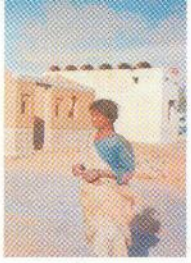
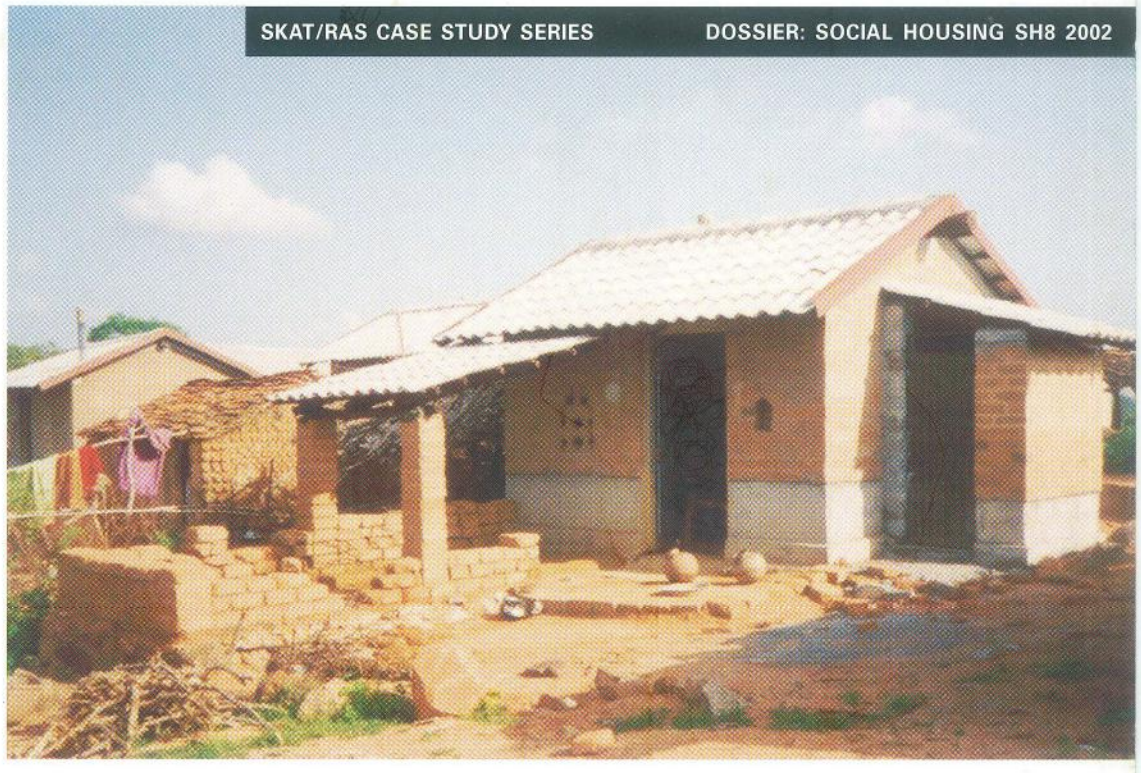


