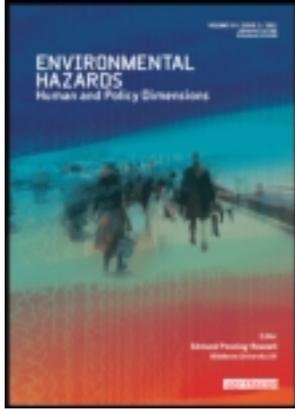


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### Community-led resettlement: From a flood-affected slum to a new society in Pune, India

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# Community-led resettlement: From a flood-affected slum to a new society in Pune, India

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This paper describes the resettlement process of a community devastated by annual floods, to newly constructed housing in Pune, India. The relocation from Kamgar Putala slum to a housing society at Hadapsar was organized by a community-led NGO partnership in 2004. The housing development was coordinated by the local NGO Shelter Associates with significant community participation. The housing has been revisited in 2010 to evaluate the sustainability of the resettlement project's delivery model via stakeholder perception. The process of organizing for resettlement after natural disaster is described along with the implementation and evaluation of the new housing nearly six years after initial occupation. The strong partnership approach overcame a series of political and financial hurdles at various stages of the relocation project. The story of resettling Kamgar Putala is detailed alongside an outline of the current political climate for an alternative slum-upgrading policy in India and Pune. The advantages of an empowered community supported by an influential local NGO demonstrate a commendable team effort which has tackled the threat of floods. The paper highlights the merits of a community-led partnership approach to housing development for achieving sustainable urban development as well as the alleviation of poverty in a developing context.

Keywords: housing; partnership; resettlement; slum upgrading; sustainability

## 1. Introduction

An estimated 1 billion people live in urban slums and this number is increasing by 25 million each year; this means that more than half of the world's poor will live in cities by 2035 (United Nations Department of Economic and Social Affairs, 2006). A slum or informal settlement is characterized as substandard housing, lacking access to clean water, sanitation and other infrastructure, overcrowding, insecure tenure, unhealthy and hazardous conditions, poverty and social exclusion (United Nations Human Settlements Programme, 2003). In the past poverty was thought to be a rural issue, but the locus of world poverty is now shifting from the rural to the urban context (OCHA/IRIN and UN-Habitat, 2007). New slums are forming and existing

slums are growing. In poor countries slums make up 30–70 per cent of urban populations (United Nations Population Fund, 2007). Poor institutional and financial resilience, less robust infrastructure, rapid industrialization, a reliance on natural resources, strain of population growth and urbanization are some of the causes that lead to the formation of slums.

The urban poor are often the most vulnerable to natural disasters as they inhabit overcrowded, marginal, unstable and dangerous land with no financial cushion or security. When flooding, fire, earthquakes, landslides and cyclones strike, the urban poor are often the worse hit. The circumstances of the urban poor also make them more vulnerable to dangers such as organized crime and epidemics (OCHA/IRIN and UN-Habitat, 2007). In India, many slums are

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often located in urban locations that are particularly vulnerable and upon sites deemed not developable for habitable buildings; such as hill-slopes, railway tracks, pavements and by water bodies. As is the case for the settlement of Kamgar Putala in Pune, it is common for slums to be situated on river banks which are susceptible to rising water levels particularly in the monsoon season. As many slums are made of impermanent materials and poorly constructed, these floods can have a disastrous effect on residents and their homes. Water damage, complete destruction and the related health impacts from the spread of water-borne diseases all have devastating consequences.

Approaches to tackle slums can involve physical, social, in-situ and resettlement options. There are numerous housing delivery systems with adaptive and proactive measures. Current good practice experience shows that community participation is vital to the long-term success of slum-upgrading projects. One example of effective community participation in the delivery of a slum-upgrading project brought about by flooding is the relocation of Kamgar Putala to Hadapsar in Pune, India.

## 2. Initiating resettlement

The informal settlement of Kamgar Putala is located along the banks of the river Mutha at Shivaji Nagar in Pune and is vulnerable due to the threat of road widening and flooding. Every year the monsoon rains cause this stretch of the river to flood into the settlement which is constructed from temporary materials. In August 1997, the rains were particularly devastating resulting in one-third of the entire settlement being submerged (Shelter Associates, 2001a, b) as well as significant damage to other slum pockets situated on the river edge. Coupled with municipality plans to widen the adjacent Sangam Bridge it was not sustainable for the residents of Kamgar Putala to remain living at Shivaji Nagar.

After the severe 1997 flood-water had subsided, a comprehensive survey of the six main affected

areas along the river was conducted in 1998, as requested by the Pune Municipal Corporation (PMC). The PMC specified a survey of all the settlements situated along the river Mutha between Kamgar Putala and Mhatre bridge with the aim to assess how many houses were affected by the floods. This survey was undertaken by collectives of Pune slum dwellers Mahila Milan, together with the National Slum Dwellers Federation of Mumbai, and the NGOs Shelter Associates and SPARC. The community federations used this opportunity to initiate the process of bringing communities together to negotiate with the city authorities for the development of a resettlement strategy (SPARC & Shelter Associates, 1998).

Shelter Associates is an NGO comprising architects and social workers who work with community federations. The main focus of their work is housing and infrastructure for the poor. The guiding philosophy of their work is that 'poor people have the best solutions to their problems and are quite capable of not only devising strategies which work best for them, but also implementing them' (SPARC & Shelter Associates, 1998). It was in this context that the NGOs supported the community federations to initiate their own relocation strategy to move away from the dangers of living by the river and to be involved in the development of their own new housing society at a new site in Hadapsar.

## 3. The flood

The largest flood in the history of Kamgar Putala came on 23 August 1997. Six slum pockets are situated along the banks of the river Mutha between Kamgar Putala and Dattawadi. The water came between 5.30 a.m. and 10.00 a.m. submerging 847, nearly half of all the houses. The residents had been accustomed to flooding every monsoon affecting the houses on the lower banks; however in 1997, the floods were disastrous. The water came while people were sleeping and residents had not received any prior warning. Some immediate relief was provided by local authorities, schools, residents and

youth groups who tried to arrange for temporary food and shelter. The affected people camped in schools, the stock exchange building, community halls and the garages of nearby housing complexes. The water started to recede after 4 days, but many people were not able to gain access to their houses until 15 days after the flood (SPARC & Shelter Associates, 1998).

