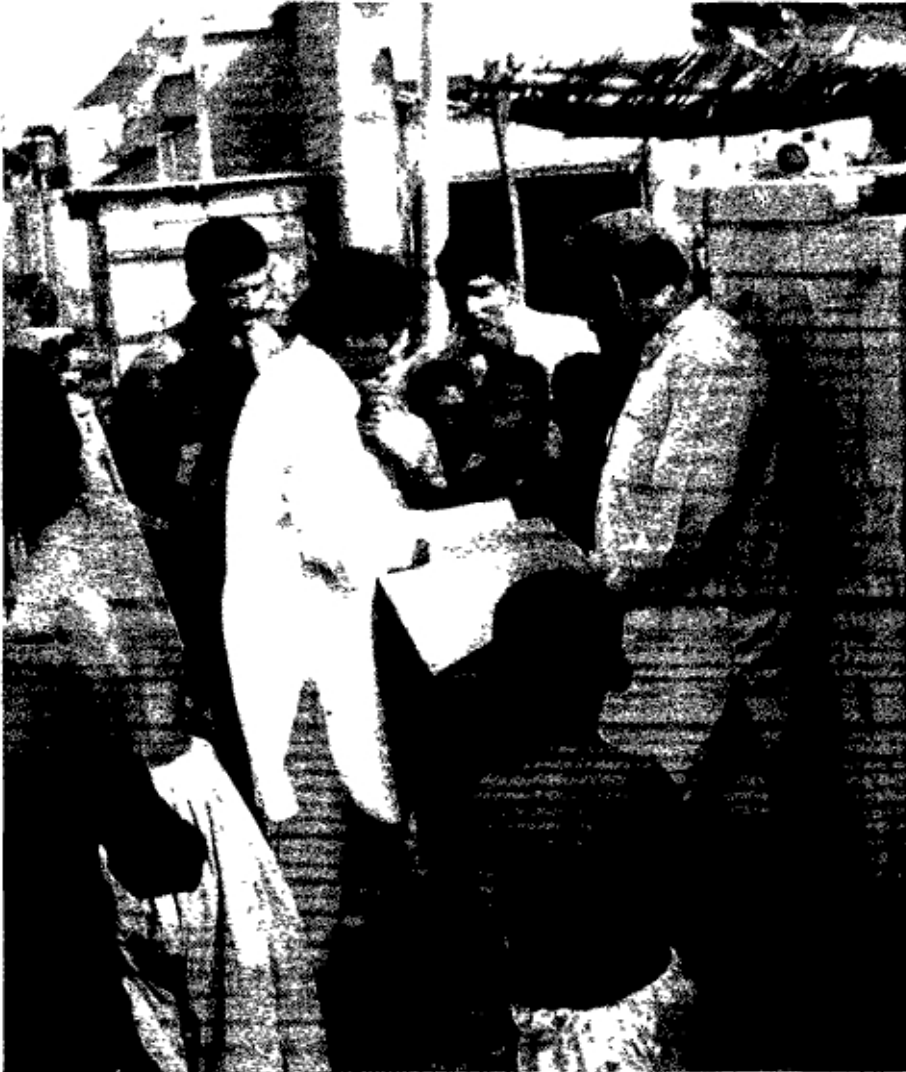


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SCALING-UP OF THE OPP'S LOW-COST SANITATION PROGRAMME

Arif Hasan



AN OPP-RTI PUBLICATION

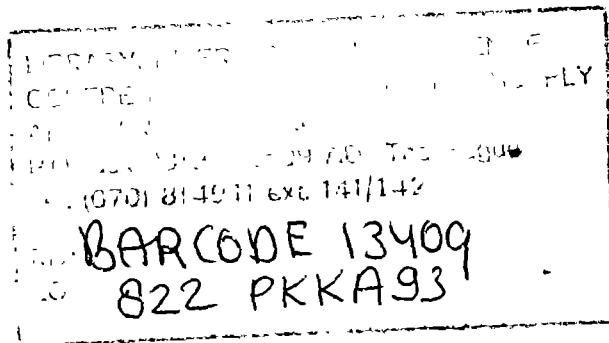
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Arif Hasan

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AN OPP-RTI PUBLICATION

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Foreward

The Orangi Pilot Project (OPP) has been working in the informal settlements of Orangi Township, Karachi, since 1980. These settlements have a population of about one million and before the OPP began its operations they were, for the most part, unserved

The OPP has promoted a number of programmes in Orangi. The most developed of these is the Low Cost Sanitation Programme. Through it the people of Orangi have financed and managed the construction of an underground sewage system for their settlements and in the process invested over Rs 53.183 million (US\$ 2.13 million). This has cleared their lanes of waste water and excreta and improved the values of their homes and health conditions

Since 1983 the OPP has been working with NGOs, government departments and international agencies in replicating the Low Cost Sanitation Programme in other informal settlements in Pakistan. This book is a critical account of the replication projects, problems encountered in the replication process and the potentials and constraints of the various actors involved in this drama.

It is hoped that this publication will give NGOs, government departments and international agencies involved in the development of low income informal settlements, insights that can be of assistance to them in their work.

PERWEEN RAHMAN

Director OPP-RTI

Karachi: March 1993

1 - THE OPP'S LOW COST SANITATION PROGRAMME

Orangi Township

Orangi Township is situated in the Orangi hills in the western part of Karachi. It is the city's largest squatter settlement and covers an area of 8,000 acres. It has a population of about 900,000 living in 94,122 houses which people have constructed themselves with help from the informal sector. For the most part, the township was created by land-grabbers and middlemen through the illegal occupation and subdivision of state land. Whatever little health and education facilities there are in the settlement, are provided by the informal sector and are generally of poor quality. Piped water has been available for most of the settlement since 1984. Before that it was provided by the Karachi Metropolitan Corporation (KMC) and the private sector through tankers. Before the Orangi Pilot Project (OPP) was established in the township, there was no proper sanitation system.

The vast majority of Orangi residents are working class. They are poor but not destitutes. Average earning per household is about Rs 1,650 (US\$ 66) per month against an average Karachi household income of Rs 2,100 (US\$ 84).

The establishment of the OPP

In 1979, Aga Hasan Abidi, the President of the Bank of Commerce and Credit International (BCCI) Foundation wanted the Foundation to involve itself in "social welfare" work in Orangi. He approached the renowned Pakistani social scientist, Dr. Akhtar Hameed Khan, to undertake this work. Dr. Khan informed Aga Hasan Abidi that he was against the conventional "social welfare" model of development but would be willing to undertake the development of a research project aimed at tackling the problems of Orangi and its residents through promoting community organisations. Aga Hasan Abidi agreed to this proposal and in February 1980 the OPP was created.

Objectives of the OPP

The OPP considers itself a research institution whose objective is to analyse outstanding problems in Orangi, and then through prolonged action research

and extension education, discover viable solutions. It does not carry out development work but promotes community organisation and cooperative action, and provides technical support to such initiatives. In the process, it overcomes most of the constraints governments face in up-grading low income informal settlements.

OPP's principles

The philosophy of the OPP is summed up by its Director, Akhtar Hameed Khan, in a note on welfare work written in February 1980. He says, "We are all living through a period of social dislocation. Where people have been uprooted from their old familiar environments, this dislocation is especially acute. They have to reestablish a sense of belonging, community feeling and the conventions of mutual help and cooperative action. This can be done chiefly through the creation of local level social and economic organisations. Without these organisations, chaos and confusion will prevail. On the other hand, if social and economic organisations grow and become strong, services and material conditions, sanitation, schools, clinics, training and employment will also begin to improve."

The need for replicable models

The OPP feels that the function of NGOs and pilot projects in informal settlement rehabilitation programmes should be to develop strategies that can be integrated into the planning mechanisms of the government. This is because the scale of the problem is far too large to be tackled without effective government participation. However, for this integration to become possible, there are three prerequisites:

1. The models developed should overcome the constraints faced by government agencies in the rehabilitation of informal settlements without requiring major changes in their structure and/or the development and imposition of any radical legislature.
2. Overheads, staff salaries and related costs, should be in keeping with government expenditure patterns and regulations and the strategy should respect established state procedures.
3. Proper documentation of the processes of developing the model, the creation of a demonstration area, and effective training material, have to be created, without which replication is difficult, if not impossible.

The need for professional-community interaction

Most programmes developed for the poor in the Third World, in the opinion of the OPP, fail because they are designed by professionals who belong to the upper classes and are not fully conversant with the sociology, economics and culture of low income communities or the causes of the conditions in informal settlements. On the other hand, the informal sector, that increasingly caters to the needs of the urban poor in Third World countries, and the urban poor themselves, do not have access to technical research and advice that qualified professionals can give. Subsequently, the development they bring about is substandard and fails to make use of the full potential of informal sector operators and low income communities. Therefore, an arrangement has to be made and institutionalised to enable effective interaction between qualified professionals and research institutions on the one hand, and the informal sector and low income communities on the other. The OPP has succeeded in creating such an arrangement.

OPP programmes

Based on the principles mentioned above, the OPP is operating the following programmes:

1. A Low Cost Sanitation Programme which enables low income families to construct and maintain modern sanitation (pour flush latrines in their homes and underground sewerage pipelines in the lanes) with their own funds and under their own management.
2. A Low Cost Housing Programme which introduces stronger machine-made concrete blocks and batten and tile roofing, costing much less than reinforced concrete.
3. A Basic Health and Family Planning Programme for segregated, illiterate or semi-literate low income housewives which teaches them scientific causes of common Orangi diseases and methods of preventing them, methods of birth control, and growing vegetables in their homes. It also provides them with immunization and family planning services.
4. A Women's Work Centres Programme which organises stitchers and other garment workers into family units dealing directly with exporters and wholesalers, thus escaping from the oppression of petty contractors. It also inculcates managerial skills and cooperative action.
5. A Programme of Supervised Credit for Small Family Enterprise Units

which increases production, employment, managerial skills and business integrity.

6. A School Programme which assists in the upgrading of the physical and academic conditions of schools established by private enterprise.

The Low Cost Sanitation Programme

When the OPP was established the lanes of Orangi were full of waste water and excreta. The more affluent residents had constructed soakpits, but most of these had filled up due to bad construction and adverse soil conditions. Dr. Khan's research clearly established that the first priority of the Orangi residents was for the development of an underground sewerage system. However, they felt that this was something that the local bodies or the Karachi Development Authority (KDA) should give them free of cost. They also felt that the KMC and KDA provided this facility to the more affluent areas of Karachi without a charge. The Orangi leadership, which at that time consisted mainly of land-grabbers and middlemen who had helped establish the settlement, encouraged the people to think in these terms.

When Dr. Khan approached the KDA and KMC regarding this problem, he was informed that they did not provide anyone with a free sanitation system and that the affluent areas paid for it through a development charge, which was so high, that the Orangi residents could not afford to pay it. He was further informed that the KDA and KMC had no money to 'gift' a sanitation system to low income settlements. However, he was told that international loans were being arranged to finance the *Katchi Abadi* (squatter settlements) Improvement and Regularisation Programme (KAIRP) under which sanitation would be provided to the residents of *katchi abadis* and its cost recovered through lease and development charges from them.

OPP research showed that recovery of money from the poor for development projects had a very poor history in Pakistan. Also, that the problem of *katchi abadis* was so immense (with over 3.5 million people living in them in Karachi alone) that it could not be solved through foreign loans, especially if the cost could not be recovered from the beneficiaries.

Dr Khan then asked as to why the cost of a sanitation system was so high that the residents of *katchi abadis* would not afford it? Research by the OPP revealed that the development cost as charged by the KDA/KMC was about 7 times the cost of actual labour and materials involved in constructing an underground sewerage system. Where foreign financial assistance was involved, costs went up by 30 to 50 percent, and where international tenders

were called, it went up by upto 250 percent. In the end the user was being asked to pay Rs 25 for something whose actual cost was only rupee one. These high costs, it was established, were due to high overheads, excessive profiteering by contractors, kickbacks to government officials, and fees to foreign consultants who came with the loan package. It was further established, that if costs could be brought down to only those of labour and materials, an underground sanitation system would be affordable to the residents of Orangi; and if money to build the system could be provided by the people before construction began, it would overcome the problems involved in acquiring and repaying loans to international agencies.

The methodology of the OPP's Low Cost Sanitation Programme was thus evolved to create a people's financed, managed and constructed underground sewerage system.

Methodology of the OPPs Low Cost Sanitation Programme

Before the OPP's Low Cost Sanitation Programme started, the majority of the people of Orangi used bucket latrines which a scavenger (at Rs 15 per month) would empty out every fourth or fifth day, very often into the unpaved lane. As mentioned earlier, the more affluent houses constructed soakpits, which filled up after a few years and did not solve the waste water problem. Some people had also laid sewerage lines from their houses to the nearest natural drain or *nullah*. These lines were usually defective, and as there was no communal effort, one found many parallel lines in one lane. However, in spite of these short-comings this system cleared the streets of both excreta and waste water. The people also had a preference for an underground system, and the OPP felt that if the right kind of technical support and tools could be provided, and if the lane residents could be organised and trained to use them, then an underground sewerage system, financed and constructed by the people, could be developed in Orangi.

The first step towards building up a sewerage system, therefore, was the creation of community organisations. The lane, which in Orangi consists of about 20 to 30 houses, was made the unit of organisation. This was because it was a small and thus cohesive unit, and there would be no problem of mistrust involved among the residents. In addition, the traditional Orangi leadership, which functioned at neighbourhood level, would not feel threatened if the programme was limited to one lane at a time; and at that initial stage, the OPP was not in a position to antagonise anybody. An underground sewerage system is a complex affair, and developing one lane at a time, without a master plan, was considered by planners to be an invitation to disaster. However, because of innovation and modifications to engineering practice, no disaster took place.

The methodology for developing lane organisations consisted of four stages. First, the OPP social organisers, who are paid employees of the OPP, would hold meetings in the lane and with the help of slides, models and pamphlets, explain the programme to the people, along with its economic and health benefits. They would explain that the KDA or the KMC, do not lay sewerage lines free of cost, and their charges could not be afforded by the lane residents. The motivators would tell the people that if they formed an organisation in which the whole lane participated, then the OPP would give them assistance. In the second stage, the organisation was born and chose its lane managers who, on behalf of the lane, formally asked for assistance. In the third stage, the OPP technical staff surveyed the lane, established bench-marks, prepared plans and estimates (of both labour and materials), and handed over this data to the lane managers. Lastly, the lane managers collected the money from the people and called meetings to sort out any sociological problems involved in the work. The OPP staff supervised the process. At no time, however, did the OPP handle the money of the people.

As no central supervision and controlling agency was looking after the work being done, and as people in some cases worked themselves, the only way of guaranteeing the quality of work was by educating the people. However, people who are financing and managing the work themselves cannot be forced to listen to advice, and their confidence in the OPP could only develop over a "prolonged association". As such, certain substandard work was done in the lanes by the people, and in mid-1982 there was a lull in the programme. As a result, an evaluation of the concept, design and implementation procedures of the project became necessary.

As a result of the evaluation, research was carried out to identify causes for substandard work and simplify standard engineering designs. The results of this research were taken to the people through a massive extension effort, and hundreds of meetings were held. As a result, the people learnt about mixing concrete and curing it, and about the proper manner of making inverts. This extension effort led to a great improvement in the standard of work, and more and more lanes applied for assistance. In addition, it also led to a major modification to conventional sanitation technology and procedures and made them compatible with the concept of a community financed and built system. It also reduced costs substantially and resulted in major technical innovations, which have been documented in OPP monographs.

As the lane was the unit of organisation, initially only those lanes asked for assistance which were near a *nullah*, or those which could drain into *nullahs* easily. It was feared by the OPP advisors that the programme would end here, unless lanes away from the *nullahs* came together to construct secondary drains. To promote the concept of secondary drains the OPP carried out a

physical survey of Orangi. The unit of the survey was the circle or ward of each elected KMC councillor. Architecture and engineering students carried out this survey. After 30 to 40 students had moved through Orangi, talking to the people and involving them in their work, Orangi became a changed place. People interacted with the students and the concept of secondary drains registered in their minds. In addition, the concept of development through community participation went back to the professional universities and colleges, and their involvement with Orangi has grown as a result.

The results of the survey of each circle were compiled along with literature regarding the programme, and given to the councillor of each area. In motivation meetings the people were informed of this, and they started to pressurise their councillors to take an interest in the secondary drains. This resulted in a large number of neighbourhood lane organisations coming together and asking the OPP for technical assistance for construction of secondary drains.

The OPP no longer needs to motivate the people. Because of the demonstration effect, lanes organise themselves and contact the OPP for technical assistance, and the OPP organisers increasingly find themselves involved in technical supervision rather than organisation. More recently, people do not even contact the OPP but get the work designed and executed by masons who have been trained through carrying out work in other lanes.

The average cost for a sanitary latrine in the house, the primary drain in the lane, and the secondary collector drain, works out to about Rs 1,000 (US\$ 40) per household. The people find this reasonable.

Results of the OPP's Low Cost Sanitation Programme

It is now difficult to find a lane in Orangi which does not have an underground sanitation system. 72,070 houses out of 94,122 now have sanitary latrines, 4,701 lanes out of 6,230 have an underground sewerage line; and 367 secondary drains collect and carry the affluent to the open *nullahs*. The people of Orangi have invested Rs 53,183,656 (US\$ 2.13 million) in this effort. The OPP's administrative, research and extension cost for this effort, on the other hand, works out to Rs 3,428,588 (US\$ 127,000). The ratio of OPP cost to the investment by the people is thus 1:15.51 (1). In addition, people maintain the system they have financed and constructed themselves.

However, there are problems. The *nullahs* which now carry the sewerage to the sea are silting up. With heavy rains they are also prone to flooding. Untreated sewerage is being taken to the sea, to which not only Orangi, but also the whole of Karachi is contributing. To overcome this problem the OPP

has developed designs for the trunks and is lobbying with the KMC to get them implemented. Trunk sewers and treatment plants are items the residents of Orangi cannot possibly develop.

Surveys carried out by the Aga Khan Medical University establish that health conditions in Orangi have improved immensely due to the sanitation programme and real estate prices have shot up. In addition, the OPP now has technical manpower and social organisers, who not only understand the sanitation related problems of low income settlements, but also possess the skills required to involve and train communities in solving them. The OPP is in possession of tools, shuttering and equipment, that it has designed and developed, to train people and to deliver its sanitation model.

Significance of the Low Cost Sanitation Programme of the OPP

The formal sector in Pakistan provides only 180,600 housing units per year in the urban sector against a demand of 428,000. The annual deficit of 257,400 housing units is taken care of by the creation of squatter settlements, informal subdivisions of agricultural land, postponement of replacement or through increased densities (2). In Karachi alone, informal settlements grow at a rate of 9 percent-plus against a total urban growth rate of 4.8 percent (3). Realistic planners agree that for the foreseeable future this trend will not only continue but increase (4)

Most squatter settlements manage to acquire water supply, electricity and gas over a period of time. Even road paving of some sort is developed by the 'councillors programme' of the municipal bodies and town committees. However, sewerage systems are almost never developed.

Meanwhile, the KAIRP, which was to overcome the problems of the *katchi abadis* has run into serious problems. The programme has failed miserably in meeting its targets. Since its inception only 1,210,963 *katchi abadi* residents out of 5,504,380 have benefitted from the Programme. This amounts to about 16,800 households per year (5). To keep pace with the increasing backlog, 100,000 households per year should benefit from the programme for the next decade (6). In addition, recovery of land and development charges is very poor. For example, the Lahore Development Authority (LDA) has spent 200 million rupees on the programme in the last 7 years and recovered only 10 million (7). The project design makes the project inoperable if there is more than a 20 percent default in recovery.

The OPPs Low Cost Sanitation Programme points a way out of this dilemma.

Requests for replication

Since 1983 community organisations, activists and NGO's from other *katchi abadis* and informal settlements in Karachi and other cities of Pakistan have applied to the OPP for help in replicating its Low Cost Sanitation Programme in their areas. Since 1986, international agencies have also cultivated the OPP, and in recent years tried to replicate the OPP experience by integrating it into the planning processes of government projects that they are sponsoring. Meanwhile, in its search for the solutions to Orangi's problems, the OPP has had to lobby with relevant municipal and government organisations. In addition, to protect the work of Orangi residents from destruction by insensitive government planning, it has had to monitor nationally and internationally sponsored projects and deal with the organisations responsible for them. In this process the OPP has learnt a lot of lessons and taken a number of steps. This paper is an attempt to record these processes and list the lessons learnt from them.

2 - REPLICATION PROJECTS

Masoom Shah Colony, Karachi

Masoom Shah Colony lies on the railway track a kilometer and a half away from the Cantonment Railway Station. It is 10 minutes walking distance from Karachi's posh residential area called *Defence Society*. However, it is over 15 kilometers from Orangi township.

The settlement consists of 126 houses. Of these the vast majority are mere one room shacks. About 15 are permanent structures. Water in the settlement is acquired from community taps installed by the residents of the settlement themselves at a cost of Rs 5,500 (US\$ 220), by hooking them to the KMC mains in the neighbourhood. The supply, however, is erratic and a number of people also get water from the neighbouring railway quarters. The people say that the pipes installed by them have rusted, as they were not encased in plastic or concrete, and most of the water leaks out.

