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## Appropriate Shelter for Tribes : A Prayas

(October 2003 to June 2007)

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April, 2007

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I am grateful to the people and community of the area, without whom the project would never be able to make a difference.

Anu Verma



## A Word...

Secured home is an unalienable prerequisite to live a healthy and productive life. Relative risk to life caused by air borne infections and physical injuries increases manifold in the absence of houses without adequate floor space and required environmental measures. However, globally, the unmet need for safe housing is huge amongst families from low income categories. In India, the crisis of secured housing is very severe in rural and low lying urban areas that accounts for more than three quarter of the total population.

There have been attempts to boost housing through number of schemes and programmes in the form of loans and subsidies. But, these are too little in comparison to the sheer volume of the challenge. The cost of building a secured house is prohibitive and beyond the capacity of large number of families. Prayas, with the support of SDC has made an attempt to mobilise rural community of south Rajasthan towards secured housing. One very essential elements of this endeavour production of low cost building materials for walling, roofing, flooring, ventilation etc., those can be produced locally with use of manual labour. Other components of it certainly are to create awareness for secured housing and mobilisation of finances.

It is an occasion of immense pleasure for me to share a monorgaph on the efforts of Prayas to ensure “Access to Secured Shelter”.

Dr. Narendra Gupta





# Preface

“Safe and Secure Shelter is a right of every individual.”

Roti, Kapada, Makaan, (Food, Clothing and Shelter), as they say, are among the fundamental necessities of survival for every human being. Thus, it is the right of every individual to get these needs fulfilled.

Housing, in particular, besides being a very basic necessity, also increases the productivity of people: the feeling of living in safe & secured house, and a feeling that the house is likely to endure, all help to increase people’s productivity.

Unfortunately, within the broad framework of rural infrastructural development: housing sector finds itself at the periphery. According to 2001 census, 3.2 million houses are still needed in rural India.

Same is the situation with the rural areas of Pratapgarh block, where not many families have access to safe, secure and appropriate houses with basic amenities such as water, sanitation and domestic energy. The economic status of the household makes the family unable to build appropriate house.

Thus, Prayas took a step in the area of developing rural housing with the aim of ensuring housing security for the tribes of Chittorgarh district. Prayas has been working with the less advantaged rural and tribal people with a mission to revitalize the self-esteem of the people.

As owning a house directly helps to raise people’s self-esteem, promoting housing security is one of the major interventions to achieve this mission.

During Prayas’ 3 years and 9 months long intervention in the project (titled “People’s Initiative For Housing Security In Chittorgarh District”) the team witnessed many ups and downs. Initially the team found the going tough, as it had no previous experience on working in rural housing. However, the project’s learning was very enriching which helped in framing a broader perspective on rural housing security and habitat development. Although the experience in habitat development was for a short period, it widened the vision to work in the same sphere with all experience and learning gained during the implementation.

With the experience gained from implementation, it was increasingly being realized that housing security has to be integrated with other associated issues such as water and sanitation, livelihood, infrastructural development, etc. Hence, it was planned that habitat development (and not just housing) would be taken up programmatically in future efforts.

It’s interesting to note that, Prayas, right from its earlier days has been working on different components such as health & hygiene, livelihood, social security, natural resource management etc, but all this work had been undertaken separately. Now, under the rubric of habitat, Prayas has a chance to making an integrated intervention.

Anu Verma



# Chapter 1: Housing - A Basic Need

## Introduction

The chapter explains the context of the project, status of housing in the area, existing rural housing schemes of the government, the attitude of people towards housing and the rationale behind Prayas’ entry into housing.

It is believed that housing has a direct impact on the socio-economic well being of the people. A house with basic amenities offers privacy, safety and dignity; it also enhances economic productivity of the family.

As per the 2001 Census of India, more than 80% of rural households do not have an appropriate and secure shelter<sup>1</sup>, out of 71% of the total rural population, only 41% live in pucca or permanent houses.

## Context

Chittorgarh is located in the south of Rajasthan. Pratapgarh<sup>2</sup> is the largest Panchayat Samiti (PS) in Chittorgarh District having a total area of 1452.57 sq. Kms. It is predominantly inhabited by Bhil tribes.

In the past, forests were abundant, which provided the major source of building materials. But at present, the forest has been drastically reduced, leading to a great scarcity of wood. Consequently, building a house has become a major problem for the people. They either obtain wood through illegal means, or approach

local moneylenders for loans (to fund the more expensive, but legally available wood). Most tribal families occupy partially constructed houses. It is usually a scarcity of funds that forces a family to stay in such partially constructed house: houses without any living space or ventilation, sanitation or water.



Traditional House

<sup>1</sup> Shelter refers to security of life that includes housing, infrastructure, water sanitation, livelihood and other basic amenities of life.  
<sup>2</sup> On March 9, 2007, Pratapgarh was declared as 33rd district of Rajasthan.



### Housing in Project Area

Within the project area itself, housing is in a poor state. During a survey on the status of housing in project area, some obstacles were identified, which were responsible for the prevailing status of housing. These obstacles were poor economic status, non-availability of economic resources, lack of awareness about CEEEF building materials, rising prices of building materials and non-availability of skilled labor. However, Prayas<sup>3</sup> comprehended that these obstacles and other existing problems could be overcome and began a movement for introducing the concept of environmental friendly and gender sensitive<sup>4</sup> housing.

A typical house in the identified villages is kuccha, roofed by county tiles called kelu (these are made by the users themselves out of clay and soil). Wood is profusely used throughout the construction. Most houses have only one room, which is used for living, storage, cooking, cattle shed and other household activities.

Here, people construct their house by themselves. The cost of an average house comes to around Rs 4000 to 5000 (Source: PRA with community)

Generally houses are built with inferior quality building materials, no ventilation, with walls made of bamboo, mud, cow dung or unfired brick, and with floors made of mud.

