Orangi Pilot Project

The Orangi Pilot Project (OPP) has become one of the best known NGO projects in the provision of sanitation. In the 16 years since its inception, the Project has directly and indirectly assisted about one million people in Orangi (Karachi) to improved sanitation. Their intervention has been developed through research into household resources and aspirations in Orangi. From the beginning, OPP staff have sought to minimise external support in order to assist households to achieve their objectives for local development. From their first activities, their work has been extended in two directions. The Project has started to work with the people of Orangi and the surrounding area in the provision of a number of additional services including housing, health, credit for entrepreneurs, education and rural development. More recently, staff have been assisting both government and non-government agencies to initiate a number of new projects in other cities in Pakistan drawing on the experience of the Orangi Pilot Project.

I. INTRODUCTION

THE OPP HAS been working in Orangi, a low-income settlement on the periphery of Karachi, since April 1980. During this time it has developed programmes in several areas including sanitation, health, housing technology, education support services, credit and income generation, social forestry and a rural project.

Since 1988, following the success of the models that it initially developed, the OPP has expanded into four autonomous institutions. The OPP Society is responsible for allocating core funds to the three other institutions and meets once every three months to undertake this task. The Secretary of the Society is Dr Hameed Khan, the founder of the Orangi Pilot Project. There are three implementing institutions, each with an independent board. First, the OPP Research and Training Institute manages the sanitation, housing and social forestry programmes in Orangi, plus the replication and associated training for all programmes. Secondly, the Orangi Charitable Trust which manages the credit programmes. Finally, the Karachi Health and Social Development Association which manages the health programme.

OPP considers itself to be a research institution whose objective is to analyze outstanding research problems within Orangi and then, through prolonged action research and extension education, discover viable solutions. In recognition of the fact that NGOs cannot solve problems on the scale required, it does not construct sewerage lines or set-up clinics or schools itself. Rather, its strategy is to promote community organization and self-management. By providing social and technical guidance, it encourages the mobilization of local managerial and financial resources and the practice of cooperative action. To date, the OPP has developed the following "model" programmes:

1. A low-cost sanitation programme which enables low-income households to construct and maintain modern sanitation (pour-flush latrines in their own homes and underground sewerage pipelines in the lanes) with their own funds and under their own management.
2. A low-cost housing programme which upgrades the *thalla* (block-makers yards) by introducing stronger machine-made concrete blocks, and battens and tile roofing which is cheaper than reinforced concrete. The programme also upgrades the skills of local masons by introducing proper construction techniques and by educating house-owners on planning, orientation and low-cost technology.
3. A basic health and family-planning programme for segregated and illiterate or semi-literate low-income women which teaches the causes and methods of preventing common diseases, the importance of birth control and the importance of growing vegetables, and which provides immunization and family planning services.
4. Credit for small family enterprises.
5. A schools programme which assists in the upgrading of physical and academic standards in private schools.
6. A women's work centre programme which organizes stitchers and other garment workers into family units dealing directly with exporters and wholesalers. The programme

also covers managerial skills and cooperative action.

7. A rural development programme which provides credit and technical guidance to support entrepreneurs develop their arid holdings into woodlots and orchards, and to grow forage for milk cattle.

II. THE BEGINNING OF THE ORANGI PILOT PROJECT

ORANGI IS THE largest *katchi abadi* or unplanned settlement in Karachi. People began living in the area in 1965 and, after 1972, it grew rapidly. At the last estimate in November 1989, there were about 94,000 houses located there with an estimated population of about 800,000. The population is drawn from a wide range of immigrant groups from India, Bangladesh, the Punjab, the northern areas of Pakistan, and local people. Most find employment as labourers, skilled workers, artisans, shopkeepers or clerks.

The official agencies have provided a few facilities including main roads, water lines and electricity plus a few schools, hospitals and banks but these have been supplemented by a wide range of private services. This was the situation when the BCCI first invited Dr Akter Hammed Khan to work in Orangi in 1980. The first focus was on the sanitation and sewerage problems. Without sanitary latrines and underground sewerage lines, both the health and property of the residents was being endangered. However, the households could not afford the current cost of conventional sanitation systems. The first OPP researchers rejected solutions based on foreign aid because the local residents could not afford to repay the loans or maintain the systems, and the donors themselves could not afford the large costs involved given the scale of necessary investments.

