100,000</b>
<b>IV. <u>Special programme (a) Low-cost sanitation:</u></b>			
1. Central office	133,719	124,319	122,888
2. Sanitation I	30,600	46,209	49,704
3. Sanitation II and III	75,381	68,593	75,408
<b>Total</b>	<b>245,760</b>	<b>239,121</b>	<b>248,000</b>
(b) Women's programme	56,568	51,656	80,888
(c) Gardening	58,440	56,489	58,764
(d) Mohalla Tanzeem	103,200	60,970	96,168
<b>V. <u>Economic programme</u></b>	<b>121,000</b>	<b>102,697</b>	<b>100,000</b>
<b>VI. <u>Grants</u></b>	<b>10,000</b>	<b>6,000</b>	<b>6,000</b>
<b>VII. <u>Capital expense</u></b>	<b>337,800</b>	<b>357,174</b>	<b>258,803</b>
<b>VIII. <u>Provident and medical fund</u></b>	<b>104,240</b>	<b>97,820</b>	<b>100,000</b>
<b>Grand total</b>	<b>2,000,000</b>	<b>1,974,056</b>	<b>2,000,000</b>

19th progress report  
July-September 1984

The Pakistan Administrative Staff College held a seminar on management of urban development and services to the poor, 2-5 September. The paper which I read there, "OPP's three programmes" constitutes the 19th progress report. Another paper read by Mr Arif Hasan, "Orangi Pilot Project - Community participation and modification in sanitation technology", can be sent on request.

19th progress report

July-September 1984

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**Bibliography:**

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3. Dr Jorge Anzorena's report, February 1984
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5. Waterlogging menace in Orangi, June 1984
6. Benchmark survey of sanitation programme in 28 mohallas. Available from Orangi Pilot Project office.

## Section I : Introduction

### 1. OPP and its documentation

OPP began in April 1980. It was sponsored by the Bank of Credit and Commerce International. Keeping in view of OPP's experimental nature all work is being carefully documented. A quarterly progress report in English, and an Urdu journal called Orangi, is published regularly. The report describes the approaches, and the subsequent changes in the approaches, the action research and its findings, the objectives and their fulfilment as well as their non-fulfilment. It contains many statistical tables and financial statements. The bi-monthly Urdu journal displays a more detailed picture. Each issue contains many case studies of actual work and profiles of workers. It reflects their opinion, hopes, achievements and frustrations. So far eighteen progress reports have been written. Copies of the English reports and the Urdu journal are available from OPP's office. Besides the publications, numerous files and records containing sociological and technological data are also available.

### 2. Two basic features

I will present to you, not the tedious details which can be found in the publications, but only a brief review of three OPP programmes. However, first I must point out two basic features:

- a) OPP is a non-government organisation (NGO); and
- b) its aim is experimental social research.

Thus, on the one hand, as an NGO, OPP has obvious limitations. It has no regulatory powers. Its role is purely advisory. It cannot make or enforce any master plan. It has neither the capacity nor the desire to set up parallel services or compete with official agencies. At best it performs a supplementary role.

On the other hand, as a research enterprise it is not the prisoner of conventional methods; it is free to test other methods and discover new social and technical models.

### 3. Model of popular participation

OPP's research has one definite basis: its chief aim is to promote popular organisation and popular participation. Its endeavour is to discover such organisational models as the people will accept and adopt readily and widely. If evaluation proves that a model is



not readily acceptable it is either revised or discarded.

The test of popular adoption is a very severe test. In a low-income area cost is the critical factor for acceptance. It is an essential condition for all models.

During the last four years, after many trials and errors, OPP is at present engaged in developing three models:

- a) low-cost sanitation programme;
- b) women's health education programme; and
- c) women's work centre's programme.

I will now summarise the current position of these three programmes.

## Section II : Low-cost sanitation

### 1. Primary problem not house building

Orangi is a recent settlement. Here the first houses were built in 1965. Initially KDA wanted to plan a colony over 1300 acres. But a flood of immigrants began to pour in after 1971, and the township now extends over more than five thousand acres, planned as well as unplanned. And more houses are being built all the time.

As we became familiar with the conditions of Orangi we realised that here house building was not the primary problem. In fact a hundred thousand houses have already been built, not only without any assistance from official agencies but in defiance of their authority. We saw good reasons to believe that no official or commercial agency could make such houses more cheaply or more quickly. We also saw that almost every homeowner was dedicated to the improvement of his real estate, and gradual improvements were continually taking place.

### 2. Primary problem - sanitation and sewerage

To us the primary problem appeared to be sanitation and sewerage. Individual owners built houses but they did not build sewers. The filth from the houses was discharged

into the lanes. It is easy to imagine the condition of these lanes when the density of population reaches two hundred persons per acre and every day 35 million gallons of water are being used while there is no drainage and sewerage system. In a few years a newly settled suburb can become a festering slum.

In Karachi there is no lack of individual initiative. But most collective work is undertaken either by official or commercial agencies. In the case of sanitation the price demanded by these agencies is beyond the reach of dwellers of katchi abadies. We came to obvious conclusion that social consciousness and social cooperation alone could create alternate agencies for low-income people. To our surprise we found that many Orangi residents are ready to create their own agency.

### 3. The dilemma of sanitation in Orangi:

Our investigation revealed a dilemma true of all katchi abadies. The official agency told us that they could not construct a conventional underground sewerage in Orangi because the people were too poor to reimburse its cost. The agency operated by charging development expenses from the beneficiaries. It did not possess funds for gratuitous distribution. The people of Orangi, on the other hand, believed that it was their fundamental right that their drains and sewers should be built for them gratuitously. Their leaders have assured them that this boon will soon be conferred on them.

In the meanwhile filth flowed into the lanes, destroying their health and comfort, and the ground water table kept rising, spreading the menace of waterlogging in the low-lying areas.

### 4. Organising a low-cost sanitation programme:

We explored the possibility of a low-cost sanitation programme. Its gradual evolution is described in the quarterly reports. A more succinct description has been written by Dr Jorge Anzorena in his newsletter (Feb. 1984) and by Sami Mustafa - "A case study in local participation and community development", June 1984.

The first step was to set up an office and collect a team of social organisers and technicians.

Research was undertaken to analyze and then reduce costs. Technical research simplified the designs and streamlined the methods of construction; eg, by making standardised steel shutterings for septic tanks, manholes etc.

The lanes were surveyed, levels were ascertained, maps, plans and estimates were prepared.

Simultaneously, social organisers explained to the homeowners in the lanes that for the sake of their health and well-being they could themselves construct a sanitation system which was neither too expensive nor too difficult for them to build. They could get all the technical guidance they needed from OPP and also borrow tools and shutterings. Thus they could manage the construction themselves and they need not pay exorbitant charges to contractors.

#### 5. Applying the research and extension technique

In Orangi OPP has applied the research and extension technique to grapple with the problem of sanitation. We all know the case of small farmers. They are presumed to manage and finance their own farms. However, outside agencies help them with valuable research, supply them with useful information, and guide them with training and demonstration, and provide them with reasonably priced inputs. OPP presumes that low-income homeowners can be helped similarly. It has conducted research to lower the cost of construction. It has carried out detailed and comprehensive surveys. On the basis of its research OPP has provided the lane residents with maps, plans estimates and designs. It has given training and instruction through meetings, leaflets, posters, demonstrations, and visits to improved lanes. When invited OPP's technicians have supervised the work. OPP has loaned sets of tools and standard shutterings.

It is worth noting that the homeowners themselves were quite disgusted with dirt and filth; they did not love it as myths go. The missing factor was social organisation and technical knowledge.

#### 6. Perceptible results

By the application of this research, extension and supervision technique perceptible results have been obtained:

- a) Costs have been drastically lowered.
- b) Homeowners have accepted the responsibility of constructing sanitary latrines in their homes and underground sewerage in their lanes.
- c) They are managing the construction and paying the entire cost themselves.
- d) Self-management and self-financing has resolved the dilemma of costly sanitation.
- e) The dynamic power of popular participation has been demonstrated by a segment of poor Pakistanis.

7. Problem not solved fully

Of course the problem has not been solved fully. There are four levels of sanitation in Orangi:

- a) Inside the home - sanitary latrine
- b) In the lane - underground sewerage
- c) Secondary or collector drains
- d) Main external drains and treatment plants

It has been demonstrated that the residents are willing to finance and construct themselves all sanitary arrangements at the first three levels. At the fourth level, the external drains and the treatment plants must necessarily remain the responsibility of the KMC. These require a master plan, and centralised execution and management. However, I feel sure that the Orangi people would gladly pay, in reasonable instalments, such development charges too, provided they are convinced that the work has been done economically and contractors have not stolen too much money.