Not many houses are electrified; they use kerosene to light their houses (depending on the availability of kerosene, of course). They rarely have a separate kitchen or provisions for bathroom,

toilet, water supply, fodder or firewood storage. The houses in the project area are scattered and are located on their farms. They use country tiles / Mangalore tiles as per the investment capacity of the individual.



<sup>3</sup> An Endeavour

<sup>4</sup> Comparatively females access the compartments (kitchen, sanitary place, etc) of a house more than men do. Traditionally houses are not constructed in a manner that takes care of the above requirements of a female. In contrast to the traditional design, this project emphasized a house design which allows women to have greater privacy; ensures separate places for kitchen, cattle and fodder; provides ventilation in kitchen;

### Preliminary study to assess the existing housing conditions

A study was conducted in December '03 by Prayas to assess the housing conditions in one of the sample villages named Mehido Ka Kheda having a population of 380 households. Mehido Ka Kheda presents similar living as well as economic condition as in all other project villages. The study found that 100% of the houses are built with local material, requiring maintenance on monthly basis and overall repairing on an annual basis. These kuccha structures are built up on an average of 450 sq. ft. land area/plot size, 93% of the houses were constructed on land which had formal titles.

About 20% of the houses have windows and only 6.6% are electrified. Most of the houses consist of one large room, in which kitchen is located in the corner. There is absolutely no sanitation facility. The only source of drinking water is hand pumps located within 25 – 100 meters from the house.

Owing to the above construction practices, traditional houses generally encounter problems of: leaking roofs, annual repairing of walls before rains, rain damaging wall surface due to no roof overhangs / Chajja, rapidly flowing water washing away the base of the structure, windows and doorframes easily lending themselves to attack by termites etc.

### Government's Rural Housing Schemes in the Project Area

During the initial phase of the project, the then ongoing Government schemes to promote rural housing especially among people below poverty line (BPL), SC and STs were:

- Indira Awas Yojana
- Credit Cum Subsidy Scheme

- Samagra Awas Yojana
- Innovative Stream for Rural Housing and Habitat Development
- Rural Building Center

Amongst these, the most extensively utilized schemes were the Indira Awas Yojana (IAY) and the Credit Cum Subsidy Schemes. It was seen that IAY couldn't bring much gain for people owing to the widespread corruption, wrong selection of beneficiaries, commission-seeking behavior of the officials, inadequate financial support and use of poor building materials.

To avail Credit Cum Subsidy Scheme, the person is required to have title over the land and to have collateral securities. The process includes too many formalities and paper work, frosty attitude of the bankers, etc, which made people disinclined towards seeking loan. Although the government schemes are usually implemented through PRIs, PRIs neither have detailed information regarding the schemes, nor seem interested in extending benefits to the poor.

### People's Attitude Towards Housing

The general perception of people as to what constitutes an ideal house is a masonry built pucca house with adequate space for cattle shed and fodder storage. A courtyard and open space is also preferred.

People perceive house as an important requirement and asset. Besides being a basic need, a house also symbolizes empowerment - both economic and social - within the community. Whenever family has sufficient income or savings, they construct house. However, there is a big gap between people's demand and ability to build properly designed gender sensitive houses.



### Prayas in Rural Housing

Prayas has had interventions in the villages of Pratapgarh block for more than two decades.

During this period, it was increasingly being felt that Prayas should start working for rural housing. Hence, Prayas took up “Peoples Initiative for Housing Security in Chittorgarh District” project to introduce CEEEF technology to enhance the affordability and accessibility of rural and tribal people to have a safe and secured roof over them. The project duration was October 2003 and till June 2007. Prayas believes that shelter is a fundamental right that should be ensured to every human being. Unfortunately a number of people in India are debarred of this right, especially those living in rural areas. The rural housing programme integrates gender sensitive and livelihood aspects with housing for the tribes. Its most significant feature is the “people’s” approach, which provides housing for the individual, family through participatory processes of Community mobilization, Resource mobilization and Livelihood promotion.

In the initial phase, it was proposed to work with the individuals who had access to bank loans or subsidy under credit cum subsidy schemes. But due to the reluctance of people to take government grants, the planning couldn’t be continued for long. It was also

envisaged that in order to provide cost effective housing to the homeless, innovative scheme for housing and habitat development would be implemented in one panchayat by the organisation and an adjoining panchayat would then facilitate the replication of the process in their respective area.

Prayas facilitated in ensuring easy accessibility of CEEEF and gender sensitive housing for the poor, increasing the internal finance resource base, providing solutions for healthy living, infrastructural development for better habitat, promoting alternative cost saving technology and influencing the policy makers for a sustainable habitat.

### Conclusion

The chapter explains the context of the project; briefly describes the project area, as well as the then prevailing condition of housing; further explains about the government schemes available for rural housing and finally outlines Prayas’ thinking with respect to rural housing. The chapter indicates how the Project was initiated in Pratapgarh tehsil of Chittorgarh block. It also introduces us to Prayas’s thinking of blending of housing security with livelihood promotion and habitat development. As to how exactly this thinking has got implemented, will be seen in the forthcoming chapters.

## Chapter 2: Project Design

### Introduction

This chapter explains in detail the project design. The chapter includes area of operation, project management, objectives and happenings of the project.