In 1980, bucket latrines or soakpits were the main means of disposal for human excreta and open sewers for the disposal of waste water. The result was poor health with typhoid, malaria, diarrhoea, dysentery and scabies being common. Poor drainage resulted in waterlogging and reduced property values. Initial enquiries showed that residents were aware of both the sanitation and drainage problems and knew of the consequences for their health and property. However, they took no action for four reasons:

1. Psychological barrier: the residents believed that it was the duty of official agencies to build sewerage lines to local residents free of charge.
2. Economic barrier: the cost of conventional sanitary latrines and underground sewerage could not be afforded by households.
3. Technical barrier: although the people could build their own houses, neither they nor the local builders possessed the technical skills required for the construction of underground sewerage lines.
4. Sociological barrier: the construction of the underground lines required a high level of community organization for collective action and this did not exist.

Further analysis of the sanitation problem identified four levels of infrastructure: inside the house, in the lane, secondary or collector drains, and the main drains and treatment plant. Further research showed that the house-owners were willing to be responsible for the first three levels. Drawing on experience in rural research and extension programmes, the OPP planned their strategy. The research consisted of simplifying designs so that they were affordable and technically implementable locally. The extension involved identifying activists, training in community organization and technical details, and further guidance and supervision.

III. LOW-COST SANITATION

RESEARCH INTO AN affordable system took about a year. Through simplifying the design and developing steel moulds for sanitary latrines and manholes, the cost was reduced to one-quarter that of contractor rates. The elimination of contractors' profiteering reduced labour rates by a further one-quarter. The cost of the final proposed system (at current prices) was about Rs. 1,000 (US$ 31)of which about half was for the investment inside the house and the remainder for the lane sanitation.

Once the economic barrier had been overcome, the extension workers of the OPP began to talk to households to convince them to stop believing in government provision of services. Once households realized that they could address both health problems and damage to property for such a small investment, the psychological barrier also began to be overcome.

OPP employed technicians to help survey the lanes and prepare the plans and estimates for each lane. The social organizers worked at the level of the lane to show how they needed to work together to ensure that the lane investment was effective. Within each lane, a lane manager needed to be identified to manage the process, including collecting individual contributions, resolving disputes and supervising the work. From the beginning, OPP staff refused to undertake this work. Whilst they could assist in technical advice and support social organization, only those living in the lane could be responsible for managing the finances and contracting the lane sanitation. Together, staff members addressed the technical and sociological barriers.

Shortly after the OPP started work, its area of operation was reduced to half of Orangi and, from 1982 to 1989, the Project worked in this smaller area (see Box 1). After 1989, it was again allowed to operate throughout the settlement. By 1993, 97 per cent of the lanes in the area in which they had been active since 1982 had installed lane sanitation (3,285 lanes in all). In the area in which they had been working only since 1989, there was lane sanitation in 1,689 lanes, or 57 per cent of the total number of lanes in this area. Between July 1981 and November 1993, 57.2 million rupees had been invested by the local residents on improved sanitation and

Box 1: The Division of Orangi

Twenty-one months after the start of the Orangi Pilot Project, the BCCI Foundation reached an agreement with the United Nations Centre for Human Settlements that they would provide technical support to the Project. The UN consultants started working with the Project staff but, after four months, they expressed their grave reservations about the direction and content of the project. In particular, they believed that the low-cost sanitation developed by Orangi staff would be ineffective and they wished to replace it with more conventional technology and delivery mechanisms involving local councillors and using external contractors and larger community organizations. The consultants believed that, if the OPP wished to develop and use lane organizations, then soak pits and leach pits would be a better technology.

OPP staff strongly disagreed with the advice of the UN consultants. They believed that to work with local councillors and contractors would be disastrous at an early stage before the project was established. The use of soak pits and leach pits was not acceptable both because it could only be a temporary solution and because it would not lead to a (later) direct engagement with the municipality. Such an engagement was necessary in order to address the unequal relationship between municipal officials and local residents. This, the staff believed, was fundamental to further development. The staff also did not accept the technical assessment of their low-cost sanitation system and argued that the system would be effective.