In the settlement of Kamgar Putala, 156 houses were completely swept away by the river. Four hundred and sixty-eight houses (31 per cent of all) were submerged. In other houses the water had left silt, rubbish, snakes, insects and sewerage that caused terrible damage. The insects, reptiles and damp caused many children to become ill. For immediate relief, the authorities arranged for some money, a few utensils and clothing to be given to the flood-affected people. The distribution of the relief was based on ration cards. Unfortunately, many deserving people missed out as their documents were lost in the flood. The people whose homes were completely destroyed were forced to rebuild their houses *pucca*, in brick or *patra* despite the increased cost (SPARC & Shelter Associates, 1998).

At the time of the survey many residents had been living at Kamgar Putala for 16 years. They favoured the location due to its convenience for local schools, hospitals, transportation, markets and work places, despite the danger of the flooding river nearby. The favourable city centre location might also have been preferred by residents due to a lack of other available locations within which to settle. Despite the hazardous location many residents may have considered the proximity to livelihoods more important than the threat of flooding (Figure 1).

#### 4. Road widening

As well as the dangers of the water, the residents of Kamgar Putala were also at threat of eviction from road widening. The municipality had plans to widen the Sangam Bridge adjacent to the settlement. When the 1997 flood line and the boundaries of the proposed road widening

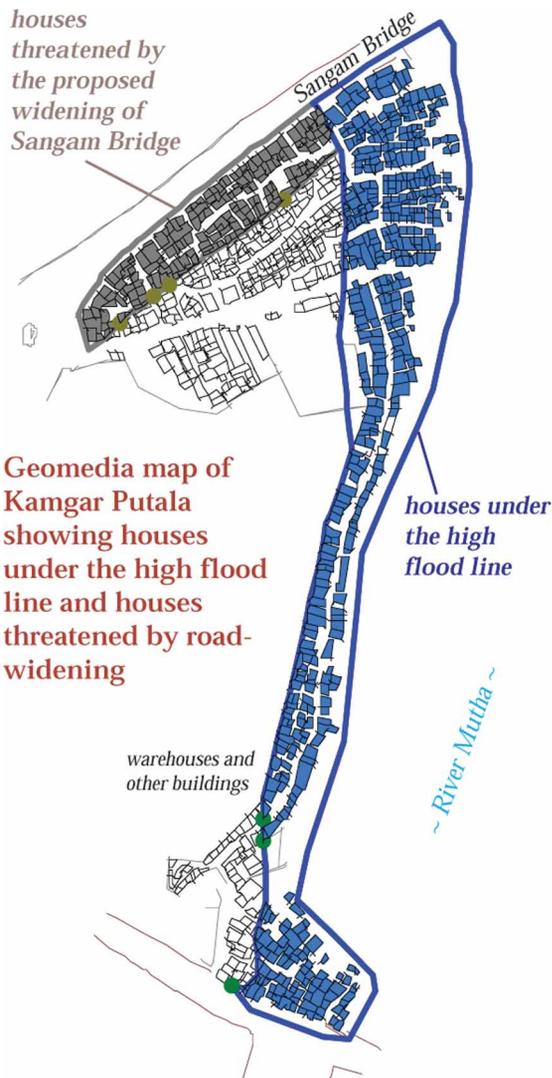


**FIGURE 1** The devastating floods at Kamgar Putala  
© Shelter Associates.

were marked on a map, only 25 per cent of the original settlement was not affected. The NGOs realized that the communal facilities of the entire settlement would be affected as well as valuable community networks and relationships among families, friends and neighbours if the settlement were to be split. Therefore, any resettlement option needed to include everyone (Shelter Associates, 2001a, b) (Figures 2 and 3).

#### 5. The survey and community mobilization

The PMC started by appointing surveyors to mark the high flood line across the six main settlements affected by the floods. The line indicated all the houses that had been either partially or fully submerged. Next, a team of 20 people from the Mumbai Mahila Milan and Mumbai NSDF came to Pune to conduct a comprehensive survey of the flood-affected people. These people joined forces with a further 40 members of the Pune Mahila Milan to conduct the survey together. The survey process involved numbering all the houses then, a door-to-door enumeration, community meetings and the creation of settlement registers. The survey created a great deal of energy among the residents of Kamgar Putala. Some were curious and excited, whereas others were wary and scared of the threat of eviction. The survey process heightened the awareness of Mahila Milan enabling the federation to gain



**FIGURE 2** Geomeedia map of Kamgar Putala (Shelter Associates, 2001a, b).

more members (SPARC & Shelter Associates, 1998).

The survey conducted in Kamgar Putala in January 1998 found it to be a declared settlement (officially recognized by the authorities) home to approximately 3,768 people. The slum was said to be established in 1947 and in 1998 constituted 928 houses of various construction ranging from *pucca* houses on the upper banks, *kutch*a and semi-*pucca* on the lower banks. Large amounts of demographic data of all the six



**FIGURE 3** After slum clearing at Kamgar Putala.

affected settlements were collected during the survey. The majority of the respondents were Maharashtrians, but a large proportion of the population comprised second- or third-generation migrants. In all, 57.1 per cent were born in Pune city. The largest group of non-Maharashtrians came from Uttar Pradesh. A total of 71.5 per cent of residents were said to have lived in the settlement for over 10 years, 49.5 per cent for over 20 years and 10.5 per cent for more than 5 years. The remaining 10 per cent could not recall when they came to the settlement (Shelter Associates, 2001a, b) (SPARC & Shelter Associates, 1998). These data show that 82 per cent of residents have been living at their present address for over 5 years and prior to 1995 which qualifies them for resettlement according to government regulations. Most of the houses were sized between 90 and 140 ft<sup>2</sup> the small size indicates the level of congested living conditions. The survey also revealed the number of joint and extended families sharing one house.

The surveyors found that many families had lost their ration cards and photo ID documentation during the floods. These documents are required to prove residency status and therefore eligibility for resettlement under government schemes. The tracing and reissuing of such documents is a long task and implies that data gathered during the survey will need to be

continuously updated and maintained (SPARC & Shelter Associates, 1998).