Development
Alternatives

SKAT

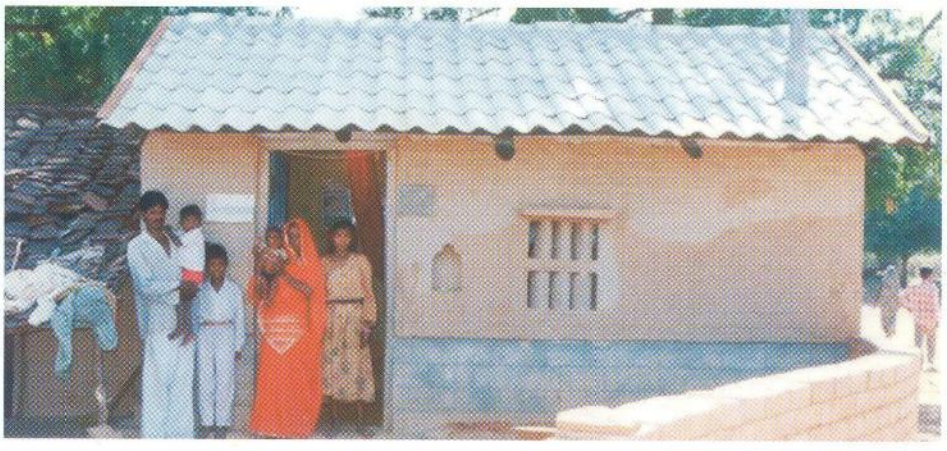
SKAT/RAS CASE STUDY SERIES DOSSIER: SOCIAL HOUSING SH8 2002



The Azadpura Housing Project, Orchha, India

Right and below:
Happy house owners who appreciate their surroundings

PROJECT INFORMATION



Background

The state of Madhya Pradesh lies in the centre of India and is the largest in size. It has an area of 443,446 km² and a population of 74 millions. Azadpura is located 11 km from the city of Jhansi on the road to Orchha. It has a population of approximately 850, dominated by Yadavs, Rajputs and Sahariyas. The targeted Sahariya Community – by far the poorest in the Bundelkhand region – forms 36% of the total population and lives in a settlement detached from the main village. Their income is primarily daily wages from unskilled construction work, or from basket weaving and the illegal collection

Existing Housing

and sale of jungle wood. Houses are of poor shelter quality. The walls are of thick composite masonry – stone and local brick – on minimal foundations. Roofs are sloping, clad with country clay tiles on a supporting structure of jungle wood and lantana. The roofing tiles, which are typical of Jhansi and Tikamgarh and the surrounding districts, are baked at home using cow-dung and jungle wood. A combination of poor quality fuel, low moulding skills and an inefficient burning process results in a poor quality product, and, typically, up to 25% of a roof requires annual replacement.

The Project

The Sahariya cluster was identified as a focus for the shelter upgrading programme. A Gram Sabha meeting selected the 50 most vulnerable families in the village, needing assistance to build a pucca shelter. Families contributed more than the mandatory minimum required by the project scheme towards the cost of construction by way of unskilled work, transportation of building materials, salvaging old materials or collecting local boulders for construction. The continuity of TARA Gramin Nirman Kendra (TGNK) at TARAGram and its proactive efforts in disseminating the new

Architectural Design

technologies have resulted in their being used in many new structures, indicating a general acceptance of the "new" technologies. A model design was formulated in the beginning that enabled an initial estimate to be drawn up for the allocation of funds. However, on site, no standard design was prescribed and the sizes and shapes of the dwelling units have been restricted only by the budget allocated for each house and the positions of adjacent structures. The location of each house was based on the existing plot of land owned by the beneficiary family. The design of each

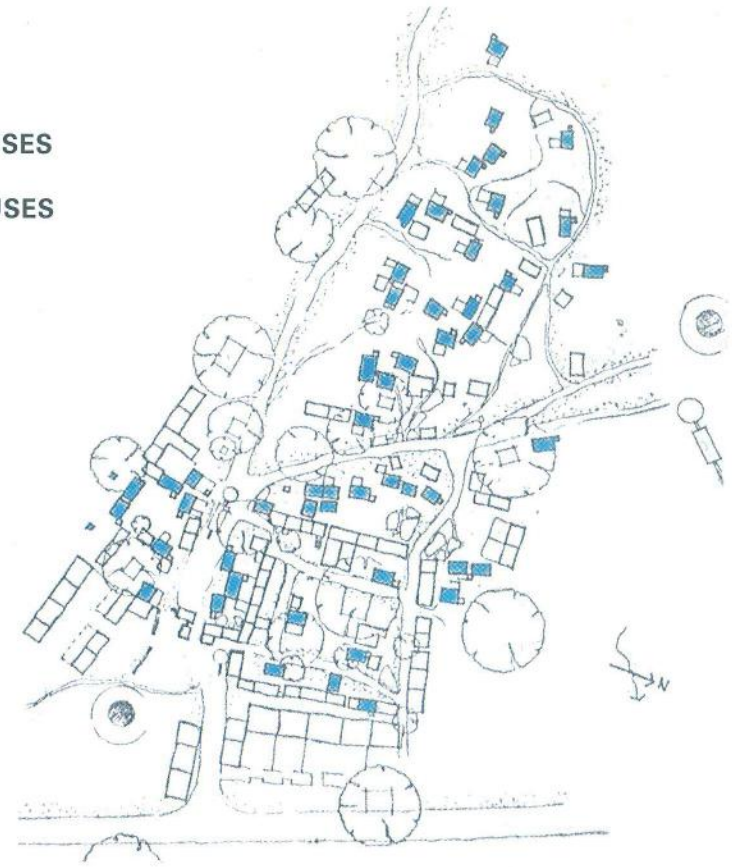
PROJECT DATA

FUNCTION	Social housing
LOCATION	Azadpura, Orchha
PROMOTER	DA and the Government of Madhya Pradesh
ARCHITECTS, ENGINEERS	Development Alternatives
PROJECT IMPLEMENTATION	TARAGramm, DA, HUDCO
YEARS OF CONSTRUCTION	1996 - 1997