These differences could not be resolved. The BCCI Foundation divided the area up, allowing the Orangi Pilot Project to continue to work in one section and asking the United Nations Centre for Human Settlements to develop an alternative project in the other section.

In 1989, some seven years later and after an expenditure of US$ 625,000, it was agreed that the alternative strategy of the United Nations was not successful and the OPP were once again allowed to work throughout Orangi, working with the people to provide low-cost sanitation.

Box 2: Working with Communities: OPP Principles and Methods

1. The community has the resources it needs for development: skills, finance and managerial capacity. But it needs support to fully use these resources, to identify further skills that are required and to receive training in these skills.

2. A study is not needed to identify the projects in *katchi abadis*. But a study is required to understand the people, their process and relationships, and to identify the solutions and methods that are appropriate.

3. The role of the NGO is to be a support organization and the technicians develop the advice. The social organizers who "extend" the advice into the settlement need to be drawn from the local community.

4. The package of useful advice is developed through interaction with all levels and groups within the community. There is a need for an attitude of mutual respect and learning.

5. The role of the activist is critical. Activists are community members who are already aware of problems, think about them and try to resolve them. The programme needs to identify these activists.

6. The smaller the level of organization, the better it will function. In Orangi, a lane of 20 to 40 people is the level of organization.

7. The initial process is slow but, after success has been demonstrated, progress rapidly accelerates. The concept and process should not be modified to obtain quick results.

8. The people and government are partners in development. Neither can solve all the problems of development alone.

Source: Rahman, Perween and Anwar Rashid (1992), "Working with communities: some principles and methods", OPP-RTI, Karachi

drainage. During the same period, OPP had spent some 3.8 million rupees on research and extension, equal to about 7 per cent of the total invested by residents.

The demonstration effect of this activity is visible everywhere. The intensive training of masons in the technology of sanitary engineering and the widespread training of lane managers has resulted in an increased level of skill and a reduced dependence on OPP for social and technical guidance. Residents are increasingly willing to take on the costs and organizational challenge of secondary drains. Moreover, further research has shown that lane residents routinely maintain and repair their investments. The principles which have developed to guide this work are outlined in box 2.

More recently, there has been further interest from a range of other agencies including local NGOs, bilateral and multilateral development assistance agencies, and state institutions. Since 1983, community organizations, activists and NGOs 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. Since 1986, government and international agencies have also tried to replicate the OPP experience by integrating it into the planning processes they are sponsoring. To respond to this demand, OPP converted these programmes into a Research and Training Institute (RTI) for the development of *katchi abadis*. The Institute is currently assisting initiatives in a number of other areas in Pakistan that are seeking to replicate the Orangi sanitation programme. In several cities, these are being undertaken with young NGOs who are seeking to replicate the model of the OPP. One of these initiatives, in the city of Sukkur, has been initiated by UNICEF and is discussed in Box 3.

IV. LOW-COST HOUSE BUILDING PROGRAMME

THE 94,000 HOUSES in Karachi have been built with different kinds of help from the

informal sector. *Dalals* have undertaken the functions of the Karachi Development Authority by acquiring, developing, sub-dividing and allotting the land. They have also arranged the limited supply of resources that exists. *Thallas* have undertaken the functions of the House Building Finance Corporation through providing credit for building materials and supplying these materials. Masons have undertaken the functions of architects, engineers and contractors. Students of architecture from the Dawood College in Karachi have undertaken a number of studies into the sociology, economics and technology of housing in Orangi.

A survey of the houses showed that blocks made at the *thallas* were sub-standard and the work of the masons was faulty in a number of aspects, resulting in over 40 per cent of walls showing cracks. Many house-owners built incrementally and walls had to be demolished when a second storey was added, thus wasting the initial investment. After the success of the sanitation programme, the OPP started a housing programme in 1986.