Throughout the survey process, Shelter Associates and Mahila Milan held meetings with the residents and motivated them to join the federation activities. Residents were encouraged to begin crisis savings groups for future use when the inevitable resettlement came. At the time of community consultation there was an ongoing resettlement project at Dattawadi further up the river, the success and public awareness of this project helped Mahila Milan gain the confidence of Kamgar Putala's residents that resettlement could also be a viable option for them. Resistance did come from some people who were scared to move to a new location and also some traditional and political leaders. The research conducted by Shelter Associates found that many residents were so accustomed to battling against the floods each year that it had become a way of life, from which many people were resistant to change. However, the positive impact of the Dattawadi relocation generated much interest and people began to realize that there was a viable alternative to their situation. The enthused residents began housing saving schemes and became actively involved in land searches while participating in the Mahila Milan federation activities. Negotiations to acquire a relocation site began and the mobilization of the community had begun. The newly formed federations started to develop strategies for resettlement and to take control of their own future (SPARC & Shelter Associates, 1998).

## 6. Baandhani and shelter associates

After the surveys were complete, the women of Kamgar Putala got together to start daily saving schemes and to hold regular community meetings forming the community-based organization (CBO) Baandhani. This women's collective was also instrumental in the 1998 River Workshop that was held at the Dattawadi relocation project site with an aim to raise the profile of the slum dwellers that were being overseen by

the PMC. The PMC had initiated a river improvement project with a team of advising experts, but the riverside slums and key slum resident stakeholders were not included in the consultations. At the River Workshop women from the slums spoke about the hazards of their life by the river and expressed their desire to be involved in any potential resettlement schemes (Shelter Associates, 2001a, b).

The women of Baandhani started up housing savings groups to ensure that they had the funds for a loan down payment if and when the time came that resettlement became a reality. While awaiting resettlement, the collective were also very active in endeavours to improve the conditions of their present environment by initiating vermiculture activities (funded by the PMC) to decompose their biodegradable waste and produce manure to sell thereby generating an income. This work attracted the attention of the Additional Municipal Commissioner Deepak Kapoor (1999) who visited their project and expressed his interest in the work of the collective (Shelter Associates, 2004).

The women negotiated with the PMC to demonstrate the difficulties they were facing with living at Kamgar Putala and their willingness and capability to contribute to their own resettlement scheme. The community successfully managed to raise their profile, thanks to the support of the NGO Shelter Associates that worked to strengthen the voice of the poor and mobilize the community collectives (Shelter Associates, 2001a, b).

## 7. Governance and planning

Due to the institutional structure of local government in Pune the voice of the Kamgar Putala community was sometimes missed and the municipality had other priorities. During the period of 1997–2002 there were many transfers and changes within the PMC and administration heads. Each time a new civic chief started the Baandhani federation was forced to restart their

negotiations to convince the administration to prioritize their resettlement plans.

In 2000, the efforts of the Baandhani federation were noticed by the Municipal Commissioner Ratnaker Gaikwad. He visited the community and accepted invitations to meetings with Shelter Associates who had tentatively prepared housing plans for the resettlement to present to him. These meetings were successful and the commissioner agreed to support the project. With the PMC's support a 2.4 ha plot of flat land reserved for the economically weaker section (EWS) at Hadapsar was identified as a location for the residents of Kamgar Putala to resettle to; a safe plot far away from the water. There was, however, some disagreement among local politicians who campaigned for the community to be re-housed in the same place, in situ, with plans to construct a 5 crore rupees retaining wall to keep the water out. Their justification for this was that the majority of residents were rag-pickers and scrap vendors who relied on this income which was easily accessible by train from the Kamgar Putala site. The politicians did not feel that the residents would want to move away from their livelihoods (Shelter Associates, 2004). However, Baandhani and Shelter Associates disagreed with this, so they set about proving the facts. After Shelter Associates' household surveys, which included employment patterns of the residents, it was clear to see that the majority of workers were in fact unskilled construction labourers who did not actually require a specific site for their place of work. The other employment groups identified, skilled workers, auto drivers, shop owners informed Shelter Associates, that moving was not harmful to their trade. The residents claimed that even if it were an issue they would be willing to make this sacrifice to move to more secure homes away from the threat of floods (Shelter Associates, 2004). Shelter Associates research also found that the majority of female workers were domestic maids and the organization was confident that the Hadapsar site was centrally positioned enough to provide employment locally.

Due to uncoordinated government development planning for the city of Pune, Shelter Associate's plans and designs for the resettlement scheme needed much iteration and numerous proposal submissions to the PMC (Sen et al., 2003) (Table 1).

The uncoordinated planning can be further demonstrated by the fact that while the relocation plans were being discussed with the PMC, another PMC department was constructing two large community toilet blocks and a community

**TABLE 1** Iteration of development plan

<p><i>Plan 1 1997–99:</i> After the 1997 floods the PMC drew a high flood line across the settlement. After surveys it was clear that 379 houses would be affected by the floods. At this point SA and Baandhani started designing a development plan for the 379 households on the Hadapsar site</p> <p><i>Plan 2:</i> In 1999 a newly formed Mutha River Improvement Committee comprising prominent city activists, environmentalists and scholars proposed the construction of a 'submersible road' in the riverbed which required more houses to be cleared. This meant that a new total of 559 households would need to be relocated and SA had to revise their plans</p> <p><i>Plan 3:</i> After the second revision of plans were submitted to the PMC, SA then learned that the Sangam Railway Bridge running over Kamgar Putala was to be widened by 20 m. This increased the total number of affected households to 793. As the total number of houses in the settlement was 1014 the PMC suggested that the entire settlement should now be relocated which meant the project had tripled in size. After the third set of designs had been submitted to the PMC the Building Department then realised that part of the existing settlement had been reserved for in situ redevelopment. With the support of GIS mapping (Sen et al., 2003) SA demonstrated that half of the previously reserved land was taken up by bridge widening, road building and the high flood area. Shelter Associates submitted a feasibility report to the PMC to show that it would not be possible to re-house the entire settlement in situ on what was left of the previously reserved land. It would only be possible to re-house 240 families in an 11 storey building, the rest of the community would be stranded. SA had proved that resettlement was the only viable solution for Kamgar Pula's residents</p>
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centre within the areas of the slum threatened with demolition (Shelter Associates, 2004).

