SQUATTER SETTLEMENTS IN KARACHI


L and developed by formal sector agencies in Karachi is far too expensive for low-income groups. The procedure for acquiring it is also long and arduous and delivery of the developed plot may take as long as ten years after application and initial payment for it has been made. As a result, the vast majority of the Karachi poor live in squatter settlements which house more than 40 per cent of the city's population.

The initial squatter settlements developed through unorganized invasions. They were badly planned and housing stock consisted of shacks made of bamboo, mats and reeds. Fires were common and in the absence of credit, technical advice and leadership, improvements in the settlements were slow. In the 1960s, however, major changes took place. Unorganized invasions gave way to organized, though illegal, subdivision and sale of state land by informal sector developers. As a result of this change, planning standards improved. The housing stock also improved and construction in the illegal subdivision settlements now consists of concrete block walls and corrugated iron sheet roofs. This improvement was the result of a major intervention by informal sector entrepreneurs who set up building component manufacturing yards, or thallas as they are called, in the squatter settlements.

As soon as a squatter settlement is initiated in Karachi, a thalla-wala, as the thalla-owners are called, purchases land in the settlement, moves in and establishes a yard. He builds a water storage tank for curing and mixing of concrete, a concrete platform for block making and a small room that acts as a store for cement, corrugated iron sheets and tools, and residential quarters for the chowkidar or caretaker.

As soon as he is established, the thalla-wala sets about establishing a good relationship with the new community. In the initial stages of development the residents of squatter settlements buy water tankers for their use. However, at that initial stage there are no storage facilities for water in the settlement. Invariably the thalla's storage tank is used for this purpose, free of charge, and often the thalla-wala takes on the responsibility of distributing the water. The thalla-wala has some building experience and he offers the new residents advice on how they should build and on the materials they should use. He offers to provide these materials and the skilled labour required for their use. If the residents cannot afford to pay, he provides the materials on credit and often also provides cash credit for payments to the skilled labour. The credit is recovered fairly quickly, within two to six months, in small instalments because it is seldom of more than 2,000-5,000 rupees. Violence or threats are never used to recover credit but social pressure from neighbours and clan or family members is.

The thalla-wala finances his activities from various sources. Often the informal developer of the settlement gives him a loan or land for the thalla free of cost. This is because the value of the land in the settlement goes up considerably if the houses are made of corrugated iron sheets and concrete blocks instead of mat and reed. Aggregate suppliers and transporters provide materials on a monthly credit basis at a marginally higher cost, and corrugated sheet suppliers recover their money as sales are made.

Normally after a settlement has 200 to 500 houses in it, it expands rapidly, and

1. Houses built in Karachi squatter settlements without assistance from a local thalla-wala.
with its expansion a less poor clientele moves in. By this time the thallawala is usually an important and trusted member of the community. His services are sought for settling disputes, including matrimonial ones, and for assisting the lobbying effort with the local government for services for the settlement. By this time he is in a position to expand his thalla, take on building contracts and cater to the more sophisticated demands of his new clients.

Surveys carried out in selected Karachi squatter settlements have shown that in all cases of house construction there was involvement of the thallawala. Construction of 13 per cent of the houses was contracted out to the thallawala; 62 per cent of the respondents purchased materials on credit from it, and 9 per cent took cash credit as well. Ninety-one per cent of the houses were constructed of concrete blocks and corrugated iron sheets.1

The thallawala's intervention has certainly improved housing quality in Karachi’s squatter settlements. However, his materials of construction, raw and manufactured, and the technical advice and building skills that he provides are all sub-standard. As a result, the buildings in the squatter settlements face several problems. Foundations are prone to sulphate attack; bonding between blocks, especially at corners and junctions, is not properly done, resulting in big vertical cracks at these points; timber or steel members carrying the corrugated iron sheet roofs sag due to wrong sizing resulting in leakages during the rains; roofs fly away during the storms as the iron sheets are not anchored to the supports and walls but held down by concrete blocks or large stones; and the walls take in so much water during the monsoon (as the concrete mix is poor) that they sometimes collapse. Residents cannot build a first floor to their houses since the walls and the foundations are not strong enough to take another storey.2