The research included the development of a block-making machine to improve the quality of the blocks. The machine was developed on a miniature scale suitable for manufac-

Box 3: The Urban Basic Services (UBS) Programme in Sukkur

In 1990, the Urban Basic Services Programme of UNICEF began to work in the town of Sukkur on the banks of the River Indus about 450 kilometres north of Karachi. Sukkur has a total population of about 500,000. The project area within which the first phase of the Urban Basic Services Programme is being implemented includes three *katchi abadis* with about 30,000 residents living in 2,958 houses. Piped water supply was available but waste and foul water passed through the settlement in open drains to a large pond of 28 acres. When the project began the pond was overflowing into the settlement, causing immense physical and health hazards, especially for children.

A partnership between UNICEF, Sukkur Municipal Council, the Sindh *Katchi Abadi* Authority, OPP and the local community was formed to address this situation. UNICEF part-financed the external development and financed the strengthening of local institutions. It was also responsible for paying the OPP who were consultants to the development. Sukkur Municipal Council part-financed the development and was responsible for implementing and maintaining the external sanitation. It also paid the costs of two social organizers, one male and one female, who linked the communities of Gol Tikri, Kaan and Bhusa and the municipality. The Sindh *Katchi Abadi* Authority was responsible for selling leases to the residents and, in so-doing, for raising the necessary capital for settlement infrastructure and service development. OPP's role was to train the staff and local residents and give social and technical guidance for external and internal sanitation, a health programme, documentation and monitoring. The community finances and manages the construction and maintenance of internal sanitation and participates in the decision-making for external sanitation.

The external work at the Sukkur site involved building a pumping station and laying a rising main from the pumping station at Gol Tikri, Kaan and Bhusa to the river 8 kilometres away so that the pond could be emptied. In addition, a trunk sewer needed to be laid along the periphery of the pond to which people could connect their internal sanitation. The work began in October 1991 and draining of the pond was completed in January 1993.

Sewerage lines have now been laid in 20 lanes and sanitary latrines constructed in about 200 houses in Gol Tikri, Kaan and Bhusa. Work is in progress at various levels in other lanes. In addition, 13 health centres have been set up in activists' homes in the settlement.

ture by the informal sector. The blocks were four times stronger and only a little more expensive. The OPP passed on the research results to the *thallas*, offering them loans and supervision to mechanize. Since the first four machines were sold with OPP provided loan finance, a further 44 have been purchased by OPP *thallas* without any further support from OPP.

A number of other improvements have also been researched and re-designed. A new roofing system enables a second floor to be added without new walls being built. The design used batten and tiles or slabs at half the cost of reinforced concrete. A staircase was designed using precast slabs. In order to make best use of this technology, a training course for masons has been designed with about 100 masons having attended to date. More recent developments include steel reinforced battens and clay tiles.

V. HEALTH AND FAMILY PLANNING PROGRAMME FOR LOW-INCOME WOMEN

OPP STAFF FIRST undertook to introduce modern sanitation, and then teach the women the scientific causes and prevention of common Orangi diseases. In June 1984, the OPP started a pilot programme to impart basic health education to low-income women. In January 1985, family planning education was included in the programme. The survey research showed that there were more "medical facilities" in Orangi that in other cities in Pakistan if the informal health facilities were included. A substantial proportion of the income of 500 households was spent on "doctors". While clinics and informal medical staff were doing their best to cure diseases, little was done to address the basic causes.

Most of the people in Orangi were aware of the connection between the sanitary conditions and disease. Often, the wives were more concerned than the husbands because they had to bear the greatest burden of disease. On many occasions, it was the women who forced their reluctant husbands to pay the sanitation contribution. Many of the low-income women of Orangi are traditional and segregated. The new social and economic forces and urban pressures are disrupting these traditional ways of life. During the period of transition, any programme which seeks to promote new attitudes and practices among the tradition-bound segregated women must find answers to two urgent questions: first, how to gain access and second, how to create trust? A third question is how to build an efficient and convenient system of delivery for the segregated housewives?

The main problem for the external agent is access. Traditional welfare centres are ineffective because they are responsible for a large area and, therefore, do not maintain close contact with the local women. The OPP introduced mobile training teams and selected an activist family or contact lady for 10 and 20 lanes with regular meetings at their home and the formation of neighbourhood groups by the activist. Each mobile team includes a woman health visitor and a social organizer. The teams are directed by a woman doctor. Family planning was organized at separate meetings because some women objected but this division was abandoned after six months and the services are now integrated with other health care.