Despite the planning submissions and successful negotiation so far between Baandhani, Shelter Associates and the PMC everything changed in 2001 when the head of the government administration, at that time, changed again. The resettlement plans were no longer a priority for the new administration and all plans were frozen. After 5 years of planning and community saving everything had ground to a halt. This caused tensions between Baandhani and Shelter Associates as trust was fading between the partnership. The relationship between Shelter Associates and the new municipal commissioner had deteriorated. The community members were starting to lose patience and faith in Shelter Associates, which further affected their relationship and also led to the creation of fractions within the Baandhani federation (Shelter Associates, 2004).

Shelter Associates decided to do something proactive and began the registration process to establish cooperative housing societies. Mr Ratnakar Gaikwad was the Commissioner of Registrar at the time and was very supportive and helped Shelter Associates and Baandhani to register the residents in groups of 40–45 members by January 2003.

In the same year Valmiki Ambedkar Malin Basti Awas Yojna (VAMBAY) was introduced by the government in Maharashtra. VAMBAY is a major programme for the provision of affordable housing and infrastructure. This programme receives Rs. 50,000 as a grant from the central government. With the introduction of this scheme, the PMC was now encouraged to implement slum-upgrading projects. Slums were now back on the administration's agenda. The notified housing agency for the Government of Maharashtra; Maharashtra Housing and Area Development Agency (MHADA) (which has the responsibility to build houses for the EWS) placed an advert in the local newspapers inviting tenders for the relocation of slum dwellers to the Hadapsar site that had previously been ear-marked for Kamgar Putala. It emerged (to Shelter Associates) that MHADA had already drawn up plans for the

relocation of 800 families onto this plot and were inviting quotations from interested contractors or NGOs to implement the design. The PMC had also already installed the infrastructure on the site needed for roads, drainage and water connections. The KP residents, however, were not satisfied with MHADA's plans due to the small dimensions of the tenements. The previously submitted Shelter Associates housing plans, which had been developed in collaboration with the community, did not seem to have been considered. Shelter Associates did nevertheless submit a bid for the work, but it emerged that the VAMBAY funds would not be sufficient to implement the scheme as per MHADA's specification and so some contractors withdrew (Shelter Associates, 2004).

Then, in March 2003 there was yet another change of administrative head. Mr Sanjay Kumar took over as the Municipal Commissioner of Pune. Shelter Associates and Baandhani again presented the surveys, research and planning they had done since 1997 for Kamgar Putala to move to Hadapsar. Mr Kumar was sufficiently impressed and decided to award the rehabilitation project to Shelter Associates. The VAMBAY committee also allowed Shelter Associates to re-design the houses and submit designs that suited the aspirations of the community while fitting in with the existing Hadapsar site infrastructure. The Buildings Department of the PMC cooperated with Shelter Associates and supported them to comply with Floor Space Index and other rules and regulations.

## 8. House design and cost

The 176 house tenements implemented by Shelter Associates were organized in clusters of eight tenements around small courtyards. Shelter Associates had demonstrated that low-rise, high-density solutions work well for the poor, as often their homes double up as workshops and businesses for income generation. Shelter Associates states that slum dwellers rehabilitated into high-rise buildings often sell and

move back to the slum as this building style fails to satisfy the needs of the poor to provide space for income generation activities; that they are difficult to maintain over time and that with weak service networks it becomes particularly difficult for families on the upper floors (Shelter Associates, 2004) (Figure 4).

It is for these reasons that Shelter Associates' architects designed the new housing at Hadapsar in low-rise (two-storey) modules of eight tenements, four on the ground floor, and four on the first floor. The tenements are clustered around a central courtyard with one flight of stairs leading to the first floor. The central courtyard is flanked asymmetrically by two small courtyards that provide access to the individual tenements on the ground floor as well as to the staircase leading to the first floor. This design allows plenty of sunlight and ventilation into each tenement. The placement of people's entrance doors were spaced to avoid disrupting circulation in the courtyards and corridors. The design process was done very much in consultation with the residents whose considerations were prioritized and balanced with design constraints. The community chose to have one large window and five concrete *jailis* (trellised openings). The community also took a vote on the option of communal toilets to maximize space in their houses or for the option of

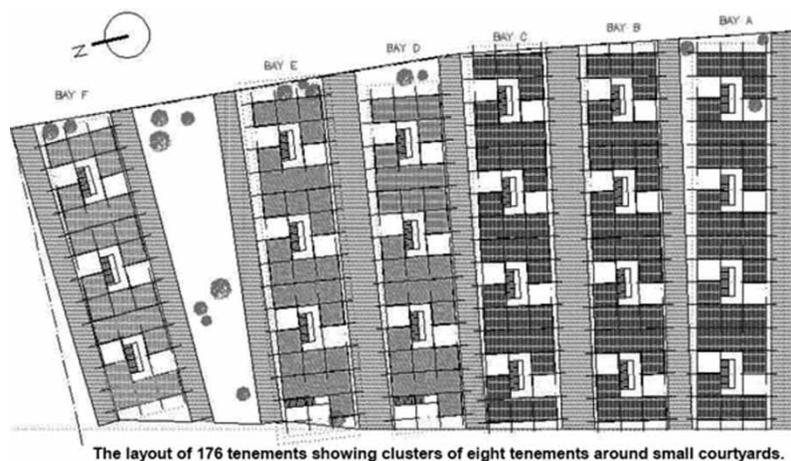
individual private toilets. The majority preferred to have a private toilet and so this was incorporated into the design. The internal floor area of each tenement is 200 ft<sup>2</sup> made up of two 10 × 10 ft bays positioned linearly. The tenement designs include a toilet, a *mori* with a kitchen area and a multipurpose living/dining/sleeping area in the 'front' room/bay.

A very clever aspect of the house tenement designs was a raised ceiling height to 14 ft in one of the bays. This allowed for the construction of a mezzanine floor of approximately 100 ft<sup>2</sup> which could be added as and when the family felt they needed the extra space. This effectively gave each household a tenement of 300 ft<sup>2</sup>.