8. Some figures

Details about the widespread adoption of the sanitation models, or the motivations for its adoption or the variable progress, are recorded in OPP's quarterly reports, and in a recent benchmark survey of 28 mohallas. I may refer especially to the 15th progress report. Here I confine myself to quoting some cumulative figures:

From October 1981, when the first lane adopted the model, till the end of June 1984,

- a) OPP has surveyed, at the request of the residents, 772 lanes in 89 mohallas; and

- b) it has supplied maps, plans and estimates to 632 lanes.

These 632 lanes:

- \* Contain 12,626 houses
- \* Total length of sewerage lines: 214,075 rft
- \* Total estimated cost : Rs 3,322,892

Average per house contribution upto June 1983 was Rs 318., and from July 1983 to June 1984, it was Rs 379.

Cost per rft was Rs 19 upto June 1983, and Rs 24 afterwards. Surprisingly the benchmark survey indicates that the actual work in the number of lanes exceeds the above figures.

#### 9. Per house cost contribution

Let me quote one more figure. The lowering of cost through social organisation and technical extension has been the main catalyst. Approximately, the average per house cost contribution, at present, is as follows:

- a) Inside the house - sanitary latrine Rs 200
- b) Septic tank/haudi with T-pipe outlet Rs 250
- c) Underground sewerage line in the lane Rs 300 to Rs 400
- d) For secondary drain, where necessary, Rs 100 to Rs 150

Thus the total contribution per house for sanitation works at three levels - house, lane, secondary drain - averages from Rs 850 to Rs 1000.

A surprising number of Orangi residents whose income is quite low are investing such a large amount in one instalment. During April - May - June quarter of this year work was in progress in 18 mohallas in 57 lanes involving approximately 1400 households. Requests for plans are coming in every week.

#### 10. A viable low-cost sanitation model

OPP's sanitation model is less than three years old. But look at the scale of adoption it is not unreasonable to suppose that it is proving its viability. Evidently the residents of a katchi abadi possess material, social, and managerial resources, which can be mobilised through social organisation and technical extension, to build a 3 level sanitation system. Thus the dilemma faced by official agencies - high costs and short funds - can be resolved at least partially.

The need for begging grants and loans from foreign donors may be reduced.

### Section III : Women's programme

#### 1. Organising a women's programme

There is no need for me to repeat platitudes about the crucial role of women. The story of OPP's efforts to promote women's groups, home schools and first aid centres, can be read in our reports. In some respects it is a disappointing story. None of these programmes took roots like low-cost sanitation. Adoption remained very limited. The demands for staff time and other assistance were beyond OPP's capacity.

Since June we are following a new approach, which is fully explained in the 18th progress report. We have realised that at present conditions are too anarchic and our staff resources are too meagre to establish and sustain stable groups. This is not the first time that our hope for the formation of permanent groups have ended in disappointment.

#### 2. Training team and lane meetings

Now instead of striving for permanent groups only lane meetings are held by a training team consisting of the lady doctor, the LHV, and the gardening expert. The team goes to the lanes where sanitation work has been completed, or is in progress. They contact an activist, generally the lane manager, and a woman recommended by him. She assembles the lane women in her home to meet the training team. Experience has taught us that the women are deeply involved in the sanitation programme. There are two reasons for that: in the first place women are more concerned with the problems of health and hygiene; and secondly the sanitation cost contribution comes from household expenses. Hence the sanitation conscious ladies are ready to receive more advice from the training team.

#### 3. The package of advice

The package of advice offered to them is as follows:

- a) Further training about sanitation and hygiene in the home.
- b) Leaflets and training about prevention of common diseases, like diarrhea, malaria, scabies etc.

- c) Advice about water purification.
- d) Leaflets and training about low-cost nutrition.
- e) Immunisation / inoculation service for young children.
- f) Instruction for growing vegetables in the homes and free supply of seeds.

These meetings are short and businesslike. I call it the thelewala (street vendor) approach. One and often two or even three meetings are being held every day. Fifteen to thirty women are present in each meeting. In this way advice is being given to several hundred women every month. Cards are being maintained for follow up visits.

#### 4. Keen interest in immunisation

There is no doubt about these women's keen interest in immunisation. Upto thirty children are brought to each meeting for inoculation. Record cards are handed over to them, so that the children should receive not only the first doze, but also subsequent second and third dozes at proper intervals.

Health conditions in Orangi are terrible. Incidence of disease is extremely high, and so is the cost of medical treatment even by quacks. The treatment of a sick child could often consume a family's entire monthly income. Therefore the motivation for a low-cost health programme (primarily preventive) is present. It has taken OPP a long time to utilize this motivation in a satisfactory manner. The same motivation, ie, the concern about disease, was being utilized for the construction of sanitary latrines and underground sewerage. In fact we have records of several lanes where women were chosen as managers and where they dug and built with their own hands. Now we are utilizing this motivation for giving them training about prevention of disease.

#### 5. Interest in kitchen gardens

Keen interest in growing vegetables in their own homes is also obvious. In July alone 120 women started kitchen gardens. Generally four or five women ask for instructions and seed in every meeting. Orangi is fortunate that most houses are built on plots of 100 to 150 sq. yards. The women always find some space in the courtyard or even grow the plants in boxes or pots. Vines like torai, beans, pumpkins, petha etc. are popular because they climb on to the roof and keep the room cool. Low-income families are suffering from inflation as they are from disease.

Home grown vegetables save money and improve health. However the women needed instruction and the supply of seeds to grow them.

#### 6. Concept of mohalla tanzeem

Low-cost sanitation combined with low-cost health education forms our concept of integrated mohalla tanzeem or neighbourhood organisation. Low-cost sanitation programme has reached an advanced stage while the women's programme is getting into its stride. A few more years of persistent efforts are needed to find out whether the vision of clean homes, sanitary lanes, and health families can become real through organising and training the men and women living in the homes and lanes of a Pakistani katchi abadi or whether our poor people are beyond redemption, and we do not know how to improve their condition.

#### Section IV : Women's work centres

1. Orangi families, especially the women, urgently need sanitation and health programmes. Equally urgent is their need for programmes of economic betterment. Three years ago OPP tried to rehabilitate the Benarsi cloth cottage industry, which is facing a crisis on account of stiff competition from the far better organised Indian industry. Our reports narrate how, in spite of the technological success of its model dye-houses, OPP has to withdraw on account of the lack of social response from the Orangi weavers. Disheartened by the loss of money and time, we decided to keep away from economic programmes. But there was continuous urging in women's meetings for an income generating programme. Five months ago, in March, we agreed to do so. As usual we began with a thorough investigation and a small scale experiment.

#### 2. Garment industry

Our first choice has been the garment industry because Karachi has become a big centre for this industry, and also because a very large number of Orangi women are dependent on it. One segment of the Karachi garment industry is highly sophisticated and mechanised. It produces finished articles for the quality export market. The mechanised factories employ a small number of female workers within their premises and do not depend on parttime work in homes. The other segment caters for the cheap export market as well as for the cheap home market. Such factories employ fulltime male and female labour for part of the work but also engage contractors, who engage parttime home workers.



3. The contractor system

There are dozens of contractors who bring piece work from the factories and the exporters and distribute it to women home workers, collect the finished work and pay wages on a per piece basis. The rate of wages for cheap garment is quite low. For the women home workers the wages are further depressed because

- a) the contractor keeps a big percentage (often 50% or more) for himself out of the exporters rate; and
- b) because another large cut is made for the mechanical work which cannot be done in individual homes.

4. Exporters point of view

When we contacted some exporters and factory owners we found them sympathetic. However they insisted that in order to get work orders from them, OPP should be in the same position as a contractor. It should have centres equipped with the necessary machines, organised like a contractor's establishment to ensure punctuality and quality of production. If these conditions were fulfilled, the garment magates were ready to supply enough work.

5. Work centres

We therefore set up two centres in April and two more in July. As yet we have not been able to get any assignments from the exporters. Only four contractors are giving work for our centres. OPP is therefore in the position of a subcontractor and is getting low rates and short deadlines.

6. In spite of all the handicaps, OPP's experimental economic programme which started in March, has been able to provide the following wages:

March - April	Rs 6,000
May	Rs 3,067
June	Rs 2,233
July	Rs 4,500
Total	Rs 15,800

Many women are coming to ask for work from these centres, but as yet we do not have enough work and machines. It is pathetic to see their disappointment. Requests are being received from other mohallas for new centres. We are trying to persuade the exporters to enroll us on their list of contractors. If we get large orders we will open new centres.