Since January 1985, OPP's basic health and family planning education and services were confined to 3,000 families in order to fully test the approach and ascertain the response of segregated housewives. In the light of these experiences, the model was revised in 1991 to reach out to a larger number of households. There is now a three-month course which is, once more, organized through family activists. Twenty are selected every three months and weekly meetings are held. Immunization services are provided at these meetings. The continuation of supplies is ensured through the activists being recruited as agents. The provision of immunization and family planning has resulted in an increase in demand and many private clinics now also provide these services.

In November 1993, a further change of programme was initiated. Instead of household meetings, the programme is to be managed by giving training on primary health and immunization to women teachers in Orangi, managers of family enterprise units and private clinics. Mothers' meetings will be held in schools, work centres and clinics delivering a package of advice similar to that previ-

ously provided. These measures are intended to facilitate the low-cost delivery widely and quickly.

VI. PROGRAMME OF WOMEN'S WORK CENTRES

THE PROGRAMME OF women's work centres was started in March 1984. After five years of intensive efforts it became self-managed and self-financing. Research at the beginning of this period showed that the traditional pattern of exclusive dependence on male earnings was already being broken by the rising cost of living and uncertain employment. Many of the women in Orangi were working in a range of occupations, the largest single occupation being stitchers and it was this one that was chosen as the focus of the project. A trust was established to assume the functions of the contractors who were exploiting the women workers. The trust procured orders from exporters, distributed the work, ensured quality, delivered the final product to the exporters and collected payments for wages.

The trust established work centres for women, each one based within a family. OPP paid no salaries for rent in order to ensure the centres were financially viable from the beginning. However, it was hard to ensure that the programme did not become paternalistic. To upgrade the skills of the workers and ensure that they became competitive and able to get into the mainstream commercial market was difficult. The exporters made things more difficult by seeking to exploit the inexperience of the OPP. Whilst the women's work centres were reasonably effective in improving the living conditions of some of the lowest-income households, the experience of this programme is that little can be done to assist the women without a continuing flow of work and payments. It was five years before the centres were able to bear all the costs themselves and be independent from the OPP. They now receive and repay loans.

VII. FAMILY ENTERPRISE ECONOMIC PROGRAMME

IN 1987, THE Orangi Charitable Trust was formed to help family enterprises obtain credit at reasonable interest rates. The Trust borrowed money from banks at commercial rates and then lent (at the same rate) to households with little bureaucracy or collateral. Grants from donor agencies paid for the administrative costs of the Trust. The objectives of the pilot project were as follows:

- discover efficient methods of management;
- identify correct criteria for selection;
- learn how to supervise family units and recover loans;
- create honest and loyal clients;
- promote the formation of cooperatives.

The first year was difficult, with much bad debt but, by the third year, these problems had been resolved. Experience has shown that there are three main causes of bad debt: dishonesty, incompetence and misfortune. To date, some 2 per cent of the total amount loaned has been written off as bad debt. The

Box 4: Some Case Histories

Zohra Bibi opened a small store selling directly to households in 1987. She purchased about Rs. 5,000 (US$ 160) worth of goods each month and earned a monthly income of about Rs. 900 (US$ 29). Zohra received her first loan in January 1989, Rs. 5000 (US$ 160), to be repaid in ten instalments of Rs. 500. After the successful repayment of the first loan, a second loan of Rs. 10,000 was taken out in December 1990. These two loans have enabled Zohra to increase her monthly income to Rs. 2,000.

Iftikhar Ahmen has two sons who were each earning about Rs. 150 (US$ 5) a week for working 12-hour days in a nearby house which has an embroidery unit. Iftikhar received a loan of Rs. 7,000 (US$ 224) in October 1980 which was used to add a further room to his house. This room is large enough to take the frame with the material to be embroidered. The two children are now able to work at home and they receive Rs. 250 each for a working day of about nine hours.

trust has now extended activities into rural areas and some of the other towns where the sanitation programme is being replicated, including Gujranwala and Lahore. The costs of administering this programme (from 1987 to 1994) are equal to 7.8 per cent of the capital loaned.