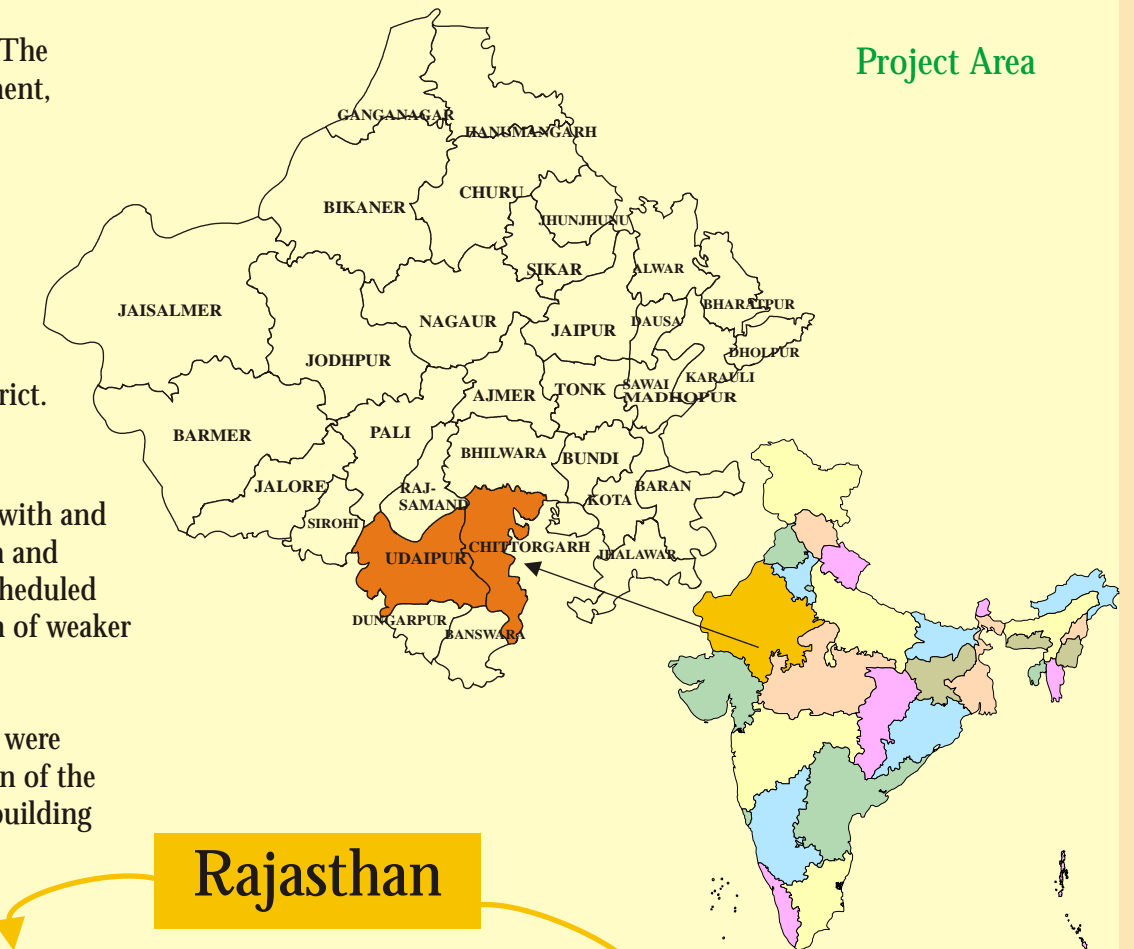
### Area of Operation

The project was started in 15 villages under 6 Gram panchayats of Pratapgarh Block in Chittorgarh District. Slowly and gradually the project was extended to Choti Sadri, Badi Sadri and Bhadesar blocks of Chittorgarh district and Dhariyawad and Kotra blocks of Udaipur district.

### The Rationale for Choosing the Project Area:

Prayas chose abovementioned area as it has been working with and for people of this area since 1979. Prayas has a recognition and sanction of villagers in this area. Project area falls under scheduled tribal sub plan of the government with high concentration of weaker section belonging to ST community.

Community development committees and women SHGs were functioning in the area that enables better implementation of the project. Raw material required for producing CEEEF building material is available in near vicinity.