20th progress report

October-December 1984

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## Part I : Low-cost sanitation programme

### 1. Highlights of the quarter

1.1 People's planning of sanitation is proceeding steadily from the lanes to cover the whole sector. This comprehensive planning is taking place in more than a dozen sectors already, and the activists of other sectors are coming forward to do the same in their sectors. We have prepared a case study of this gradual development of people's planning from the lane to the sector in Alfatah colony. Similar progress in some other sectors is also being recorded for publication. Professor George Anzorena specially pointed out the significance of people's sectoral planning during his recent visit (see # 3).

1.2 Another source of encouragement is the new practice by EMC to construct underground sewerage and drainage lines instead of the open surface drains. Several such lines have been constructed in the circles of councillors Afaq Shahid and Mohammad Ahmad Siddiqui. In one interesting case the level of the previous open surface drain was higher than the level of the lanes. The lane people therefore approached their councillor and he has arranged the construction of an underground drain with EMC funds by the side of the open drain, which could not take the discharge from the lane lines laid by the people.

1.3 We are planning to start contact meetings with the activists who have built their lanes. The purpose of these meetings will be to review the work and invite new suggestions and ideas.

1.4 The sanitation section is now trying to coordinate more closely with the women's programme. Joint research is being undertaken for garbage treatment and disposal, improvement of chulas, and control of mosquitoes.

1.5 Starting of research in connection with the design and construction materials of houses is also being considered.

### 2. People's planning of low-cost sanitation

The chronological story of Alfatah describes the gradual development of people's planning of low-cost sanitation, from the lane to the sectoral sewerage plan. It took Alfatah three years to reach this stage. The Alfatah study has been published separately. Copies can be sent on request. The list of contents is given below:

a. Introduction

- \* Vain hopes
- \* Double distress
- \* Self-finance and self-management
- \* Slow progress due to the problem of collector drains
- \* Wider responsibility
- \* KMC's participation

b. The story of Alfatah colony

- \* The problem of sanitation
- \* Work starts and stops
- \* Deadlock
- \* Deadlock resolved by distress
- \* Extent of work in lanes
- \* Extent of work in secondary drains
- \* The remaining lanes
- \* Investment in sanitation

Maps - Alfatah in December 1981, 1982, 1983, 1984.

10 Photographs.

3. Professor Anzorena's observations

In December Professor Anzorena came on his third visit to Orangi and stayed for two days and one night. His impression will be described in his newsletter which we hope to receive later on. He made the following observations to Perween Rahman:

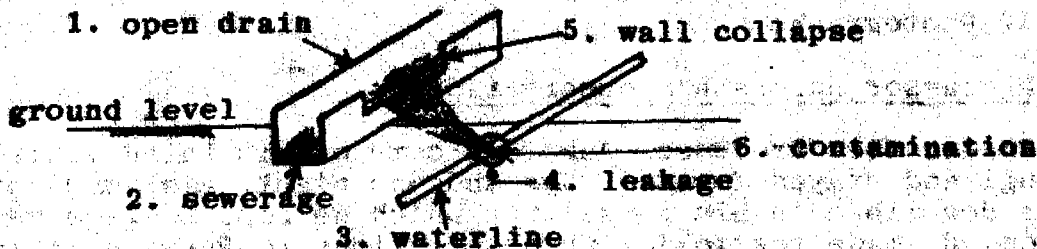
a. KMC's involvement in people's sanitation planning which he saw in Alfatah, Mominabad and sector 5, was a very important development. If this trend can be maintained, and KMC continues this positive role, a model of popular participation and the sharing of responsibility between an official agency and the people will get established.

b. OPP at this stage should not increase its staff as new persons might find it difficult to understand and communicate OPP's basic approach.

c. OPP should now try to spread its work to other katchi abadies in Karachi. It should also try to contact other groups who are working in similar areas, in order to assist these groups as well as to learn from them. Initially some leaflets describing the programme of the project and its results in Orangi should be written and distributed in other katchi abadies. The adoption of OPP's approach in other places will put an end to OPP's isolation, and improve the chances of even more positive involvement by KMC.

#### 4. Pollution of water lines by open surface drains

The sanitation section has recently surveyed some open surface drains in sectors 5 and 10. These drains were built by the KMC ostensibly for storm drainage. But people have also used them as sewers. Now these drains carry large quantities of filth and garbage. In most cases the drains are running parallel to the water lines, which are leaking. In the first place the surface drains are of substandard construction. The substandard walls of the drains are further weakened by the leakage from the water line, and have finally collapsed. Through the gaps of the collapsed walls highly pathogenic waste is pouring into the water lines dangerously contaminating the water supply, as is shown below in the sketch :



This is a very serious situation. OPP has decided to write an illustrated leaflet in order to warn the people of this danger. They will be advised to inform their councillors of the need for safeguarding the water supply by:

a. the proper reconstruction of the drains at an appropriate distance and below the level of the water lines; and

b. the laying of underground pipes for sewerage instead of open surface drains. The underground sewerage lines can easily be laid at lower levels. The leakage from the water lines cannot cause their collapse. Thus the danger of contamination will be eliminated. It may also be pointed out that the constant leakage from the defective water lines in Orangi is seriously damaging the roads.

5. Progress of work

We have been reporting the progress of work under four heads:

a. Survey completed; b. plans and estimates supplied; c. details of estimates; and d. work in progress during the last quarter. A summarised statement is given below. The source of these figures are the records in OPP's office.

Head	Oct. 1981 to June 1983	July 1983 to June 1984	July 1984 to Dec. 1984	Cumulative
a. Survey completed	418	354	102	874
b. Plans supplied	346	286	43	675
c. Details				
No. of houses	7,635	4,991	402	14,028
Length of sewer line (rft)	131,506	82,569	10,431	224,506
Estimated cost (Rs)	2,428,564	1,892,608	192,270	4,513,462

d. Construction work in progress

From July to September 1984 : On 66 lane sewerage drains and 14 secondary drains in 17 sectors

From September to December : On 103 lane sewerage drains and 15 secondary drains in 23 sectors.

6. Field survey

The office records contain copies of the plans and estimates supplied to the lane managers. In order to ascertain the execution of actual work one field survey was made by engineering students in August 1983. A second survey was done in June 1984. In December this survey has been revised and updated. Although some discrepancies might be discovered later, but we believe that they would be of a minor nature. We believe that the latest survey provides fairly accurate figures about the sanitation situation in OPP area in Orangi. The tables and maps compiled from this survey will soon be published seperately. Here we are presenting a few abstracts:

**Table I: Construction of underground sewerage lines in OPP area**

Circle	Sectors	Total lanes	Sewerage constructed	Under construction	No sewerage
121	7	246	73	-	173
122	6	381	178	-	203
123	4	204	54	3	147
124	6	367	232	13	122
126	8	582	63	-	519
128	5	247	59	-	188
129	13	420	217	7	196
130	6	268	144	-	124
131	12	357	230	-	127
<b>Total</b>	<b>67</b>	<b>3,072</b>	<b>1,250</b>	<b>23</b>	<b>1,799</b>

**Table II: Secondary drains (SD) needed and constructed**

Circle	SD needed	SD constructed	In progress	No construction
121	13	2	1	10
122	18	7	2	9
123	8	6	-	2
125	34	24	7	3
126	14	3	3	8
128	10	6	-	4
129	31	17	4	10
130	3	-	-	3
131	8	7	1	-
<b>Total</b>	<b>139</b>	<b>72</b>	<b>18</b>	<b>49</b>

The data in respect of secondary drains is incomplete because in many sectors even the designs for the required drains have not yet been prepared. The awareness about the need for SD's is quite recent. OPP has prepared many of the designs only in 1984 and many more will be prepared in 1985.

**Table III: OPP-supervised sewerage lines**

	Oct. 1981- June 1982	July 1982 June 1983	July 1983 June 1984	July 1984 Dec. 1984	Cumulative
Lanes	59	83	158	158	458
Houses	648	1,174	2,548	2,584	6,954
Length (in rft)	13,702	18,864	42,712	37,719	112,997
Estimated cost (Rs)	205,530	282,960	640,680	565,785	1,694,955

**Table IV: OPP-supervised secondary drains (SD)**

Number	6	15	13	24	58
Length (in rft)	3,077	6,960	5,130	10,375	25,542
Estimated cost (Rs)	60,340	139,200	102,600	207,500	509,640

**Table V: Self-supervised sewerage lines**

Sewerage lines have been constructed by people in 809 lanes without OPP's supervision. In most cases they have followed the general OPP design. Sometimes the quality of the work is poor.

Sectors	40
No. of lane lines	809
No. of houses	13,516
Length (rft)	199,093
Estimated cost (Rs)	2,986,395

After the introduction of underground sewerage lines the lane residents are eager to get rid of the nuisance of the bucket latrine and the overflowing soakpit. Our research shows that on an average each houseowner has spent Rs five hundred for the sanitary latrine and the house connection.