In 1985, there was no sanitation system in the settlement. Waste water filled the streets and men and women went down to the railway track to excrete. The children, on the other hand, excreted in the settlement itself. Cooking was done in the open, by most families, surrounded by the dirt and filth of the settlement. However, about 9 houses had connected themselves to the underground sewerage system of a neighbouring settlement and constructed communal latrines.

The residents of Masoom Shah Colony are lower caste Hindus and traditionally cobblers by profession. They are known as the *Bhantu Jamaat*. As such they belong to a tradition where poverty, deprivation and illiteracy are accepted as part of their culture. Traditionally they migrated in summer to Balochistan to work as cobblers. However, due to larger social and economic changes in society, very few of them do so now. In the past they have squatted in various parts of the city, and each time they have been evicted. They moved to this site in 1962, and due to the promises made by the government under its KAIRP, they feel secure at last.

The men now work as caretakers and wash-hands at various car show rooms, the women beg at traffic lights, and the children sell dusters and towels to

motorists.

As is common among all Hindu castes, the Bantu Jamaat has a *panchayat*, or council of elders, that decides on all community matters, crimes within the settlement, and personal and property disputes. The head of the *panchayat* is known as a *chaudry* and his position is hereditary. However, the position of the *panchayat* is slowly being eroded and local activists are challenging the power of the *chaudry*. The meeting place of the *panchayat*, and for other social gatherings, is the *mandir* or temple.

Background to initial contacts

Masoom Shah Colony was the first settlement outside Orangi in which the OPP involved itself. The initial contact between the OPP and the settlement was arranged by Dr. Jorge Anzorena. Dr. Anzorena is a Jesuit priest who teaches architecture and planning at Sophia University in Tokyo, for six months a year. For the other six months he visits community development projects in various parts of the Third World, and his newsletter regarding these projects, is awaited with great impatience by urban development practitioners in the Third World. Since 1982 he has visited the OPP in the fall of every year.

In the fall of 1985, Dr. Anzorena was taken to Masoom Shah Colony by Derrick and Bernadette Dean, a Christian couple who had been doing voluntary social welfare work in the settlement. They asked Dr. Anzorena to help them in improving the houses of the Masoom Shah Colony residents. Dr. Anzorena, however, felt that the issue which needed immediate attention in the settlement was sanitation and not housing. He suggested that Derrick and Bernadette Dean get the support of the OPP's extension services for developing a sanitation programme in Masoom Shah Colony. A meeting between the OPP and the Deans was held at the latter's residence and a programme for replication chalked out.

Derrick and Bernadette Dean

Derrick Dean holds a Master's degree in Business Administration from Manila. His wife, Bernadette, is a graduate in Psychology. In 1985 Derrick was working for the Pakistan International Airlines (PIA) and Bernadette was the vice principal of a primary school in Korangi, a low income settlement to the east of Karachi. In their spare time the Deans had been working in the settlement since 1983. They ran a health programme which consisted mainly of immunization and the operation of a two hour evening clinic, and an education programme where Bernadette gave lessons twice a week to a group of children. The Deans also made an attempt to institute adult education, but

though the programme did commence, it could not be sustained.

Derrick and Bernadette Dean's involvement in the settlement was motivated by Christian charity. Through their work they were able to gain the trust of the community.

The process of replication

In January 1986, Parween Rahman, then incharge of OPP's Sanitation Programme, and OPP social organiser, Hafeez Arain, visited the settlement. They identified an open drain along the railway track into which the settlements' sewerage system could discharge. They met the *chaudry* of the *panchayat* and informed him that the OPP could only give technical advice and supervision and that the people would have to bear the cost of development and organise the management of work. He agreed to the OPP's terms and the OPP requested him to formally apply to it for assistance. This was done.

In February 1986, the OPP held a motivation meeting at Masoom Shah Colony in the evening. The OPP explained its programme in Orangi with the help of slides and advised the people to organise and collect money to replicate the programme in Masoom Shah Colony. However, Lahori, the *panchayat chaudry*, refused to be responsible for collection and use of the money for fear of being accused of dishonesty, and this function was handed over to Derrick Dean.

OPP carried out a site survey in 11 days and worked out an estimate for Rs 8,991 (US\$ 360) for the labour and material required to build the 450 feet long underground sewer. 92 dwellings agreed to participate and each agreed to contribute Rs 100 (US\$ 4) towards the effort.

The OPP designed drain was to pass under concrete platforms erected outside the houses of a number of residents. They agreed to bear the cost of demolition and reconstruction of these platforms. In addition, the OPP commenced discussions with the people with regard to building latrines and making their connections with the sewer line. The people were receptive. While these discussions were going on Rs 6,000 were collected by the people. A local activist, Tulsī, emerged on the scene and started to play an active and positive role in the work. This was resented by Lahori and there was an impasse. Work stopped and the people also started losing interest.

The KMC area councillor, Ayub, came to know of the OPP's involvement in Masoom Shah Colony. He approached Lahori and told him that if Lahori could give him Rs 4,000 as a bribe from the money that had been collected, he would get the KMC to finance the drain as designed by the OPP and thus the

community would save a lot of money. Lahori, with the support of the residents, agreed. In a complex process of negotiations it was also agreed between all parties that the OPP would supervise the construction of the drain so as to guarantee its quality.

The councillor acquired funds from the KMC for the construction of the OPP designed sewer. The work, that according to OPP estimates was to cost Rs 8,991, was contracted out for Rs 35,000. The work was substandard and the people participated in excavating the trenches after the OPP objected that the excavations made by the KMC contractor were too shallow. The work was finally finished in May 1986 by an OPP appointed contractor as disputes between the KMC contractor and the people could not be resolved. OPP also provided tools for construction work and shutterings for manholes and manhole covers to the contractors.

Once the councillor took over the construction of the drain most people lost interest in the project and the OPP found itself talking to an unconcerned community about toilets and their connections to the drain. To promote the concept of toilets, the OPP even took influential community members to Orangi to talk to Orangi residents and see their toilets. The only good that came out of this was that those Masoom Shah Colony residents, who sell dusters, established a link with Orangi duster stitchers and started purchasing dusters from them directly, thus by-passing the middlemen.

To get the work done the OPP technical supervisor, Suleman, lived in the settlement for over 15 days, and OPP social organisers and sanitation programme incharge visited Masoom Shah Colony almost every third day. Their absence from Orangi had an adverse effect on OPP programmes in Orangi township.

Results of the process

The residents of Masoom Shah Colony acquired a sewerage line. However, they did not build the toilets that the OPP had advised them to do and for which it was willing to give them technical advice and support. Instead they started using the manholes as toilets after removing their covers. In a years time the sewerage line was choked with excreta and garbage and the people went back to excreting along the railway track. In 1989, the residents again lobbied with the councillor and a new line was laid parallel to the old line at a cost of over Rs 42,000. Again no toilets were built and the line has been choked again.

Conclusions drawn by the OPP from the Masoom Shah Colony replication

1. The OPP cannot go and work in other areas through its technical experts and social organisers without adversely effecting its work in Orangi. A system has to be created whereby people and activists of settlements which request for replication should come and get trained at the OPP in its methodology and procedures through association with Orangi activists, lane managers and technical staff. Orangi township can serve as a demonstration area for this training.

In 1987, the OPP converted its sanitation, housing and social forestry programmes into a Research and Training Institute (RTI) for the development of *katchi abadis* so as to put this concept into operation

2. The OPP cannot solve the problems of the people itself. It can only give advice and training. This advice and training can only be accepted if there is an aware leadership in the settlement or there are activists and artisans from within the community who can promote and sustain these inputs. Traditional hereditary leadership is not effective since it is usually non-progressive in nature and represents a system that is fast collapsing. Similarly, voluntary social workers from outside the community are not an alternative to activists from within the community.

3. Marginalised “low caste” communities have a different culture from the more “liberated” communities that form the bulk of Orangi residents. They have no major aspirations for social and economic mobility and are less concerned with issues related to privacy and individual ownership. Due to these cultural reasons it takes them longer to respond to the OPP model

4. The KMC area councillor feels threatened if people organise themselves to carry out any infrastructure work. In addition, he is able to generate official funds for preventing people from organising. It is therefore essential to involve him in the replication process so that he does not feel threatened by it

Chanesar Goth, Karachi

Chanesar Goth is a 200 year old village. Once it was on the out-skirts of Karachi, surrounded by fields. Now it is squeezed between the high income areas of PECHS and Defence Housing Authority. It has a population of over 40,000, consisting of many ethnic groups which have come from various parts of the Indian subcontinent as refugees and migrants and occupied the open

areas around the village. In the centre of the village is the Vaghri *Para* or Vaghri settlement, where the original inhabitants of the village live in 117 houses. The Vaghris are Hindus and number about 1,000.

Unlike the more recent *katchi abadis*, planned by middlemen, Vaghri *Para* has narrow meandering lanes. There are a few *pucca* (permanent) and semi-*pucca* structures in the settlement, but for the most part houses are no more than reed shacks. Only 7 percent of the houses have water connections and the rest fetch water in containers from community taps, that are surrounded by dirt and filth as the areas around them are not paved, and there is no drainage system in the settlement. However, the Vaghri *Para* has an open drain on its periphery, constructed by the KMC, which carries some of the waste water of the houses along it to a large natural *nullah* and then to the sea.

People have no toilet facilities in their homes. Children excrete in the open. In some homes where space is available, adults excrete in tin containers and then throw the excreta into a nearby often unpaved open drain. However, most of the adults, male and female, excrete at night along the KMC open drain. Often the women are harassed by men from neighbouring settlements, and many simply prefer not to go.

The people of Vaghri *Para* live in abject poverty and are almost 100 percent illiterate. The majority of them earn less than Rs 1500 (US\$60) per month. Their main occupation is raising and selling chickens and grinding and preparing spices. Men seldom work and women are the main wage earners. Alcoholism and drug addiction is common among males. Infant mortality is exceptionally high and so is the incidence of disease. Children do not go to school.

Over the last 25 years the Vaghri *Para* has been the subject of many surveys and development plans sponsored by the local government, philanthropic organisations, and academic institutions, but they have never been implemented. All they have done is to promote a feeling of cynicism and the attitude of *lets-wait-for-something-to-be-done* in the residents of the area. The residents of Vaghri *Para* have no community organisation and for all practical purposes the institution of the *panchayat* is dead. There is a temple in the settlement but it is mainly used by drug addicts as a den and by others, if and when possible, for recreational purposes.

Background to replication process

In 1985 the Aga Khan Medical University (AKMU) in Karachi established a clinic in Chanesar Goth as part of its Community Health Sciences Programme (CHSP). The programme consists of studying health conditions in low income

settlements, advising communities in preventive health and training health workers.

The AKMU had previously run the CHSP in Al-Fateh Colony in Orangi and through its surveys noticed the major change that had occurred in disease patterns after Al-Fateh Colony had acquired an OPP supported sanitation system. Ms Kausar Saeed Khan, coordinator of the CHSP, decided to ask the OPP for advice and help for developing an underground sanitation system for Vaghri Para. The first meeting of the CHSP and the OPP in this connection took place in May 1988.

The area activists

Almost all the activists for the CHSP and for the building of the sewer line were women. This was because the absence of toilet facilities was really a women's problem in the settlement. In addition, the women who did become activists were of above average awareness, had suffered a lot in life and contributed financially and otherwise in keeping their families together. Profiles of these women form part of Appendix - 1

The process of replication

In the May 1988 meeting with the CHSP, the OPP described itself as an advisor to the programme. It would survey the area, prepare plans and estimates, advise on implementation procedures, give top supervision, and if the CHSP felt it necessary, it would also hold motivation meetings. In addition, it would welcome activists from Vaghri Para at the RTI at the OPP for exposure to its programmes in Orangi, and if required, for training. However, CHSP would be the extension agent and overall incharge of the replication effort. The OPP explained its methodology of a people's financed, managed and constructed sewerage system to the CHSP, and it was agreed that it would be followed.

As the CHSP had been working in the area for 3 years, the OPP was confident that it had established a close link with the community, had access to local activists, and that a bond of trust existed between the people and the programme. Initial visits of the OPP staff to the area confirmed this feeling.

The OPP visited the settlement in June 1988 and identified a KMC sewer on the periphery of the settlement as the outlet for the proposed system. It took the OPP team 3 long months and over 14 visits to finish the survey, establish benchmarks, draw up plans and work out estimates. There were a number of reasons for this delay. First, the plan supplied by the CHSP was found to be inaccurate and out of scale. Therefore, a new plan had to be prepared after

a full scale survey. Then there was a lack of coordination between residents of the settlement and the visiting OPP team. It is difficult to survey a settlement unless a team of residents who have proper knowledge of the area can assist the surveyors and get permission for them to move about freely in the lanes. However, the women of the settlement were helpful, and provided water and whatever knowledge they had of the settlement, to the surveyors. It was in this process that the OPP was able to establish contacts with the women who were to eventually become activists for the programme.

There were other reasons for the delay. It was not decided as to whether the whole area of 117 houses in the Vaghri *Para* had to be developed or only a part of it to begin with. Nor was it known as to which areas or households were willing to participate in the programme and which were not. The proposal for the sewerage system also envisaged the building of a couple of secondary drains. A decision on who would build these, the people or the KMC, had to be taken. The OPP felt that these decisions had to be taken by the CHSP and the community.

After the preparation of plans and estimates, the OPP in collaboration with the CHSP held a number of motivational meetings in which it asked the people to collect money for the work. According to OPP estimates this worked out to Rs 430 (US\$ 17) per household. However, the community remained inert. Finally the settlement activists informed the OPP that whereas the OPP was asking them to finance the sanitation system, the CHSP had promised to provide funds for it.

After considerable discussions it was decided that the residents would pay for the system and work would be carried out in any area that agreed to the terms and conditions of the programme. Sohni, a woman activist mobilised 3 lanes consisting of 28 houses, and started collecting money for the construction of the drain. The KMC area councillor was persuaded by the CHSP to build a secondary drain, with KMC money, to carry the affluent from the primary drains of the 3 lanes to the *nullah*.

By November 1988, 28 houses had collected Rs 5,600 (US\$ 224) or Rs 200 (US\$ 8) per house. The residents of these houses approached the CHSP and requested that if the balance of Rs 230 per household could be contributed by the CHSP they would undertake to return this in 4 monthly instalments of Rs 50 (US\$ 2) each, and make an immediate additional contribution of Rs 30. The OPP opposed this move and said that let's wait for 4 months for the residents to raise the required money and then begin work. However, the CHSP said that it could not wait and wanted quick results. In addition, it was sure that people would pay back and that this demonstration of laying the drains would encourage other lanes to come forward and finance their sewers.

The OPP provided the community with a mason from Orangi who was well versed in OPP sanitation technology, advised them on where to purchase pipes from, the type of materials required, and provided them with tools for construction and shutterings for manholes and manhole covers. The CHSP arranged 3 visits of community members to the OPP in vans hired by it for this purpose.

However, through a dialogue between the CHSP and the community, the activists handed over their money to the CHSP, to which the CHSP added its subsidy, and took over the management of the programme from the activists. The Orangi mason who was to build the system as an employee of the community, became a contractor to the CHSP, and the residents became on-lookers.

In April 1989, the line was completed and linked itself with the councillor built secondary drain. It has benefitted the people enormously, although only 6 of the 28 houses have constructed latrines.

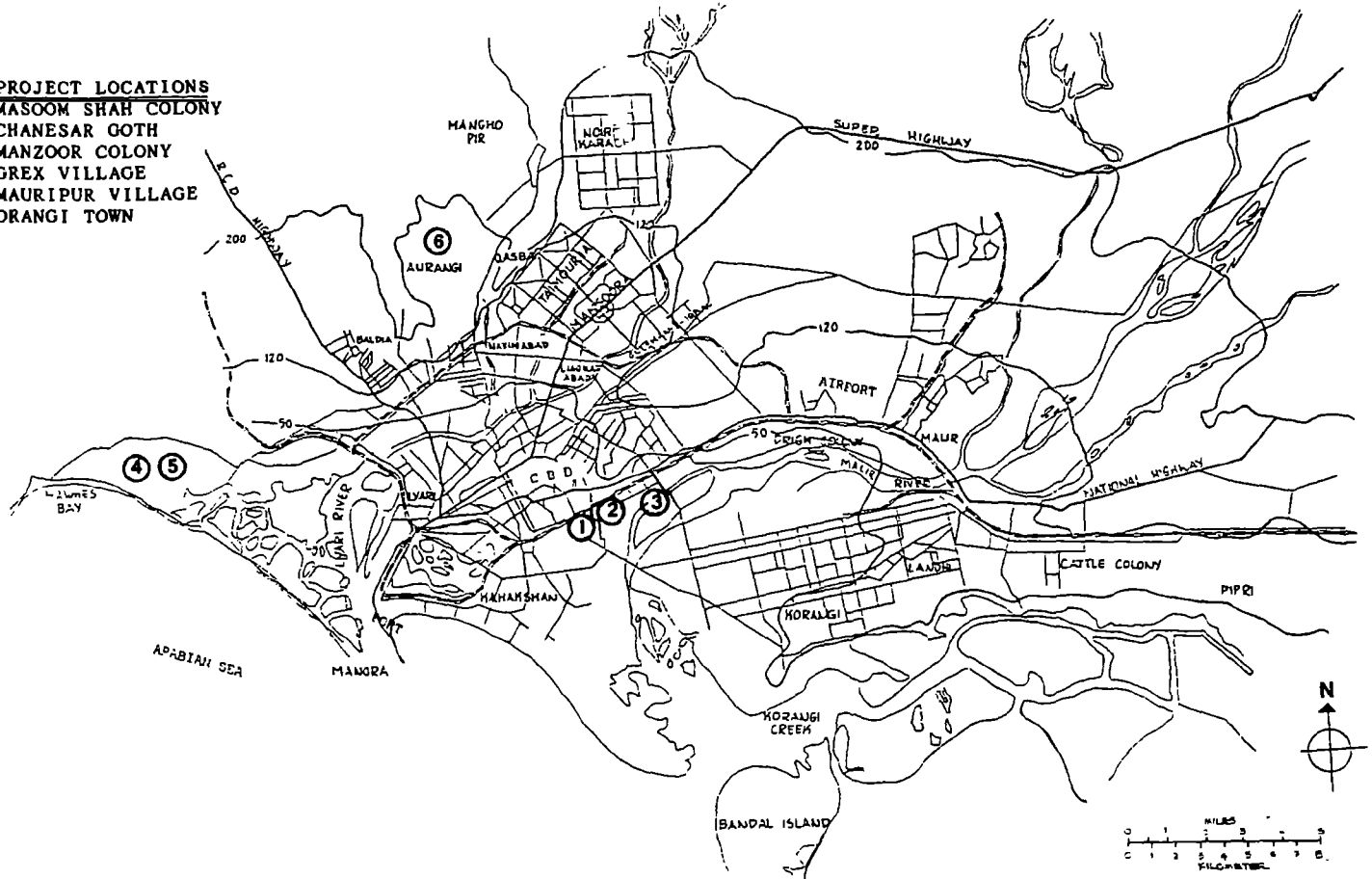
However, most houses in the settlement do not have space enough in them for constructing a latrine. People who cannot construct latrines have tried to come to various understandings with people who can or have constructed them, so as to be able to use the latrines. In many cases these arrangements have not worked out. One of the major reasons for this is that individual households have not been involved in collective action for laying the sanitation lines, and as such find it difficult to share their benefits with others.

Results of the replication

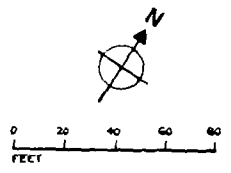
The 28 households who contributed to the sewerage line have not paid back a single rupee to the CHSP and nor do they intend to. The other lanes in the settlement dropped all ideas of building the system themselves and started to pressurise the CHSP for building their sanitation system for them on the same terms as they had done for the other 28 houses. What was supposed to be a demonstration of the benefits of a sanitation system, ended up by being a demonstration of dependence and subsidy.