The reasons for the sub-standard construction done by or through advice given by the thallawalas has been studied by the Orangi Pilot Project (OPP) and by the students at the Department of Architecture at the Dawood College in Karachi.3 Concrete mix for the blocks is often 1:24 cement:aggregate. This is not to increase profit margins but to make the product affordable to the people. Curing of blocks is seldom done for more than two days and after that blocks are often lifted and used while still wet. Aggregate used for concrete is from sources identified by the city authority. Most of these sources are at a distance from the city and hence their cost is high.

Masons working with the thalla are badly trained and that is why they work in low-income settlements where wages are considerably lower than average city wages. Foundation and roof-joist sizes are decided intuitively and this intuition takes into consideration the low paying capacity of the clients in a big way! Eaves and ridge details are poor, and above all, the house-owners, many of whom are from rural areas, are unfamiliar with the materials and techniques of construction being used. They do not know what to expect or demand from the thallas or how to relate to the system that is serving them. There is the common attitude among all the participants in the low-income housing process that for a poor man’s house ‘anything goes’.

There has been a lot of research in Pakistan into materials and technologies for what is known officially as ‘low-cost housing’. Impressive models have been developed by the Appropriate Technology Development Organization (ATDO) and the Pakistan Council for Scientific and Industrial Research (PCSIR). However, the ATDO and PCSIR research has not studied the process of housing or identified the actors involved in it. As a result, it has not been possible to extend the results of this research to the residents, entrepreneurs and artisans of the squatter settlements. The OPP, on the other hand, has studied
the process in detail, identified the actors in it and has the advantage of operating from the largest squatter settlement in Pakistan. On the basis of this research and its links with community activists and thallas, the OPP has developed a housing programme for Orangi.

The OPP's housing programme has three basic components: 1. The upgrading of manufactured items at the thalla and of technical advice through research and extension and in the process reducing costs. 2. Improving the skills of artisans through a training programme. 3. Raising awareness levels of the residents regarding construction technology and its relationship to the process of construction, artisanal skills and the thalla.

Initially, OPP worked in collaboration with an existing thalla. Research was carried out to reduce costs and improve the quality of the concrete block. New sources of cheaper aggregate were discovered, block manufacture was mechanized and so was the curing process. The result was a concrete block of over 700 psi strength as opposed to a traditional one of 50 to 60 psi and at the same cost. In the next stage standard designs for foundations and concrete battens for supporting corrugated sheets were prepared and made available both to the thallas and the residents. Thus, with the new walls and foundations the construction of a first floor became possible. Further research resulted in the development of pre-cast concrete tiles and battens for the roof to replace the corrugated iron sheets. This made first floor construction possible without having to remove an existing roof. Very soon these products became popular in Orangi and other thallas applied to the OPP for technical assistance. Now there are 14 upgraded thallas in the Orangi squatter settlements and many of them are also serving the more affluent areas of the city. Requests for upgrading continue to pour in.

The upgrading of the thallas, along with the OPP's extension and training programme aimed at house-owners and artisans, is in the process of improving not only new construction but also carrying out rectifications to older buildings. Best possible technical and managerial advice based on social research and an understanding of the housing process has succeeded where large-scale state intervention, through the various special development projects, has failed to develop an easily replicable model.

NOTE
3. The OPP is a NGO sector project operating in Orangi township in Karachi. Most of the township consists of squatter settlements.

ARIF HASAN IS AN ARCHITECT/PLANNER WORKING IN KARACHI AND A CONSULTANT TO THE ORANGI PILOT PROJECT (OPP) WHICH IS INVOLVED IN UPGRADING KARACHI'S INFORMAL SETTLEMENTS.