Table VI : Estimated investment in latrines and house connections

	OPP-supervised	Self-supervised	Total
Lanes with sewerage	458	809	1,267
Number of houses	6,954	13,516	20,470
Estimated investment (Rs)	3,477,000	6,758,000	10,235,000

Table VII : Estimated people's investment in sanitation (Rs)

OPP-supervised sewerage lane lines (Table III)	Rs 1,694,955
OPP-supervised secondary drains (Table IV)	Rs 509,640
Self-supervised sewerage lines (Table V)	Rs 2,986,395
Sanitary latrines and house connections (Table VI)	Rs 10,235,000
<b>Total</b>	<b>Rs 15,425,990</b>

If this work had been done at the official contractors' rate its cost would have been at least three times higher: instead of fifteen million rupees it would have been forty-five million rupees. Drastic reduction in cost and extension training has turned sanitation planning at the house, lane, and secondary drain level into a popular movement.

Part II : Women's welfare programme

1. Grant from the Population Division

In June 1983 Dr Sheila McCraw and Mr Cliff Lenton of the British ODA visited the Orangi Pilot Project. After their visit they suggested that the women's programme should be expanded. A proposal was therefore sent to the Population Welfare Division. It remained pending with the division for fifteen months. In September 1984 the Director of OPP met the Secretary of the Population Division and explained the objectives of the women's programme and the purpose of the June proposal. Last November the project's proposal was finally accepted and the first instalment of Rs two lakhs was released in December. According to the proposal the Population Division will give the following grants to OPP for expanding its women's programme over a period of three years :

First year	Rs 250,000
Second year	Rs 115,000
Third year	Rs 130,000

The first year's grant is to be utilised for purchase of vehicles and appointment of a lady doctor and a lady health visitor. The purpose of the project is to discover an organisational model of extensive and reliable access to traditionally segregated women so that they could be educated about health care and family welfare.

2. New budget

The budget for women's programme has therefore been revised and is as follows for 1984-85:

Receipts (Rs)

From OPP budget	80,980
Grant from Population Division	250,000

Disbursements (Rs)

a. Vehicles	150,000
b. Staff	

Lady doctor	48,000
LHV 1	14,400
LHV 2	14,400
LHV 3	14,400
Social organiser 1	14,400
Social organiser 2	14,400
Manager- WW centres	22,080
<b>c. Transport</b>	
Driver	12,000
POL and servicing	13,000
<b>d. Miscellaneous</b>	18,810
<b>3. <u>Disbursements from 1st June to 31st December 1984 (Rs)</u></b>	
<b>a. Vehicles</b>	139,198
<b>b. Staff</b>	
Lady doctor	28,600
LHV 1	1,350
LHV 2	3,217
LHV 3	800
Social organizer 1	1,200
Social organizer 2	1,380
Manager WW centers	13,120
<b>c. Transport</b>	
Driver	-
POL and servicing	528
<b>d. Miscellaneous</b>	-

Vehicles were purchased and new staff was engaged after the approval of the project proposal by the Population Division, and the receipt of Rs two lakhs.

4. Expanded programme

With a new vehicle and additional budget the women's programme has been expanded in December. There are now two teams instead of one. It is now possible to hold two or three lane meetings in a single day. The two teams board the same Suzuki van and are dropped at, and later collected from different meeting places. Figures given in item # 6 indicate how much the contacts have increased. In the next quarter the increase would be bigger still.

5. Secretary's visit

On 29th December Mr Kareem Iqbal, federal Secretary of the Population Welfare Division, spent three hours talking with the OPP staff and also walking in the Orangi lanes. All the three programmes were explained to him: low-cost sanitation, women's basic health and welfare education and women's work centres. He wanted that the data should be recorded accurately, and benchmark surveys should be done carefully in order to provide a reliable measure of progress. He assured us that he was deeply interested in innovative research. He also wanted that OPP's research project should seek coordination with departmental staff. The director OPP suggested that the district officer of Population Welfare should associate himself with OPP's pilot project by coming regularly to a monthly meeting in which work during the last month may be reviewed, and targets may be fixed for the next month. Details for introducing the practice of family planning in the lane meetings, and providing the necessary services, will then be decided in consultation with him.

6. Women's lane meetings, from June to December

Month	Meetings	Number of women	Lanes
June	16	177	n.a.
July	20	361	72
August	16	350	52
September	19	388	67
October	16	431	71
November	24	673	116
December	42	810	118

A new feature is the interest which the men are taking in these women's meetings. They also want to listen to the talks on health, and as they are relatives and neighbours, the women allow them to attend the meetings. 92 and 176 men attended the meetings in November and December respectively.

7. Immunisation from June to December

Month	Number of children	Number of vaccines
June	177	405
July	258	501
August	241	485
September	240	577
October	123	280
November	239	455
December	216	505

8. Kitchen gardens from June to December

Month	New adopters	Cumulative adopters
April - May	272	272
June	108	380
July	120	500
August	180	680
September	200	880
October	70	950
November	220	1170
December	80	1250

The quality and extent of cultivation varies a great deal. Some of the gardens, as yet a small percentage, not only supply the household needs; a small surplus is even sold. In other cases it is a marginal activity, a mere hobby. However, the interest is growing steadily. Women and girls are getting involved in this wholesome activity.

9. New research

Research has been started to understand, and if possible to solve some other problems. For example the treatment and

disposal of garbage, the improvement of chulas, and the investigation of various kinds of income-earning occupations followed by poor women. It is too early to report about these researches.

#### 10. Health survey by Aga Khan Medical College students

The results of the survey conducted by students in May - June 1984 in circle 125 have been compiled. The full report will be published by the College. Dr Fauzia has sent us a copy. Some highlights from the survey are given below.

I. Sixty students of the Community Health Science class made a survey of circle 125 (excluding sector 10, and Afridi colony) in May and June. Under the guidance of Dr Fauzia Qureshi, they have prepared a report on health statistics and health facilities. We give below some highlights. It is hoped that another survey will be undertaken next year. It is also hoped that a package of useful advice will be prepared on the basis of these surveys.

II. 507 households were selected out of a possible 2131 households - giving a sampling ratio of 1:4. The 507 households had a population of 3882 persons. Each household was visited by a team of two students, one male and one female:

##### a) House

89% Own their houses

30% have only one room

43% have two rooms

60% have electricity

74% have a community tap as source of water

54% have septic tank and pour-flush latrine

##### b) Income

43% have an income between 400 and 1000 rupees

55% of the population is dependent - housewives, students, retired and unemployed persons.

c) Literacy

Excluding children under 5 years, 37% are illiterate

d) Main professions

11% work in transport or construction

11% production workers

9% electro-mechanical works

e) Age groups and sex

50% of the population is under the age of 15

There are 2051 males and 1816 females

Household density is 7.7 persons per house

f) Deaths

Of the 44 recorded deaths:

Age group	No. of death	Percentage
Still birth	09	20.5%
1 - 7 days	07	43.2%
8 - 28 days	03	
1 - 12 months	07	
13 - 48 months	02	
5 - 50 years	05	11.3%
above 50	11	25.0%

g) Frequency of illness

On being asked about illness in previous month, it was learnt that 41% of the population was ill. This is a very high percentage, three times that in the U.S. per month.

h) Common diseases

Respiratory infections

Diarrhoea

Dysentery

Fever

Skin diseases

Accidents

III. Health facilities

- a) 52 health facilities were visited by these 507 households. These facilities included those within and without circle 125.
- b) 26 facilities are open for 3-8 hours  
04 facilities are open for 9-12 hours  
07 facilities are open for 13-24 hours
- c) 21 facilities are run by qualified doctors (50%)  
05 facilities are run by homeopaths  
05 facilities are run by hakims  
11 facilities are run by unqualified "doctors"
- d) Of an average of 1590 patients a day:  
1043 (66%) visit qualified doctors.
- e) Charge for outdoor patient visit ranges from Rs 2 to Rs 15, inclusive of medicine. The average charge being Rs 6 per visit. Thus 507 household spend approximately (1590x6) Rs 9540 per day on illness. This totals upto Rs 286,200 per month or Rs 3,362,400 per annum.
- f) 92% patients paid for the visits, 8% depended on charity.



### Part III : Woman's work centres

#### 1. Objectives and problems

The first report defined the objectives of OPP's new programme of starting women's work centres. It pointed out that Karachi is a big centre for the garment industry, and a large number of Orangi women are engaged by contractors for stitching jobs. We thought that if OPP could procure work from the exporters, and organise work centres, women workers might get better wages, and in course of time skilful women entrepreneurs may emerge who could form women worker's cooperatives. We appointed a separate fulltime staff, and purchased a vehicle. And when the Canadian Embassy gave a grant of Rs 160,000 it became possible to supply the necessary machines to the main centre and the sub-centres. From June to September one main centre and four sub-centres were established. The chief difficulty encountered was the lack of orders. A second difficulty was to ensure quality and punctuality.