The CHSP, however, was not willing to subsidise any further lanes but started to lobby with the area councillor for providing an underground system to the Vaghri Para. Finally, in 1991, the area councillor undertook the development of an underground sanitation system for the settlement at a cost of Rs 100,000 (US\$ 4,000). The construction clogged up within a month of its use as the directions of the slope were all wrong, the joints leaked, and a number of manholes were not provided with covers. The reasons for this disaster are that the contractor was not supplied with proper plans, benchmarks were not

- PROJECT LOCATIONS**
- 1 - MASOOM SHAH COLONY
 - 2 - CHANESAR GOTH
 - 3 - MANZOOR COLONY
 - 4 - GREX VILLAGE
 - 5 - MAURIPUR VILLAGE
 - 6 - ORANGI TOWN



PLAN OF KARACHI SHOWING REPLICATION PROJECT LOCATIONS



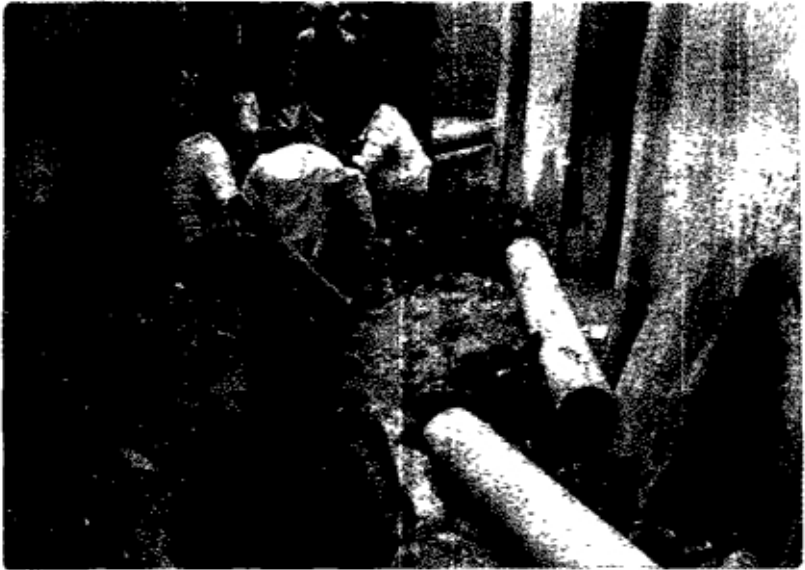
PLAN OF VAGHRI PARA, CHANESAR GOTH, KARACHI



Masoom Shah Colony: conditions in the settlement



Chanesar goth: motivational meeting



Work in progress in Fathers Colony, Karachi



Grex village, Karachi OPP team carrying out a survey

established, he did not possess proper tools for construction such as levels and shuttering, and he was not supervised. In Vaghri Para, except for the 28 houses that had contributed to the OPP designed and supervised system, sanitation conditions are back to what they were before 1988.

Conclusions drawn by the OPP from the Vaghri Para replication project

1. In dealing with low income communities, support organisations must keep a low profile. In the case of the Vaghri Para replication the AKMU was seen by the residents as a rich organisation. The residents repeatedly told the OPP organisers that the AKMU could easily finance the sanitation system in the area and that it was the OPP that was putting hurdles in its way. The CHSP, on the other hand, did not take a firm stand on the issue either, but kept avenues for negotiating on the subject open.

The image of the CHSP as an affluent organisation was built up mainly by the nature of its office in the settlement, a number of foreign made, as opposed to a few locally made jeeps at its disposal; and the impression that a large number of foreigners who had brought a lot of money with them, were associated with the Programme.

2. Subsidising development and managing it for the people so as to create a demonstration effect ends up by being a demonstration of subsidy and dependence, rather than of benefit.

3. People should be supported to take decisions and act on them themselves, only then can they be empowered in the real sense of the term. This came across very clearly in the CHSP hiring a van 3 times to take members of the Vaghri community to Orangi. According to feedback from the field, the community saw this more as a recreational visit (especially the last 2 times) rather than an educational one. If the community had been persuaded to go to Orangi by public transport (that they regularly use for moving about) at their own cost, the whole nature of the visit, and perhaps the results, would have been different.

4. Decisions that provide short-term benefits, or help meet targets at the cost of long-term benefits, can cripple the process of empowerment for good. If the CHSP had waited for the 28 households to mobilise an additional Rs 230 (US\$ 9.2) each, there is every likelihood that a self-financed and self-managed sanitation programme would have developed in the whole settlement, leading to the construction of latrines in the homes.

Manzoor Colony, Karachi

Manzoor Colony lies to the south of the railway track that runs along Shahrah-i-Faisal, one of the main arteries of the city. The Manzoor Colony project area has a population of about 18,000 living in over 2000 houses

The area that comprises Manzoor Colony was originally government land that the state used to lease out for agricultural and grazing purposes. From 1969 onwards, the lease holders began to subdivide this land into small residential plots of 80 to 120 square yards and sell them to people who were willing to come and live here. It was through this illegal subdivision (ISD) and sale of state land that Manzoor Colony was created.

Like most ISD settlements of the 70's and after, Manzoor Colony is planned on a grid iron with 20 to 24 feet lanes taking off from wider main roads and arteries. The people have considerable open space available to them, both in their houses and in their neighbourhoods.

ISD settlements are strictly speaking a commercial venture and the subdivider sells land to whoever is willing to pay the price for it, and can start living there without delay. As such ISD settlements usually have households of different ethnic groups living together, and so it is with Manzoor Colony

As in other similar settlements, the people of Manzoor Colony, supported by the subdivider, have lobbied for and obtained a water supply system for themselves, with house connections, from the KMC. However, there is seldom water in the system and they still have to rely for the most part on tankers. A few main roads have been paved through councillor funded projects but the lanes remain unpaved and unlevelled.

Before the OPP replication programme began in 1990, there was no proper sanitation system in the settlement. People used bucket latrines that were emptied out into the streets or built soakpits. Most soakpits filled up after 2 or 3 years and after that after every 15 to 20 days. KMC pump-mounted vans had to be hired to suck out the affluent from these pits and for this service they charged Rs 100 - Rs 150 (US\$ 4 to 6). Thus a number of residents went back to using bucket latrines. Sanitation problems are further aggravated as large parts of the settlement are low lying and get flooded during the rains.

The government has set up a few schools in the settlement but according to the residents they do not even serve 10 percent of the population. However, local private initiative has set up an adequate number of schools in the neighbourhood and the majority of children go to school.

The settlement has become a major producer of furniture and most of the residents work as artisans and work hands in the business or in the supply and transport sectors related to it. Others work in the Korangi industrial area as labour, and some are low grade employees in formal sector business enterprises and government offices.

Initially, after settling here, residents tried to recreate *bradari* or caste and ethnic organisations on the model of the *panchayat*. These were models they were used to. However, they soon realised that in their changed social conditions these could not possibly work. Organisations were then created on neighbourhood or sector basis, and even if they had an ethnic or caste name to them, they worked for the welfare of the whole area and welcomed all residents to their membership.

Three major organisations existed in Manzoor Colony project area in 1990. One was the *Anjuman-i-Falah-o-Bahbood* or Social Welfare Organisation which was established in 1985. The other was the *Tanzeem-i-Jattan*, or the *Jaat* (which is a major agricultural tribe) organisation. A separate *Tanzeem-i-Jattan* existed for every sector of Manzoor Colony with its respective office bearers. There was also a Young Christian Welfare Society which represented the Christian neighbourhood of the settlement.

All these organisations were involved in social welfare and charitable work. They helped people out financially in times of need, such as for marriages, during illnesses, funerals etc, they arranged religious and cultural functions, they helped orphans and widows. But apart from lobbying with their councillors, Members of the National Assembly (MNAs) and Members of the Provincial Assembly (MPAs), for water, road paving and other facilities, they did not involve themselves in any development work.

Background to initial contacts

The Aga Khan NGO Support Programme (AKNGOSP) was established in 1989. In 1990, its director, Qadeer Baig was looking for NGOs to support. In this process it came into contact with the Manzoor Colony organisations. It held a needs-assessment-workshop which these organisations attended, and it tried to train them to write out proposals to donor agencies for funding. In the words of Mohabat Khan, president of *Tanzeem-i-Jattan*, they were being taught to beg properly.

During this contact of the AKNGOSP with the Manzoor Colony organisations, it became clear that the first priority of the residents of Manzoor Colony was sanitation. The Urban Resource Centre (URC), with which the AKNGOSP was in contact, advised Qadeer Baig to get in touch with the OPP on this

subject. In June 1990, Qadeer Baig, with about 12 representatives from the Manzoor Colony organisations, visited the OPP, discussed its sanitation programme and accepted it in principle. The AKNGOSP and the *Tanzeem-i-Jattan* applied in writing for assistance within a week of the meeting.

Manzoor Colony activists

The activists who were responsible for the replication work in Manzoor Colony were Mohabat Khan and Umar Hayat Sandhu of the *Tanzeem-i-Jattan*; Rashid Gill of the Young Christian Welfare Association and Anwar Baluch. These are all educated and highly aware persons. A brief profile of one of the activists is given in Appendix - 1.

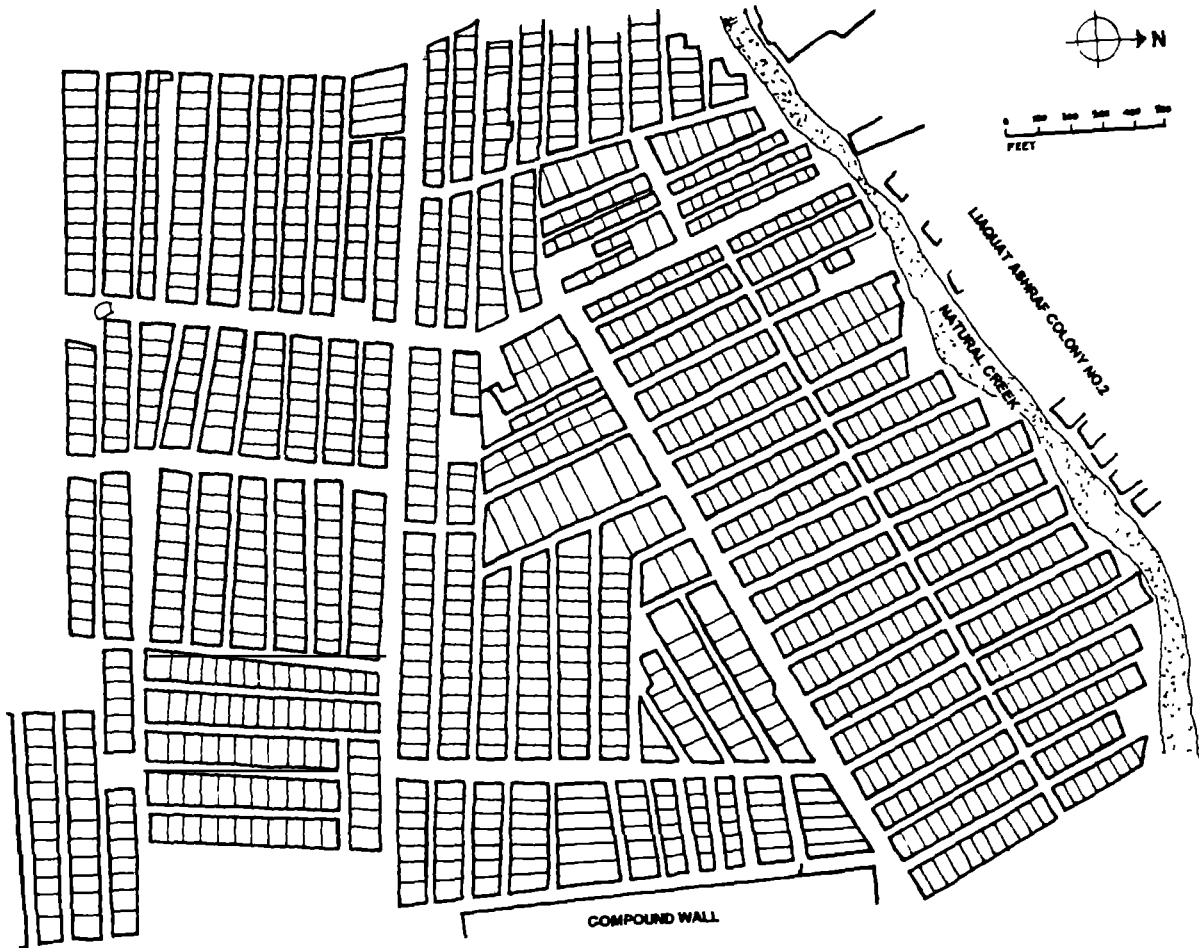
Process of replication

After being requested to help in replication the OPP visited the area and identified the disposal point. This was a natural *nullah* in the settlement. The Christian community had to cover a considerable distance through a secondary drain to get to this *nullah*, and this was proving uneconomical. They searched hard for an alternative and subsequently located an old abandoned cast iron trunk that linked their area to an unused oxidation plant.

Between June and September 1990, OPP surveyed the area, prepared plans and estimates for the work, and held a number of motivational meetings in collaboration with the area organisations. The organisations were informed that in the future they would have to hold meetings themselves, prepare plans and work out estimates. During this time 4 visits of the area activists and their support members to the OPP were arranged, where they met area residents who had laid their own sanitation systems and were exposed to the OPP methodology.

The initial project consisted of primary drains of 22,075 feet for 71 lanes of 4 Manzoor Colony sectors, which had a total of 1,451 houses in them; and secondary collector drains of 3,878 running feet. The cost of the primary drains worked out to Rs 599,534 (US\$ 23,981) or Rs 413 (US\$ 16) per household. The cost of the secondary drains worked out to Rs 116,447 (US\$ 4,658) or Rs 80 (US\$ 3.2) per household. The total cost of the project, minus the sanitary latrines in the house, thus worked out to Rs 715,981 (US\$ 28,640) or Rs 493 (US\$ 19.72) per household. The people were certain they could afford this.

The *nullah* to which most of these lanes were to be connected to was considered too shallow as a disposal point by the residents. The residents applied to the Zonal Municipal Council for the desilting of the *nullah* and for



PLAN OF MANZOOR COLONY, KARACHI



Manzoor Colony Karachi: manhole shutterings being put in position



Manzoor Colony Karachi: a lane after the completion of sewer line

building embankments on either side of it. However, it was soon realised that this would either take a long time to happen, and may not materialise at all. Thus a point further downstream was located which was considered deep enough and hence appropriate.

To scrutinise the OPP prepared plans and estimates, a Working Committee of one person per sector was created by the activists. This Committee was obsessed in lowering costs. It held 4 detailed meetings with the OPP staff and many changes in the plans and estimates were made as a result.

Work in Manzoor Colony was done differently from the normal Orangi pattern. Each lane selected a lane manager. In a meeting of all lane managers it was decided that the secondary drains would be constructed first. The managers were asked to collect money from their lanes for this purpose. Two additional committees consisting of 4 members each, chosen from the lane managers were created. These were the Accounts Committee, whose job it was to collect money and keep accounts; and the Works Committee, whose job it was to organise and supervise the construction of the secondary drains. The construction of the primary drains was left to the lane itself and it did this work at its own pace.

By December 1990 work on the first secondary drain had been completed and by March 1992 over 60 lanes had connected to them. The OPP had stopped holding motivational meetings by the end of 1990 and the local organisations assumed this responsibility. Regular visits by OPP technicians also stopped after December 1990 and took place only when the community made a request, which was seldom, and usually for complex problems such as dealing with the crossing of a water line with the under construction drain.

For the most part excavation work for the secondary and primary drains was given on contract to local people. Purchase of materials was arranged by the Works Committee for the secondary, and the lane manager for the primary drain. A mason was employed for laying the line and making the joints. For the making of manholes and manhole covers, shutterings were provided on loan by the OPP.

Concrete pipes were purchased by the Works Committee from Orangi. However, other sources were considered and Orangi was chosen because it was cheaper, and due to OPP's involvement, was considered more reliable. OPP was also asked by the Committee to arrange for contractors and masons from Orangi, but the OPP felt that it should not take on this responsibility as it could lead to disputes between it and the community in case the contractors and masons performed badly, and also adversely effect the development of local know-how regarding the building of a sanitation system.

For the Manzoor Colony replication the OPP had to deploy 2 persons on a part-time basis for 2 months for plan and estimate preparation, holding of dialogues and motivational meetings. OPP professional staff paid 14 site visits to the project and Manzoor Colony representatives visited Orangi 6 times for training and orientation. An OPP supervisor worked with the project for 3 months. Through him the OPP gave full-time supervision to the construction of 12 primary drains at which local masons and lane managers got trained in OPP sanitation technology. In addition, the OPP in the initial stages of the replication, held slide shows, distributed pamphlets, posters and hand bills regarding its programme, for motivational purposes. The approximate cost to the OPP for providing technical assistance and training and extension, works out to Rs 45,000 (US\$ 1,800) or Rs 31 (US\$ 1.2) per beneficiary household.

Results of the replication

The Manzoor Colony replication has had major repercussions. The activists, organisers and local artisans have become sort-of-experts in the OPP sanitation methodology and technology. They know how to motivate people, understand what is involved in developing plans and estimates (though they cannot do it scientifically themselves), know how to organise work and supervise it. Organisations of neighbouring low income settlements are applying to them for help and assistance in dealing with their sanitation issues.

The activists of the Manzoor Colony organisations had also applied to the OPP requesting it to develop designs and estimates for paving the *nullah* and covering it with concrete slabs. They had also requested the OPP to lobby with the Mayor of Karachi on their behalf to fund this proposal. The OPP has developed designs for trunks along the *nullah* and made estimates of Rs 1.4 million (US\$ 56,000) for them. However, the OPP is not willing to lobby with the Mayor on the settlement's behalf as it does not consider this to be its function. It suggested that the community get the AKNGOSP to take up this issue, following which Qadeer Baig, along with Manzoor Colony leaders, visited the Mayor. So far nothing has come of it.

The local organisations are also pressurising the councillors of the area to carry out filling of the low lying areas and plots in the settlement. As earth filling is costly they have proposed that KMC garbage vans should dump their garbage in these areas, instead of at the regular dumping sites. Furthermore, they have decided that councillor funded projects should now consist exclusively of paving lanes which have developed their sanitation system. They intend to enforce this decision and already 34 lanes in I-sector of the Colony are being constructed.

Mohabat Khan of the *Tanzeem-i-Jattan* has managed most of the construction work in the area. In 5 lanes he had also acted as a contractor, where he has constructed the sewerage system at his own cost and recovered money from the residents, inclusive of a profit margin. This was discouraged by the OPP as it has been noticed in Orangi that unless people are fully involved in development work, they do not maintain the system after it has been completed.

Another issue taken up by the community organisations in Manzoor Colony is of lease charges for regularising their settlement. Manzoor Colony is marked for regularisation, which means that as a part of the regularisation process a sewerage system should be provided to it. However, since the residents have provided this themselves, they want the cost of a KMC developed sewerage system deducted from their lease charges and they have applied to the KMC requesting this to be done. The KMC has requested the Karachi Water and Sewerage Board (KWSB) to look into this affair. The KWSB response has not been positive so far and as a result the people have applied to the Federal Ombudsman to intervene on their behalf.

During their visits to various government organisations in connection with the question of *nullah* upgrading and lease charges, the leaders of the Manzoor Colony organisations discovered that on paper the Sindh Katchi Abadi Authority (SKAA) has spent Rs 8 million (US\$ 320,000) in providing services to their settlement. However, no services have been provided and the leaders are anxious to know what became of this money that was meant for their settlement, and at least in theory, is to be recovered from them through a lease and development charge.

The AKNGOSP feels that in the future it is Manzoor Colony's work, and not that of the OPP that will be replicated, at least where AKNGOSP contacts exist. For this the Manzoor Colony, as Mohabat Khan puts it, will have to be turned into an OPP. Oxfam and AKNGOSP, it seems are discussing the possibility of the former financing such an effort. The replication project has also been visited by representatives of a number of international agencies, including the World Bank, and has been looked at in some detail by the Bank consultants working on the Shelter for Low Income Communities Project. It was only after looking at this project that the Bank consultants felt that the OPP experience could be replicated outside Orangi.

Conclusions drawn from the Manzoor Colony replication project

1. Where local organisations are strong and representative, and artisanal and entrepreneurial skills are present in the community, the low cost sanitation programme of the OPP can be replicated successfully and its methodology and

technology transferred to the people. In addition, if local organisations are strong they can organise people on a sufficiently large scale to take on the construction of secondary drains before the primary drains are commenced. However, organisation at the lane level, with the appointment of a lane manager, is necessary for this to be done successfully.

2. Organisations such as the AKNGOSP can play an important role in developing links between resource organisations and local community organisations. As such they should be cultivated

3. There is a major potential for the private sector to develop affordable low cost sewerage systems for low income communities by using OPP technology. However, the questions of operation and maintenance, awareness raising and transfer of skills and vision to the community, are not addressed through a contractor's programme

4. The awareness generated by local communities in involving themselves in development activity asserts itself in undertaking new initiatives and brings about a more equitable relationship between it and other actors in the development drama, such as the local bodies and urban development authorities

5. OPP's direct costs in assisting a replication project through plan and estimate preparation, supervision, training and extension, is low enough to be afforded by low income settlements

Mauripur, Grex and Tikri villages, Karachi

Mauripur, Grex and Tikri villages lie to the south-west of Karachi city and are adjacent to each other. They were established at the turn of the century and are on the edge of the Sandspit back waters, an area that comes under the sea at high tide. A large part of this area is used as "salt pans" for extracting salt from the sea. The land is flat, and the natural *nullahs* are shallow and are also inundated at high tide by the sea.

About 8 percent of houses are *pucca* and over 70 percent semi-*pucca*. The rest are shacks. The older parts of the villages are planned conventionally around open spaces, but the more recent ones are on a grid iron. Densities are comparatively lower than ISD *katchi abadis* on the city fringe

Water supply in the settlements is mainly through stand posts and is insufficient and erratically supplied. There is no proper sanitation system in the settlements and most people use bucket latrines. Soakpits have also been built

but fill up quickly, perhaps due to the proximity of the sea. In some areas sewerage lines have been laid by the KMC and they take the affluent to the sea. They do not function properly as their slopes are insufficient and at high tide the system gets inundated with sea water. The local bodies also constructed public latrines in areas that were inundated by sea water and built raised paths to them. The idea was that the sea water would carry away the excreta. However, it carried away the paths as well and the latrines are no longer used.

