



Community infrastructure programme in Pakistan

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IN TEHKAL BALA, an urban community within Peshawar in Pakistan's North West Frontier Province, a group of local people is working hard to surface their own streets with brick and stone, after waiting for many years for the local council to do so. The streets and footpaths have good lined drains, and the people no longer suffer from the unhealthy environment created by the muddy streets and the blocked drains. Funds for these works have come from the savings of the people from Tehkal Bala, with support from local and provincial government.

Further north in the Swat valley, the residents of the rural settlement of Ghalegay are constructing diversion weirs and check dams in stone masonry and gabions, to control flash floods coming down from the hills above their village. They have surfaced streets and footpaths, re-built local drainage system and relocated water supply mains.

The quality of the workmanship is remarkably high, with the help of local artisans. The costs have turned out to be about a quarter less than the cost estimates based on government rates, a cash benefit returning directly to the community.

Introduction

Pakistan has made impressive progress during the past decade in the development of its industry, commerce and major infrastructure. A national highway network is under construction, telecommunications have improved dramatically, industry is expanding away from the traditional sectors. Against the background of these remarkable achievements stands in stark contrast the relative neglect of the social sectors, in particular in the rural areas. Illiteracy among women in certain rural districts is as high as 96%. Only a fraction of urban and rural population has access to adequate sanitation. Primary health care, education for all, shelter and basic infrastructure have now become the focus of government programmes, with support from international agencies.

A national programme of pre-investment studies in the Shelter sector pointed to the deep-rooted problems that contribute to the current weaknesses in the provision of housing and infrastructure:

- inappropriate public finance mechanisms for basic infrastructure
- lack of an active housing finance industry
- inappropriate technical standards and quality control

The programme tried to develop new ways to deliver basic services to low-income communities in both urban and rural areas. The programme encourages the popula-

tion to take an active part in improving their own physical and social environment.

Pilot projects were designed to try out new approaches to improve housing and infrastructure on a small scale in different provinces. This paper describes the successful experience with one of such programmes, in which community organisations are actively and directly involved in planning, designing and financing basic infrastructure: the Community Infrastructure Programme (CIP) in Pakistan's North West Frontier Province (NWFP). CIP seeks to improve basic infrastructure in many urban and rural settlements throughout the Province, financed by the Government of Pakistan, the World Bank and Switzerland. Guiding principle of CIP is that beneficiaries contribute to investment for local infrastructure, and take full responsibility for the cost of its operation and maintenance.

The process has introduced fundamentally new ideas and roles to all actors in the programme of development: to local and provincial government, to international aid agencies and to the local communities themselves. A project preparation cycle for infrastructure improvements - traditionally involving the urban planner, the engineer and the financial analyst - now includes the community development planner and the social organizer: not merely to seek community participation and improve awareness, but as an integral part of the planning process.

The organization

Pilot projects are prepared by a multi-disciplinary team working within a Project Management Unit (PMU) established as part of NWFP's Department of Physical Planning and Housing, in collaboration with the Department of Local Government, Elections and Rural Development. The community development group consists of male and female social organizers (SOs) specifically recruited and trained for this programme, headed by a community development planner. SOs have different educational backgrounds, and have degrees or diplomas in social sciences as well as in languages, law or geography. They have been trained in the skills of social organisation, with lessons drawn from other community participation programmes in NWFP and elsewhere in Pakistan. They have been selected for their ability to listen to people and to encourage them to organize their community to achieve improvements in their living environment. Within the cultural climate of NWFP, female SOs often need permission from their family to undertake a job such as this that requires them to travel independently.

The community development mechanism

The central theme behind the process has become that any improvements to local infrastructure should be planned and built together with the people who will use these works. The programme needs to find out what the people want most, what they can afford and how they want to achieve it. To find a common opinion among a group of people, a representative community organisation of some type needs to be found or formed. This is where the process of project preparation starts: community mobilization.

Community mobilization

aims to establish a group within the community which can act as a representative body for voicing opinions and acting for the community: a Community Based Organization (CBO). Social organizers - both male and female - begin to visit selected communities and make contacts with individuals and representatives of local social and cultural groups. They need to understand the structure and distribution of power and influence within a community. It is the role of the SOs to ensure that any established elite does not feel threatened by the initiative, but that they understand the aims of the social organization, and that their influence is mobilized to support the process. Certain communities already possess an active CBO. SOs will introduce the infrastructure programme to the CBO and assess their interest in such a programme.