#### 2. Progress during this quarter

We had hoped that the dual difficulties will soon be overcome, that large orders will be obtained and the workers will become efficient. However, the performance during the last three months has been disappointing in both respects. Large and steady orders could not be obtained. And even when sufficient orders were available, production was slow. It could not be expanded quickly. In fact we were caught in a vicious circle. The workers at the centres were scattered when there was no work. To get them together again required considerable time, which caused delay in fulfilling a new order.

#### 3. Canvassing for orders

Almost every day the manager and the assistant manager went out to meet exporters and contractors. Seventeen parties have been contacted upto now. Orders were placed by eight of them. But these were small and short orders. Others made promises and asked us to wait till the export quota for the new year was opened. Further contacts are being made. Several influential persons have also been approached who have expressed sympathy and promised to speak to big exporters. Let us hope that the orders would be forthcoming in the current quarter.

4. Managing production

The smallness and irregularity of the orders made the task of streamlining production quite difficult. Workers would be scattered during the idle periods and had to be collected again and again. The credibility of the work centres suffered seriously. Three of the centres collapsed. However, the remaining main centres and two sub-centres are now firmly established, with a hard core of loyal workers, and with potential capacity for expansion. We have not given up our hope that there would be many more centres, but we have revised our timetable. The demand is there from many mohallas. But we are unable to obtain enough orders from exporters. We were mistaken in thinking that we will be able to obtain many orders quite quickly and start many new centres. Now we realize that both the procurement of steady orders, and the management of production are highly skilful tasks which will require time-consuming persistent efforts. Fortunately we possess the financial resources and the determination to persist.

5. Disbursement from 1st June to 31st December 1984

Head	Budget	June September	October December
<u>Staff</u>	Rupees	Rupees	Rupees
Manager	24,000	4,000	6,000
Asst. manager	18,000	6,900	4,800
Asst. manager	14,400	--	2,400
Driver	12,144	4,648	3,300
<u>Transport</u>			
POL	12,500	3,722	3,348
Servicing	12,000	3,161	1,673
<u>Operation</u>			
Machines	160,000	52,029	60,144
Equipment	30,000	8,025	19,879
Contingencies	10,000	1,488	1,027

Samples	5,000	1,654	127
Meetings	11,000	1,276	392
Miscellaneous	1,000	--	203
Allowances	8,000	900	900
Advance: Cont.	30,000	8,165	--
Advance: Gen.	12,000	-2,000	3,000
Advance: wages	64,000	8,790	6,631
Imprest	1,945	150	500

6. List of machines purchased (Rs).

25.6.84	Juki 2	14,250
25.6.84	Overlock 1	10,750
26.6.84	Sewing machines 6	4,500
09.7.84	Electric motors 7	3,525
11.8.84	Sewing machines 3	4,860
01.9.84	Sewing machines 6	7,685
01.9.84	Overlock 1	7,150
Total		52,029
30.10.84	Sewing machines 20	28,029
1.11.84	Electric motors 10	2,400
06.11.84	Electric motor 1	315
15.11.84	Sewing machines 20	27,000
15.11.84	Electric motor 1	240
Total		60,144
Grand total		112,173

7. The centres

During the quarter of October-December only the main centre and the sub-centres at Mujahid colony and sector 4 could be supplied with work. The above machines have been

distributed among these centres. One reason for slack work was the seizure of the work-centre vehicle for referendum purposes. The vehicle, however, was released later by the Deputy Commissioner as a special favour.

8. Wages earned by the women workers (Rs)

Centre	Upto September	October		Cumulative
			<u>December</u>	
Main centre	13,731	Rs 10,887	Rs 24,618	
Sector 14	5,207	-	5,207	
Mujahid colony	2,150	3,230	5,380	
Sector 4	781	2,827	3,608	
Hanifabad	192	-	192	
Haryana	372	-	372	
Total	22,433	16,944	39,377	

Detailed records are being kept of the number of workers and the wages earned by each of them. Uptil now these figures are so pathetically small that we feel ashamed to analyse them. We have not been able to utilise even one fourth of the capacity of most workers, and we have been unable to procure any work for a large number of women who are making requests.

9. Type of stitching jobs

The main orders were for shopping bags, kitchen towels and aprons. One exporter placed an order for 22,000 decoration pieces. A lot of energy was spent on arranging its production. But just as production was expanding he scaled down the order to 5,000 only.

21st progress report

January-March 1985

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## Part I : General

### 1. End of the fifth year

On the first of April 1985, OPP completed its fifth year. During these five years the project has received full financial and moral support from BCCI, for which we express our deep gratitude to President Agha Hasan Abedi and Director I.H. Burney. Gratitude is also due to the residents of Orangi who have cordially accepted us as their partners, and whose sympathy and understanding has been the main cause of whatever success has been achieved by OPP's programmes. More recently we have reason to be grateful for favourable reviews, especially by our most prestigious newspaper, the daily Dawn. OPP is frequently visited by groups of officers under training at the Pakistan Administrative Staff College, Lahore; the National Institutes of Public Administration, Karachi and Lahore; Population Welfare Training Institute, Karachi; and Social Work Training Institute, Karachi. Foreign experts are also coming to inspect the OPP's programme in increasing numbers.

### 2. Collaboration with academic institutions

A welcome feature since last year is close collaboration with academic institutions. The students of the College of Architecture, Dawood College of Engineering and Technology, and the NED Engineering University, have been associated with the low-cost sanitation programme since 1983. Students of community health at the Aga Khan Medical College made an intensive survey in 1984 and will continue to do so every year. The department of Anthropology, Islamabad University, has sent two students for four months to observe Orangi for their M.A. theses. Four Dutch students have come from a University in Netherland for the same purpose and an English student will arrive next month from the Imperial College of Technology. The Pakistan Institute of Development Economics will begin a research on certain economic aspects of the settlements in Orangi and the attitude and conditions of the immigrant settlers. Thus OPP is providing a forum for observation, analysis and discussion of the problems of a low-income area by professors and students. OPP's methods of organising and mobilising are also being studied and recorded.

### 3. The low-cost sanitation model

Where does OPP stand after five years? In the first place, the model of low-cost sanitation has been widely

adopted in Orangi. A survey made in December 1984 shows that out of 3072 lanes (in OPP's area), 1273 lanes have constructed sewerage lines; out of 43,424 houses, 20,470 houses have built sanitary latrines connected to underground sewerage lines in the lanes. Every month more sewerage lines are being constructed. During January to March, 84 lane sewerage lines and nine secondary drains were under construction.

Last December, OPP had requested the Federal Planning and Development Department to evaluate the low-cost sanitation model. In January Mr. V. A. Jaffrey, Secretary-General, personally visited Orangi and walked in the lanes. He then appointed an evaluation team headed by the Director General, Monitoring Division. The report is now under consideration.

We have suggested that OPP should be turned into a small research and training institute. Its function should be to carry out further researches into the problems of katchi abadies, and to discover viable organisational models. It should use Orangi as a demonstration area for training.

#### 4. Women's welfare programme

Along with low-cost sanitation, OPP has developed a model of low-cost health education for women. The innovative research approach on which this model is based is described in the report on women's welfare programme. Through this approach large numbers of segregated women become accessible to mobile teams with the help of lane activists, who arrange regular meetings in their homes. There are now 173 lane activists, each with a group of 10 to 15 women.

From January, separate activists are being enrolled for family planning groups (see W.W.P. report, Part III).

The Secretary, Population Welfare Division, after personally examining this approach, has encouraged OPP to develop it to the fullest extent. He has also sanctioned a yearly grant.

Further he has nominated OPP's director as a member of the Board for N.G.Os.



5. Women's work centres

As the report on the women's work centres will show, OPP's economic programme, its latest and most difficult, is getting established. After many months of intensive effort, the procurement of orders and the organisation of production is proceeding smoothly. Both goodwill and efficient skill are being created. There are reasons to hope that the women's work centres will, in course of time, spread like the sanitation and women's welfare programme. In order to ensure permanence and autonomy for the economic programmes, a trust has been registered, under the title of Orangi Charitable Trust.

The women's work centres received a grant of Rs 160,000 from the Canadian Embassy. More help is expected this year.

6. Permanent institutions

Thus at the end of 5 years, OPP is ready to bequeath three permanent institutions to Orangi:

- \* A research and training institute for katchi abadies, recognized by the Planning Commission.
- \* A women's welfare association, recognized by the Population Welfare Division.
- \* Orangi Charitable Trust, for promotion of women's work centres and other economic programmes.