### Rajasthan

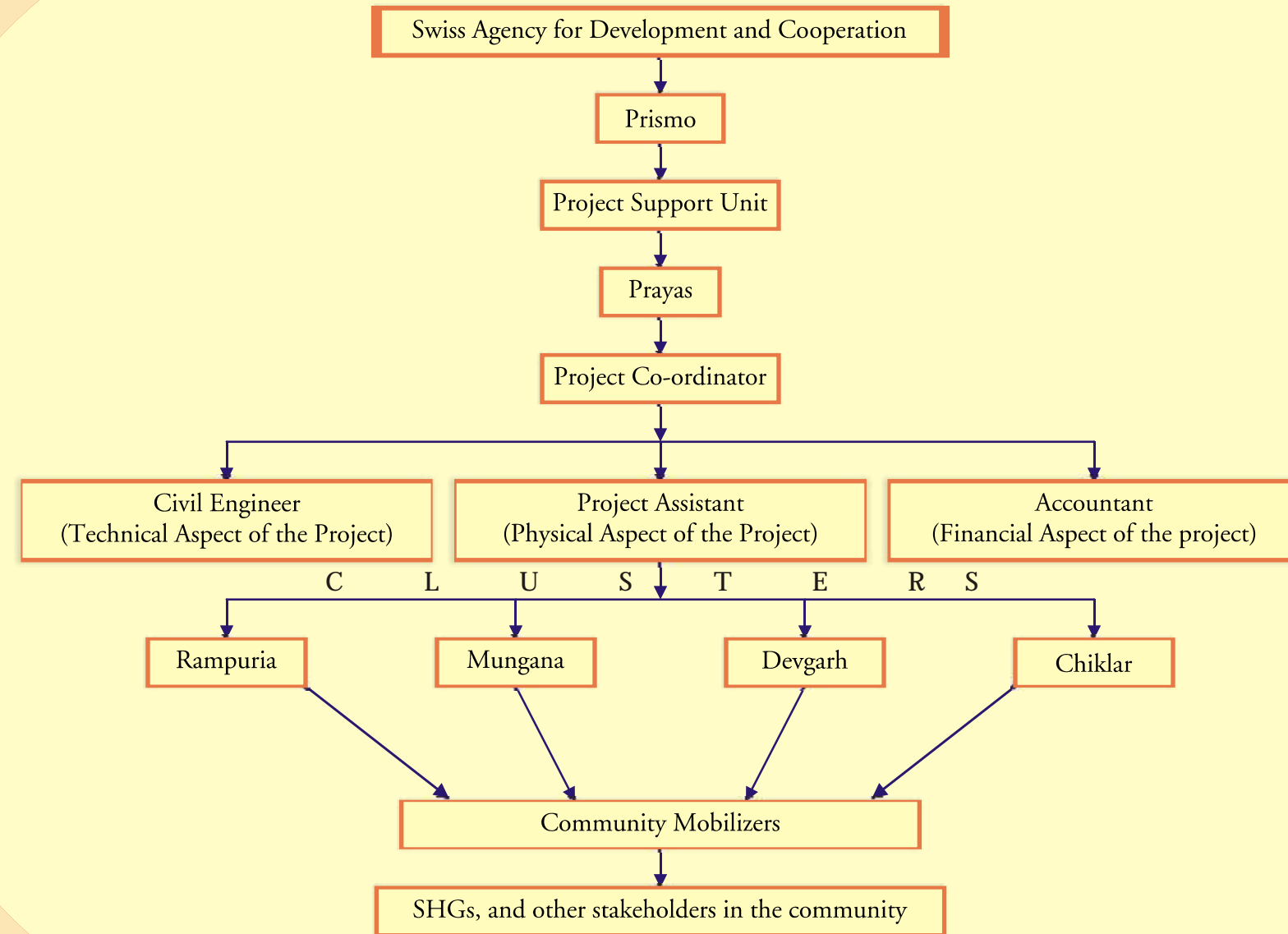
#### Chittorgarh

- Pratapgarh
- Choti Sadri
- Bari Sadri
- Bhadesar

#### Udaipur

- Dhariyawad
- Kotra

# Project Management



Note: • This was the arrangement at the beginning of the project, later both Prismo and PSU stopped being a part of the project.  
• Project management was top-down and reporting was bottom-up.

## Objectives of the Project

The objectives of the project are as follows:

- Introduce the concept and rationale for appropriate and gender sensitive housing
- Mobilize finance to enhance rural housing
- Evolve model of Decentralized financing
- Promote the concept of CEEEEF technology
- Advocacy for policy framework to promote rural housing
- Create CEEEEF building material and Research and Development production center
- Create proto type of appropriate and gender sensitive houses

Note : The table explaining objectives, strategies and activities is given in annexure.

## Happenings of the Project

The activities undertaken in order to achieve the objectives of the project is indicated in the annexure. Some of the key activities amongst them are as follows:

### Campaign for land titles

Most people in the project area own land, legally, in two ways:

- In the name of ancestors
- Under joint ownership

In other words, people do not own land in their own names. The land on which they live has come down to them, has been

divided informally, as per proportions decided within the family itself. However, not having legal ownership of land also implies that people cannot access loans from Banks.

Though legal ownership is essential, the fact is that the procedure of getting land titles is too complex and requires completion of 14 testimonial documents per individual. In short, the task is quite difficult, and beyond the capacity of most individual tribes.

In order to help the tribes acquire land legally in their own name, Prayas took the task of land conversion. Regular visits to the households and regular follow up of the applications were undertaken.

### Advocacy

Generally, in rural India, housing is a continuous process. It was realized that merely providing built units couldn't solve the associated



Discussion with bank officials



problems. Thus the strategy was evolved to facilitate people in getting housing finances on one hand and to provide building material and technological skills on the other hand. The idea was to make the actual construction, owner driven.

To implement the above concept, a number of workshops were organized with bank officials. To mobilize more finance for ensuring housing security, Prayas advocated that group savings should be linked with livelihood. At the same time, Prayas also tried to tap government resources. Advocacy was undertaken on following issues:

- Disseminating and promoting alternative technologies
- Facilitating innovative financial model in housing delivery
- Motivating people to acquire title over land (*patta*) in government campaign such as “*Prasasan Aapke Dwar*”
- Promoting the CEEEEF technology through the housing schemes of the government
- Waiving off or minimize the fees indulged in pursuing search report
- Reducing risk premium from the loan amount

A consciousness was generated among the policy planners as well as stakeholders through lobbying and advocacy efforts to promote the concept of CEEEEF technology in rural housing and habitat development.

#### Workshop

A number of sensitization workshops were organised to create an enabling environment for CEEEEF technology in rural housing and to underline the need for gender sensitive housing. The workshops were organised with various stakeholders such as SHGs, PRIs, bankers, Block Development Officials.



Workshop for SHG members

Through the process of workshop, panchayats were sensitized about the use of cost effective technology. But even though the panchayats got sensitized and appreciated the use of cost effective building materials in the demonstration structures, they couldn't promote it in the structures supported by various government schemes. One of the major reasons was that, predominantly the traditional techniques earned them a handsome amount as commission through local agents (thekedars).

#### Resource Mobilization

In any construction ventures, finance is the major component. The strategies to overcome the financial constraints (major cause of concern in the area) were:

- Creating internal financial resource base through micro-credit and savings group.
- Tapping up grants, loans and subsidies available through government schemes, banks and other financial institutions.
- Promote PRIs' role for resource mobilization in ensuring housing

security to people. Regional financial institutions were being consulted and their schemes were studied and documented. A dialogue had been made for disbursement of funds for housing under credit cum subsidy scheme, which benefited four people.

#### Development of IEC materials

IEC materials were developed on Ferro Cement Roofing Channel, Stabilized mud blocks, pre-cast doors and windows frames and panels, Micro Concrete Roofing Tiles. These materials were distributed to the trained artisans.