The original inhabitants of the villages are fishermen and descendants of families who settled here to work at the salt pans. However, these villages have now become large settlements and an almost equal number of their residents are migrants who have built their homes on the state land around them. No subdividers have been involved in promoting these settlements. Apart from fishing locally, a large number of residents work at the fish harbour as boat hands, or at the port and the neighbouring industrial estate as labourers. The population of Mauripur is 8,626, of Grex 12,000, and of Tikri 8,320.

The original inhabitants have caste *panchayats* that deal mostly with personal and property disputes and other social issues. The *panchayats* do not lobby for social amenities or involve themselves in development work. The Christians and Zikris (a sect of Islam) live in specific areas of the settlements and have their own welfare organisations which in recent years have tried to lobby with the relevant authorities for water and sewerage systems. A number of non-ethnic organisations are in the process of taking shape as well, as people realise that without such organisations they cannot create the unity that is required to lobby effectively for services.

Background to initial contacts

Busti is a Karachi based NGO which was working not only in Mauripur, Grex and Tikri, but also in other neighbouring villages along the sea since 1985. Busti was supported by UNICEF and it gave loans and technical assistance to the residents for building soakpits. Local activists were to recover the loans which were part of a revolving fund. Rashid Khatri, a civil engineer, was one of its employees and he worked closely with the local people and organisations to promote the programme. The Busti programme also had a preventive health component to it and Shahida was in charge of it. Because of conflicts within the programme, Rashid Khatri resigned from Busti in March 1988. The programme itself became inoperative in the beginning of 1989, as the soakpit fund could not revolve since the loans were not being recovered.

Since Khatri had been involved with the problems of the people of these

villages for over 3 years, he decided to form a federation of local organisations. The federation was called The Mauripur Development Project (MDP) and it was registered in June 1989. A committee of heads of local organisations was created as the governing body, and one of the members of the body was to counter sign all cheques drawn out and signed by Khatri. The organisation took over Busti's office and what was left of its funding. It continued Busti's immunization programme, created a new programme for protecting people from police harassment; and searched for ideas and support for development programmes for the MDP. This search brought Khatri to the OPP in June 1989, where he met Dr. Akhtar Hameed Khan and Perween Rahman. The OPP advised Khatri to spend sometime with it so as to understand its programme and methodology. Khatri agreed.

Rashid Khatri

Rashid Khatri has been the only link of the OPP with the Mauripur, Grex and Tikri villages. He is a graduate in civil engineering and is 30 years old. He has been active in student politics, has left wing leanings (in spite of his beard), and has been to prison for his involvements. His profile is given in Appendix - 1.

The process of replication

Rashid Khatri arranged meetings of the heads of member organisations of the MDP with the OPP staff. The OPP philosophy, methodology and programmes were explained to them. They had a preference for the income generation loan programme. However, meetings held in the settlement established that the people considered sanitation to be their major problem. In addition, in the OPP's opinion a loan programme is never an effective entry-point.

In October 1989 the OPP held 2 motivational meetings in Grex village and as a result one lane built its underground sanitation system. Other lanes showed an interest in the programme. However, the MDP did not have the financial, managerial and technical capacity to operate such a programme and the OPP was not willing to repeat the mistakes it had made in Masoom Shah Colony. Instead, the OPP suggested that the MDP organise itself, with OPP advice, to replicate the OPP's sanitation and health programmes. Khatri agreed.

As a result a project office was established and Khatri was advised on how to run it. Applications for funding the MDP were made to various donor agencies. These funds were needed for office rent, salaries for Khatri and Shahida (who was to run the health programme). The whole of 1990 was spent in this process, during which Khatri was a regular visitor to the OPP and was closely associated with its work.

In January 1991, the Canadian Mission Fund sanctioned a grant of Rs 100,000 (US\$ 4,000) to the MDP. The money was received in March and almost immediately Khatri, with OPP's involvement started to hold meetings in the villages. However, disputes among the leaders of local organisations surfaced and Khatri decided to concentrate his work in an area known as Fathers Colony in Grex village. This area consisted of 26 lanes and its activists had good relations with Khatri.

OPP took 2 months to survey the area, work out plans and estimates and also helped Khatri in motivational meetings. A disposal point which was too shallow to be satisfactory, was found in a nearby *nullah*. Pipes could not be laid at a reasonable depth as there was very little slope available from the homes to the disposal point but the OPP went ahead as it satisfied itself technically that the system would function. Requests for assistance started to come in from the lanes to the MDP office. However, Khatri decided to go the Manzoor Colony way, and against OPP advice, decided to build the secondary drain first.

This decision led to major disputes among the leaders regarding the handling of money. People also did not trust the leaders and were unwilling to hand over their money to them for the secondary drain. Jealousy of the MDP members against Khatri surfaced and they pointed out that he was really their paid employee. Getting cheques signed by the countersigning authority in the governing body became a major problem. To add to Khatri's woes, the OPP gave him a jeep so as to facilitate the replication work. This "privilege" intensified the conflict. So between March and November 1991 nothing happened, and as nothing happened, the conflict grew.

Enter the Sindh Katchi Abadi Authority (SKAA)

In August 1991 Tasneem Siddique became the director of SKAA. Tasneem was the author of the well known Hyderabad Incremental Development Scheme, had worked closely with the OPP, and had a good understanding of the problems of *katchi abadis* and the issues involved in their upgrading. He also knew about the OPP's involvement in the coastal settlements and the problems the MDP was beset with.

The OPP explained the physical problems of the coastal settlements to Tasneem Siddiqui. It told him that although a sanitation system could be developed for the 26 lanes in Fathers Colony, the flat topography of the coastal regions would, for a larger sanitation project, require pumping out of the sewerage into the sea. In addition, for environmental reasons a treatment plant would also be required between the pumping station and the sea. The OPP suggested that SKAA consider the possibility of financing and develop-

ing the main trunks from the settlements to the pumping site, the collection well and pumping arrangement, and the treatment plant. The people on the other hand could finance and develop their latrines and the primary and secondary drains.

Tasneem Siddiqui discovered that a plan for the upgrading of the 3 villages had been prepared and approved by SKAA in January 1988. The plan was for Rs 23 million (US\$ 920,000) and its components consisted of water supply, road surfacing and the making of open surface drains for waste water disposal.

Since the money was sanctioned and available, Tasneem Siddiqui asked the OPP to work out a new plan, based on its concept. From August to October, OPP surveyed the area, identified the location of secondary drains, trunks, collection wells and treatment plant, and prepared estimates. Meanwhile, SKAA engineers also worked out details and estimates based on the OPP concept and survey.

The OPP proposed a Rs 2.3 million (US\$ 92,000) SKAA investment in trunks. The primary and secondary drains were to be built by the people in this proposal. In addition, the OPP insisted that a treatment plant should be built at an additional cost. SKAA engineers on the other hand proposed a Rs 7.08 million (US\$ 283,200) SKAA investment for developing the trunks. They did not feel that a treatment plant was necessary and proposed an additional Rs 3.75 million (US\$ 150,000) investment in a collection chamber and pumping arrangements. In both the proposals SKAA investment was to be utilised by SKAA approved contractors and according to government rules and regulations. Tasneem Siddiqui opted for the OPP proposal and directed the SKAA engineers to adopt it. The engineers were not happy with this decision. OPP was appointed consultant to SKAA and in collaboration with SKAA engineers finalised the scheme. The cost was increased to Rs 2.6 million (US\$ 104,000), minus the treatment plant, and finally tendered out in December 1991 at Rs 3.5 million (US\$ 140,000). The original January 1988 SKAA plan, mentioned earlier, for the area had envisaged a Rs 9.41 million (US\$ 376,400) investment in open drains as opposed to trunk sewers.

In October 1991, the OPP started work on the design of the treatment plant. It looked into the possibility of installing wind mills for pumping out the effluent from the plant. It also studied the possibility of using the effluent for agricultural purposes on the vacant land around the villages; and for handing over the treatment plant to the private sector for O and M, giving it the right to sell the effluent and the solid deposits as fertiliser. It found all these possibilities commercially feasible. These proposals freed SKAA from the financial and administrative burden of looking after the O and M of the system and paying energy charges. However, SKAA engineers were not sympathetic

to these possibilities and they had to be abandoned

For the design of the treatment plant the OPP contacted university professors and leading Karachi consultants and experts. It discovered that they were all obsessed with high-tech solutions, seldom looked into the problems an average entrepreneur or technician would have in maintaining the plant, were not particularly interested in lowering costs, and did not take into consideration the constraints small contractors and poor quality skilled labour would have in implementing their designs. The reasons for these aspects not being taken into consideration by these leading professionals, was attributed by the OPP, to the fact that they had never worked with people or on shoe string budgets.

Subsequently, the OPP designed the treatment plant itself with assistance from SKAA engineers. Its cost, according to OPP estimates, was Rs 2.11 million (US\$ 84,400). However, it was tendered out by SKAA for Rs 3.5 million (US\$ 140,000)

OPP as SKAA consultant

As SKAA consultant, the OPP's job was to prepare plans and estimates of work in association with SKAA engineers and give top supervision to construction work. In addition, the OPP wanted to bring down the costs as far as possible but without compromising quality. In this the OPP faced a number of problems.

First the SKAA engineers were not willing to own the designs they had prepared in association with the OPP. They always referred to them as "OPP designs". Then there was the problem of specifications. The SKAA engineers specified RC pipes which are supposed to be manufactured by only one company in Karachi. However, OPP discovered that these pipes were twice as expensive as pipes of better specifications manufactured by other companies. Their use could have brought down costs by about 30 percent. This did not happen. Once work began the width of the excavations carried out by the contractors was more than twice of what was required or specified, and since they were billing for actual quantities, costs went up. Levels were not properly maintained and checked. The first consignment of pipes was according to specifications and with proper rubber joints. The rest were from other sources and without rubber joints. The manufacturers told the OPP that this was common practice for most government projects. The OPP failed to control these activities of the contractors, as the SKAA engineers and supervisors who were supposed to work with the OPP staff, considered the OPP as their enemy and the contractor as their friend.

There were also other problems SKAA staff informed the residents that originally there was a Rs 23 million plan for the whole settlement inclusive of internal works, and that the OPP had it reduced to a Rs 3 million one, and that too only for the external works. This was to promote OPP-resident enmity. Meanwhile, local leaders started pressurising the SKAA engineers and contractors to change the plans to service their lanes directly. The people were not organised at lane level to counter-act these pressures. And then the councillor entered the conflict. He said that he had not been consulted about this whole scheme and nor was his name associated with it. He threatened to put a stop to it and if he could not, he said he would dig it up and relay it all over again.

Things came to a head in December 1991 and OPP staff was attacked by leaders of local organisations. The OPP withdrew as consultants to the project and the SKAA contractors and engineers, and the local leaders, were free to do what they wished with the project.

Results of the replication

The work on the trunks was to be completed by SKAA appointed contractors by May 1992. However, in July 1992 only 50 percent had been completed. The work is substandard in all respects, without proper slopes and defective joints between pipes. To satisfy the self appointed local leadership, changes have been made in the layout that has made a mockery of the whole concept promoted by the OPP.

The work on the treatment plant has not begun. This is because the land chosen for it was identified by SKAA as government land belonging to the Central Board of Revenue (CBR). As such it was acquirable under law for amenities at Rs 26,000 per acre. However, it turned out that this land belonged to the Customs Department and they were not willing to sell it. Consequently, SKAA is just putting up a collection tank and a pumping station. The affluent will go into the sea untreated. No attempt had been made to locate a new site for the treatment plant. The OPP feels that this is only because the engineers do not see a necessity for it. An alternative location could have been found, even if with difficulty.

Meanwhile, the residents and area activists have started realising that they have lost out because of their leadership, the contractors and SKAA. OPP has received a number of calls from them to come and initiate work in the lanes. However, the OPP and Khatri wish to wait before commencing work. This time they intend to organise lane wise, as was done in Orangi, to overcome leadership conflicts and the absence of trust between the people and the self appointed leaders.

In Fathers Colony 3 lanes did collect money and wanted to begin work, but their MPA got the work financed through funds that were available to him. He has promised other lanes assistance as well. No other sanitation related work has been done since the OPP left the scene

The MDP has been wound up and its place has been taken by the Grex Development Project (GDP). The GDP is especially structured to act as an extension organisation on the lines of the OPP. At present the GDP is carrying on a home school and health programme in the settlement, and refuses to deal with sanitation issues. Feedback from the field shows that conditions are being created in the "minds of men" which will lead to a major demand for a people's financed and managed low cost sanitation programme

Conclusions drawn by the OPP from the MDP replication project

1 Where local organisations are weak and/or leadership does not have a relationship of trust with people, it is better to organise one lane at a time and lay the primary drains before tackling larger issues, such as secondary drains.

2. The high costs of government development are not only because of corruption but also because of procedures and regulations. For example, the tendering procedure for the work done in the MDP areas required filling of various forms, supplying security bonds etc, which made it impossible for small contractors to bid for the project and the price went up. Again, if SKAA could purchase pipes and cement and give out only a labour and aggregate contract, tendering procedures could be simplified, and no advance payments to the contractors would be necessary.

3 Government engineers and functionaries cannot be forced to adopt new approaches and directions on orders of a superior. They have to be properly oriented and convinced of the new approach so as to own it. Such an orientation did not take place and as such the SKAA engineers did not own the OPP design and methodology. And so the MDP replication project was doomed from the very beginning.

4 Eminent professionals who have not worked with people are not competent to understand and cater to the requirements of a development project which is financed and managed by communities. They need to be exposed to local social and economic conditions. But first they must accept the need for it.

5. By adopting the OPP methodology, lease and development charges for low income settlements can be halved. For instance, at the MDP replication, according to the SKAA plan for the building of trunks, (without pumping arrangements and a treatment plant) development charges worked out to

about Rs 2,822 (US\$ 112 88) per family (Rs 2,022 for external development and about Rs 800 for self financed and self managed internal development) There are about 3,500 families in the area. As per the OPP plan which worked out to Rs 2.3 million for the same development (minus a treatment plant), each family would have to pay about Rs 1,435 (US\$ 57 4) (Rs 635 for external development and about 800 for self managed and self financed internal development). According to the original SKAA plan of Rs 23 million, the development charge works out to Rs 6,388 80 (US\$ 256) per household.

The Sukkur *Katchi Abadis*

Sukkur is a small historic town on the banks of the Indus river, about 450 kilometers from Karachi. Within easy walking distance from the old city centre are the 3 *katchi abadis* of Gol Tikri, New Pind and Bhoosa Lane. They are contiguous to each other and have a population of about 30,000 living in over 2,950 houses

The *katchi abadis* were established in the late 60s and grew in a big way in the 70s. Adjacent to them is an abandoned stone quarry. The quarry depression became the disposal place for their waste water, garbage and excreta. After piped water came to these settlements in the late 70s, the depression started filling up, and by the mid-80s it became a pond covering over 7 acres and having an average depth of 8 feet. The houses on the edge of the lake started getting inundated and during the rains a large area of the settlements came under water. As the depression filled up, the water table rose and an increasing number of lanes became waterlogged. Other smaller depressions in the settlements also got converted into ponds and caused flooding in their vicinity. The Sukkur Municipal Corporation (SMC) installed 2 small pumps to deal with this situation, but they proved to be far from effective.

The residents of the settlements come from different ethnic backgrounds. There are refugees from India in certain areas and there are migrants from the rural areas of Sindh and Punjab in others. The residents are, by and large, working class and the majority do odd jobs on a daily wage basis for the services sector in Sukkur.

Most houses use bucket latrines whose contents are thrown into the street, or at best into the pond. The use of soakpits is out of question due to soil conditions. A number of households have no latrines. Their children excrete in the lanes and the adults go out along the drain or the pond's edge at night.

Background to initial contacts

The UNICEF operates an Urban Basic Services (UBS) programme in low income settlements and *katchi abadis* in Pakistan. The programme consists of sanitation, health and home school components. The sanitation component is supposed to be carried out by the communities and is fully subsidised to begin with. Overtime the subsidy is reduced, and ultimately withdrawn.

In Sindh, the province to which Sukkur belongs, the programme has been in operation since 1988. It is operated through the local government, the Public Health Engineering Department (PHED) of the provincial government, and SKAA. The director of the UBS programme is normally the commissioner of the division, or the highest revenue officer of the government that is stationed in the town where the programme is in operation.

In Sukkur, the three *katchi abadis* of Gol Tikri, New Pind and Bhoosa Lane, were chosen as the programme sites. It was decided that 10 lanes in the settlement would be provided with a fully subsidised underground sewerage system to begin with. The disposal point was to be the pond.

The UNICEF wanted to adopt certain aspects of the OPP's Low Cost Sanitation Programme for its Sukkur project. In this connection, between August and October 1990, the UBS staff, UNICEF officials and the Commissioner of Sukkur visited the OPP for orientation. Finally, the UBS and UNICEF officials accepted the OPP philosophy and methodology and agreed to replicate the OPP experience without modifications to it, and not partially as originally envisaged. An agreement was signed to this effect between the OPP and UNICEF in October 1990. In December 1990, UNICEF sent 3 Sukkur based engineers (one each from the SMC, PHED and SKAA), for training to the OPP as a first step to the replication programme.

The UNICEF was anxious that the OPP involve itself in the UBS programme for Larkana and Shikarpur, two other towns not far from Sukkur, as well. However, the OPP felt that first the model should be tried out in Sukkur and then replicated in the 2 other towns, with Sukkur serving as a training and demonstration area. UNICEF agreed to these terms.

The OPP was to be consultant to UNICEF. It was to shape the programme; provide technical inputs to it; train engineers, organisers and activists, and monitor and document the process. UNICEF would continue to operate the programme with government support and pay the OPP fees for its services.

The process of replication

In January 1991, the OPP technical team visited Sukkur. It saw the situation and talked to the people and the SMC engineers. It realised immediately that the people could not invest in a sewerage system as there was no disposal point available, except for the pond, which was overflowing and flooding the settlements. People were so desperate that they were willing to pay to have the pond emptied.

The OPP surveyed the area and located an outlet to the river 8,500 feet away from the pond. The team felt that water from the pond could be pumped out to that location. During the visit it was discovered that the PHED office in Sukkur had prepared a Rs 2.2 million (US\$ 88,000) plan for emptying the pond and taking the water to the river. OPP re-worked the plan and reduced its cost to Rs 1 million (US\$ 40,000).

UNICEF and OPP felt that it was necessary to implement the OPP modified plan since it was the only permanent solution to the problem. The PHED had no finances for the project but was willing to have it built if finances could be raised. It was also felt that a treatment plant should be constructed near the river bank so that untreated sewerage would not be pumped directly into the river. Due to financial constraints the sewerage treatment plant would form phase 2 of the project. It was further felt that once work began on the external development, motivation meetings could be held in the lanes of the settlement to get the people to organise and undertake the construction of their sewerage system. Support to make this activity possible would have to be developed.

The SMC councillors and the Mayor of Sukkur were not convinced that a self financed, self managed sewerage programme could work in the Sukkur *katchi abadis*. They said conditions in these settlements were different from those in Karachi. However, the Mayor agreed to provide Rs 0.2 million (US\$ 8,000) for phase 1 of the project, and the UNICEF agreed to provide an additional Rs 0.8 million (US\$ 32,000). The SMC tendered out the work and the PHED provided the SMC with technical and supervisory assistance.

The construction of the trunk and pump house proved to be a complex affair. Permissions for electric connections to the pump house from the Water and Power Development Authority (WAPDA) were required and the Indus Water Authority had to agree to the passing of a trunk through a protective embankment near the river. Finally, a work order was issued to the selected contractor in September 1991, and work began the following month in October. It was to be completed by end December 1991.

However, work was completed in April 1992 and the dewatering of the pond began. The Mayor had the dewatering slowed down and finally stopped, as he wanted to make arrangements for occupying and securing the land that was going to be reclaimed, for the SMC. Various claimants for the land had surfaced and it seemed that since it was becoming a bone of contention, the dewatering would never be completed. Schemes for converting the reclaimed land into plots were floated while the residents of the *katchi abadis* made plans for encroaching on it. The OPP suggested that the reclaimed land should be protected for use as a community open space. In addition to this issue, an additional trunk sewer had to be built that would carry the sewerage of the settlements through the emptied pond to the collection well and pump house. This also had to be financed if the internal development had to be undertaken by the people.

At this stage, SKAA intervened and asserted its authority. It took responsibility for taking over and protecting the reclaimed land for community purposes, and it agreed to finance the additional trunk. SKAA has owned the whole project and the OPP methodology, and is now playing an active role in the project. It also intends to take up the question of leasing in the settlement.

Changes in UBS procedures and organisational systems

A number of changes were made in the UBS procedures and organisational systems as a result of UNICEF-OPP dialogues. The important changes are listed below.

1. The commissioner was not to be the director of the UBS programme for Sukkur as he could not possibly give time to it. It was decided that Nazir Mateen, then the Public Relations Officer (PRO) to the SMC, was to be the project director. He understood the programme very quickly and was very excited by it. He gave a lot of time to it, even after office hours. It is important to note that Nazir Mateen had been a journalist before he joined the SMC and had a lot of contacts in the 3 *katchi abadis*.