The tenement size was an issue for Shelter Associates. According to government rules, families were entitled up to 22.5 m<sup>2</sup> of built up space. However, the VAMBAY funds that had been allocated to the project were not sufficient to construct the quantity of tenements needed at this size, and therefore, the size of the units had to be compromised to fit the budget (Figure 5).

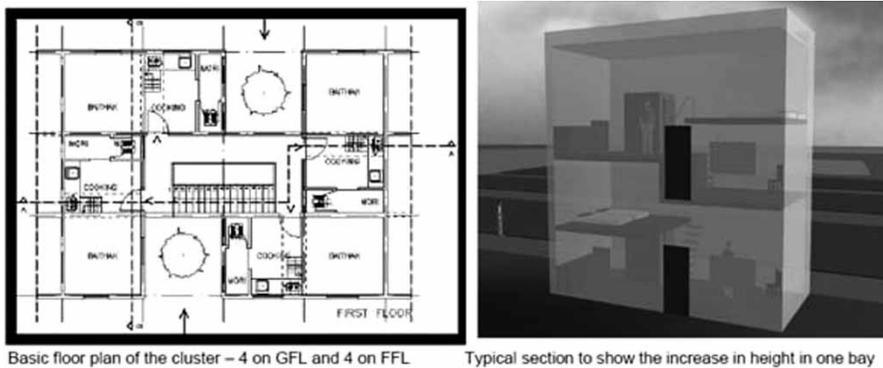
## 9. Funding and external support

Earlier on in the relocation planning Shelter Associates contacted the Housing and Urban Development Corporation Limited (HUDCO),



The layout of 176 tenements showing clusters of eight tenements around small courtyards.

**FIGURE 4** Tenement layout (Shelter Associates, 2004).



**FIGURE 5** Tenement design (Shelter Associates, 2004).

Mumbai, to begin negotiations for housing loans. The MHADA was also contacted to utilize the government's VAMBAY scheme. This scheme provides a subsidy from central government, routed via HUDCO to MHADA to slum-dwellers in need of housing rehabilitation. VAMBAY is a subsidized scheme with 50 per cent funding from central (Indian) government and 50 per cent from the state (Maharashtrian) government. Along with the scheme the central government set targets to individual Indian states to encourage the utilization of the funds and benefits reaching the poor. The communication between Shelter Associates and MHADA successfully resulted in obtaining a subsidy of Rs. 50,000 to be allocated for each household from VAMBAY; however, this amount later decreased to Rs. 47,619 after imposing various taxes and fees.

The residents of Kamgar Putala's saving efforts since joining the Baandhani federation resulted in each family depositing Rs. 5,000 in a common account opened with the support of Shelter Associates for housing.

The cost of each tenement was initially calculated by Shelter Associates to be approximately Rs. 80,000. Each family had already saved Rs. 5,000. Along with taxes and materials cost rises, an additional Rs. 30,000 needed to be raised.

Shelter Associates set about meeting with banks to organize loans, however Shelter Associates found that banks were reluctant to lend to

the poor despite the favourable position of the Kamgar Putala households and the proposed relocation:

- the land was sanctioned by the PMC;
- the drawings had been approved by the PMC;
- there was a subsidy of Rs. 50,000 from VAMBAY;
- the families had saved up Rs. 5,000 each;
- the people were willing to mortgage their tenements;
- the remaining amount needed was less than 40 per cent of the total cost (Shelter Associates, 2004).

Shelter Associates and Baandhani met with several nationalized banks who shared the same concerns of lending to the poor. Some requested that Shelter Associates become guarantors for the loan, but this was not feasible for Shelter Associates. Another of the bank's concerns was if VAMBAY funds were not disbursed. Eventually, the United Western Bank agreed to lend to families with members who were employed within the formal sector. This resulted in 11 of the households obtaining loans. Later, a successful meeting and further meetings and presentations with the manager of The Bank of Maharashtra, Shivajinagar branch eventually resulted in another 69 loans being sanctioned. The strategy was for there to be modules of

three families, where each family became a guarantor for the other two. This enabled the families to mortgage their tenements to the bank and receive loans at 8.5 per cent interest, repayable over 7 years with repayments of Rs. 486 per month which was agreeable to the households. The residents had already discussed the amount they would be able to repay without excluding the less well-off. Usually, most families had to spend Rs. 3,000 per year to maintain, replace tin sheets and repair their houses after the monsoon rains; an amount they would now be able to save. Even those families who were tenants at Kamgar Putala were able to save money as they no longer needed to pay the high rents at Kamgar Putala's city centre location.

The loan issue was very critical to the success of this project. It brought out the dire need for setting up funds from which the poor could borrow. The Bankers were partly justified in their fear that there would be defaults. Their previous experiences with the poor had not been very encouraging. Though the tenements were mortgaged, the bankers were apprehensive of political interference, which would prevent them from taking over tenements of willful defaulters. But in order to make housing a vehicle for transformation, it was necessary that the financial system get institutionalised. Most bankers suggested that the PMC should become guarantors for these loans, as it would be easier to tackle willful defaulters with them (Shelter Associates, 2004).

#### 10. NGO and government partnership

Construction of the houses commenced on site in September 2003 soon after *bhumi poojan*, the groundbreaking ceremony. As MHADA was the nodal agency for the disbursement of funds, their chief engineer was appointed to be the District Chief Housing Officer and responsible for monitoring the construction work. Shelter Associates and MHADA drew up mutually agreed terms and conditions for the release of payment for construction.

The Municipal Commissioner chaired VAMBAY committee meetings which were made

up of officers from MHADA, the PMC and elected representatives. This committee agreed to meet monthly to review the progress of any VAMBAY projects ongoing in the city, but in reality 'very few' meetings actually happened (Shelter Associates, 2004). A lack of coordination and effective communication between the PMC and MHADA became a problem for Shelter Associates and significantly impeded the progress of the Hadapsar project. At some points payments were blocked from reaching the NGO for the construction, despite the terms laid out in the original agreement between the parties. 'At one point the PMC decided to levy a premium on land for beneficiaries, which was worked out at Rs. 1,500 per m<sup>2</sup>, and recover this from the final bill of the NGO Shelter Associates' (Shelter Associates, 2004). This issue was taken up with the Housing Secretary as the poor were not capable of raising this extra fee for the land and it had not been a precondition in the previous agreements. The Housing Secretary agreed with Shelter Associates and directed the VAMBAY committee to make the land available free of cost to the beneficiaries. However, the PMC is yet to formulate its agreement with the beneficiaries regarding land (Shelter Associates, 2004).