#### Street Theater (*Kala Jattha*)

Housing is seen as a productive means for people. Health is one of the close associates to increase an individual's productivity. To motivate people to enable panchayat to create healthy and hygienic environment within the villages, a number of street theaters (*Kala Jattha*, as is known in local dialect) were organised. *Kala Jattha* is an effective traditional method for entertaining and information dissemination and medium to reach to the communities.

#### Mass awareness

To familiarize government assistance schemes with regard to housing and habitat, mass awareness program was carried out, by holding a series of meetings for individuals and SHGs. During the process, major emphasis was given on gender sensitive housing design, economic valuation and comparative study of traditional construction and construction through CEEEEF technology.

#### Community Mobilisation

Intervention was made through the existing or newly created self-help groups. Concept of gender sensitive and secure housing



Exposure visit of women on the site

through use of locally available material was introduced amongst the community using different instructional media viz. kala jattha, slogan writing, photographs, drawings and lectures.

#### Conclusion

The chapter describes the objectives of the project and activities undertaken to achieve these objectives. The prime objective of the project was to facilitate people and communities to take the initiative to have housing security. The emphasis of the project was on familiarizing the concept of gender sensitive housing and CEEEEF technology.

During the implementation, a need was felt for campaigning for land titles, advocating for different issues, and other such contingency interventions. The chapter talks about these interventions.



## Chapter 3: Technological Development and Blending Housing Security with Habitat Development

### Introduction

The chapter deals with the technologies developed and the approach towards ensuring cost effective, energy efficient and environmental friendly house. The chapter highlights the blending of housing security with habitat development and the linking of income generation activities with the project.

### Approach towards Minimizing the Cost of Housing

Cost of houses can be minimized if attention is paid to the following:

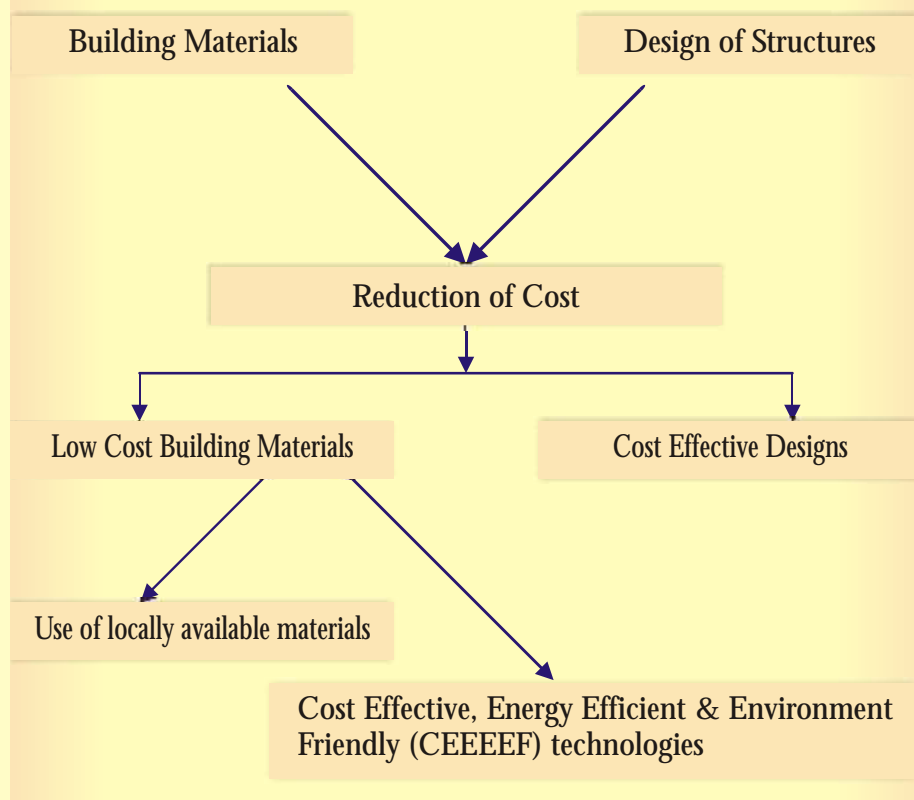
- The Design
- The Material used

### Design of the House

Although the traditional housing design has certain inadequacies, the fact is that people are used to these kinds of houses. Thus, new designs can only be done by keeping in mind the existing traditional housing

design. An architect was approached to plan different appropriate construction designs. The finalized design made minute modifications of the traditional one, while keeping in mind the gender sensitivity as well as the problems pertaining to termite infection through the understructure of the roofing system.

### Basic Components of Cost Reduction



### Material Utilization

A Research and Development unit was established to produce building materials through CEEEEF technology. Local materials were used for producing CEEEEF building materials to maintain cost effectiveness. The locally available materials are stones, sand, and wood. So it was decided that stone masonry with cement mortar, rammed earth technology or stabilized cement blocks would be utilized for walling purpose. It was decided that either morvi tiles or sand stone slabs may be used for sloping and flat roof respectively. In the case of tiles, it was decided to use an understructure of wood while for sand stones the

understructure could be either steel/wooden/concrete joint.

The actual selection of any of the above materials, get decided on case by case basis, depending on the economic condition of that family, as well as their attraction to a particular technology.