2. A project office was to be set up in the area and its office timings would also be in the evenings after people come back from work. This was to enable people to contact the project easily and at their convenience. Such an office was set up in November 1991. The function of the office is to provide plans and estimates for internal development work to the lane managers, to motivate and organise the residents, and to hold discussions and answer questions as and when they arise. The office would be autonomous and would report to the OPP.

3. It was decided that social organisers would be appointed from within the community, whereas under the UBS Programme social organisers were normally appointed from the local government bureaucracy. The OPP felt that government employees could not perform this function as they would not always be available to the community, and there would be problems of culture and language, and constraints on time. Two social organisers, were appointed in September 1991. Some comings and going have taken place and at present there are 2 male organisers from the community with the project. The social organisers have been trained at the OPP-RTI and their salaries are being paid by UNICEF through the OPP. If their salaries were to be paid directly by a government department they would not be able to resist the pressures government officials are normally subjected to, nor would they be able to act against the interest of superior government officials. Successful community work cannot be done when the people doing it cannot act independently. The social organisers were asked to keep a diary of their activities and provided with cameras to document the process of development.

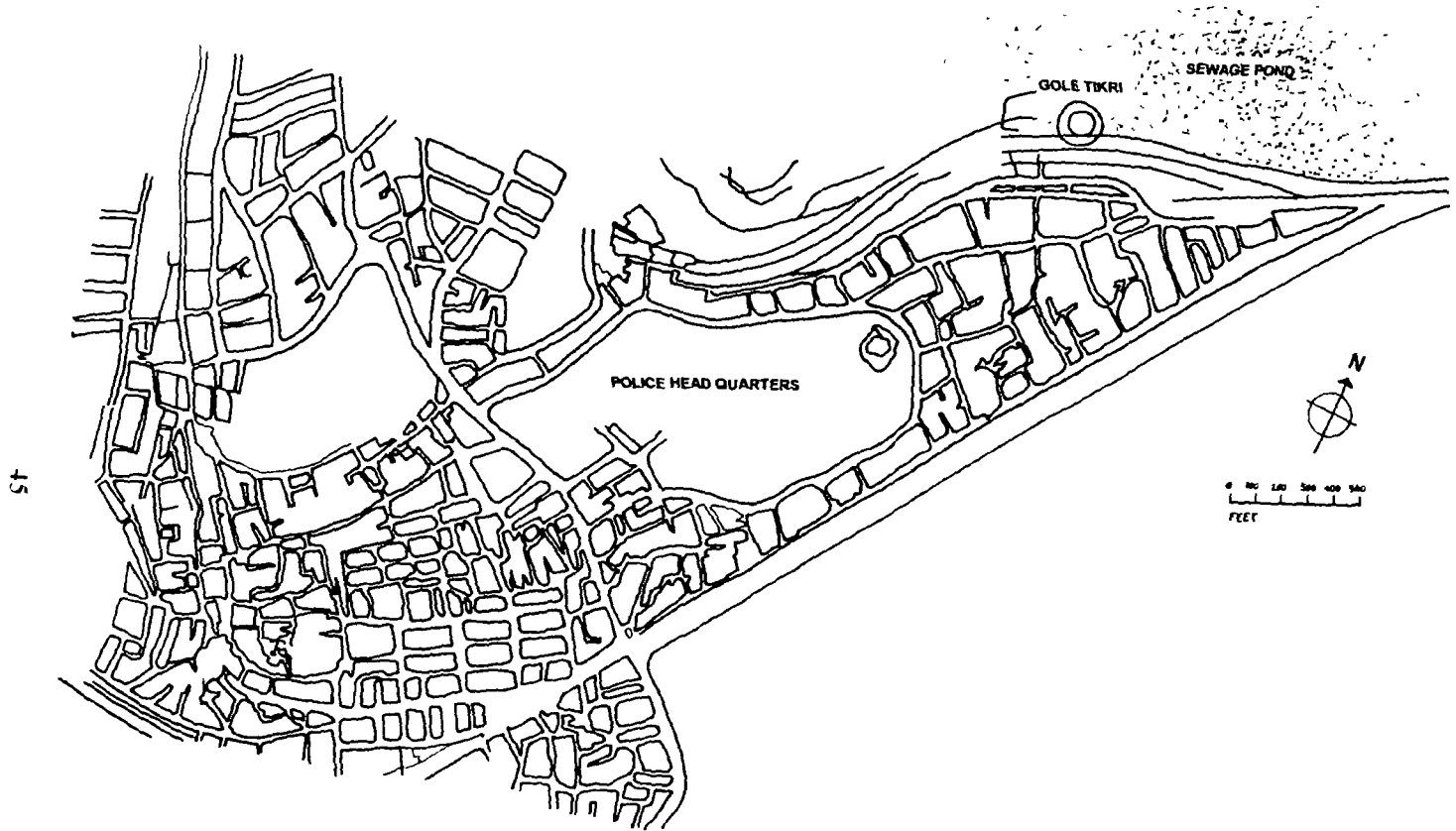
4. It was agreed that 2 UBS social organisers would be required from the government's side as well. They were to be recruited especially for the project as grade 15-16 employees of the SMC. Their job would be to coordinate internal-external work, and be a liaison between the project office, SMC, SKAA, OPP and UNICEF. In addition, they would learn about internal mobilisation and development in the process, so that they could become trainers for future UBS projects of a similar nature. They would not control the work being carried out on internal development by the project office and the community. Two officers, one male and one female, have been deputed for this job recently. The female officer will also be responsible for helping to mobilise women for internal sanitation and for the UNICEF health programme for the 3 *katchi abadis*, which again has been modelled on the OPP programme in Orangi.

5. The OPP would visit the project once every two weeks, review the work and provide on-site guidance. With the provision of plans and estimates the project office would concentrate on lane level mobilisation.

6. It was felt that if a local NGO could be associated with the project it could, over time, take over for the Sukkur *katchi abadis*, the functions the OPP performs in Orangi. However, no such NGO could be identified.

Organisation of internal work

The OPP prepared plans and estimates for internal work. To do this its survey team went to Sukkur and worked there for 2 weeks. The plans and estimates were completed by October 1991. Five manhole shutterings and tools were



PLAN OF GOLE TIKRI, NEW PIND, SUKKUR



Sukkur: a motivational meeting



Sukkur: a view of the 7 acre pond

sent by the OPP to the project office. A three day on-site training for the project director and the social organisers was arranged by the OPP. In addition, training courses for the SMC area councillors and 6 local activists were also held at the OPP-RTI.

Motivational meetings started to be held in November 1991. During the meetings slides of the OPP experience were also shown. The new project director proved to be an excellent motivator and so did the local social organisers. As a result, 3 lanes appointed their lane managers and began money collection.

However, in December 1991, the project director was transferred. The reason for his transfer was related to a conflict between him and the Mayor on a jeep that the UNICEF had supplied for the project. The project director insisted that the jeep should be with the project and not used for other purposes and by other departments. A new project director was appointed. He is the Health Officer of SMC. The OPP had a major problem on its hands, that of orienting the new director to the programme.

By February 1992, one lane comprising 9 houses had built its underground sewerage system. In 4 lanes comprising 50 houses money collection was in progress. In 6 more lanes mobilisation had begun. However, since the external work was far from complete, work in the lanes could not be undertaken, and the lane managers returned the money to the residents. They decided to wait till the external work and dewatering was complete.

The OPP has prepared regular reports of its fortnightly visits to the area. These reports are both monitoring and documentation documents. In addition, photographs have also been prepared. SKAA has documented the latter part of the process on video.

Results of the replication

Since SKAA has involved itself in the project, dewatering is taking place at considerable speed. During the recent rains the *katchi abadis* were not flooded by the pond for the first time in the last decade. There is no doubt that the reclaimed land will be protected for community purposes.

The SMC has undertaken to operate and maintain the pumping station and the collection wells. In addition, the PHED will finance, operate and maintain the treatment plant which is now in the process of being designed. The OPP feels that the plant should be handed over to the private sector which should operate and maintain it at his own cost, and in addition, operate and maintain the pumping station and the collection wells. The private sector can sell the

affluent for irrigation purposes to the farmers along the Indus flood plains near the site. Initial investigations by the OPP show that this can be a commercially viable proposition

There will be no difficulty in getting the people to undertake the financing and construction of their primary and secondary drains, once the external work is complete. In the case of the Sukkur *katchi abadis* all the actors in the drama, including the councillors, PHED, SMC and SKAA, have come to an understanding and are fully behind the replication project. In addition, the district health officer is supporting the health programme, and the forestry department is anxious to promote a social forestry programme for the 3 settlements.

Meanwhile, UNICEF and the OPP have come to an understanding whereby the OPP is going to be a consultant for training and providing advisory services for the Sindh UBS programme for 1992-1993. During this period work in the 3 Sukkur *katchi abadis* is to be consolidated and they are to be converted into a pilot demonstration area where training and orientation can be provided to the Shikarpur and Larkana UBS project areas. The process has begun and UBS staff, and local community activists and councillors from Shikarpur and Larkana have started coming to the OPP-RTI and the Sukkur project office for orientation and training. In addition, the OPP will try and assist the UBS programme in development of a support NGO in Sukkur which can take over the programme and establish a training centre. Details of the Project Plan of Action (PPA) for 1992-93, are given in Appendix - 2.

The residents of other *katchi abadis* on the periphery of the project area and in other locations in Sukkur, have started visiting the project and asking the project staff to help them in tackling their sanitation problems and helping them to develop disposal points for their sewerage. The Orangi experience seems to be repeating itself.

Conclusions drawn from the Sukkur replication project

1. The OPP for the first time came across a situation where the disposal point was a pond subject to flooding. Looking at Sukkur and the neighbouring areas, it realised that this was the most common manner of waste water and sewerage disposal in the Indus plains. Therefore, a solution to it was extremely important for replication projects in Pakistan.
2. External development becomes a priority where a natural disposal point is not available. This external development work can only be undertaken by government agencies at their own cost. Without such development people cannot carry out internal development.

3. Various government organisations are not aware of each others plans and responsibilities due to which development is hindered In the case of Sukkur for instance, the SMC did not know of the PHED scheme for dewatering the pond in the 3 *katchi abadis* Similarly, they are not aware of the funds that are available to their sister organisations and thus cannot coordinate work between them. Again, in the case of Sukkur, the SKAA asserted itself rather late in the programme.

4 Changes and adjustments to programme procedures and directions can always take place to suit new approaches and objectives, if the individuals involved have the will to understand each others point of view, and are decided about objectives and processes.

5. If middle level government functionaries are involved from the very beginning in dialogues and discussions on new approaches and their benefits, they become their supporters and promoters, provided they are assured of an important role in decision-making and implementation In addition, if one component of a project shows signs of success, departments that can operate other components are quick to associate themselves with the project. In Sukkur, the OPP discovered an immense longing within government departments to do some useful work, and also discovered that they could not find much useful work to do in the circumstances in which they operated

6. The OPP, through the Sukkur experience, has been able to clearly identify the relationship between internal and external development, the role of government, international agencies, NGOs, local organisations and activists in the process of development through community action, and the various institutional arrangements required to develop and sustain such development Some of these conclusions are outlined in detail in Chapter Three

7. Transport vehicles are a major source of conflict and jealousy between departments and individuals and instead of facilitating work, end up in obstructing it Wherever possible transport should be hired, and that too for specific periods when it is required This is what OPP has done for its Sukkur visits, and it is not only a cheaper solution but saves the time spent in the maintenance and looking after of vehicles

8 The costs of external development per household are negligible and in the case of the Sukkur *katchi abadis* work out to about Rs 335 (US\$ 13.4) If the cost of the treatment plant is added to this cost, then it works out to Rs 940 (US\$ 37.6).

The World Bank Collaborative *Katchi Abadi* Improvement Programme Pilot Project at Hyderabad

In 1990 studies for the preparation of the Shelter for Low Income Communities Project of the government of Pakistan were undertaken. The studies were funded by the Swiss Development Cooperation (SDC) and the government of Japan, and administered by the World Bank. An inception report was produced in October 1990. It was basically a review of literature and organisations and an identification of shelter related problems and issues.

In April 1991, project preparation reports were completed. One of the possible projects identified was called Collaborative *Katchi Abadi* Improvement Programme (CKAIP). The programme envisaged a collaboration between SKAA, municipal corporations in Sindh, and the OPP in upgrading squatter settlements and using the OPP methodology in the process.

Between April 1991 and March 1992, detailed discussions took place between the OPP, representatives of the government of Sindh, and the World Bank representatives and consultants. The main consultants for the project were TPO Sullivan and Partners. In addition, numerous visits to Orangi, Grex Village, Manzoor Colony and other *katchi abadis* were undertaken collectively by the sponsors and the OPP staff. Finally, in April 1992 an agreement was signed between the OPP and the other actors of the project. The text of this agreement is given in Appendix - 3.

Commencement of the Hyderabad project

After considerable consideration and debate, Hyderabad was chosen as the site for the project. This was because it was only a two and a half hour drive from Karachi and as such the OPP staff could visit it frequently. A number of towns are in the vicinity of Hyderabad, and at a latter stage the Hyderabad sites could serve as training and demonstration areas for them. Three *katchi abadis* (American Quarters, American Colony and Gujrati Para) were chosen in Hyderabad. They have a combined population of about 41,000 living in 5,695 houses. Conditions here are similar to those in Sukkur although the disposal points consist of a number of much smaller depressions and peripheral *nullahs*. In addition, the Hyderabad Municipal Corporation (HMC) has also built a number of substandard open drains.

Under the terms of the agreement the OPP will play an advisory role, impart training, operate the site office in the selected *katchi abadis*, carry out research and development activities and monitoring and evaluation functions for internal work. SKAA will be the coordinator of the project between

government agencies, local councils and the OPP-RTI HMC will depute its staff for the execution of the project. A joint SDC-World Bank team will monitor the work, SDC will fund it, and the World Bank will be responsible for its administration

SKAA has appointed its deputy director, Ms Fatima Hasan Zaidi as the Coordinator. She has very quickly picked up the OPP methodology and understood its importance and become an effective advocate for it. Fatima Hasan Zaidi has also been associated with the replication project at Sukkur and is no ordinary bureaucrat. She is a progressive Urdu poet and her work is well known and respected.

The HMC has deputed its engineer, Haneef Qureshi, for dealing with the surveys, estimates and development for external work. He has a very good knowledge of the 3 settlements, knows people personally in them, and is on very good terms with the local councillors and leaders. This is because he has worked in these areas for many years under the HMC *Katchi Abadi* Improvement Programme and is an old resident of Hyderabad. As such, he has been very useful for the OPP.

Mr. Haneef Qureshi and the OPP have identified community activists who are residents of the 3 *katchi abadis* and they are to visit the OPP-RTI this month for training and orientation. From them, two will be employed as social organisers for the site office. In addition, a site office has also been identified in one of the *abadis* and training to HMC support staff has been provided.

A sewerage master plan has been prepared under an Asian Development Bank (ADB) loan by Balfours, a UK based engineering firm. It will take many years before the plan is implemented and therefore its trunks cannot be the disposal points for the sanitation system of the 3 *katchi abadis*. Alternative disposal points have been identified by the OPP and relevant surveys to establish their details and levels have been undertaken by the HMC and Hyderabad Development Authority (HDA) engineers and surveyors. Adjustments to the master plan will have to be made subsequently to accommodate these disposal points.

The SDC-World Bank cell has commenced its monitoring work. It has already submitted two reports although almost no physical work has been done so far.

Insights gained and conclusions drawn from negotiations with World Bank and SDC

During the year long negotiations between the OPP and the World Bank-SDC, and the various joint visits to *katchi abadi* upgrading projects, the difference of perception, attitudes and work procedures between OPP and the interna-

tional agencies surfaced. There were also differences between the SDC and the World Bank. The SDC was more sympathetic to the OPP's point of view and often supported it. Some of these differences and the insights gained by the OPP during negotiations are detailed below.

1. The World Bank-SDC wanted to begin more than one pilot project. They had hoped that work could begin in 3 Sindh towns. However, the OPP felt that it could only handle one project and that if that project was properly developed, it could serve as a training and demonstration area for other towns. It was finally decided to have only one pilot project.

2. The World Bank-SDC wanted government involvement at all levels of upgrading. They felt that government staff should be employed for motivating people, organising them and giving them technical advice. The OPP on the other hand was adamant that this function could not be performed by government functionaries but only by community members supported by NGOs.

3. The World Bank-SDC saw the project office as a government institution under the HMC or SKAA. The OPP saw it as a community office run temporarily by the OPP. Again, the OPP insisted that the office should be autonomous and located in one of the settlements and easily accessible to the other two settlements.

4. The World Bank-SDC felt that the social organisers appointed to the project office should be paid by SKAA and/or the HMC. The OPP argued that they would thus end up becoming government employees and as such incapable of resisting the pressures that government functionaries are subjected to. In addition, they would be viewed by the community with suspicion and hostility. As such they would not be able to fulfill their role as community organisers. However, the World Bank-SDC were not willing to let the OPP pay the salaries to the social organisers on their behalf. Finally, it was agreed that the salaries would be paid directly by the Shelter Project.

5. The World Bank-SDC felt that a big seminar should be organised at the commencement of the project in which all the actors, including the community, should participate. The OPP disagreed. It felt that this would jeopardise the project as the community would see a lot of money being spent and a lot of foreigners participating in the seminar. They would immediately say that this money could have been used for development purposes instead. In addition, they would feel that the style of the project was not one that was conducive to the development of self help and self finance. The same differences between the two parties surfaced with regard to the nature of the project office. The OPP wanted an austere non-airconditioned office in the settlement. The World Bank-SDC envisaged a more elaborate affair.

6. The World Bank consultants felt that it was necessary to give “perks and benefits” to government officials so that they would collaborate properly with the project. These perks and benefits were to be in the form of transport vehicles and other facilities. The OPP on the other hand felt that this was not only unnecessary but would lead to jealousies and conflicts and have an adverse effect on the project. The government counterparts should be motivated to perform their duties by being made to realise the importance of the programme and not through “fringe benefits”.

7. The monitoring arrangements proposed by the World Bank-SDC representatives were very detailed and complex. They involved talking to the community regarding the OPP performance as well in the absence of OPP representatives. The OPP pointed out that as a result, the community would see the OPP and the World Bank-SDC as two separate and antagonistic entities and would play the one against the other. This would erode the effectiveness of the OPP and weaken the community participation aspect.

8. The monitoring reports can be a source of misunderstanding between various actors. OPP's experience of such reports has not been positive. From these monitoring reports various actors manage to draw wrong conclusions and attribute motives to other actors that are sometimes not accurate. As such these reports can promote differences rather than reconcile them. The two monitoring reports to date, regarding the Hyderabad project, can also be interpreted to promote differences between the various parties involved in the project.

9. The OPP feels that there is no need for a monitoring cell. It raises overhead costs considerably and since it is not involved in the day-to-day operation of the project, it can miss out or misunderstand a number of sensitive issues. The project staff should be trained to monitor its work itself. What is needed, however, is some one who can gently carry out a coordinating function between the various actors in the project and help in the establishment of better relations and the identification and tackling of sensitive issues. In this way the learning-by-doing process will be strengthened.

10. The foreign consultants and World Bank-SDC representatives were concerned with issues that the OPP has discovered are quite irrelevant to the upgrading process. These issues relate to the tenure status in the settlements and detailed ethnic and socio-economic information, that consultants require, regarding the residents. These issues have been discussed in Chapter Three under the heading “The Role of International Agencies and Their Consultants”.

11. On a certain site visit the World Bank consultants preferred to take their own interpreters so as to be able to talk to the residents of *katchi abadis* independently of the OPP. The *abadi* residents later commented to the OPP that it was obvious that the foreigners did not trust the OPP staff. This is a sensitive issue and can have adverse effects on the upgrading process.

12. It is commonly believed by the non World Bank-SDC project staff members that the total administrative cost of the Hyderabad project office works out to a small fraction of the monitoring budget. This belief is a source of cynicism, amusement and/or heart burning. What repercussions this will have on the project is not clear. However, they will not be of a positive nature.

Organisation of external work

The OPP has already identified the locations of external trunks that would be required for sewage disposal for the three settlements. The HDA engineers have already given two designs along with specifications for these trunks. Those designed by the HDA according to its standard specifications cost Rs 13.06 million (US\$ 522,400) or Rs 2,293 (US\$ 91.72) per household. Those designed according to the specifications of the ADB funded programme cost Rs 25.43 million (US\$ 977,200) or Rs 4,465 (US\$ 178.6) per household. The external works in Sukkur worked out to Rs 474 (US\$ 19) per household. In addition, the trunks will be serviced by two pumping stations.

The OPP is looking into the possibility of reducing these costs and doing away with the pumping stations. It feels that costs can be reduced to less than Rs 1,000 (US\$ 40) per household. There is also a disagreement in approach to the design between the HDA and HMC. The HDA is responsible for developing infrastructure and the HMC is responsible for maintaining it. The HMC wants to do away with the pumping stations even if it means maintenance problems for the trunks. It feels that maintaining inefficient sewers is much easier and cheaper than maintaining pumping stations. OPP supports the HMC contention.