As Shelter Associates is an NGO and not a building contractor – although they were performing the duties of a contractor for this project – there were times that they encountered hurdles during the project planning. One major issue was organizing the electricity connection to the site during the construction process for which neither the PMC nor the electricity board were taking responsibility (Shelter Associates, 2004). Although in charge of the construction process as a building contractor would normally be, the NGO did not have the funds in place to pay for the construction process. This required a large amount of discussion with the PMC and MHADA in order to organize for a 10 per cent advance to pay for one bay of 24 tenements. The release of funds required much paperwork, the submission of consent letters from the validated beneficiaries, on stamped paper, in a format prescribed by MHADA (Shelter Associates, 2004).

Shelter Associates later realized that the Rs. 50,000 subsidy that had been allocated for each tenant was in fact Rs. 47,619 as MHADA was retaining 5 per cent as monitoring charges. Other charges included work contract tax at 4 per cent, and security deposits were another 4 per cent. This reduced the grant available to each tenant to Rs. 43,500 (figures quoted from Shelter Associates documentation. Reason for discrepancies unknown). Shelter Associates raised this issue with the Housing Secretary, the Housing Minister, the Municipal Commissioner and also the Vice President of MHADA; all agreed that the works contract tax was unnecessary and instructed the Commissioner of Sales Tax to waive this 4 per cent fee. After Shelter Associates' requests, MHADA agreed to waive their 5 per cent monitoring charges. However, Shelter Associates were only ever able to claim Rs. 47,619 despite the earlier agreements.

During the progress of the project the cost of steel and cement prices rose, the beneficiaries were forced to cover the cost discrepancies by increasing their loans to Rs. 30,000.

### 11. Moving

Some families started to move to their new homes at Hadapsar in June 2004. The community decided to allocate houses by randomly drawing lots. When families knew which tenement was theirs they became even more actively involved in finalizing the construction. Many people spent their spare time on the site supervising the work to ensure good quality craftsmanship. The committee also decided to assign the task of fabricating the doors and windows to one of the community members who had a small fabrication unit. This helped to ensure the quality of the work. When the basic shells of the tenements were complete, many families started to further fit out and install flooring, kitchen sinks, work surfaces and tiling into their new homes. The security of tenure gave them the confidence to make further investments in their homes. A 'stand up kitchen' was one of the most popular

installations the households fitted. 'Their middle-class aspirations were being expressed in the use of space and finishes that they chose' (Shelter Associates, 2004).

In August 2004, the floods hit Kamgar Putala badly. Much of the original slum went under water again and many families had to be shifted to local schools. However, by this stage nearly 100 tenements were complete and many of the flood-affected families were able to move directly into their new homes. The change that was taking place was tangible. There was a sense of pride amongst those who had shifted to the new site. Now they were staying in a society and not a slum (Shelter Associates, 2004).

### 12. Revisited in 2010

There were obstacles in planning the resettlement of the residents of Kamgar Putala to new homes on safer land in Hadapsar. The process was long but eventually resulted in 152 families to be relocated to safer homes since 2004 (Joshi, 2010). The upgrading project was very much driven by a collaborative NGO and CBO partnership which enabled the beneficiaries to be in control of their housing situation.

This housing project has been re-visited in April 2010, nearly 6 years after the residents moved in, in order to assess the present situation and sustainability of the resettlement upgrading programme. Interviews and group discussions have been conducted with key stakeholders to gather their perceptions of the project now.

Key issues that emerged from the interviews include:

*Sense of ownership:* Not one resident was found to have moved from their new home, sold up and moved elsewhere. Some residents are still awaiting their ownership documentation from the government, which could block the option of moving, however no residents expressed such a desire. There was a significant sense of pride among residents who feel connected to their homes both financially and spiritually. This has been demonstrated by significant investments in

their homes, the installation of mezzanine floors, decoration, fixtures and fittings and gardens.

*Community cohesion:* There are strong social networks in the community and active CBOs which are enforcing the sense of society. The building design that allows separate living and sleeping spaces was reported to have improved children's concentration on educational studies and enables privacy. The layout of low-rise tenements with a courtyard arrangement has not disturbed community cohesion as can often occur in high-rise slum rehabilitation schemes.

*Structural integrity:* Residents are very positive about now living in well constructed, concrete buildings rather than temporary shelter. The advantages of living in a water-tight environment which does not allow the entry of snakes and insects has made residents feel more secure as well as had a significant impact on improved health.

*Maintenance:* After 5 years, some of the external plaster work is beginning to show wear which some residents are unhappy with. Due to tight budgets and the NGO being forced to coordinate construction (which is not normally their area), the standard of finish was compromised. Residents are now responsible for this maintenance but existing CBOs and community savings groups are well established to deal with such issues.

*Water and sanitation:* Residents report a main advantage of the new housing is the provision of a private toilet and washing area within their home. Compared to the use of communal toilet blocks in their previous slum, they no longer have to worry about security issues when using the toilet at night. Residents also report a lower incidence of waterborne diseases since resettling. Water supply to the Hadapsar site is not 24 h as was the norm at Kamgar Putala; however, residents did not report this to be an issue. The desire to have taps and private water connections into the tenements (rather than the present communal stand-posts) was expressed and residents are aware that they are able to invest in installing the pipe-work themselves should they wish. The infrastructure for Hadapsar was provided

separately by the government authorities. The NGO's house designs were laid out to fit around the existing site infrastructure.

### 12.1. Distance from amenities

Although Hadapsar is 8 km away from Kamgar Putala, the residents chose the location themselves from one of the sites reserved for the 'EWS' that were offered to them by the government. Some residents have reported the displacement to the outskirts of the city initially caused difficulties with distance to bus stops and therefore transport to schools, markets and job opportunities. However, residents now report that a new bus stop has been created and alleviated the situation.