### Cost Effective, Energy Efficient and Environment Friendly Building Materials: Product of R & D Unit

Considering the design of the house and material utilization for housing, the R and D unit focused on minimizing the cost of production of building materials. The testing of the local materials available was carried out aggressively at different sites. The proportion of the mix varied, for which parameters for the proportion of the mix were set accordingly. R and D unit witnessed failures and successes in the research on Cost Effective, Energy Efficient and Environment Friendly (CEEEEF) building materials and technologies. The building materials

that were found to be cost effective are as follows :

- Stabilized Mud Block for walling application
- Ferro-Cement Roofing Channel for roofing application
- Micro-Concrete Roofing Tiles for roofing application
- Pre-cast Door, Window Frames, Panels, *Jallies* and Garden Tiles



Stabilized Mud Blocks



Ferro-Cement Roofing Channel



Micro-Concrete Roofing Tiles



Artisans Constructing House



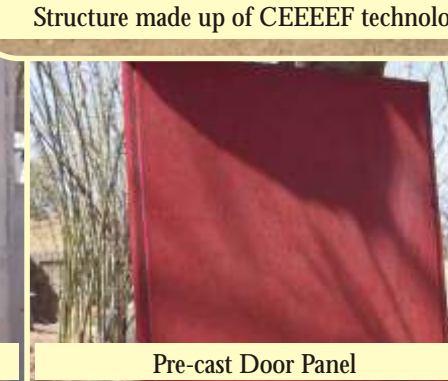
Structure made up of CEEEEF technology



Pre-cast Window and Door Frames



Pre-cast Window and Door Panels



Pre-cast Door Panel



Chajja, Jallies



### Prospects of R & D Unit

Further research is being carried out on producing other CEEEF building materials for diversified market and quality maintenance of the building materials.

People from the local area visit the Research and Development Unit and demand these building materials. Over a period of time, huge demand of the CEEEF building materials has been created in the area by organizing trainings at villages and constructing demonstration structures. It became relatively essential to establish the supply units by generating micro-enterprises within the community to meet the growing demand of CEEEF building materials for housing needs.

Running capital is required in order to maintain production and supply. This could be dealt with by supplying building materials for constructing houses and for repair and maintenance of old structures.

### Establishment of Supply Units

Unlike other micro-enterprises where the market poses threat to the production activity, entrepreneurial development of CEEEF technology has the local market and higher acceptability among the community.

For establishing supply units, it was crucial to develop skills of the tribes in CEEEF building materials & technologies. Thus, skill enhancement training programs were introduced for those people who migrate to work as labourers in construction work during the lean periods in agriculture.

The objective of conducting these training programs was to generate livelihood option by establishing enterprise for



Trainings for Establishing Supply Units



producing low cost building materials. The capacities of local masons and artisans had been enhanced in CEEEF technologies. Technical skills were provided and efforts made to provide these moulds to local artisans. Women members of SHGs were trained on CEEEF technologies and helped to start production and its marketing. After regular trainings, these trained masons became master trainers and had later imparted training to rural youth. Some of these trainings were also conducted under the skill development training by NABARD and RMoL.

A group of trained masons were helped to prepare a bankable project to get the loan from the financial institutes so that they could start their own enterprise. But there was too much formality, and paper work requirements to get the loans, owing to which the frustrated masons finally decided to organize funds on their own to purchase an SMB<sup>5</sup> machine.

### Income Generating Activities

One of the strategies of the project was to help the trainees through producing and marketing of the CEEEF building materials. The potential Income Generating Activities were discussed with the SHG members (trainees) so that they could initiate Micro-Enterprise units in the area.

Trainees witnessed rise in demand for CEEEF building materials that boosted their interest in establishing the micro-enterprise.

The groups, who were trained through the skill enhancement training programmes, had to deal with two

<sup>5</sup> SMB, Stabilized Mud Block machine, used to produce blocks for constructing walls.



Artisans taking up Income Generating Activities





challenges: arranging for money to invest in SMB machines, and finding a market. They solved the problem of money by practicing saving and thrift. The problem of marketing was a bit more difficult. They developed a market strategy wherein they promoted vermicompost.

Vermicompost bed constructions required SMB that created demand for SMB. Thus, vermi-compost activity was promoted with creation of market for the entrepreneurs. This in turn would enhance the economic status of the trainees as well as of the people using vermi-compost activity. The vision is the increased economic status would ultimately augment the affordability of the tribes, who, in turn will construct the appropriate housing.

### Blending Housing Security with Habitat Development

The project tried to blend housing with habitat development. During the implementation, it was experienced that the housing alone won't suffice to meet the need of the community. This is because the community would also require water and sanitation, roads, electricity, livelihood, social security and community infrastructure along with housing security.

During the extension phase of the project (July 2006 to June 2007), Prayas committed to sustain and replicate the concept of habitat development through the following strategies:

#### Strategies

- Discuss the concept of habitat development in the *Gram Sabhas* and build consensus around it through community participation.
- Consult and explore areas of cooperation with financial and development institutes and rural local bodies (*Panchayati Raj Institutions*) for formulating financing mechanisms.
- Identify livelihood options based on local resources
- Improve and build in-house knowledge on different aspects of habitat development, mainly land, water and livelihood issues

#### Conclusion

The chapter deals with minimizing the construction cost through use of CEEEEF technology. Understanding people's reluctance to take government loan for housing, it was realized that training artisans to start their own enterprise would help them to earn a livelihood, and to simultaneously produce CEEEEF material.

## Chapter 4: A Snapshot of the Project

### Introduction

The chapter describes the challenges faced during the implementation. It reflects upon major shortcomings and learning from the project. It also highlights the achievements of the project.

### Challenges faced during the implementation

When Prayas was trying to collaborate with various government housing schemes and with various stakeholders, it faced many problems. Nobody liked to join hands owing to commissioning and malpractices.

The figure below depicts the position of different stakeholders in the project.

#### Frosty attitude of some stakeholders

Some of the stakeholders tried to create problems in the functioning of the project at various levels. These challenges could be understood through following stakeholders and actor analysis.