It is interesting to note the different perceptions of the HDA and HMC engineers regarding the approach to sewer design. The maintenance agency's pre-occupation is with problems related to subsequent maintenance and that of the design agency with "sound" engineering practice.

OPP as advisor to KMC's *Katchi Abadi* Upgrading Programme

In 1989 the KMC's *Katchi Abadi* Directorate commenced work under an ADB Loan Programme, in certain parts of Orangi. The work consisted of providing

water, sanitation and road paving to some squatter areas. The OPP visited the areas and saw that the upgrading process was digging up sanitation lines that people had laid themselves, and re-paving lanes that had been built by KMC councillors. In addition, the work that was being done was, to say the least, substandard and was destroying existing work of a far superior quality. It was a criminal destruction of peoples investment, a waste of loan money and a negation of the OPPs work in Orangi.

In March 1989, the OPP prepared a small monograph on the subject and approached both the ADB and the *Katchi Abadi* Directorate of the KMC regarding its concerns. In the monograph the OPP explained that through the peoples efforts and the programmes initiated by the KMC councillors, large scale development had already taken place in Orangi, and that the ADB programme should aim at complimenting this development by making an investment in trunk sewers and treatment plants and by supporting the OPP programme. As a result of OPP intervention the work was curtailed.

In November 1990, the OPP read a report in the press which said that an agreement for upgrading 2,300 acres in Orangi had been signed between the KMC and NESPAK, a Karachi based firm of consulting engineers. On further investigations it was discovered that this was a part of the ADB financed Karachi Urban Development Programme (KUDP) and that Kinnhill, a foreign engineering firm were the main consultants.

The OPP tried to initiate a dialogue with the technocrats of the KMC's *Katchi Abadi* Directorate, but there was no positive response from them. The OPP then, through its contacts, approached the Mayor of Karachi and a meeting was held with him in December 1990. The OPP explained its programme to the Mayor with the help of slides, and also explained the negative aspects of the KUDP upgrading scheme. The Mayor clearly understood the advantages of the OPP programme and the need to support and compliment it. In January 1991, he visited the OPP, saw the work it was doing, and spoke at length to the residents of various parts of the settlement.

Following the Mayor's visit to Orangi, the OPP wrote to the Mayor restating its position and spelling out its advantages to the KMC's programme. This was followed by a series of meetings with the Mayor and the KMC technical staff, and in May 1991 the Mayor decided to appoint the OPP as an advisor to the KMC's *Katchi Abadi* Upgrading Programme.

Role of OPP as KMC advisor

Under the agreement that was worked out between the OPP and the KMC, OPP was to provide documentation of existing development works in sanitation,

water supply, roads and lane paving in the project area. In addition, it was to identify sanitation related items for external development required in the settlements. It was also to provide design for internal sewerage lines and promote community participation in developing them. The KMC programme, meanwhile, adopted the OPP methodology and limited itself to designing and implementing external works.

After May 1991 the OPP attended various meetings related to the project in which the KWSB engineers and the consultants to the programme were also present. The consultants initially felt that the OPP was interested in replacing them as consultant to the programme and taking away the bulk of the Rs 18 million (US\$ 720,000) fee that they were getting as consultants. In addition, they felt that they could also motivate and organise people if they were paid for it. However, the KMC's *Katchi Abadi* Directorate, which has worked for years with communities, knew better.

During the meetings the OPP also discovered that the consultants had made no surveys of the existing work done by the people in the settlements, and that was the reason why they were not able to incorporate this in their design and work plan. Over a period of time, an understanding between the consultants and the OPP also developed.

OPP's engineering designs have been done by rule of thumb and the application of common sense. KMC's consultants felt that as such there would be major design discrepancies in OPP's work. However, checking of the designs, and that too very critically, has revealed that they are very sound.

The Balfours design for Orangi trunk sewers

Kinhill/NESPAK were asked by the KWSB engineers to relate their work in Orangi to the design of trunk sewers that has been prepared by Balfours, consultants to an ODA (UK) financed project. When the OPP studied the plans prepared for the trunks it was horrified. The trunks did not pick up the work done by the Orangi communities or the KMC. In addition, the plan required 6 pumping stations, in an area where there are considerable gradients. If the trunks were to be built, they would run dry, unless the Orangi residents were to dig up their sanitation lines and lay them again.

The sanitation system developed by the OPP follows the natural slope of the land, and through various *nullahs*, reaches the main Orangi *nullah* which then empties out into the Lyari river. As such the OPP felt that the trunks should either be laid in the bed of the *nullahs* or parallel to them. The greater Karachi sewerage plan envisages trunks in the bed of the Lyari river. In addition, the OPP was concerned at the enormous cost of developing the proposed trunks.

and realigning the existing system to link up with them. This could not be done without acquiring another major loan and the psychological effect on the communities would be disastrous.

After a number of meetings it was decided by the KWSB to shelve the Balfours design. The Balfours representative was very concerned and pointed out that Her Majesty's government had invested one million pounds in the preparation of these designs. However, these considerations were set aside and the OPP was asked to prepare designs for the trunks.

The OPP designs consisted of trunk sewers on either side of the *nullahs*. This was because it was discovered that two trunks of a smaller diameter, without problems associated with traversing the *nullahs*, were not only much cheaper but much easier to construct. The costs of this exercise worked out to Rs 120 million (US\$ 4.8 million), a sum that the government of Pakistan can afford. The Mayor was sure that he could get this from the Prime Minister's fund.

Future OPP-KMC relations

In July 1992, due to a political crisis, the KMC council was superseded and the Mayor was removed from office. The OPP agreement with the KMC also came to an end on 31 August 1992. It now remains to be seen whether the provincial bureaucracy and the KMC technocrats will continue the association that the people's representatives had established with the OPP. The signs are promising. The new director of the KMC's *Katchi Abadi* Directorate, has recently rung up the OPP and expressed a desire to visit it.

Other on-going replications

Kot Lakhpat is a working class area on the outskirts of Lahore. A young couple, Rukham and Shazia live there. They are both university graduates and operate a Kot Lakhpat based NGO called Youth Commission for Human Rights. Shazia also operates a home school in her neighbourhood.

The South Asian Partnership (SAP) is a Lahore based NGO which has links with CIDA and Canadian NGOs. Akhtar Hameed Khan, director of the OPP, is a member of the SAP Governing Body. Since 1989, SAP has been supporting NGOs in replicating the OPP sanitation model. SAP explained the model to Rukham and Shazia and SAP financed their visit to OPP for orientation and training. While in Karachi they also visited MDP and saw the conflict there. They visited Manzoor Colony and saw the success of the replication. In January 1992 they asked the OPP to visit Kot Lakhpat. The OPP saw that the concept has taken root in Rukham and Shazia's neighbourhood and that one

lane had been organised Earlier SAP had sent activists from another Lahore informal settlement, Koray Pind, to the OPP-RTI The activists were asked to contact Rukham and Shazia and as a result, 3 lanes in Koray Pind have financed and built their sewerage lines and many more are organising One OPP organiser, spent a day in Koray Pind during the course of work, training the residents.

Rukham and Shazia wish to establish an OPP style office in Kot Lakhpat. However, the OPP, realising that Rukham and Shazia can not carry out this work on a voluntary basis, recently arranged for a Rs 10,000 (US\$ 400) monthly grant for a 5 year period for them through the BCCI foundation

Attempts at replication in Faisalabad

The ODA (UK) in collaboration with the Faisalabad Development Authority (FDA) has been trying to set up a *katchi abadi* improvement programme on the OPP model in that city However, in spite of many meetings and discussions, over the last three years, this has not materialised. The FDA insists that this model may work in Orangi, but cannot be replicated in Faisalabad. To prove the FDA wrong, Rori Brooks, the representative of ODA for the project, and Haq Nawaz, an FDA social organiser motivated a lane to organise and construct its sewer line The OPP provided shutterings and advice. The OPP was informed by Haq Nawaz that the work was completed in March 1992. However, this replication has made no difference to the FDA's conviction that the OPP programme cannot work in Faisalabad

3 - LESSONS LEARNT FROM THE OPP REPLICATION PROJECTS

All *Katchi Abadis* are similar

The OPP has learnt a number of lessons through the replication process and through dealing with government institutions, community organisations and international agencies. A number of lessons that it had learnt through its work in Orangi, have been reinforced. The OPP has discovered that there is no major difference between the physical and social conditions in Orangi and in the other settlements it has worked in. The differences that do exist are related to the level of social organisation of the community and hence its capacity to work together. Given the right support and motivation, this capacity can be enhanced. The lessons reinforced through the replication process, and the new lessons that have been learnt are listed below

There are four levels of sanitation

The OPP has discovered that as in Orangi, there are four levels of sanitation in other settlements as well. These are the sanitary latrine in the house, the primary drain in the lane, the secondary collector drain that links the primary drains, and the trunk sewers and treatment plants. In all the settlements the OPP has worked in, the communities were in a position to invest in and manage the construction of the first three levels.

External development

In OPP terminology, external development consists of trunk sewers and treatment plants, or collector drains that are too long to be developed by local communities. Where natural disposal points, such as *nullahs* are available, or where trunk sewers laid by the development authorities and local bodies exist, communities can immediately undertake the development of their sewerage systems. The problem thus created for the *nullahs* can be tackled by laying trunks in their beds or along their sides, and subsequently integrating this development into the sewerage master plan. If communities are asked to wait till such trunks are developed, they may have to wait “forever”.

Where a disposal point is not available or is problematic, as in the case of a pond that is liable to flooding, a new disposal point has to be developed. For this plans and estimates have to be prepared and implemented by the urban development authorities and/or local bodies. Finances for these efforts have to be raised. A lot of innovation may be required to make this possible. It has been discovered that government professionals are quite capable of this innovation once they are given directions and get into "the spirit" of this form of development. It has been further discovered that there are various sources of finance available with certain government agencies, but poor coordination between government departments, and a lack of knowledge about each others activities, often lead to the non-utilisation of such funds.

External development costs can be reduced to one-fifth of standard government costs simply by re-working sewer directions and by creating smaller drainage units and discovering more appropriate disposal points. In addition, there is a major difference in perception and approach to sewer design between agencies who are responsible for maintenance and operation of sewers, and those who are responsible for design and development. The maintenance agencies prefer to do away with all pumping provisions, even if it means relatively inefficient sewers. They feel that it is easier, simpler and cheaper to look after such sewers than to look after and maintain pumping stations. Development agencies invariably have their way as no dialogue between them and the maintenance agencies takes place in the design stage. In addition, the development agencies represent the powerful provincial bureaucracy and the maintenance agencies represent weak local governments.

Internal development

Internal development can be undertaken by the communities. However, for this they need to be motivated, organised and trained. Government agencies cannot fulfill this function. NGOs, such as the OPP, on the other hand, can. To overcome the constraints of time, manpower and distance from the field, the following process needs to be adopted.

1. The NGO should undertake surveys of the settlements, identify disposal points, and where they do not exist, develop programmes for external development and lobby with the relevant authorities to get them implemented. In addition, the NGO should prepare plans and estimates for internal development.

2. Training and orientation of local activists, settlement technicians and local councillors should be undertaken at the NGOs training centre and its demonstration area.

3. An office should be set up in the settlement. It should be austere and its physical and social character should be as close as possible to that of the settlement.

4. Social organisers should be appointed from the trained activists and they should be the paid employees of the project and should report to the NGO. For this arrangement to function properly, the NGO should be responsible for paying their salary

5 Initially NGO staff should motivate and organise residents with assistance from the social organisers. However, this function should be handed over to the social organisers once they have been trained. It has been noticed that social organisers pick up this function very quickly

6 The NGO should monitor the replication/development through regular site visits and should train the social organisers to do so as well. This training becomes possible if the social organisers are asked to keep a diary of their daily experiences, which can be discussed at meetings of the project staff during the NGO visits to the project. In addition, the social organisers should be supplied with cameras and slide projectors and should be taught as to when and for what purpose to use them

7. Where the local organisations do not have the support and trust of the vast majority of the residents, work should proceed lane wise and as such the emphasis should be on the creation of lane organisations. These organisations can subsequently come together to take up the issue of secondary drains. The OPP has found that beginning with the neighbourhood or settlement level issues, results in leadership conflicts, accusations of dishonesty, and a clash of interests.

8 The NGO should aim at creating a new NGO and a demonstration area in the settlement, and in equipping the new NGO with the necessary knowledge and understanding to carry out similar work in other areas. In this way the concept of a self financed and self managed sanitation system can expand and become a national movement

The role of government

If the government accepts the concept promoted by the OPP, it should.

1 Provide funds to NGOs for setting up and operating an office in the replication settlements, paying the salaries of social organisers and technicians and paying professional charges and direct costs to the NGOs that are

providing training and support;

2. Appoint and fund the training of officers to co-ordinate government funded external works with NGO supported internal works, and provide funds and expertise for external development.

Government functionaries and the role of dialogues and training

It has been noticed by the OPP that middle level government officials do not accept new approaches by being ordered by their superiors to do so. Nor do they accept them by being formally lectured to. If they do not accept them, then they subvert them. To convince middle level government functionaries is very important if a change in approach and style has to take place. This can only be done through dialogues, discussions and an exchange of views backed by facts and figures. This is a special form of training and orientation which takes place through association of the trainees with people of a similar social and cultural background to themselves.

Government procedures and regulations

During its dealings with government agencies the OPP has discovered that there is a lot of flexibility in government rules and procedures and that government officials have a lot of discretion in their application. If government officials are willing to use this discretion, procedures can be simplified, rules relaxed, and as a result development costs reduced by over 50 percent of normal government development cost. NGOs need to be informed about these possibilities and should lobby with government agencies to adopt more rational interpretations of rules and application of procedures.

Problems related to leasing and development costs

In most of the OPP replication projects, people and area councillors have invested a considerable amount of money in developing infrastructure, mainly water supply, electricity and road paving. However, lease and development charges, under the KAIRP do not take this investment into consideration and apply a flat lease and development charge. The OPP, through its dialogues with communities, has come to believe that the lease process can be speeded up if the lease and development charge is broken up into land, water, electricity, sewerage, road paving and gas components, and that communities only pay for what they have not already acquired. This means that a survey of existing facilities in every neighbourhood will need to be undertaken. In

addition, leasing procedures need to be simplified and made a one window affair.

The role of international agencies and their consultants

International agencies provide loans for development and appoint their own consultants for planning projects and monitoring them and the use of the loan. In this connection, the OPP has made a number of observations. Some of these are given below.

1. Loans for development purposes are required by the government of Pakistan from international agencies, only because the state delivers infrastructure whose actual costs in terms of labour and materials is Re 1, at Rs 7. These higher costs are because of excessive overheads and institutional costs of government agencies, profiteering by contractors that is informally promoted and protected by some state officials, and complex and complicated procedures and conditions of tendering and contract management.

2. International agencies and their consultants establish a high profile for their projects which alienates low income communities from the development process.

3. The number of consultants employed is usually unnecessarily high and most of them carry out studies and surveys that have already been carried out before.

4. International agencies are also interested, and spend a lot of time, on issues that the OPP considers irrelevant to the upgrading process, such as land tenure, social and ethnic data, and relating local development to esoteric master plans that will probably not be implemented for the next two or more decades, and will by that time become irrelevant.

This OPP view has evolved as a result of working fairly successfully in non-regularised settlements and with no socio-economic data available for them. House owners and tenants have participated equally in OPP programmes. The only major difference between communities that the OPP has encountered is between those that have an upward social mobility and those that are stagnating. The former usually attempt to create non-ethnic neighbourhood organisations while the latter have traditional caste organisations that are increasingly becoming irrelevant to their needs in the changing socio-economic environment of Pakistan. These two different types of communities require different approaches for mobilisation and organisation. No surveys of any nature are required to identify the category to which a community

belongs. Observation is sufficient. Maybe with more experience the OPP may change its opinion.

There are certain processes taking place in *katchi abadis*. Water, electricity and gas are being acquired without tenure being an issue. Councillors' funds for development are also available to non-regularised settlements and are being used for open drains and road paving. This "upgrading" activity is, more often than not, being carried out in complete disregard of government master plans and established procedures. It is obvious from the situation on the ground that waiting for the lease issue to be resolved will simply mean that there will be no "formal" upgrading for the foreseeable future. The OPP feels that current trends, directions and practices should be regulated and supported without waiting for legal niceties to be completed. As regards funds for supporting this activity and providing external development, the OPP has calculated that the subsidies in the upgrading process can deliver a major part of the external development. For this to happen, design approaches and implementation procedures will have to be changed and made more rational and compatible with Pakistan's resource base.

5 Monitoring arrangements are an important function of international agencies. However, the OPP has noticed that these arrangements promote suspicion and hostility between the various actors in the development drama, and can easily be exploited by community leaders and activists. Details regarding this issue are given in Chapter Two under the sub-heading "Insights gained and conclusions drawn from negotiations with World Bank and SDC"

6 Like their Pakistani counterparts, representatives of international agencies and consultants, have almost no understanding of the political, social and economic process in low income settlements and as such cannot plan for them realistically. They confuse political, social and economic conditions, which they establish through an analysis of faulty data, with processes. In addition, at best they have a patronising attitude to the residents of the settlements they work in.

7 Most professionals who work on upgrading projects are trained conventionally and are not used to working with people. In addition, they are not concerned with reducing costs and many of their proposals are unnecessarily high tech. In designing systems very little attention is paid to the limitations of available skills and to subsequent problems of operation, management and maintenance.

8 International agencies have not yet learnt to establish processes and procedures whereby people can be partners in development with government.

They see the role of communities as merely a supporting one to government initiatives, and in this process they not only fail to mobilise the enormous technical and managerial skills that the informal sector and low income communities possess, but actually alienate them from the development process

9. International agencies have a low opinion of government functionaries and feel that they can only respond to “perks and benefits”. This attitude, in addition to promoting corruption, makes a mockery of the whole planning and development exercise, and more so of attempts at institutional restructuring and reform.

Professional charges

Professional charges paid to international consultants and their Pakistani counterparts are extremely high by Pakistani standards. Once these charges are known, cynicism and resentment is created all round and this in turn erodes the authority of the professionals. It is for this reason that the OPPs professional charges and direct costs, which are given in the relevant appendices to this paper, have been kept at less than 10 percent of what is normally charged by professionals working for internationally funded projects. The OPP feels that its low profile, modest salaries and charges, and austere image are the reasons why its staff and its programme are easily accepted by low income communities.

Average costs of the various components of the OPP promoted sanitation system

From its experience in Orangi and the replication projects, the OPP has worked out the average cost per household of the various components of the OPP promoted sanitation system. These are given below

1. OPP's research, extension, training and administrative costs and capital expenditure	: Rs.	40.65
2. Costs of internal development	: Rs.	756.00
o in the lane	: Rs.	224.48
o secondary collector drains	: Rs.	24.32
o sanitary latrine in the house	: Rs.	<u>508.00</u>
Total	: Rs.	796.65
	or : US\$	31.86

Formal sector costs for similar development would be in the neighbourhood of Rs. 6,500.

3. External development costs, on the other hand, as per current government rates and procedures, work out to Rs 1,215 per household for trunks and oxidation ponds. These can be reduced to much less than half by a simple change of approach and design as was done in the case of the MDP and Sukkur replication projects, and without changes in procedures and regulations

FOOTNOTES, ABBREVIATIONS AND LOCAL TERMS

Footnotes

1. OPP quarterly reports
2. Pakistan Low Cost Housing Project Report ADB, 1989.
3. Ibid
4. Karachi Master Plan figures support this contention
5. World Bank Shelter Sector Review, 1989
6. Pakistan Low Cost Housing Project Report. ADB, 1989
7. Ibid

Abbreviations

ADB	Asian Development Bank
AKMU	Aga Khan Medical University
AKNGOSP	Aga Khan NGO Support Programme
CKAIP	Collaborative <i>Katchi Abadi</i> Improvement Programme
CHSP	Community Health Sciences Programme
FDA	Faisalabad Development Authority
GDP	Grex Development Project
HDA	Hyderabad Development Authority
HMC	Hyderabad Municipal Corporation
ISD	Illegal Sub-Divisions
KAIRP	<i>Katchi Abadi</i> Improvement and Regularisation Programme
KMC	Karachi Municipal Corporation
KUDP	Karachi Urban Development Programme
KWSB	Karachi Water & Sewerage Board
LDA	Lahore Development Authority
MDP	Mauripur Development Project
MNA	Member National Assembly
MPA	Member Provincial Assembly
NESPAK	National Engineering Services Pakistan
NWFP	North-West Frontier Province
OPP-	Orangi Pilot Project - Research and Training Institute
RTI	
PHED	Public Health Engineering Department
RC	Reinforced Concrete
SMC	Sukkur Municipal Corporation
SKAA	Sindh <i>Katchi Abadi</i> Authority
UBS	Urban Basic Services

Local Terms

anjuman-i-falah-o-behbood	social welfare organisation
bradari	caste organisation
chaudry	head of the panchayat
katchi abadis	squatter settlements
mandir	Hindu temple
nullah	natural drain
panchayat	a caste based council of elders
para	locality
pucca	permanent

APPENDIX - 1

PROFILES OF VAGHRI PARA, MANZOOR COLONY AND MAURIPUR DEVELOPMENT PROJECT ACTIVISTS

Three women activists of Vaghri Para

Sohni

Sohni lives in house No S-43, Chansear Goth, Karachi. Her family has been settled here since 200 years, after migrating from Marwar (India). They belong to a Hindu sect known as Kokhri, and speak a language which is a mixture of Kathiawari, Gujrati and Sindhi.