### 12.2. Issues

The residents are generally highly satisfied with their new homes; however, some reported they would like external street lighting, water supply and better plasterwork. The first two issues are the responsibility of the government whose remit is to provide the site infrastructure. The aging buildings after only 5 years is the most significant issue residents are disappointed with, and which is due to a very tight construction budget. The NGO and CBO partnership utilized the funds available to the best of their ability and made the decision to organize the construction of the shell of the housing themselves in order to save costs. Residents agreed to incrementally finish and fit out their homes with time. The partnership did the best they could considering the financial circumstances and have still achieved a significant improvement in quality of life of the residents.

## 13. National slum policies

The development of Hadapsar demonstrates a successful case of community-led processes in risk

reduction and participatory planning. However, since Hadapsar, various slum-upgrading policies now exist in Maharashtra. India's national slum policies introduced in the last 10 years now take into more consideration the involvement of communities.

In 2001, The Draft National Slum Policy was formulated by the government and developed a slum resettlement plan for 60,000 people. 'This initiated a newer level of understanding of the issue of urban slums; that slums are an integral part of urban areas and contribute significantly to their economy both through their labour market contributions and informal production activities'. Over the years the policy in India has redefined slums to include all under serviced areas. It does not advocate slum clearance schemes except under strict resettlement and rehabilitation guidelines which are defined in respect of slums located on untenable sites (Asha Seattle, 2006).

The Mumbai Urban Transport Project required the resettlement of approximately 60,000 people living close to train tracks, facilitated with popular participation and partnerships with NGOs and the National Slum Dwellers Federation (NSDF) were involved with the policy formulation. This project demonstrates the importance of partnerships between stakeholders, donors, state and local bodies, CBOs and NGOs (Risbud, 2003).

In August 2001, the Prime Minister announced a major programme called VAMBAY for the provision of affordable housing and infrastructure. This programme receives 50 per cent subsidies and 50 per cent loan components with a grant of US\$200 million from the central government. It was under the VAMBAY scheme that the Hadapsar resettlement project managed to raise much of its funds.

In December 2005 the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) programme was established with an emphasis on strengthening infrastructure and housing for the urban poor. Pune city was a recipient of funding under the JNNURM (BSUP) and identified 40,000 families currently residing in non buildable zone like river beds, hill top/slopes

etc. in need of relocation. This accounts for roughly 20 per cent of the total slum households in the city. Pune city has been the largest beneficiary of NURM funding under the BSUP programme to relocate affected families. The plans already authorized in Pune total over Rs. 640 crore (JNNURM, 2007; Shelter Associates, 2007). 'Public policy has seen a shift from the role of controller and provider of housing to facilitator of housing. Various policy decisions have influenced housing supply in the city, which has had a bearing on the growth of slums in the city' (Risbud, 2003).

As well as VAMBAY and JNNURM other slum improvement schemes overseen by Maharashtra Housing and Area Development Authority (MHADA) include Lok Awas Yojana, Integrated Housing and slum development programme, National Slum Development Programme and the Khandesh Vikas Package Programme (MHADA, 2010).

The Slum Rehabilitation Authority has another model for slum rehabilitation which creates incentives for private developers to take on slum rehabilitation by granting Transferable Development Rights which allows the sale of additional built-up space for profit. The SRA brought about a new policy which recognizes the rights of any slum and pavement dwellers resident in the city since 1 January 1995 to 'avail of an alternate permanent accommodation' (Homeless International, 2010). Under the scheme the SRA provides 100 per cent free housing to eligible families in the form of a tenement with a floor space of 269 ft<sup>2</sup> (approximately 25 m<sup>2</sup>) (Kolte, 2010). The policy incentivizes private developers to rehabilitate slum-dwellers in new buildings in situ, with the exception of slums located on non-buildable or dangerous zones of the city such as hill tops, slopes, in the vicinity of rivers and *nallahs*.

#### 14. Final remarks

The residents of Hadapsar are well aware of the other slum upgrading programmes in Pune city

which provide larger tenements for free to slum dwellers that are rehabilitated from settlements on more valuable land. Due to the hazardous nature of the flood-affected site upon which Kamgar Putala was located, the residents mobilized with the assistance of Shelter Associates utilized the government schemes they were eligible for help under, and achieved their goal of safe housing away from the hazards of the water. As well as moving away from the threat of floods, the residents were able to use the opportunity to 'build back better' and have created permanent housing considerably better than their previous slum home.

Resettlement schemes can often fail due to the distance created between a community's place of origin; however, the clearest indication of the success of Hadapsar is that no residents were found to have sold up and moved out, even nearly 6 years after habitation. The success of the scheme can be attributed to the housing delivery model using a community partnership which embedded sustainability principles throughout the conception, organization and implementation of the scheme. As the recipient end-users were fully included in every step, an unshakeable sense of ownership and connection of the community to the new development has been created.

The residents at Hadapsar are no longer threatened by the annual devastation of floods and most stakeholders would say the resettlement project has been a great success. After inhabiting the new houses for 5 years, many residents are now used to their new situation and have increased expectations for their future quality of life.

The community consultation and participation organized by the NGO has been exemplary following the guidelines that many slum-upgrading agencies advocate. The small Indian NGO worked well with communities with the use of a small team of social workers who were well regarded by the community and therefore able to form a strong partnership for implementing the resettlement project.

The success of this resettlement project has positively affected an entire community and the lessons learned have been promoted both nationally and internationally within best practice

documentation for slum upgrading which has had a beneficial impact on strategies for slum upgrading in India.

Residents have invested significantly in decorating and fitting out their new homes, some have installed piped water connections into their houses, some have planted gardens and decorated their interiors; these all indicate a sense of pride of their home. One resident has established a shop within her home (Figures 6–8).

After assimilating the data gathered during stakeholder interviews and group discussions the key issues that repeatedly arise are the detrimental effect that the resettlement has had on residents' water supply and access to livelihoods. The residents are now no longer affected by the threat of floods, but are now worse off since resettling in these respects. Access to water and livelihoods are basic human needs which residents were not aware that they would have to sacrifice in exchange for a less vulnerable house structure. Residents are not content with the current situation and many have expressed a desire to move in order to gain these basic needs.