THE SAHARIYA SETTLEMENT

NEW HOUSES

OLD HOUSES



PROJECT SCOPE

No. of villages built:	1	Covered area approx.	22'000 m²
No. of houses built	50	Living area/house	17 m²
No. of people served	250		

BUILDING COSTS AND MATERIALS USED

Construction cost per m²	US$ 12.20	per house:	US$ 290.00
Foundations	Random rubble masonry		
Walls	Concrete Blocks and CEB (Compressed Earth Blocks)		
Roofs	MCR (Micro Concrete Tiles)		

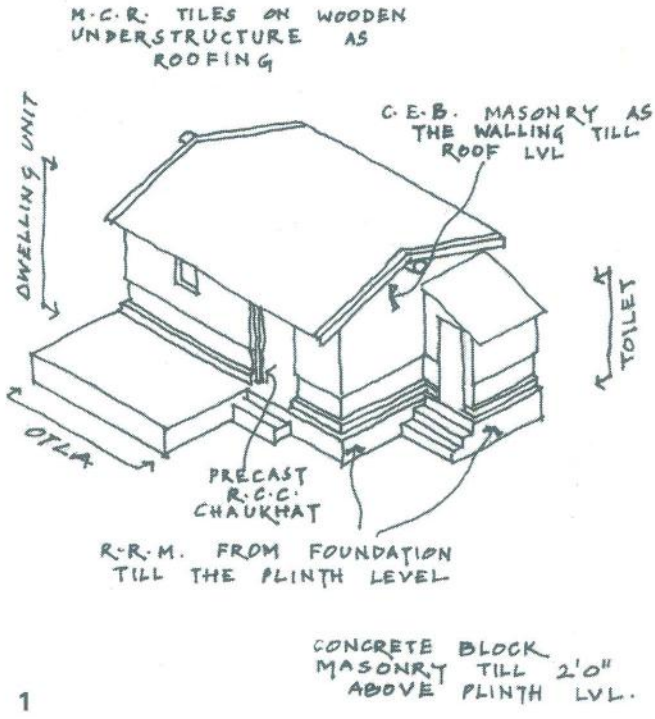
A PARTICIPATORY APPROACH

Habitat issues were guided by the following principles:

- Response to community needs of common spaces, and place for village level women's group enterprise
- Community and family participation in planning, beneficiary selection, design and construction
- Enhanced local process control and transparency in finance management
- Local employment generation through the project by family labour input, local skill development and enterpreneurship development.
- Improvement in overall village environment by addressing issues of village level drinking water, sanitation, drainage and road paving
- Cluster based approach to planning in response to existing living patterns, topography and land ownership

Technology choice was guided by the following concerns:

- Introduction of locally appropriate alternative wall and roof materials to improve shelter quality in the region
- Cost efficiency
- Ease of repair, maintenance and extention
- Local availability of materials and skills



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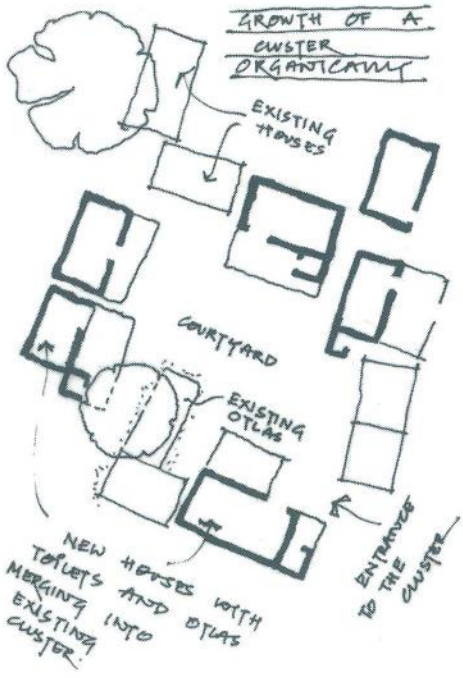