Socioeconomic surveys

Once a provisional interest by the community in the programme has been established, the team conducts a socioeconomic survey. The survey serves many purposes. It gives the people an opportunity to state their priorities and concerns, on health and education, on services and housing. Simultaneously, it improves the SO's understanding of the community and allows a chance for discussions with individuals and leaders. The surveys provide the basis for later planning and design, with data on infrastructure needs and priorities, willingness to pay for additional services and affordability. At a later stage, engineers will make a preliminary visit, to gain a first impression on the scale of infrastructure needs, the availability of trunk infrastructure and the level of investment required to improve services.

Community based organisation

The objective of social organization is to create strong representative groups at the community level. The role of the CBOs - once established - is broader than only for infrastructure improvement: The aim is to create a self-perpetuating institution through which the community members can work together to manage their human and material resources to reach higher standards of living. It is only through such maturity that the communities can maintain the CIP package delivered.

The creation of a CBO needs to be formalized to link with Government activities, as the CBO will eventually manage collective funds, and award or execute contracts. Name, constitution and procedures, the election or selection of its general membership, executive body and office bearers need to be defined and registered.

Through internal consultation the CBO defines the common needs, and agrees on priorities. For each priority, the initial willingness on cost sharing is agreed between the CBO and the Project. Guiding this process, the social organizer must ensure that the needs identified by the community match the targets of the CIP. Inevitably this has led to some disappointment and misunderstandings as some communities have expressed a need for a girls' secondary school or a district health centre. Although the current CIP cannot provide such facilities, the programme has now established linkages with e.g. UNICEF and other initiatives that could respond to these needs. The CBO is thereby providing a basis for a wider role and to become the focus of other developmental activities, such as health and hygiene awareness programmes, and support to women and children.

Preliminary designs and cost

The list of priority infrastructure need improvements as defined by the CBO forms the basis for the preliminary engineering design work. A topographic survey and a detailed survey of existing infrastructure result in 1:500 maps used by engineers for an initial design of improvements in all selected sectors. Designs are based on sets of *design standards*, adopted as appropriate for the nature of this programme [see box 1].

CIP focuses on local or *internal* infrastructure: provisions that are within the boundaries of the target settlement, and that can be improved without the need for major trunk or *external* infrastructure. Some external infrastructure is included where it is considered essential in supporting internal infrastructure and in achieving the global programme objectives of improving living conditions for low-income settlements. The costs for any such trunk infrastructure will be fully financed by government. Special funding arrangements have been introduced for sanitation improvements because of the still developing awareness on the need for improved sanitation facilities (see box 2).

Project cost estimates are based on unit rates accepted by government. From preliminary project cost estimates, the financial analyst prepares a first financing plan, according to global cost sharing principles accepted for the programme (see below). An assessment of household affordability - by which households will not be expected to spend more than 3-5% of their combined income on the programme - decides the scope and phasing of the programme. The capital cost per household is about the same as that of a new TV set. The outcome of this first round of design and cost estimates is the monthly cash contribution that will be required from all (beneficiary) house-

Box 1. Design standards and target service levels.

Design standards for CIP are based on the needs and environment of low-income-communities. An additional consideration is that works need to be built by communities themselves or by small local contractors. This has implications for the choice of material and for standardization of the range of designs. The standards are considered to be incremental and in future could be upgraded.

- water supply: house connections or standposts within 100 m of every house. Distribution system in GI pipe, dia. 25 to 100 mm. Per capita consumption through intermittent supply of 60 lcd (rural) to 75 lcd (urban).
- drainage: (i) concrete trapezoidal channels cast in situ, or (ii) rectangular brick channels with cement sand rendering, on concrete base.
- sanitation: **on plot:** double pit pour-flush latrines; demonstration project through provision of slab and twin-pit as incentive.
settlement ponds: pre-treatment of heavily polluted storm water before discharge.
- solid waste: local concrete or brick work containers within 80-100 m of every household. In urban areas, collection for final disposal through city-wide system. In rural areas: local disposal through burning or burial, with extensive reuse.
- roads & access: **access roads:** flexible pavement asphalt premix or double surface dressing;
minor streets: brick-on-edge or (in hilly areas) concrete;
footpaths: flat-laid brick on cement sand, or concrete.

Box 2. Sanitation.