Due to the limitations of MHADA grant funding the construction standard of the houses was highly compromised requiring significant investment from residents which has made the move not cost effective for many residents particularly now that their livelihoods are at detriment since resettling. Infrastructure deficiencies are the responsibility of the PMC and are particularly affecting the residents' perception of success of the project.



**FIGURE 6** Decorated and well-equipped houses.



**FIGURE 7** Self-made water connections and gardens.

The resettlement project lacked the creation of employment generation activities. No business units were provided or community facilities such as meeting halls, children's playgrounds, etc. These are all vital components of a community which are significantly lacking at Hadapsar. The failure to include these has had major consequences on the residents' livelihoods. However, in 2010 Shelter Associates have started to work



**FIGURE 8** Home-based businesses.

with residents to promote livelihoods generation activities through sari recycling.

Since this resettlement project was designed under the MHADA grant, policies for slum upgrading have moved on and the stipulated conditions developers are required to provide to rehabilitated slum-dwellers are of a higher standard. The residents at Hadapsar are no longer a priority to the NGO and PMC who now consider this project complete, however the residents are experiencing problems which are the responsibility of the PMC to fix. The stakeholder's ignorance of the community is poor and shows that the long-term welfare of this section of society is not of priority. Handing over and walking away is inappropriate, irresponsible and against sustainability principles not ensuring a plan for the future management and maintenance and future scenarios for the development. However, the NGO social workers do receive communication from the residents and have at times supported residents by accompanying them to local government offices when lobbying the PMC for action.

Due to the vulnerable site conditions at Kamgar Putala residents on the banks of the river needed to be relocated, but the effect of the distance of separation from the site at Kamgar Putala has had serious consequences on the residents' quality of life due to the impact on livelihoods. Since the community have moved to Hadapsar, the PMC have now constructed a flood-retaining wall which now protects the rest of the residents who stayed at Kamgar Putala. These residents are now safe and *could* have better prospects than those who relocated to Hadapsar because they are now going to be included in a new government Slum Rehabilitation Authority (SRA) slum-upgrading scheme. This means they will be the recipients of a new house, for free, with a private toilet, bathroom and bedroom, within high-rise buildings on the same site at Kamgar Putala. Therefore these residents will not be required to move from their city centre location within easy reach of their existing livelihoods, they will not be required to contribute financially to the cost of a new house, and the new house will provide more

space, better facilities and construction. However, many residents included within SRA schemes have complained about inappropriate building designs and poorer quality of life after rehabilitation. Also, SRA projects are notoriously slow to take off, this means that while the residents at Kamgar Putala are still residing in slum conditions, their old neighbours at Hadapsar are benefitting from a healthier living environment.

However, the residents at Hadapsar are benefiting greatly from the low-rise courtyard building design with plenty of open space around which they would not have had if stayed at Kamgar Putala. This effective building design has been particularly successful as it made use of the NGO's architects who are experienced in the impact of building design on social cohesion and living styles of the urban poor. The buildings were also designed in consultation with the residents and have a very good impact on residents' lives. Considering the circumstances the NGO did the best they could with the resources available for the residents. The PMC could learn greatly from the participatory techniques and community relationships effectively fostered by the NGO during the development of this project.

In situ resettlement would have been ideal for the flood-affected residents at Kamgar Putala. Water supply is a basic human need that should have been prioritized along with other infrastructure by the PMC. If comprehensive planning strategies were in place for the city of Pune, the residents of Kamgar Putala who were relocated could have been spared the upheaval of moving and instead included in the in situ SRA scheme after the construction of the flood-retaining wall. However, the time scales involved would have meant a poorer quality of life for the residents in the medium term, therefore for most residents at Hadapsar, relocation was the best option and has spared the upset of devastating floods for the past 5 years. The problem of social housing is very complex and hence cities need to work out strategies- both long and short term based on sound information systems which could explore combination of government and public private partnership models keeping in

mind that scarce resources like land should be optimally used.

Now that many residents are indicating a desire to move once they receive their ownership papers, this may indicate a struggling sense of community ownership and a failing in sustainability of the resettlement project. However as residents have had secure tenure for over 5 years, upward economic mobility might be the reason that people are aspiring for bigger and better homes, particularly in Pune, where poverty can be partly attributable to a lack of access to secure tenure. The residents have now been living at Hadapsar for over 5 years during which time their expectations have raised and, as is human nature, their desire to improve themselves further is ever present. The community's resettlement to Hadapsar has been a successful step-up for the community which has encouraged the residents to want to better themselves and hold higher aspirations for their future generations.

We like the present house because we are free from the recurring problem of floods. We had to bear lot of problems previously, like lot of mosquitoes, the problem of cleanliness, which we do not face now. We used to find snakes in the house after the flood water receded from our house, the house used to stink. We were facing these issues every year ... We had to spend quite a lot each year on the maintenance of the previous house due to the floods. We had to almost rebuild our house every year after the floods. This [house] is better than that one and bigger (Patel, 2010).

We used to stay in a tin shed. Now it is a concrete house. Children have a good school nearby. Good road is nearby. Everything has become easier ... Our life has improved here. The house is big enough to accommodate all of us. Children can study well. We are living comfortably and have no tension regarding this house (Kamble, 2010).

After coming here our lives have changed. Children have a space to play, we also have more open space to use, the house is big, the toilets are inside the house. The lifestyle has improved after coming here (Pathan, 2010).

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This paper draws from a PhD investigation of the sustainability of slum-upgrading approaches through stakeholder perception in Kenya and India. Detailed analysis of the role of key stakeholders and sustainability evaluations has not been included here, but could be the subject of a future paper. For further information regarding this research please contact the author. The residents of Hadapsar and Kamgar Putala. Pratima Joshi, Shelter Associates. Sandyha Kamble and Shashikant Asware, Social workers, Shelter Associates.

## Glossary of terms

Boudh, Buddhist;  
 Crore, 10 million;  
 Jails, Trellised openings;  
 Kutcha, Non permanent, lower quality, dried brick, mud or tin;  
 Nallah, Stream;  
 Patra, Tin sheets;  
 Pucca, Permanent, higher quality, brick, concrete;  
 £1 = Rs. 73 (correct as of May 2011);

In this report the terms slum and informal settlement are used interchangeably.

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