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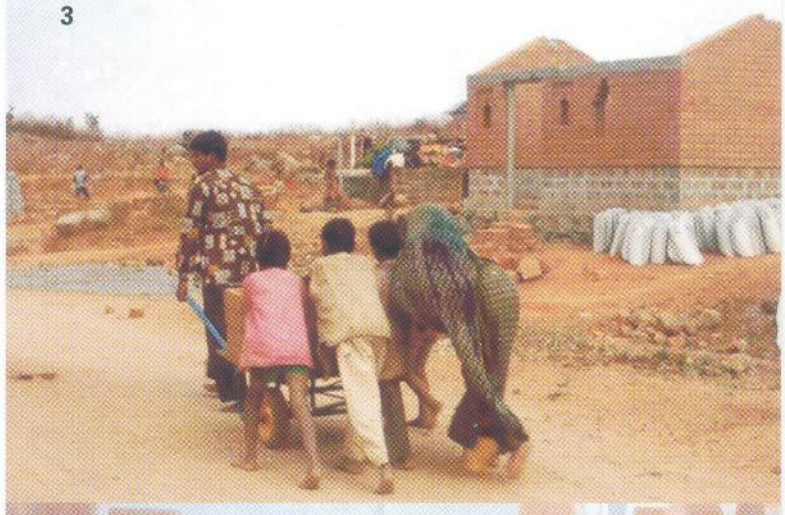

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Participation of the users was guiding principles of planning and implementation of the project.

Legend:

1) The model design for a tipical dwelling unit to serve as a guide

2) Growth of a cluster

3) Family participation in construction through unskilled labour contribution

4) New livelihood opportunities - a positive fall-out of the project

Left:

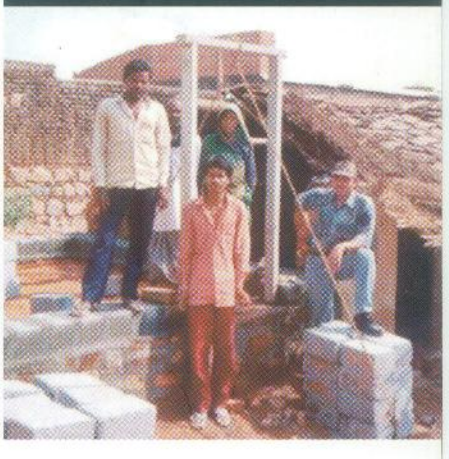
Installation of roofing structure in local hardwood

Below:

Left: A house under construction (family head, mason and DA supervisor)

Right: Compressed earth block production at site

BUILDING CONSTRUCTION



Sanitation

house developed in response to the needs of each individual family. Toilets and smokeless stoves were an integral part of the design.
In the Sahariya settlement of Azadpura, there were no toilets before the project. People had no experience of a hygienic sanitation system. A toilet was provided for a house only when the need for it was adequately understood and expressed by the resident family. The advantages of privacy for women and comfort for the old and ailing were emphasised. People who were employed at TARAGram had been exposed to clean toilets at their work-

Impacts

place and could now explain the benefits of sanitation. Funds allocated for sanitation could not be used for any other part of construction. A pour-flush two-pit latrine was adopted. This requires very little water for flushing, can be cleaned easily and does not generate any offensive odours.

The process of providing housing in Azadpura led to wider impacts and shows that it is possible to have rapid jumps in the level of technology in a community through information, knowledge and demonstration. Within three months, the community users had internalised the new technologies, tested them in simple ways for themselves and they developed confidence enough to suggest quality improvements for the compressed earth blocks. The acceptance of the new MCR and concrete block technologies for residential use through a government project has been a major breakthrough. The formation of a trained block production team provided local employment for the village youth. The dissemination of MCR technology has since, through other supplementary efforts, become a viable alternative widely accepted in the region.

Social Aspects

Women were identified as the house owners and were the focus of the entire participative exercise. Their involvement in the siting of the dwelling unit, deciding on the positions of doors and windows, and ensuring family contributions towards labour, provided a boost to the programme. The project team ensured that families were aware of the cost of construction and the availability of financial assistance. A positive fall-out of the project has been the formation of a women's co-operative, the sahariya Sangram Samiti, that now manufacture paper products as an alternative livelihood option.

basin

This CASE STUDY SERIES reports on intelligent architecture and best practices concerning economical building systems. These examples take into consideration traditional and socio-cultural aspects as well as the requirements of modern living. The CASE STUDY SERIES comprises three dossiers: Housing, Health Facilities and Educational Facilities.

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