7. Three reports

The 21st progress report includes progress made in the three major programmes of OPP during the last quarter - January, February, and March 1985. These three programmes are:

- a. Low-cost sanitation
- b. Women's welfare programme
- c. Women's work centres

Note 1 In January, we prepared a catalogue of the expenditure and works of OPP's low-cost sanitation programme for the Planning Commission's evaluation team. A copy can be sent on request.

Note 2 Also available on request are copies of OPP's receipts and disbursements from April 1980 to 31st May 1985, and the budget for 1985-86.

Note 3 Disbursement from 1st June 1984 to 28th February 1985 (end of 3rd quarter) are given below:

8. Receipts and disbursements- 1st June 1984 to 28th February 1985 (end of 3rd quarter)

<u>Receipts (Rs)</u>		1,928,335	
B.C.C.I.		1,500,000	
<u>Orangi Journal</u>		7,335	
Canadian Embassy		221,000	
Population Division		200,000	
<u>Disbursements (Rs)</u>		1,780,655	
Central office	106,569	Women's work centres	40,000
Transport	177,678	Mohalla tanzeem	60,671
Administration	66,387	Gardening	45,225
Budget and accounts	68,456	Economic programme	4,125
Research and evaluation	46,487	Grants	6,000
Library	5,856	Capital expenditure	231,336
Meetings and conferences	11,651	PF, MF, Ins. and OAB	68,695
Demonstration	3,406	Increments	--
Training	10,039	Inflation allowance	22,398
Consultants	50,027	Loans and advances	13,940
<u>Orangi journal</u>	63,572	Canadian Embassy	232,328
Other publications	39,283	Population W. Division	142,910
Audiovisual	16,299		
Sanitation programme central	95,396	<b>Total</b>	<b>1,780,658</b>
Sanitation programme I	39,664		
Sanitation programme II	43,484		
Women's welfare programme	72,163		

## Part II : Low-cost sanitation programme

### 1. Highlights

(a) **Steady progress:** The programme has now reached a stage of self-sustained growth. Requests are being received from the majority of lanes without the need of motivation by OPP social organisers. During this quarter, 84 lane sewerage lines and 9 secondary drains were under construction. Neither the excitement and preoccupation of elections nor the rise in the prices of pipes and other materials reduced the tempo of work. At the same time fairly good quality is being maintained, and very few technical mistakes are being made by the lane managers. However, homeowners are inclined to consider the T-haudi as superfluous, because they think that as plenty of water is now available for flushing, their latrines should be connected directly to the manholes. This insistence on direct connections makes the improvement of open nalas very urgent.

(b) **Design of the main nala:** In the meanwhile, in some places, eg, in sector 11A, the nalas are overflowing and damaging the houses and the lane sewerage lines. We have therefore decided to start some research for low-cost design of large nalas, and persuade the lane people to take this problem also into their hands.

(c) **Housing research:** In this quarter systematic research has also been started in the design and low-cost construction of houses (for details see # 9).

### 2. Slow progress of the master plan

The agreement between the KWSB and the consultants has been signed after several months of delay. They have been directed by KWSB to incorporate the sewerage work done by the people in the master plan. Dr Alvi, the chief of the consultant firm, was kind enough to visit the OPP office in January. OPP has supplied him with the information he asked, and offered to place all maps and other data at his disposal.

### 3. Documentation

A catalogue of expenditure and works of OPP's low-cost sanitation programme has been prepared for the evaluation team appointed by the Planning Commission. The catalogue gives details of all expenditures since April 1980, and

outlines and tabulates the various kinds of work done, eg, mapping, survey of lanes, research on designs and elements, designs of secondary drains, plans and estimates supplied to lanes. The catalogue also tabulates supervision and extension work and the actual construction work in the lanes, as surveyed in December 1984. After the preparation of the catalogue, all maps, files and records have been bound neatly and kept for future reference.

Slides have also been arranged systematically. We are also purchasing more photographic equipment in order to make the audiovisual section more efficient, and to save the expenses on the processing of our films, which are being paid to commercial shops. There is a steady demand by foreign experts for copies of our slides and reports.

4. Disbursement - 1st June 1984 to 28 February 1985

Low-cost sanitation programme (Rs)

I Staff:		II Operation:	8,202
<u>Central</u>		III Transport:	
Technical Director	29,680	Drivers 2	18,459
Draughtsman 1	17,987	POL and	
Draughtsman 2	14,980	servicing 2	<u>31,815</u>
Plumber	15,687	Total	<u>50,274</u>
Mason	<u>8,860</u>		
Total	<u>87,194</u>		
<u>Sanitation I</u>		<u>Total</u>	
Manager	20,337	I Staff	170,342
Assistant	09,595	II Operation	8,202
Assistant	<u>09,732</u>	III Transport	<u>50,274</u>
Total	<u>39,664</u>	Total (I+II+III)	<u>226,818</u>
<u>Sanitation II</u>			
Manager	17,787		
Surveyor	17,467		
Assistant	<u>8,230</u>		
Total	<u>43,484</u>		

5. Progress of sanitation work - Surveys and designs

<u>I. Survey of lanes</u>	<u>Mohallas</u>	<u>Lanes</u>
July 1981 to June 1982	24	226
July 1982 to June 1983	11	78
July 1983 to June 1984	32	360
	<hr/>	<hr/>
Total	67	664
July 1984 to December 1984	13	96
January-February-March 1985	11	102
	<hr/>	<hr/>
Total	24	198

II. Details of survey of lanes : January - March 1985

<u>Mohalla</u>	<u>Lanes</u>
Almustafa colony	15
Sector 11½ - block L	4
Sector 15A	6
Bismilla colony	14
Sector 14B	31
Sector 13D	2
Sector 7	7
Sector 6	2
Islamnagar	11
Sector 14C	7
Qasba colony	3
	<hr/>
Total	102

III. Secondary drains

Almustafa colony	1
Bismilla colony	1
Islamnagar	1
Sector 14B	1
	<hr/>
Total	4

IV : Designs, plans and estimates supplied

Head	Cumulative upto December 1984	January-March 1985
Mohallas	53	08
Lanes	626	64
Houses	11,820	1,025
Length of lines (rft)	202,040	19,505
Estimated cost (Rs)	4,402,690	329,999

V. Designs, plans and estimates of secondary drains

a) Cumulative upto December 1984:

Mohallas	Length rft	Lanes connected	Estimated cost (Rs)
039	27,840	457	858,661

b) From January to March 1985

Sector 11½	300	04	4,273
Almustafa colony	700	15	15,484
Sector 14B	400	04	7,283
Sector 14B	350	03	6,291
Sector 14B	975	10	16,338
<b>Totals</b>	<b>2,725</b>	<b>36</b>	<b>49,669</b>

6. Construction work in progress : January - March 1985

Lane sewerage lines and secondary drains (in 23 mohallas):

Mohallas	Lane line	Secondary drain
Sector 11A	3	-
Sector 7C	4	-
Mominabad	7	-

<u>Mohallas</u>	<u>Lane line</u>	<u>Secondary drain</u>
Sector 4D	1	-
Sector 15B	2	-
Hanifabad	16	3
Afridi colony	3	2
Haryana	7	-
Bijlinagar	1	-
Alfatah	15	1
Sector 15A	6	-
Khyber colony	1	-
Noor Mohalla	2	-
Noorani mohalla	2	-
Sector 10	-	1
Sector 15D	1	-
Sector 13D	1	-
Husainabad	4	1
Usmania colony	2	-
Alsadaf colony	1	-
Labourabad	1	-
Sector 14C	2	1
Qasba colony	2	-
	<hr/>	<hr/>
Total	<u>84</u>	<u>9</u>

7. Supervision

(a) Rectification for a defective line in Moinabad is ready. Motivation for acceptance is underway.

(b) No progress has been made in the case of sector 11A's defective line. The people of the lane appear to be unconcerned.

(c) An underground drain in sector 10 was being constructed by the KMC contractor. He was not paying any heed to OPP's instruction being given with the approval of the councillor. Accordingly the councillor was informed of the poor quality of the work. He has compelled the contractor to remove the defects.

(d) The main nala passing through sector 11A is overflowing as it cannot carry the additional volume pouring into it by the construction of more sewerage lines in the adjacent higher areas. The overflow is damaging the houses and some of the sector 11A sewerage lines. OPP is preparing a plan for the reconstruction of the nala drainage system. The plan will soon be presented to the 3 councillors and people of sector 11A.

(e) It seems that the lane people will have to take over the reconstruction of the large nalas too, on account of KMC negligence and apathy.

### 8. Extension

(a) The leaflet on pollution of water mains by open surface drains is complete. It will be printed and distributed to the councillors, KMC, KWSB and Orangi people. It will also be published in the Urdu journal, Orangi.