A considerable amount of loan finance has also been extended through the women's work centres. Just under 400 women entrepreneurs have borrowed Rs. 5.5 million (US$ 175,000) to date.

VIII. RURAL PILOT PROJECT

IN 1990, A rural pilot project was introduced in the area around Karachi through the National Rural Support Programme, a government funded programme being implemented through a non-governmental agency established for this purpose. The objectives were to identify small -scale commercial farmers who own at least five acres of land and who have between 20-50 cattle in order to increase their profitability. The market in Karachi and a good road network offer a good opportunity for the farmers in this area but, to benefit fully, they need access to technical advice and credit. The project identifies local activists to act as trainers to show how to convert arid holdings into woodlots and orchards and grow forage for their milk cattle. Through the Trust, Rs. 5.7 million (US$ 182,000) of loans have been given to 290 units.

IX. SOCIAL FORESTRY PROGRAMME

THE HEALTH PROGRAMME encouraged women to plant kitchen gardens in order to improve their nutrition. Later, in collaboration with IUCN, tree plantations were also introduced. In 1990, the programme was extended into those villages being reached by the rural pilot project. By the end of 1993, some 22,000 trees had been planted in six villages where activities are being monitored. Six schools in Orangi have established nurseries and they sell to local households and the families of school children; about 6,000 seedlings have been sold up to the end of 1993. Finally, the Research and Training Institute has also established a nursery from which a further 16,000 trees and other plants have been sold.

X. EDUCATION PROJECT

ABOUT 90 PER cent of schools in Orangi are privately owned and managed and these cater for about two-thirds of Orangi pupils. A survey in 1989 showed that there were just under 600 schools in Orangi, of which only 13 per cent were public schools. The private sector includes some 200 schools offering pre-primary education, about 80 per cent of the 200 primary schools and 85 per cent of the 100 secondary schools. Some 45 per cent of pupils in Orangi schools are girls. Three-quarters of the teachers are also women both because they can be employed at relatively low cost and because parents are reluctant for girls to be taught by male teachers. The high percentage of women teachers has resulted in a high level of female enrolment even though 80 per cent of the schools are co-educational. Sixty per cent of state schools are segregated, compared with only 13 per cent of private schools.

The establishment of private schools in Orangi began 15 years ago when there were few state schools but a high demand for education. As a response to the continuing lack of public investment in education, their number grew rapidly. The schools are, in general, responsive to the requirements of parents and guardians because they are dependent on maintaining their patronage. They are also concerned that the students pass exams and work hard to ensure their success and that high pass rates are maintained. The owners and teachers of the schools live locally and are well-informed about the educational concerns and interests of parents. However, there is a general lack of investment, with the buildings being sub-standard and lacking playgrounds. Many teachers are untrained and grossly underpaid and there are few other facilities such as libraries and visual aids.

Together with the Aga Khan Foundation, the OPP developed a package of measures to improve educational facilities and services. Support was given for physical improvements to schools through a combination of loans from the Trust and technical advice from

OPP's sanitation and housing programme. Academic improvements were tackled through teacher training, provision of libraries and visual aids, and the publication of manuals and guides.

To date, 13 schools have joined the project and both physical and academic improvements have been made. However, the programme has not expanded as fast as first intended. In 1990, the Aga Khan withdrew from this project but the OPP have continued to work to improve standards in the schools.

XI. FINANCES

WHEN THE OPP first started working with the local residents in Orangi, they faced much suspicion. Some residents believed that the organization was receiving foreign donor assistance to develop the sanitation system in Orangi. The residents suspected that instead of using these donor funds, the Project was keeping the money and encouraging the residents to make the investment. Since the onset of the project, OPP staff have published a quarterly report which outlines income and expenditure by individual project and donor. This quarterly report also includes updates of the different activities within the Orangi Pilot Project.

The OPP is fortunate, thanks both to the BCCI Foundation and other donors, in having the resources and autonomy it requires for innovative research, experiments, demonstration and extension. In 1992, the BCCI Foundation (which has now changed its name to INFAQ) made a ten-year funding commitment to the OPP. Its major donors now also include European NGOs such as Cebemo, Misereor and WaterAid, plus consultancy payments from two multilateral organizations, UNICEF and the World Bank. The bilateral aid programme of the Swiss government has also supported the Orangi Trust. In the 14 years since its inception, OPP has spent Rs. 62.7 million (or about US$ 2 million) and has accumulated assets currently equal to Rs. 4 million (US$ 128,000).