The sanitation component is designed to provide a budget allowance in the loan for the implementation of a programme of introducing improved twin-pit pour-flush latrines in all communities. The component has specific significance and urgency in these communities, as open storm water drains are inevitably contaminated with sullage as well as faecal matter. Adequate treatment of this waste water cannot be realistically expected on a large scale. Upgrading will therefore need to focus on a reduction of the faecal contamination at source. The demonstration latrine improvement component aims to achieve this, through a combination of improving health awareness, training in construction techniques, demonstrating the available options, and providing an incentive through a 25 % cash subsidy on the cost of constructing slab and twin-pit.

The project cost estimates are based on providing on average an additional 30% of the households with a latrine by the end of the project, in the year 2000. Costs are based on a construction cost of Rs 4000, which excludes the cost of the superstructure. 75% of these costs will be paid directly by the individual household. This contribution is *not* included in the affordability calculation for assessing the community contribution to the remaining infrastructure improvement programme. The 25 % subsidy will be financed by IDA, through the provincial government.

holds in the community. This information - preliminary design and corresponding household contribution - provides the basis for a key meeting with the community: the presentation of the plan.

Presentation

The presentation meeting provides a broad forum of discussion. Usually chaired by the Chairman of the CBO, the proposed plan is explained to the meeting. Different options are discussed, with the implications for required contributions by the households, for both initial investment and the recurring obligations for operation and maintenance. The role of the SO and the engineer is to introduce technical issues in an understandable way to an untrained audience, who may help to decide the size, scope and phasing of the programme.

Following the discussions, designs and cost estimates are revised. If major changes follow from the discussions, a second presentation may be held. The plans as adopted proceed to detailed design and the preparation of tender documentation.

Detailed engineering design and contract documentation

Contract documentation for implementation of the CIP follows procedures laid down by the Government of Pakistan. At the same time, however, procedures have to support the principles of CIP, *ie* that contracts can be issued to small local contractors or to community groups. In addition, procurement guidelines of the IDA need to be observed. Developing procedures that can satisfy all these requirements proved one of the main challenges facing implementation of CIP.

Civil works contracts included in government annual development budgets in Pakistan require detailed engineering design documents and cost estimates, to be submitted in the form of a PC-1. The cost basis is a very detailed bill of quantities with unit rates derived from base materials and unit labour rates. Variations of either quantities or costs beyond a narrow band require re-submission of the PC-1 and can lead to serious delays in the processing of payments. The experimental nature of CIP - involving communities in the planning and building process - inevitably leads to changes in costs and quantities. Unless government procedures could be interpreted with more flexibility, interruptions in the flow of funds would seem inevitable, with the risk of alienating communities from the programme.

For the initial batch of twenty CIP sites, separate formal PC-1s were prepared, with full engineering drawings. On the basis of approval of these individual PC-1s, an *umbrella PC-1* was formulated, representing the overall cost of the first phase of the programme. For the next phases, a more global approach can be adopted based on experience of the first batch of sites. An element of flexibility is required to support the true characteristics of the CIP. Eventually, an overall budget allocation to a certain community will be based on a preliminary design

and accepted unit rates. This will allow the community to adjust to the inevitable changes that will arise in the quantity and type of works, as well as in their costs. The community can do such adjustment by changing contracting arrangements, modifying their priorities or modifying the designs. It is essential within the principles of the CIP that this flexibility is built in and maintained.

Financing: Who pays what

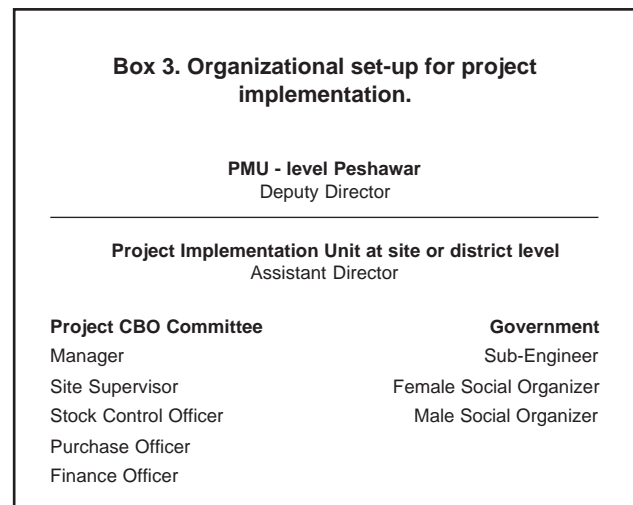
The principle of cost sharing is fundamental to the concept of CIP. Contributions by beneficiaries to local improvements, however small, ensures that the investment in infrastructure will be maintained. Participation in the design and planning provides an incentive to the population to mobilize their resources, and commit savings to improvement of their own living environment.