(b) Two leaflets have been written (bringing the total of leaflets written to 39)

- \* "Use of bajri in house construction"; and
- \* "use of cement".

(c) The case study of sectoral development of drainage and sewerage in sector 5 has been completed. It shows the extraordinary capacity of the residents of a regularised area in solving a gigantic waterlogging problem. Copies of this case study are available on request.

(d) Four more profiles have been written (bringing the total of profiles written to 47):

- \* Nazim Rasul of sector 15A
- \* Noorul Islam of sector 15D
- \* Bashir Alam of sector 15A
- \* Mehfooz Ahmed Malik of sector 15A

(e) The audiovisual section is being improved. Slides have been arranged systematically. Mr Sarwat Rizvi is taking training in video recording. More photographic equipment is being purchased.

### 9. Research

(a) Intensive research has been started for low-cost housing. Two projects have been undertaken in this quarter.



- i. Roofing system of a room in Mr Ramzan Qureishy's house in Hanifabad; and
- ii. complete construction of a new house in Mujahid colony to be financed by Moulvi Abdul Majeed, the owner.

Project (i) has been completed. The price differential between the RCC roof and the batten-tile system used is 46% less for the batten-tile system. A booklet with drawing and photograph is being written.

More experiments are being made in connection with battens. Mr Raza, who helped OPP in experiments of cast-in-situ manholes and their shuttering, has agreed to do the batten experiments in his thalla.

Project (ii) will be started soon after the batten experiments.

(b) Research on garbage disposal continues. Case studies are being published in the Urdu journal.

Part III : Women's welfare programme

1. Revised budget

In December, the Population Welfare Division sanctioned a three-year grant for OPP's women's welfare programme. The grant was to be utilised as follows (in Rs):

1st year 1984-85.

I. Purchase of vehicles		150,000
II. Staff		75,000
(a) Lady doctor	50,000	
(b) L.H.Vs.	25,000	
III. Transport		25,000
(a) Driver	12,000	
(b) POL and servicing	13,000	
Total		<u>250,000</u>

2nd year 1985-86

I. Staff		86,250
(a) Lady doctor	57,500	
(b) L.H.Vs.	28,750	
II. Transport		28,750
(a) Driver	13,800	
(b) POL and servicing	14,950	
Total		<u>115,000</u>

3rd year

I. Staff		97,500
II. Transport		32,500
Total		<u>130,000</u>

The sanction was given in November 1984, and only Rs 200,000 were released for the first year in December. OPP has been conducting the women's welfare programme on a restricted scale from its own resources. After the receipt of the grant vehicles were purchased, new staff was recruited and the programme was expanded. The budget was revised as follows for 1984-85 and 1985-86 (in Rs):

<u>Receipts</u>	<u>1984 - 1985</u>	<u>1985 - 1986</u>
I. OPP contribution		
(a) Staff	62,500	38,550
(b) Transport	31,500	27,010
II. Population Division		
(a) Vehicles	150,000	--
(b) Staff	37,500	86,250
(c) Transport	12,500	28,750
	<hr/>	<hr/>
Total receipts	294,000	180,560
	<hr/>	<hr/>
<u>Disbursement</u>		
I. Staff		
(a) Lady doctor	48,000	52,800
(b) L.H.Vs. 3	35,200	43,200
(c) Social organisers 2	16,800	28,800
II. Transport		
(a) Drivers 2	20,000	23,760
(b) POL and servicing	24,000	32,000
III. Purchase of vehicles	150,000	--
	<hr/>	<hr/>
Total disbursement	294,000	180,560
	<hr/>	<hr/>

2. Actual disbursement from 1st June 1984 to 1st March 1985

I. Staff	(Rs)
(a) Lady doctor	42,296
(b) L.H.Vs. 3	11,667
(c) Social organisers 2	9,780
Total	<u>63,743</u>
II. Transport	
(a) Drivers 2	14,439
(b) POL and servicing 2	24,000
Total	<u>38,439</u>
III. Purchase of vehicles	142,910
Total (I+II+III)	245,092

3. The research approach

We assume that for changing the attitude and opinions of segregated women the main problem is access. Custom requires them to stay inside their homes. Generally such women go out only for emergencies or exceptional circumstances. Therefore we think that the welfare centre approach has proved ineffective. For instance to establish four or five centres in Orangi, where eighty-thousand families are living, and to expect that large number of women will come out of their homes to seek advice from the centres, is quite unrealistic. In order to serve the segregated women a centre should cover only a small area, not exceeding twenty or thirty lanes. Now half of Orangi, where OPP operates, contains more than 3000 lanes and 43,000 houses. It would require one hundred welfare centres to obtain easy access to purdah-bound women.

Instead of the stationary welfare centre, OPP is introducing the following system:

- \* Mobile teams:
- \* selection of women activists or contact persons in the lanes:

- \* regular and continuous meetings at the activist's house; and
- \* formation of small groups by each activist.

Each team consists of a lady health visitor, a social organiser and a gardening expert. At present there are two teams working under the guidance of a lady doctor. The two teams are dropped at the lane activist's houses, and brought back to the OPP office after the meetings. With this approach it may become possible to contact and educate large number of families from a central office with the help of a transport vehicle.

#### 4. Meetings and participants

From June till November OPP had only one team and a half-time transport for WFP. The following meetings were held:

Months (1984)	Meetings	Participants	Lanes	Activists
June	16	177	NA	
July	20	361	72	
August	16	350	52	
September	19	388	67	
October	16	431	71	
November	24	673+92*	116	40

In December a second team and a fulltime transport was added.

December	42	810+176*	118	54
January 1983	61	685+161*	115	90
February	67	569+109*	77	132
March	77	638+120*	111	173

\* From November some men, relatives and neighbours, began to participate. An analysis of the meetings during January-February-March shows:

- a. In 13 weeks 1892 women and 303 men were addressed through 206 meetings.
- b. As meetings are held on 5 working days of the week, 168 persons were contacted on an average each week, or 33 daily.

c. At the end of March there were 173 women lane activists, and each activist was holding together a group of 10 to 15 women neighbours.

5. The growth of lane activists

We have learnt from the success of the lane sanitation programme that lane activists play a crucial role in mobilising neighbours and forming active groups. Once again this new cadre of lane activists has assumed the responsibility of collecting women from the neighbouring families for regular group meetings. The rapid growth in the number of women activists is extremely encouraging.

Month	New activists	Cumulative number
December	14	54
January	36	90
February	42	132
March	41	173

The names and addresses of the activists, and the dates and attendance of the meetings, is recorded on cards. Contacts once established are maintained with care. Therefore the groups are becoming stable, attentive and receptive. Many of them wait eagerly for the next meeting.

6. Separate activists for family planning

From January WWP has started to give advice about family planning. It was found that though in the general groups (of which there are 173), there were many women eager for birth control, there were also a few who were indifferent or hostile. These unconcerned few were inclined to introduce customary controversies and browbeat the needy ones. We have, therefore, decided to select separate activists and hold separate meetings at their houses. The activists invite to these meetings only those who are interested in family planning and nothing else is discussed. Below is a table of activists and family planning meetings:

Month	Activists	Cumulative	Meetings	Participants
January	10	10	10	48
February	18	28	23	72
March	13	41	44	100
Total	41	41	77	220

The following supplies and services were arranged:

	January	February	March	Total
F.L.	4 doz	7 doz	12 doz	23 doz
Delfen	-	3	1	4
O/P cycle	3	4	-	7
IUD	1	1	2	4
Operation	1	1	-	2

#### 7. Adoption

The case studies and profiles of adopters are being published in the Urdu journal, Orangi. Good examples of the practice of hygiene, the use of boiled water for drinking, and profitable kitchen gardens are becoming frequent. The popularity of immunization and kitchen gardens can be seen through the following tables:

#### Immunisation

Month	1st doze	2nd doze	3rd doze	Total
January	146	95	51	292
February	78	24	13	115
March	179	29	14	222
Total	403	148	78	629

#### 8. Adoption : Kitchen gardens

Month	<u>New adoptions</u>	<u>Cumulative</u>
April - May 1984	272	272
June	108	380
July	120	500
August	180	680
September	200	880
October	070	950
November	220	1170
December	080	1250
January	150	1400
February	122	1522
March	084	1606

9. Research is being carried on:

- \* Sun drying of vegetables
- \* Growing of mushrooms and pan vines
- \* Improved chulas

10. Survey of home schools

The result of the survey have been published in the April issue of Orangi. The survey shows that only a few schools have survived. Most schools have disappeared. There are two main reasons for closure. (a) Marriage of girl teachers and (b) non-realisation of fees. Obviously the parttime home schools could not compete with full-time coaching centres, which are being established by private initiative of enterprising proprietors. We have decided not to compete with them.