In 1993-4, total expenditure on the three main programmes' institutions under the OPP Society was Rs. 12.2 million (US$ 390,000). In 1994-5 it is expected to be Rs. 13.5 million (US$ 431,000). Some Rs. 1.4 million (US$ 45,000) has been allocated to the Society for their on-going expenditure. The largest items are capital expenditure (35 per cent) and payments into the reserve fund (40 per cent). The expenditure of the Research and Training Institute is estimated at Rs. 3.7 million (US$ 118,000) and it is funded by a combination of development grants and consultancies. The Orangi Trust is budgeted to spend Rs. 0.55 million (US$ 17,600) on administrative costs in 1994-5 and a further Rs. 7.5 million (US$ 240,000) has been allocated to its capital assets to be available for further loans. In addition, Rs. 12.5 million (US$ 400,000) has been borrowed on commercial terms and conditions from state banks in order to further supplement the asset base.

XII. LOOKING FORWARD

FOR MANY YEARS, the strategy of NGO intervention supported by OPP was one of a "model programme". The original intention of Dr Hameed Khan was to demonstrate, by example and to the government of Pakistan, the strength of alternative models of development and the scale of people's initiative and activity. The OPP's work was to develop a model programme to identify and support these initiatives and activities; in order to achieve this, its focus was strongly on what the people were prioritizing and undertaking. Through research, the Project identified needs and effective solutions. The extension activities then implemented these solutions through minimal intervention in ongoing local development. It was assumed that, once the model programme had been shown to be successful, government would adopt this model and OPP staff would change their role from implementors, independent of government, to being advisors to government.

Following the experience in Sukkur, the weaknesses associated with this model of NGO activity and strategy in Pakistan are now evident. There is little interest or understanding on the part of government with respect to the model and to any lessons emerging from any aspect of the project. Whilst individual government officials have been enthusiastic about working with the OPP, they have

been the exception rather than the rule. Where these individuals have tried to implement some of the strategies of the OPP through their own work, they have met with opposition and scepticism from other government staff and agencies.

However, as a result of these experiences, a new model is now emerging within OPP. The OPP has now altered its position so that it is once more supporting the activities of local residents and communities but this time with little expectation that government will respond positively. It is now putting more emphasis on two strategies and, in both of these strategies, local residents have a central role. In the first strategy, OPP provides the technical support to enable local community organizations to take responsibility for some activities that should be the responsibility of local government. For example, in Sukkur, it was the original intention that the government would maintain the main drain including the pump whilst the community would be responsible for internal sewerage. However, in recent months, the community has planned to take over the direct maintenance of the pump because the local government has not undertaken the necessary work. The second strategy is that, in addition to taking over what were previously local government activities, the local residents are being encouraged also to directly lobby and otherwise pressurize officials into acknowledging and taking up their responsibilities. Where necessary, OPP staff provide them with the information they need to do this work effectively.

While OPP continues to discuss and debate with government officials, and to demonstrate to them the validity of the model that they have developed, there are now many fewer expectations of the strength of demonstrably effective interventions. In their place, there is more emphasis placed on supporting residents to increase their bargaining power and skills within the local political context.

XIII. OPP PUBLICATIONS

THE OPP PRODUCE just under 100 publications (including books and reports) including the following:

• **Quarterly Progress Reports** - dating from April 1980 right up to August 1995.

• **Urdu Bulletin** - dating from July 1985 to March 1995.

• **Low-cost Sanitation reports** - a very comprehensive series of reports on the development of the low-cost sanitation programme in Orangi from its beginnings, including reports on its experiences and its effects.

• **Low-cost Housing reports** - including reports on house construction, a masons' training programme and on the manufacture of building components.

• **Women's Welfare Programme publications** - including reports on primary health education, family planning and working women.

• **Economic Programme publications** - including reports on a women's work centre, on family enterprise units and a micro-enterprise credit programme.

• **The Education Project publications** - including reports on literacy and the education system in Orangi.

• **General publications**.

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