#### Stakeholders and actor analysis

<b>Proponents</b> (RHP team and Prayas)	<b>Supporters</b> (SDC, PSU, few PRIs, SHGs, Community)
<b>Fence sitters</b> (Ministry and policy makers)	<b>Opponents</b> (Government Machineries, PRIs, Contractors)

Project's supporters were either supporting the project or were direct beneficiaries of the project. SDC supported the entire project through funds; PSU was not directly involved with the intervention but was contributing by giving its valuable inputs for smooth functioning of the project. Some PRIs who were in favour of the noble work were supporting the cause whereas SHGs and Community were the direct beneficiaries of the project.

The fence sitters were either unaware of the indifferent attitude of the government functionaries towards CEEEEF building materials or ignored the entire matter.

The opponents were strong enough to pose a threat to the project, as they were involved in malpractices and commissioning, which the supporters couldn't fight back. The supporters (SHGs and communities) were generally from the weaker section and easily get harassed and trapped by the tricks played by opponents.

#### Frequent change in the Project

Since the beginning of the project, a number of changes took place within the project. PRISMO withdrew and PSU couldn't be replaced which affected the functioning of the project.

The RHP team within Prayas witnessed frequent changes at different phases of project period, which too resulted in a backlog.

#### Set back in obtaining Government housing scheme

Through the efforts of the Prayas team, some of the villagers applied for housing loans under Credit cum subsidy scheme. But again the frosty temperament of the bankers discouraged people to avail the benefit out of this scheme. Prayas team then approached the then Rural

Development Minister of the state to intervene in the matter. The minister ordered the officials to grant the benefits of the scheme. Consequently, four people were granted housing loan.

### Internal Brainstorming to surmount the challenges

The above situation posed a threat to the project, which for a time at least, depressed the spirit of the team.

To fight back the situation, strategies were developed and internal brainstorming sessions were conducted within the team to retrieve the lost vigor. Following SWOT analysis and Review Assessment Goal setting and Action plan (RAGA) were the tools used during the session to strategize the activities and proceed in a set direction.

#### SWOT Analysis

<b>Strengths</b> Utter need in the area High motivation of the team Support of the Community	<b>Weakness</b> First experience of Prayas in Housing
<b>Opportunities</b> Tribal Sub Plan area, Govt. concentration of development projects	<b>Threats</b> New technology

#### RAGA

RAGA is a management tool to strategize the activities of the project by reviewing; assessing and setting the goal and drawing the action plan for the smooth functioning of the project. The

responsibility of each team members is specific, thus each member knows the assignment to be accomplished.

### Learning

Complete package of habitat development including water and sanitation facilities, roads, electricity, livelihood, social security and community infrastructure would serve the purpose of improving the quality of life of the rural mass.

Collaborative efforts of the government, NGOs and other agencies concerned with habitat development require to be ensured for development of habitat especially in rural areas.

Advocacy for the blending of all the development projects into one integrated programme of habitat development is needed.

Advocate for resource centers at various hierarchical levels in the three-tier system of local governance in order to orient people about the government schemes and train them to get the maximum benefits out of the ongoing government schemes.

### Achievements

During the period of time, community is realizing that owning an appropriate and gender sensitive house is their right.

The major emphasis of the project was that the people play a major role in designing their houses. Thus, design for the house is based on the individual's choice. The technical team generally supports in the cost analysis of that design.

Possessing appropriate housing is increasingly becoming a priority of the rural people. This can be asserted as there is a high demand of CEEEF technology in the community and banks are also being approached by community for financial support.

There is a strong realization of having gender sensitive construction. Those who can't afford permanent bathrooms and toilets are constructing temporary ones.

CEEEEF building materials have got a prominent place in the *Swarna Jayanti Swarozgar Yojana* (SGSY), a Govt. of India rural employment programme. This was the result of workshops and a series of meetings held with the Bankers to enlighten them about the advantages and business opportunities of the CEEEF building materials.

Over a period the attitude of the bankers towards promoting micro enterprise based on CEEEF has changed. Now many of them are willing to finance housing and micro-enterprise activities based on this concept to boost construction business.

PRIs and the Govt. officials of the area have also been sensitized on housing and habitat development issues through workshops.

Entrepreneurship Management and Development Institute (EMI), an autonomous body of the Government of Rajasthan and National Bank for Agriculture & Rural Development (NABARD) have expressed an interest in the project and have given financial support for training of the unemployed youth on CEEEF building materials and technologies. The project has trained around 290 masons, artisans and unemployed rural & tribal youths including women, in and around the project area.

6 application forms for the construction of houses using CEEEF building materials and technologies under credit cum subsidy scheme were processed and 4 amongst them received the housing grant; 3 amongst them have constructed their houses using CEEEF building materials and technologies.



Community Bathroom under-construction



A Trainee receiving Certificate of CEEEF Training



For walling application the technology of Stabilized Mud Block has been introduce. This technology has a very high rate of acceptability by the community on account of cost effectiveness. SMB utilizes the wastes and local resources to the optimum; it decentralizes local production and offers business opportunities.

Ferro-cement Roofing Channels have been successfully introduced for roofing application. Local community, BDO, PRIs and other Govt. officials have appreciated this product as it totally eliminates the use of wood. This product is gradually becoming popular among tribal community owing to speedy installation; no shuttering required, 30% cost saving over RCC roofing, lower dead load on the walls. Further, this product is also usable as an intermediate floor; it has a high strength to weight ratio; it has an elegant profile and is available with uniform sizes; and finally, large spans are possible with intermediate supports.

Micro Concrete Roofing Tiles were also introduced as another roofing material, which is also on high demand as they offer more value for money, and are highly durable. They also are as long living as concrete, are lighter than other roofing tiles, they require less understructure, can be coloured to users' preference, reduce heat gain, do not make noise during rains and do not contain asbestos fibers.

### We Believe

“One must have the comfort of home to be able to deliver his or her best.”