Present funding arrangements are based on a 20% contribution by the community for all internal infrastructure. Local councils pay for another 10%, with the remainder funded by provincial government, partially from the IDA Shelter Project loan. Trunk infrastructure is funded completely through the Provincial Government. Within a parallel ongoing programme of strengthening the resource base of lower levels of government, it is the intention that the share of local councils in funding CIP will gradually increase.

CBOs are responsible for collecting funds from within the community, setting levels of monthly cash contributions required from households. Internal arrangements can vary, and often those with higher income are found to contribute more. A community has to demonstrate its commitment to the programme by collecting their share of the first batch of the works before building can start.

Building the works: contracting and supervision

CIP intends to create an opportunity for small local contractors or individual craftsmen within the community to be involved in the building process. Contractors are



encouraged or obliged to employ local people as labour wherever possible. Apart from the generation of local employment, these procedures provide a greater control on expenditures and quality, as those involved in building will benefit directly from the completed works.

Implementation arrangements have been set up to respond to the requirements of community control on expenditure, whilst still operating within the procurement guidelines of government and IDA. Works have been divided into three categories: (i) Type A contracts for primary infrastructure should be awarded to large contractors (registered as Class A or B), (ii) Type B contracts for annual packages of internal infrastructure can be awarded to Class C registered contractors, while (iii) Type C contracts for small and simple infrastructure can be procured through direct contracting by the community itself.

The flow of funds for financing of the project is a sensitive subject in a highly politicised society with some distrust on the part of the population in government management of public funds. A fundamental step is the creation of a *community project account*, with representatives of local government and the CBO as joint signatories. After a formal start to the project - with the signing of a Memorandum of Understanding and a Community Finance Agreement - funds can be transferred into the project account from both the community contributions and local and provincial government. The amount of money transferred corresponds to works planned for a given period, at project cost estimates based on agreed unit rates. In practice, community contracts will allow works to be built at lower cost than estimated from government unit rates. These savings accrue to the community, enabling building up of a fund for further local development work.

Responsibility for implementation planning and management, quality control and accounting is shared between a group of CBO's representatives and representatives from local and provincial government. This arrangement reflects the shared funding of the project.

Running the works: Operation and maintenance

One of the basic principles of CIP is that the community should take full responsibility for operation and maintenance of the facilities provided through the programme, whether in cash or kind. The type of community involvement in this will vary between urban and rural settlements, and from sector to sector. The outline agreements suggest that the community provides free labour for routine cleaning of drains and waste collection points.

Cash contributions are required to pay the electricity for tubewell pump operation, and build up a fund to cover equipment repair and replacement. The initial financing agreement already defines these obligations. As implementation has only recently started, the programme has little practical experience with how arrangements will materialise in practice.

Conclusions

So where are we now with CIP. After a long leading up period we are now seeing very encouraging signs at implementation. After months and years of breaking down old divisions of roles within the planning process, and expanding the understanding amongst government and lending agency bureaucrats on more open-ended approaches to project financing and definition, we are now seeing the enthusiasm and commitment of the local population at the receiving end of this preparation. There is still a long way to go. Traditional attitudes still guard the interests of government officials and the contracting industry. International procurement rules still tend to favour the strict definitions in project approach. But changes are now perceptible, at a small scale. Success has been demonstrated. Community involvement in planning and building ensures that what is built is really needed. Getting the community to pay part of the costs ensures that works will be looked after. Involving those who pay directly in building reduces wastage and unnecessary overhead. Allowing freedom and flexibility in design and choice of materials - within set quality limits - allows real savings to be made. Introducing community contracts encourages the use of local skills and the benefit of local experience. Expanding the role of community organizations to health and education gives access to the benefits of programmes of other agencies and NGOs, and advances the involvement of women in the development process. Involving communities in planning and implementation will eventually benefit local government.

The NWFP Community Infrastructure Programme - together with other encouraging new schemes in infrastructure and shelter development in Pakistan - provides a promising beginning to new approaches which can serve as inspiration to similar initiatives to improving living conditions for low income communities elsewhere.

References

- ¹ This paper reflects the views of the authors only. It may not necessarily reflect the position and views of Government of Pakistan, Provincial Government of NWFP, the World Bank, Swiss Development Cooperation and UNICEF.