The present household size is 9 (7 children - 4 girls and 3 boys). Two other girls died due to illness. There are two regular earning members in the family, her husband and eldest son. Their main source of earning is selling chickens and making crates for housing them. Their total earnings amount to about Rs 2,500 per month, with an increase to about Rs 4,000 during the month of *Ramzan* (the Muslim month of fasting). The son has a daily expenditure of Rs 10-15, which includes his bus fare and lunch. Sohni sometimes earns money, making *ghagras* (long skirts) and head scarves.

The main problems faced by the community Sohni belongs to are water and sanitation. There are no water connections in their houses. Water is bought from neighbouring Muslim families at the rate of Re 1 per can. Availability of water is from 5:30 pm to 6:30 pm. Their daily water consumption is 10-12 cans, which increases to 18 cans when clothes are to be washed.

The most critical problem faced by most of the families is the absence of latrines and a sewerage system. There is no drainage or sewerage line. Previously, they had no latrines and the women and children used to go to a nearby *nullah* at night.

Sohni and her family used to do the same, but now they have a latrine due to the CHSP and OPP sponsored programme and the line passes near her house. Most of the houses still do not have latrines, mainly due to lack of space. This gutter line has been laid as a result of the efforts made by the people. Another advantage of the gutter line is that money amounting to Rs 16 per day spent on clearing away the dirty water is saved. Sohni is especially happy, as she has

gotten rid of the stink due to the dirty water.

Initially the idea of a gutter line was not welcomed by the people. However, Sohni and her 2 friends immediately saw the benefits of it and knew that no one would gift it to them. They began contacting their neighbours asking them to participate in its construction. The menfolk were as not really interested. It took 12 months of convincing them through meetings, after which an application was forwarded. The work started with a contribution from the AKMU-CHSP. The total cost estimated was Rs 10,736, 55 percent of which was collected by the people themselves (about Rs 215 each from 24 households). The contribution from Aga Khan Programme was in the form of a loan amounting to Rs 4,800. This came to about Rs 200 per house, which was to be returned in four instalments. In Sohni's house, there is no space for a bathroom, hence the yard is used as one.

The main religious event for Sohni's family is the Clifton Mela, in which people of their sect gather from all over Sindh. Marriages take place within the sect, but not amongst blood relations.

A menace to the area are the giant sized rats, which frequently bite Sohni's children. The daily expenditure of the family comes to Rs 60-70, spent on food and water.

Sohni was one of the women who participated in motivating other households in participating in the sanitation programme and collected money for it. She is also one of the few Vaghri women who not only sends her son for studying at the classes operated by the CHSP, but has also given the only room in her house as a classroom.

Lakhi

Lakhi also lives in Chanesar Goth and is one of the three group leaders who collected money for the building of the gutter line. She had 12 houses under her charge.

The present household size is 7 (4 children, 3 boys and 1 girl). Her blind mother-in-law also lives with them. Her husband, the main earning member of the family, used to sell chickens. The profit he made kept them quite well. Unfortunately, a few months ago, a whole consignment of chickens died. This brought them under a debt of Rs 10,000. As her husband could not pay back the loan, he ran away from home. Now he sometimes comes to visit them secretly, during the night. He could not get any other job due to his illness.

These days, their only source of income is her mother-in-law. She goes to the

city for begging and earns about Rs 5-16 per day. Lakhi's whole family live within a 35 square feet space, which is their home. She gets electricity from her brother-in-law, free of cost. Lakhi wants her son to study in school which is held at Sohni's house, but he keeps running away from there.

Lakhi used to work as a maid for one of the affluent Muslim Pathan families in a settlement nearby. They helped by giving her some provisions, but then she could not work after child birth.

A major problem for her today is the lack of space for latrines in the home. She tried to solve it by asking a neighbour to build a communal latrine at her house. For this she got other houses who did not have latrines to get together. She collected Rs 50 from each house. Later on, the neighbour wanted to have total charge of the latrine and refused to agree to come to reasonable terms. Since no arrangement could be arrived at, the money collected was kept with Lakhi's husband. Some of the money was spent on the family's needs, reimbursing which has become an added problem for Lakhi

Chemi

Chemi is also a resident of Chanesar Goth. Her husband is too old to work. They have eight children (6 boys and 2 girls). All earnings are through the 3 older boys. Two of them go to *Jumma/ Mangal Bazar* (Friday/Tuesday market) to work as porters. They earn about Rs 25 per day. The third boy works as a cratemaker.

Chemi's main concern is her invalid daughter Rupi. A lot of money has been spent on her treatment without any results. Someone suggested an operation which costs Rs 2,000, which is unaffordable to them right now.

There is a small latrine in the house, which is only used by the invalid daughter. Other members of the family go to her father-in-law's home, which she refers to as the '*sussai's kothi*' (in-laws mansion).

Chemi took a loan of Rs 5,000 - Rs 7,000 for her elder daughter, Purni's, marriage. Purni and her husband are also living with Chemi. She wants to get good medical advice for her husband who, according to her, has TB

Chemi says that the Sindh Muslim families of the area have often tried to drive their community out. They are fed-up of their threats, and would shift immediately if any alternative is provided.

Their daily expenditure amounts to about Rs 65, which includes food and water. If she does not have enough money to pay for water, she goes to the *bungalows* (large houses) and begs for some. Before the sewer was made, she used to spend Rs 8-10 daily for clearing the standing water.

Profile of Mohabat Khan, one of the activists of Manzoor Colony

Mohabat Khan's parents come from the Hazara district of the NWFP. They migrated to Karachi in the 50s, where Mohabat Khan was born. The family moved to Manzoor Colony in 1963. At that time Manzoor Colony was a small settlement surrounded by open fields. One of the early organisations of the area was the *Tanzeem-e-Jattan*, to which his family belonged.

Mohabat Khan comes from a well-to-do family. They indulged in dairy farming in Manzoor Colony and involved themselves in the informal development that was taking place in the settlement.

Mohabat Khan finished his school and in 1974 left for Kuwait. There he worked as a salesman for a local manufacturing firm. While he was there he became aware of a number of problems that his fellow Pakistanis faced in that country. He formed an association to tackle these problems collectively and became one of its office bearers.

He returned to Pakistan in 1984. He found conditions in Manzoor Colony humiliating as there was no water and no sanitation. He realised the need for creating a non-ethnic organisation so as to tackle the problems of the settlement. This led to the creation of the *Anjuman-e-Falah-o-Behbood*. The *Anjuman* has lobbied with the KMC councillors, the KWSB and the zonal councils for water supply, sewerage and related facilities. It has also helped residents out of financial difficulties related to funerals, marriages and businesses. However, it did not do any development work itself.

Mohabat Khan is a real-estate agent. In a non-regularised settlement this can be a complex affair. It needs the support, not only of local leaders, but also of KMC and CBR officials and sometimes of the police. Very special entrepreneurial skills are required for this job. In addition, Mohabat Khan, like most estate agents in *katchi abadis*, is a contractor. These two involvements make it very important for him that conditions in Manzoor Colony improve. If services come, real-estate prices will go up, and if they go up there will be a lot of construction work.

Mohabat Khan has played an important role in the laying of the sewerage system in Manzoor Colony. As president of the *Anjuman-e-Falah-o-Behbood*

he involved all the activists of the *Anjuman* in this work. His knowledge of organising people and his entrepreneurial skills were of great use. His experience in dealing with officialdom has also proved useful and he has been at the forefront in all dealings with councillors, KMC and KWSB officials, and more recently with the federal Ombudsman

Mohabat Khan has also acted as a contractor to a number of lane organisations for laying their sewerage systems. He feels that this can be a commercially beneficial undertaking. But he also says that it is better for people to undertake this work themselves as it would organise them and involve them in future development activity

Mohabat Khan's organisation has had its own shutterings for manholes and manhole covers constructed. They are encouraging neighbouring settlements to contact them and seek their advice in constructing their sewerage system. In addition, they are having a dialogue with AKNGOSP and Oxfam. The *anjuman* feels that if it is given financial support by these two organisations, it can convert itself into an OPP type organisation. However, it remains to be seen if that will happen or if Mohabat Khan emerges as a contractor of low cost sewerage systems for *katchi abadis*

Profile of Abdul Rashid Khatri, coordinator of the GDP

Abdul Rashid Khatri is 30 years old. His parents migrated from Kutch (India) to Karachi in 1948. He is a graduate in civil engineering from the well-known NED University in Karachi. He got his degree in 1987. At present, he is studying law as he feels that legal knowledge is an essential tool for fighting exploitation and inequity.

During his days at NED University, Rashid Khatri became a member of the National Students Federation, a left wing organisation which has been involved in fighting martial law and dictatorship in Pakistan. He became the unit secretary of the Federation at the University, and then general secretary of the entire Karachi division. During this period he was arrested and imprisoned in 1984 and 1986, for fighting the martial law ban on student unions and later, trade unions. At present he is a member of the Peoples Democratic Front, a national political organisation struggling to stabilise democracy in Pakistan.

After graduation, Khatri worked in a construction firm but was dissatisfied as it represented all the "exploitation and inequities" that he had struggled against. He searched for options, and in 1988 he joined the Busti Development Project as a technical advisor. Here he was able to work with commu-

nities and established a close relationship with them. Conflicts within the Busti project led to Khatri's resignation, and after the project wound up, the communities asked Khatri to help them out. This led to the creation of the MDP in 1989. The MDP was an association of 7 local organisations. He was appointed project incharge of the MDP and started searching for support for the project.

In 1990, he made several visits to the OPP and was instrumental in getting the OPP to agree to support an MDP initiated low cost sanitation programme in Mauripur. This association led to the Canadian High Commission giving the MDP a grant of Rs 100,000 for the year January 1991 to December 1991. In June 1991, a jeep was given to the MDP to facilitate motivational meetings and other work required for the sanitation programme.

SKAA's involvement in the sanitation programme, the weakness of the structure of the MDP, the adverse pressures from councillors and local leaders, led to conflicts in the programme. Rashid Khatri and the OPP withdrew from the programme and the MDP, as a result of which the MDP was wound up. In March 1992, Rashid Khatri, with the support of local activists and the OPP formed the Grex Development Project. He is now its coordinator.

In his association with the OPP, Rashid Khatri has worked on a number of issues apart from the MDP. Since February 1991 he has done surveys and designs for OPP's KUDP consultancy, and is presently working on an OPP-RTI research project on solid waste disposal.

APPENDIX - 2

TRAINING/ADVISORY SERVICES TO BE PROVIDED BY OPP FOR THE UNICEF UBS PROGRAMME IN SINDH 1992 - 93

Contents

- A Community as partners in development - an alternative development approach
 - B. Training and advisory services
 - C Lessons learnt
 - D Need to consolidate the Sukkur project
 - E Programme 1992-1993
-
- Attachment - 1: Terms of Reference: OPP-UNICEF agreement
 - Attachment - 2 Working with communities some principles and methods by Perween Rahman and Anwar Rashid
 - Attachment - 3: Costs

A. Community as partners in development: An alternative development approach

There are 5 levels of a modern sanitation system.

Internal Development:

1. Inside the house - the sanitary latrine
2. In the lane - underground sewerage line
3. Secondary or collector sewerage line

External Development:

4. Main trunk sewers
5. Treatment plant

By mobilising local social, managerial and financial resources OPP has demonstrated that the problem of internal sanitation can be resolved

The external development is the responsibility of the government as this work the people cannot undertake.

In Orangi people have invested Rs 52.97 million on internal development. They have constructed sewerage lines in 4552 lanes, 346 secondary sewerage lines, and sanitary pour flush latrines in 71,127 houses

In 1988 OPP was upgraded into a Research and Training Institute (RTI) to replicate its models outside Orangi. Since then OPP-RTI has been assisting NGOs and community based organisations.

In 1990 OPP-RTI was appointed as consultants to the UNICEF UBS Programme in Sindh to impart training to UBS programme in general and advisory services to replicate the sanitation project in 3 *katchi abadis* in Sukkur

This report gives details of the work undertaken, the lessons learnt, and the programme for 1992-93 in Sukkur and its extension in Shikarpur and Larkana

**B. Training and advisory services to UNICEF UBS programme in general and specifically in Sukkur:
November 1990 - February 1992**

As per the Terms of Reference (TOR) (see Attachment - 1) the following has been undertaken.

Training at OPP - RTI

Seventeen training courses were held at OPP-RTI. Eleven groups with total 53 persons participated

Lessons learnt: A positive outcome of the programme was that it exposed government officials to the concept of development with community as partners. However, it is felt that more benefit could have been achieved if the training was project oriented.

Suggestion: Training as much as possible to be project oriented. This would enable the participants to gain maximum benefit.

Advisory services for Sukkur sewerage project

In 3 *katchi abadis* of Sukkur, New Pind, Gol Tikri and Kaan 18 and 19.

Orientation, survey and dialogue with community: During November-December 1990, 2 groups from Sukkur comprising the Commissioner (Project Director UNICEF-UBS Programme), engineers (of SMC, SKAA and PHED) and a NGO worker visited OPP-RTI for orientation and training. Consequently, in January 1991, OPP-RTI team visited the project area for a preliminary survey.

A prime problem was identified that the waste water from the area disposed into a pond 12 feet deep and spread over 7 acres. The pond was found to be a hazard. It was overflowing and submerging the settlement. In dialogue with the community it was obvious that residents were aware of the magnitude of the problem. Some even suggested the solution, which was found to be logical. The community expressed its willingness to undertake internal work if external work was done by the government.

Need for external development

The urgent need was to dewater the pond before any internal work could begin. An appropriate plan for dewatering was found to be available with the PHED.

The addition of a trunk sewer to facilitate lane sewerage and a treatment plant was made.

External development being government's responsibility, efforts were made to lobby Municipal Corporation for finance.

Arrangement of finance - work begins In October 1991

To avoid further delays, in April UNICEF decided to finance external development. A revised estimate was made of one million. It was agreed that UNICEF would provide Rs 0.8 million and SMC would provide Rs 0.2 million. The treatment plant would be taken up by SMC in the 2nd phase.

Subsequently, UNICEF finances were arranged by July 1991. A contractor was appointed and construction work began in October 1991.

The efforts of Tasnim Siddiqui, Director General, SKAA speeded up the process.

Progress of external development - January 1992

8,000 running feet of pipe line has been laid and pump house has been constructed.

Work that remains includes crossing the embankment of river Indus, electric connection, dewatering of the pond and finally laying a 1,000 running feet trunk sewer i.e. 30% of the work remains to be completed. This would take a minimum of two months (i.e. after electrification, dewatering to take minimum one month and another 20 days is needed for laying of trunk sewer).

Organising for internal development - September 1991

One month prior to the commencement of external work, review meetings with the project director, on-site training for motivation and arrangements for survey, preparation of plans and estimates was undertaken.

Organised by the project director, the first motivational meeting was held. Considering that mobilising the people requires consistent contacts and meetings, preparation of leaflets and provision of plans and estimates, it was decided that the following logistics would have to be met without delay.

1. Setting up of project office in the area so that people at their own convenience and without hesitation can contact the project office and use it as a meeting place.

2 Appointment of 2 social organisers from the community This eliminates the constraint of time, accessibility, culture and language.

3. Provision of slide projector and extension leaflets as tools for motivation.

4. To avoid further delays OPP-RTI to depute its surveyors for a week so that survey, planning and estimating is undertaken.

By October the above logistics were streamlined Two courses were arranged at OPP-RTI One for the area councillors and another for 6 activists Two of the activists were selected as social organisers

A 3 day on-site training for mobilisation was imparted to the project director and 2 social organisers

It was decided that i) fortnightly visit would be made by OPP-RTI to the project office to review the work with the team and provide on-site guidance; and ii) with the provision of plans and estimates the project office would concentrate on lane level mobilisation

The first lane was targeted to begin by the first week of December (coinciding with the completion of external development)

Consequently, plans and estimates for lane sewerage were provided Lane meeting and contacts were undertaken by the project team In 3 lanes managers were appointed for collection of money. Five manhole shutterings and tools were sent by OPP-RTI to the project office

Setback and reorganisation

In December the project director (an SMC official) was transferred. This created a gap in mobilisation To overcome the setback and avoid delay, the work was re-organised.

It was decided that for

- internal development OPP-RTI to manage directly through the project office,
- external development the new project director to manage as this needs to be speeded up

Progress of internal development January 1992

With OPP-RTI managing, a social organiser from OPP was deputed on-site to consistently guide the project team. In addition, frequent visits have been made by the OPP-RTI team during the months of December 1991 and January 1992 for consistent guidance in mobilisation.

In one lane comprising 9 houses, sewerage line has been laid under the supervision of the OPP-RTI team. A local mason has been trained. In 4 lanes comprising 50 houses, money collection is in progress. In 6 more lanes mobilisation is being undertaken. Work is expected to begin in February.

Demonstration training area - for other Katchi Abadis

The 2 social organisers are receiving constant on-site training. It is hoped that this resource would serve as support organisation for community work, for extension to other areas.

The project can serve as a training/demonstration area for other cities/towns.

C. Lessons learnt

The lessons are detailed in Attachment - 2

D. Need to consolidate the Sukkur project

More time is needed to set up a pilot demonstration area. Therefore, the time needed for Sukkur project area is important. The success of the project is to be evaluated by

- 1 acceptance by the community of the principle of self-help i.e. self finance, management and maintenance,
- 2 acceptance by the government of the concept of development with people as partners - their role in external development,
- 3 skills extended in the community so that the programme continues with minimum input

This momentum can be achieved by the construction of 20-25 lanes in the project area

Not that 100 % lanes are to be constructed within the project area, but the impetus is such that with the concept embedded in the community, skills and resources developed i.e. masons and managers trained, the programme cannot be contained within the project boundary. It has the potential to spread to other *katchi abadis*.

The development of a support NGO to continue work, is an important aspect of the programme. Careful attention in Sukkur for the development of a training centre not only for other *katchi abadi* in Sukkur, but also for areas like Dharki, Shikarpur, Khairpur and Larkana cannot be denied.

E. Programme for Sukkur, Shikarpur and Larkana project areas

Reflecting the nature of project as explained above the schedule has been outlined Together with sanitation, the health package has been included

Role of Actors

Local council/other government agencies

- To provide all available data and plans on the project area.
- Preparation of plans and estimates for external development in sanitation
- Finance and execute external development

UNICEF

- To facilitate the programme
- To provide funds if and as necessary for external development
- To finance OPP-RTI's institutional and direct cost

Project director UBS programme

- To coordinate, monitor and manage external development in sanitation
Liaise with OPP-RTI and concerned government departments
- To coordinate and manage health programme Liaise with OPP-RTI

OPP-RTI

- External development in sanitation:

Liase with, and if necessary, assist the project director, local council and PHED in planning and design. Coordinate with project director in implementation and monitoring.

- Internal development in sanitation:

Preparation of plans/estimates and setting up project office in the area Identifying project staff comprising of 2 social organisers from the project area. Training project staff and local activists for community mobilisation, pre-paration of extension literature, documentation, monitoring, surveying, preparation of plans and estimates.

- Health package

Training and monitoring to UNICEF UBS health staff.

- Training.

For orientation to councillors, project director, local activists and social organisers.

Project office

- For internal development, to work under OPP-RTI's guidance.
- To mobilise the community
- To assist OPP-RTI in the preparation of plans and estimates. At a later stage to undertake survey, planning and estimating
- Preparation of extension literature
- Documentation, monitoring and reporting

cost component

see Attachment - 3

Attachment - 1

Terms of Reference

Training and advisory services to support UBS programme in Sindh

Training To be held at OPP-RTI One course per month. Maximum participants 5. Duration of course to be 3-5 days.

Training to be imparted in the field of social organisation, sanitation, primary health care, education, project development, management, monitoring, evaluation, research, extension and documentation, to the staff of local councils, NOS, community groups, government officials and other related project UBS staff in Sindh or elsewhere in Pakistan.

Advisory Services

The services are to be provided for the preparation of a sewerage plan of project area *katchi abadis*, New Pind, Gol Tikri and Kaan 18 and 19, total 312 acres in Sukkur

- Preparation of master plan for the project areas. Identification of the disposal, nature of work and actors involved
- Advise to the project director on preparation and execution of plans
- Training respective personnel for
 - o preparing engineering drawings and estimates
 - o community mobilisation
 - o preparing extension, monitoring and evaluation
 - o management and implementation of work plan
- On-site training

Cost Component

- Training and advisory services : US\$ 10,000 annual
(lump sum fee)

- Direct cost (on actuals) : To be charged
for courses at OPP-RTI, site visits
and on-site training.