## Part IV : Women's work centres

### 1. Objectives defined

In the second progress report the objectives of the women's work centre's programme were explained as follows:

"A large number of Orangi women are engaged by contractors for stitching jobs. If OPP could procure work for them from the exporters, and organise work centres, women workers might get better wages, and in course of time skilful women entrepreneurs may emerge who could form women workers cooperatives".

### 2. Initial difficulties

Our previous report indicated that from June to December, one main centre and four sub-centres were established. But two serious difficulties were encountered.

- a. The chief difficulty was the lack of orders; and the other
- b. was to ensure quality and punctuality.

Performance during the quarter September-October-November was disappointing. Large and steady orders could not be obtained, and even when sufficient orders were available, production was slow.

### 3. Difficulties overcome partially

The quarter, January-February-March, shows improvement. Persistent canvassing for orders is at last succeeding. Before the end of March there were enough confirmed orders to support production equivalent to one thousand rupees in daily wages to women workers. This was far more than the productive capacity of the work centres. However, with large confirmed orders in hand, the expansion of productive capacity is a comparatively easier task. Just as persistent canvassing has earned the goodwill of some substantial firms, persistent efforts at training the workers have raised their standard of skill. Fewer complaints have been made by the ordering parties. In fact some of them have been so pleased and satisfied with the quality and punctuality of the work centres that they want to negotiate long term and permanent arrangements.

#### 4. Favourable publicity

During this quarter the Dawn gave favourable publicity to the women's work centre programme. First a speech by the director OPP at the Rotary Club was published prominently, then an editorial and finally an excellent detailed report on the objective, difficulties and achievements of the programme. These notices by our most prestigious newspaper are very helpful and encouraging. But obviously the big exporters have not been impressed, and OPP has to continue its door to door canvassing. Perhaps such are the rules of the game in commercial business. We are going to follow the rules without grumbling. We will continue to canvass our customers and seek their goodwill through quality and punctuality and competitive prices. As there are no free favours, we will not seek any. However, we express our gratitude to the Dawn.

#### 5. The importance of commercial machines

Close study of the market, and the mechanism of production, has taught us an important lesson: viz, in the highly competitive commercial garment industry the simple sewing machines occupy a marginal position, while the specialised industrial machines (like overlocks, juki, cutting machines) have central importance. In order to keep their footing in the commercial market, all our centres should have a core of industrial machines, supporting and supported by the simple sewing machines. Consequently in this quarter all the centres have been equipped with a few industrial machines. As these machines require skilled operators, much attention is being paid to training. After several weeks of intensive effort the jukis and overlock machines at the main centre have begun to work, and from there the skill will be transferred to the other centres.

#### 6. The future pattern of production

The main centre is now well established. It serves a threefold purpose: as an efficient production unit, as a demonstration, and as a training centre. This centre has been established at considerable cost. In future OPP will not build or furnish any other large centre. Only small centres will be equipped and promoted. Each centre will have a core of industrial sewing machines with skilled operators, with 25 to 30 women working at the centre and in their homes. The key role will be played by the centre's manager, in whose house the centre will be located, and

who would be responsible for supervision and training of women workers. She will not be a paid employee. Instead she will keep a certain percentage (5% to 10%) from the wages as her remuneration and for the expenses of the centre. Gradually, many such activists will be enrolled as local managers of the centres. They will play the same role for the work centre programme as the lane activists in the low-cost sanitation programme.

7. Registration of Orangi charitable trust

In January a charitable trust has been registered to takeover the women's work centre programme. The procedures for accounts and management are being worked out. Regular meetings of the board of trustee are being held. We hope that by the end of next year the trust will be fully organised as an autonomous body. It will receive other donations for expanding the women's work centres, and will not remain dependent entirely on OPP's contribution. The trust will also promote the formation of the work centres into cooperative societies. Now that orders are being procured in sufficient quantities, the existing centres will be strengthened, and new centres will be opened. Expansion will be possible only if funds are available for purchase of machines. During the coming year OPP will provide the overhead expenses for staff, transport and operation. But the trust will need funds for purchase of machines. A request has been made to the Canadian Embassy for a grant of Rs three lakhs for this purpose.

8. Wages earned by women workers since March 1984 (Rs)

Centres	Upto September 1984	October December	January March 1985	Cumu- lative
<b>I. Discontinued centres</b>				
(a) Sector 14	5,207	--	--	5,207
(b) Hanifabad	193	--	--	193
(c) Haryana	373	--	--	373
<b>II. Working centres</b>				
(a) Sector 5	13,731	10,886	18,845	43,462

Centre	Upto September 1984	October December	January March 1985	Cumu- lative
(b) M. colony- Atiya K.	2,150	3,230	6,375	11,755
(c) Sector 4	781	2,827	2,183	5,791
(d) M. colony Sohail	--	--	1,500	1,500
<b>Total</b>	<b>22,433</b>	<b>16,943</b>	<b>28,904</b>	<b>68,281</b>

A month-wise breakup during the January-February-March 1985 quarter shows the increased production in March more clearly:

Centre	January	February	March
Sector 5	6,937	3,726	8,182
M. colony (Atiya)	1,328	1,567	3,480
Sector 4	667	582	934
M. colony (Sohail)	589	685	306
<b>Total</b>	<b>9,441</b>	<b>6,561</b>	<b>12,902</b>

9. List of machines purchased

Machines are being purchased from funds provided by the grant of Rs 160,000 from the Canadian Embassy in June 1984.

The list of machines purchased upto December 31, 1984 has been given in the report for the quarter October-November-December. Vouchers have been sent to the Embassy. The details are as follows (in Rs):

Purchase of machines

(a) Upto 31 December 1984	112,173
(b) Upto 31 March 1985	<u>93,850</u>
<b>Total</b>	<b>206,023</b>

Details

DDL 55	1	7,550
DC 1	3	22,025
Extra parts		3,425
DDL 55	3	22,658
DC 1	2	14,680
Extra parts		6,212
S. sewing machine	10	12,300
Cutting machine	1	5,000
Total		<u>93,850</u>

Thus machines worth Rs 206,023 have been purchased although the provision in the budget was only for Rs 160,000. Extra funds have been provided by OPP in anticipation of this years' grant from the Canadian Embassy.

10. Disbursement June 1984-March 1985 and budget 1985-86 (Rs)

<u>Disbursement</u>	<u>Actual June 1984- March 1985</u>	<u>Budget 1985-86</u>
<b>I. Staff</b>		
Manager	19,920	24,000
Asst. manager	15,807	19,200
Asst. manager	3,000	14,400
Total	38,727	57,600
<b>II. Transport</b>		
1. Driver	9,880	13,200
2. POL and servicing	14,400	16,000
Total	24,080	29,200
<b>III. Operation</b>		
Equipment	29,654	5,000
Contingencies	2,864	5,000



Dr. Akhter Hameed Khan was born in Agra on 15th July 1914. He passed his MA from Agra University in 1934 and joined the Indian Civil Service, the most prestigious and cherished service of British India. He attended the Magdelene College, Cambridge from 1936 to 1938 as an ICS probationer officer. In 1945 he resigned from the Civil Service and began to work in Aligarh as a labourer and locksmith.

In 1947 he took up a teaching position at the Jamia Millia, Delhi where he stayed for 3 years. In 1950 he migrated to Pakistan and became the Principal of Victoria College, Comilla (East Bengal). He remained at the Victoria College until 1958 with a break in 1954-55 when he was placed on deputation as Director, Village Agricultural Industrial Development (V-AID) programme, East Pakistan. In 1958 he went to the Michigan State University for training in rural development. On his return in 1959 he became the Director of Pakistan Academy for Rural Development (PARA) at Comilla where he remained until 1971. He also served as Vice-Chairman of the academy's Board of Governors.

From 1971 to 1972 Dr. Khan served as a Research Fellow first at the Agricultural University, Lyallpur, and then from 1972 to 1973 at the Economics Department, Karachi University. In 1973 he returned to the Michigan State University as a Visiting Professor where he remained until 1979. During this period he also served as Advisor PARA, Peshawar (1973-1975) and for 7 months as Advisor BARD, Bogra (Bangladesh, 1978-79). In April 1980 the Orangi Pilot Project was established and since then he has been its Director and its most dynamic and innovative leader.

For his outstanding work in the development of rural and low-income areas, Dr. Khan has been awarded the Sitara-e-Pakistan (1961), the Magsaysay Award, Republic of Philippines (1963) and honorary LLD degree, Michigan State University (1964). In addition to the MSU, he has been a Visiting Professor at the Lund University, Sweden, at the Woodrow Wilson School, Princeton University, at the Harvard University and Oxford University.

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