(Signed)
Director OPP-RTI

(Signed)
Programme Officer Sindh, UNICEF

Attachment - 2

Working with community- some principles and methods

by

Perween Rahman and Anwar Rashid

January 1992

Introduction

For the past 10 years we have been working with the community in Orangi, a *katchi abadi* with a population of one million (approximately). The concept of our work at OPP-RTI is to promote community organisation and self-management. By providing social and technical guidance we encourage the mobilisation of local managerial and financial resources and the practice of cooperative action.

During the last 10 years we have patiently analysed some basic problems and evolved the following model programmes.

A Low Cost Sanitation Programme

Which enables low income families to construct and maintain modern sanitation (pour flush latrines in their homes and under-ground pipe-lines in the lanes) with their own funds and under their own management

A Low Cost Housing Programme

Which introduces appropriate building materials and components and upgrades the skills of the masons

A Basic Health and Family Planning Programme

For the low income housewives, which focuses on preventive health education

A Women Work Centres and Small Family Enterprise Programme

Which increases production, employment, managerial skills and business integrity

Since 1989 we have been replicating our Low Cost Sanitation Programme in other settlements in Karachi and lately in Sukkur. The replication is through NGOs and CBOs, foreign donor agencies and official agencies.

In Sukkur and Mauripur/Grex, together with internal development (which is the responsibility of the community - as shown in Orangi) we are evolving a model of external development (which is the responsibility of the government)

Through our work with the community over the past 11 years, and lately its integration with official development work, we have learnt some lessons. These form the basis of some principles and methods we have evolved for our work. We would like to share these.

Some principals and methods

The community is aware of the problems it faces. What is missing is the relationship of problem to other issues, the possible methods of solutions and the appropriate technology required.

Community needs social and technical guidance to properly utilise its resources. There is need to develop a package of advice.

Problems in *katchi abadis* are obvious

A study is not needed to identify the problems of *katchi abadis*. What is needed is an understanding of the people and the community. For example, the extent of the problem, how people perceive the problems, what efforts have they made, what possible solutions/methods would they suggest. This can be identified through dialogue, discussions with the community and observations. This interaction in itself starts a process of mutual understanding between the technicians and community.

Role of an NGO as a support organisation

A team of technicians and social organisers is needed to support the community. Technicians develop the package of advice and social organisers extend it.

Social organisers need to be from the community. This resolves the problem of time, language, culture and rapport with the community

Working with community requires consistency, flexibility and a low profile
This criteria suits the NGOs.

Our experience in Sukkur and Mauripur shows that the government due to its inconsistency, and the CBOs due to their local politics, cannot serve as support organisations.

Package of advice is developed through interaction

A package of advice is developed by technicians through interaction with the community. This interaction takes place at all levels i.e. with councillors, elders, local leaders and individuals

An attitude of mutual respect, sharing and learning is needed. The concept that community knows all or, technicians know all, both are incorrect. It has to be a combined effort

Role of an activist

There are some people in the community who are aware of the problems, think about it, try to solve it and are willing to listen. There is need to identify such people.

In the process of developing a package of advice, while interacting with the community, activists are identified. These are the early adopters who extend the programme

A bonus of this method is that the community identifies with the programme

Level of organisation smaller the better

At the initial stages, the demonstration requires much concentration, time and effort. Therefore, the level of organisation needs to be small. For example, in Orangi a lane of 20 families is the level of organisation

At a small scale, the understanding is better, conflicts are less, disputes can be easily resolved, the trials and errors can be controlled

Time factor: Initial process is slow, but after the demonstration, there is a snowball effect

In working with the community change in attitude takes time, but once the breakthrough takes place, it has a multiple impact. For example in Orangi, for the first lane to construct an underground sewerage line, it took 6 months, later sewerage lines were being laid in 25-30 lanes at one time. After the breakthrough in sanitation, other programmes i.e. health, housing and income generation were easy to extend.

For quick results concept/approach should not be changed, as it can have a damaging effect on the programme. For example, for quick results if subsidy is given in one lane then others expect the same.

People and government are partners in development

Problems are at all levels, neither the community nor the government can solve these problems alone. It has to be a combined effort. For example, our work in sanitation shows that there are two levels; one, the internal development, which can be financed, managed and maintained by the community and two, the external development, which has to be the responsibility of the government.

On this principle we are working in Orangi, Mauripur and Sukkur.

Attachment – 3
Cost Component

INSTITUTIONAL COST – 1992

<i>Training</i>	Sukkur	Shikarpur	Larkana	Total
1. Training group	2	8	4	14
2. Total days	8	19	11	38
3. Persons to be trained	6	26	13	45
4. Institutional cost Rs 3000/day	24,000	57,000	33,000	114,000

Visits

1. No. of visits	22	19	7	44
2. No. of days	96	50	14	160
3. Person days	157	108	48	313
4. Institutional cost (Rs 1200/person/day)	188,400	129,600	57,600	375,600

Technical backup support

1. Preparation of plan and estimates				
a) No. of days	8	14	14	36
b) Institutional cost Rs 3000/day	24,000	42,000	42,000	108,000
2. Preparation of extention literature				
a) No. of days				10
b) Institutional cost Rs 3000/day				30,000

Cummulative

1. Training	: Rs.	114,000
2. Visit	: Rs.	375,600
3. Technical Back-up support	: Rs.	138,000
Total	: Rs.	627,600

DIRECT COST (AT ACTUALS) – 1992

Training at OPP–RTI and on–site

	Sukkur	Shikarpur		Larkana	Total
		OPP–RTI	Sukkur		
1. Local transport for course participants @ Rs. 800 / day	6,400	8,800	4,000	8,800	28,000
2. Training material	2,000	3,000	1,000	3,000	9,000
3. Accommodation Rs 450 X 30 days	13,500	22,950	5,000	22,950	64,400
4. Lunch/tea @ Rs 70/persons x 24	1,680	3,000	2,000	3,000	9,680
5. Documentation / audio visual	–	–	–	–	30,000
6. Shutterings / tools	11,000	11,000	–	–	30,000
7. Unforeseen expenses	–	–	–	–	30,000

Visits

1. Air fare	45,000	29 nos	16 nos	
2. Daily allowance Rs. 250 / day	39,250	28,000	13,000	80,250
3. Accommodation	20,000	112 per day	52 per day	
4. Transport on contract Rs. 600 / day	60,000	30,000	7,200	97,200
5. Tech. backup support	–	–	–	30,000
6. Unforeseen expenses	–	–	–	50,000

Project Office

1. Rent / Rs. 1000 / month	12,000	6,000	3,000	21,000
2. Salary 2 SOs (Rs. 1500 / PM)	54,000	18,000	9,000	81,000
3. Post / photocopy / tele / tea	2,400	1,200	600	4,200
4. Misc.	2,400	1,200	600	4,200

INSTITUTIONAL COST – 1993

Training

	Sukkur	Shikarpur	Larkana	Total
1. Training group	–	1	6	7
2. Total days	–	3	16	19
3. Persons to be trained	–	3	19	22
4. Institutional cost Rs 3000/day	–	9,000	48,000	57,000

Visits

1. No. of visits	12	19	19	50
2. No. of days	24	21	21	66
3. Person days	72	117	117	306
4. Institutional cost (Rs 1200/person/day)	86,400	140,400	140,400	367,200

Technical backup support

1. Preparation of plan and estimates				
a) No. of days	–	8	8	16
b) Institutional cost Rs 3000/day	–	24,000	24,000	48,000
2. Preparation of extension literature				
a) No. of days				10
b) Institutional cost Rs 3000/day				30,000

Cummulative

1. Training	: Rs.	57,000	
2. Visit	: Rs.	367,200	
3. Technical Back-up support	: Rs.	78,000	
Total	: Rs.	502,200	

DIRECT COST (AT ACTUALS) – 1993

Training at OPP–RTI and on–site

	Sukkur	Shikarpur OPP–RTI Sukkur	Larkana	Total	
1. Local transport for course participants @ Rs. 800 / day	–	2,400	6,400	5,000	13,800
2. Training material	–	600	1,200	2,600	4,400
3. Accommodation Rs 450 X 30 days	–	2,000	15,000	6,300	23,300
4. Lunch/tea @ Rs 70/persons x 24	–	720	2,000	2,500	5,220
5. Documentation / audio visual	–	–	–	–	30,000
6. Shutterings / tools	–	–	–	–	30,000
7. Unforeseen expenses	–	–	–	–	50,000

Visits

1. Air fare	36,000	35 nos	35 nos	
2. Daily allowance Rs. 250 / day	14,400	35,100	35,100	84,600
3. Accommodation	7,200	128 per day	128 per day	
4. Transport on contract Rs. 600 / day	21,600	52,800	52,800	127,200
5. Tech. backup support	–	30,000	30,000	60,000
6. Unforeseen expenses	–	–	–	50,000

Project Office

1. Rent / Rs. 1000 / month	12,000	12,000	12,000	36,000
2. Salary 2 SOs (Rs. 1500 / PM)	54,000	36,000	36,000	77,400
3. Post / photocopy / tele / tea	2,400	2,400	2,400	72,000
4. Misc.	2,400	2,400	2,400	72,000

APPENDIX - 3

DRAFT MEMORANDUM OF UNDERSTANDING COLLABORATIVE KATCHI ABADIS IMPROVEMENT SCHEME

The following organisations have agreed to cooperate, execute and/or provide the following services for the Collaborative *Katchi Abadis* Improvement Pilot Project and in accordance with TORs in Annex 1.

World Bank will provide US\$ 77,600 funding for the first year of a pilot project through TPO' Sullivan and Partners/PADCO Inc contract with World Bank (Shelter Project) dated 25 May 1990

SDC will:

- monitor and evaluate the pilot project through separate TORs with Shelter Project consultants and SDC consultants,
- consider further funding of pilot project prior to completion of first year services.

Signed
Address

OPP-RTI (as sub-contractor) will:

- provide advisory services to meet the objectives of the programme as mentioned in TOR, Annex 1,
- provide training and advisory services to SKAA and HMC staff in field of social organisation, sanitation project development and management according to programme approved by monitoring and evaluation cell;
- operate a site office near selected area in Hyderabad for organising and implementation of internal sanitation work, providing assistance to HMC for executing external infrastructure works and submit monthly funds requirement to the Shelter Project consultants;
- recruit and appoint social organisers from the community with the coordination of local councillors;

- provide support facilities, courses and services for training participants to attend RTI,
- carry out R&D activities and internal M&E activities,
- prepare a final report on activities undertaken, methods used and efficacy for replication, and
- submit quarterly report and nominate a representative to participate in quarterly review meeting

Signed
Address

Sindh Katchi Abadis Authority will

- establish a coordination office to maintain a close liaison with local councils, PHED/WASA, OPP-RTI, HMC together with all funding of necessary management and operation facilities including transport, servicing and equipment related to the office. The office will be required for 3 to 5 years period and fulfill the obligations mentioned in TOR (Annex 1),
- arrange with HMC for the staffing of this office and development of the work programme activities with HMC staff and recruits,
- select suitable SKAA and HMC staff for orientation training with OPP-RTI on the programme,
- depute finance officer to work with Shelter consultants project management unit on the financial administration of site office and coordination wing, and
- depute one senior officer to participate in the monitoring and evaluation of the pilot project on a regular basis

Signed
Address

HMC will:

- arrange for staff to be seconded to the coordination office on deputation and for recruitment of additional staff initially on contract basis;
- arrange with HDA, WASA, PHED and other Hyderabad based organisations to provide 'external' infrastructure on a timely basis at their own cost (as mentioned in TOR Annex 1);
- depute staff with OPP-RTI for orientation training on the programme; and
- depute one senior officer to participate in the monitoring and evaluation of the pilot project on a regular basis.

Signed
Address

UNICEF will

- provide information on women and child health issues such as personal hygiene, immunization and planning on request;
- provide resources for workshops and seminars for greater dissemination of information, pilot project objectives and achievements;
- depute one senior officer to participate in the monitoring and evaluation of the pilot project on an ad-hoc basis during the period of the pilot project, and
- provide information/documentation related to UBS/OPP-RTI/ SKAA on sanitation work in Sukkur.

Signed
Address

TPO' Sullivan and Partners/PADCO Inc. (Shelter Project Consultants will

- award a contract to the sub-contractor and carry out all legal management and administrative obligations in respect of that contract following approval by SDC/World Bank. The obligations include timely payment of approved invoices,

- provide technical input in managing and supervising the project through the services of the Project Coordinator Mr. D.B. Ellis, and members of Shelter Team Sindh; and
- provide under separate terms of reference monitoring and evaluation of the pilot project sub-contractor services and in close cooperation with separately appointed SDC consultants (Ms. Khadija Jamal and Mr. Peter Schubeler).

Signed
Address

Annex

TERMS OF REFERENCE

PILOT PROJECT IN HYDERABAD

COLLABORATIVE *KATCHI ABADI* IMPROVEMENT PROGRAMME

INTRODUCTION

Majority of *katchi abadis* are located in Hyderabad division. The city thus, has been selected for pilot project to be followed by Sukkur, Mirpurkhas, Larkana and Shikarpur. The overall objectives of the programme is to improve living conditions of low income urban households living in *katchi abadis*.

The pilot project will be started in Hyderabad. During first year it is proposed to undertake upgradation of three centrally located *katchi abadis* within the jurisdiction of HMC. These settlements are regularizable, have been notified, land ownership is undisputed, survey plans are available but need updating only. Ground conditions are suitable for upgradation works and situation in respect of off-site infrastructure works is favourable.

The pilot project aims at improving the internal and external infrastructure facilities such as roads, water supply, sanitation and electricity in the *katchi abadis* through collaborative approach.

PROJECT OBJECTIVES

The objectives of the programme are two-fold to,

- mobilise the physical, social, managerial and financial resources of *katchi abadi* communities in resolving the problems of community infrastructure, and
- involve and train local government relevant officials to work with the local *katchi abadi* communities in implementing, managing and maintaining the works

SCOPE OF WORK

The principal actors involved in the programme are following, each of them has set(s) of responsibilities which are delineated as well

- Sindh *Katchi Abadi* Authority (SKAA)
- OPP-RTI
- Concerned municipal council
- PHED/WASA
- *Katchi abadi* communities

Sindh *Katchi Abadi* Authority (SKAA)

As a pre-requisite following information for each *katchi abadi* to be improved under pilot programme shall be obtained

- An updated physical survey map to scale (1:500) indicating
 - o The existing layout of roads, streets and lanes, disposition of plots, residential, commercial, institutional and recreational uses with boundaries defined and dimensioned
 - o Location and distribution network of existing public utilities such as
 - Water supply
 - Sewerage/drainage
 - Electricity
 - Gas
 With relevant details such as pipe sizes, cross-section of drains, levels, size and depth of manholes etc
 - o The improvement work carried out earlier through local councils, government agencies and NGOs in respect of items mentioned above
- Shall be overall coordinator of project and maintain a coordination wing for close liaison with project office, local councils, PHED/WASA, OPP-RTI, HMC. Shelter Project
- Shall ensure documentation/dissemination of the programme
- Decide upon selection of *katchi abadis* upgradation/improvement works in consultation with local councils and OPP-RTI
- Make available funds out of its own budget for works not undertaken by the community i.e. external sanitation roads, water supply and street light

Provide staff which would be trained under the programme

OPP-RTI

Shall be the principal advisor to the project staff to guide and facilitate smooth implementation of the project

The main functions of OPP-RTI shall be as under

Advisory Services

Operate a site office and submit monthly funds requirements to the Shelter Project consultants and advise project staff in:

- preparation and implementation of plan of upgradation / improvement of *katchi abadis* in consultation with local council and SKAA,
- supervision and monitoring of the project,
- preparation of sewerage plan of the project area (internal / external) determine nature of treatment and disposal system,
- preparation of detailed design and cost estimates for internal sanitation work i.e sanitary latrines inside the house, laying of sewerage lines in lanes and provision of small secondary sewers with sufficient details for implementation, and
- identification of lanes under the programme, organise the community and selection of activists/lane leaders

Training

- Provide necessary training to local government personnel for,
 - o preparation of engineering drawings and estimates,
 - o community participation,
 - o preparing literature for extension services/orientation
 - o documentation, monitoring and evaluation;
 - o management and implementation of work plan; and

- o on-site training
- The training shall be arranged through OPP-RTI and conducted in small groups of 4-5 persons.
- The logistics and arrangements shall be responsibilities of OPP-RTI which shall include accommodation at a reasonable cost inclusive of transportation and course material.

Project Office

Project office shall have two components:

- Coordination wing comprising of a team of technical and accounts personnel.
- Site office comprising of community organiser.

The coordination office shall perform the following functions

- Selection and prioritisation of *katchi abadis* for improvement/upgradation work in consultation with SKAA, OPP-RTI and local councils.
- Coordination with SKAA, HMC, OPP-RTI, PHED/WASA in preparation and implementation of *katchi abadis* improvement/ upgradation plan
- Establish liaison with HMC, PHED/WASA for design and implementation of water supply, road system and external sanitation.
- Monitoring and evaluation of the project

The site office shall perform the following functions under OPP-RTI guidance

- Preparation of detailed design and cost estimate for internal sanitation work
- Mobilisation of the community to undertake internal development work

Public Health Engineering Department (PHED)

- With the exception of Hyderabad where there is WASA, internal/external water supply and external sewerage for the *katchi abadi* selected for upgradation / improvement work, will be designed and implemented by

PHED in collaboration with local councils.

Municipal Councils

The responsibilities of local councils shall be as under:

- Make available all the data, maps of *katchi abadis*.
- Design and implementation of internal roads with details of road construction in respect of thickness material to be used in base and sub-base courses.
- The municipal engineer shall be responsible for overall coordination of works with PHED/WASA, OPP-RTI.
- Approval of design, processing of payments and final acceptance of work.
- Direct concerned area councillor/staff to coordinate and assist OPP-RTI and project office
- Make available funds out of its own budget for works not undertaken by the community, i.e external sanitation, roads, water supply and street light

Pilot Project Phasing

Time schedule for completion of pilot project shall be followed as under

First Quarter

Establishment of project/site office, training of project staff and community leader at OPP-RTI, survey of area, preparation of plans for internal sanitation and details of off-site sewerage works.

Second Quarter

Implementation of external development, community mobilisation for starting internal development, detail plan for internal development; internal development to follow external development

Third Quarter

Further training of community leaders; undertake internal development and continue external development.

Fourth Quarter

Completion and extension to other areas.

Summary of obligation of participants

- **Pre-requisite information date required on preparation of development proposal**

Shall be obtained by SKAA from local councils, PHED and other departments and supplied to OPP-RTI.

- **Engineering design:**

External water supply and sewerage including treatment and disposal shall be designed and implemented by PHED/WASA in coordination with OPP-RTI.

Internal sanitation including secondary sewers shall be designed by the project/site office under guidance of OPP-RTI and implemented by community

Internal water supply shall be designed by PHED/WASA, and implemented by local councils

Internal roads shall be designed by local councils and implemented by local councils.

Cost estimate: shall be prepared by agencies identified above for designing of respective components.

Cost Component - One Year Pilot Project

OPP-RTI (lump sum fee)	Rs 500,000 to be disbursed directly
OPP-RTI direct cost (to be charged)	Rs 461,000 OPP-RTI
Pilot Project/site office establishment/operation	Rs 979,225 to be disbursed through Shelter Project consultants
Development cost, external sanitation, water supply/ roads and street light	Contribution by community (development charges) HMC and SKAA

APPENDIX - 4

Acknowledgments

A number of people have assisted the author in the preparation of this study. These include Ms Perween Rahman, director OPP-RTI, Anwar Rashid, joint director OPP, Ramzan Qureshi, social organiser OPP, Mohammad Younis of the Urban Resource Centre, Karachi, Rashid Khatri of the Grex Development Project, Mohabat Khan, president of *Tanzeem-e-Jattan*, Manzoor Colony, Karachi, Asiya Sadiq, student of architecture, DCET, Karachi, and the author's secretary, Israr Ahmad Rana.



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About the Author

Arif Hasan was born in Delhi (India), in 1943 and migrated with his parents to Karachi (Pakistan) in 1947, where he has lived since then.

He studied architecture at the Oxford Polytechnic, UK, from 1960 to 1965; worked in architects offices in the UK, France and Spain from 1965 to 1968, and established an independent architectural practice in Karachi in 1968

Arif Hasan is the architect of a large number of important residential, commercial and educational facilities in Pakistan. He has been consultant to the Orangi Pilot Project since 1982. In addition, he has been a consultant to various community action groups, NGOs, government institutions and international agencies including the Asian Development Bank, World Bank, various UN agencies, and the Aga Khan Foundation. From 1979 to 1989 he conducted the Comprehensive Environmental Design Project at the Department of Architecture and Planning at the Dawood College, Karachi

In 1983 Arif Hasan's work received one of the Best Building Awards of the Karachi Development Authority, and in 1990 he received the International Year for the Shelterless Memorial Award of the Japanese government. In 1987, at the Congress of the Union of International Architects (UIA) in Brighton, he was one of the "celebrity speakers". He has been a Technical Reviewer of the Aga Khan Award for Architecture and is currently a member of its Steering Committee. He is also a member of the executive boards of the Habitat International Coalition and the Asian Coalition of Housing Rights

His published works include two books on housing and squatter settlement upgrading, contributions to a number of books on human settlements and ecology, and regular articles on housing, development and politics for Pakistani and international journals