Due to the increasing cost of wooden door & window frames and panels, concrete door & window frames and panels have been introduced as one of the CEEEEF building materials. These materials can be easily made with fewer resources. Concrete door & window frames are being produced and sold in the local area and soon some SHGs will undertake this activity for livelihood.

Cement *Jallies* and Garden Tiles were introduced as a construction materials as well as livelihood option for women. Concept of the use of cement *jallies* is being introduced among tribal households for the lighting and ventilation purpose.

Note: Please refer annexure for structures made by CEEEEF technology

### Conclusion

This chapter tries to define the spirit of the project by explaining the challenges faced, strategies adopted to overcome the challenges, learning and achievements of the project.

The project “*People’s Initiative For Housing Security In Chittorgarh District*”, helped to build an environment of healthy and secured living as a right of each individual. As a result of the project the community too has begin to express a need for the development of habitat covering all the aspects of healthy and secured living.

### Structures made up of CEEEEF Technology

Districts	Tehsil	Cluster	Interventions	Villages	Name of the user
Chittorgarh	Pratapgarh	Devgarh	SMB walling, FCR Roofing & Precast Doors and window frames	Devgarh	Demonstration
			Precast Door and Window Frames		Mr. Jalam Singh
			SMB walling, FCR Roofing, Precast Doors and window frames & Panels	Prayas, Devgarh	Demonstration
			FCR roofing	Samli Pathar	Mr. Balaram
			MCR Roofing	Bari Bambori	Mr. Shivilal
			SMB walling	Kachotia	Mr. Ramlal Meena
			SMB walling for four rooms	Kuni	Mr. Chatrapal Singh
			Precast Water tank		Mr. Vijay Pal Singh
			24 SMB vermi beds (Individual)		
		Rampuria	Community Bathroom & Toilet	Rampuria	Demonstration
			SMB walling		Mr. Gopal Lal Meena
			SMB walling	Ambeli	Mr. Babulal
			FCR roofing	Dhariya Kheri	Mr. Devilal
			SMB walling		Mr. Kawarlal
			Community Bathroom		Demonstration
			Community Bathroom	Dhaman Dungri	Demonstration
			SMB walling		Mr. Laxman Meena
			Community Bathroom 2	Mahido Ka Khera	Demonstration
					Mr. Goutamlal & Mr. Kanhaiyalal
			SMB pillars & MCR roofing		
			19 SMB vermi beds (individual)		
		Chiklar	MCR Roofing	Gyaspur	Mr. Ambalal
			MCR Roofing	Pal	Mr. Kalpesh
			14 SMB vermi beds (individuals)		
	Choti Sadri	Manpura	8 individual Bathroom cum tiolets (SMB walling & Precast)	Lambi Peepli	
			3 individual Bathroom cum tiolets (SMB walling & Precast)	Dhola Pani	
			Ice-cream Factory (SMB walling & FCR roofing)	Manpura	Mr. Babulal Tank
			SMB walling	Manpura	Mr. Bhairulal
	Bhadesar		FRC roofing	Amarpura	Mr. Khemraj Choudhury
Udaipur	Dhariawad	Mungana	SMB & FCR roofing	Bhakatpura	Mr. Rajmal Damor
			60 SMB vermi beds (individual)	Lodiya	

Objectives, Strategies and Activites of the Project

The table explains, in detail, the objectives of the project, the strategies formulated and activities undertaken to achieve the objectives.

S. No	Objectives	Strategies	Activities
1.	Introduce the concept and rationale for appropriate and gender sensitive housing	Awareness creation among the community through existing forums such as various village level committees, ward <i>sabhas</i> or <i>gram sabhas</i> . Linking SHGs and PRIs with rural housing. Orienting village committees about CEEEEF technology, which in turn involve communities.	Environment building through street theaters (kala jattha), slide shows, etc Meeting with the Gram Panchayat elected representatives, block and district level officials. Meetings with SHG groups and VECs.
2.	Mobilize finance to enhance rural housing	Leveraging with banks and other financial institutes to mobilize finance for trainings on CEEEEF technologies and entrepreneurship development. Coordinating with the government's housing related policy.	Workshop of the DRDA officials (govt.) Workshop of the PRIs and SHGs at Gram Panchayats – Gram Sabha / Ward Sabha level. Workshop of the village housing committee. Joint workshop of the financial institutions and PRI members /SHG
3.	Evolve model of Decentralized financing	Evolving a sustainable model of decentralized financing by designing cost effective housing through the practice of saving and thrift or through mobilizing finances from financial institutions.	Meeting with government officials. Meeting with financial institutions.
4.	Promote the concept of CEEEEF technology	Information sharing on CEEEEF technology with the communities and people. A number of vocational trainings on required skills were organised to have a hands-on experience of producing CEEEEF materials. The exposure visits was carried out to such areas where CEEEEF technologies were used.	CEEEEF building materials were carried and displayed on a vehicle. Training of the local artisans on CEEEEF technology Exposure trips of the artisans to learn more about CEEEEF technology and explore about opportunities in entrepreneurship development.
5.	Advocacy for policy framework to promote rural housing	Participating in workshops on Housing and Habitat Development	Participated in workshops organized by agencies like NABARD, Basin South Asia, Habitat Forum Pune, and advocated jointly to have a suitable policy for rural housing and habitat development in Rajasthan. Organized workshops for PRIs



6.	Create CEEEEF building material and Research & Development production center	Establishing Research and Development production center.  To Research Cost effective technologies with locally available materials.  Continuous effort to minimize the cost of construction by developing cost effective designs and reducing the cost of producing building materials.	SHGs undertaking the task of making roofing tiles.  Training of artisans.  R and D center makes continuous effort to develop alternative options for CEEEEF technology in the areas.
7.	Create proto type of appropriate and gender sensitive houses	Making infrastructural support schemes of the government and financial institutions accessible, through joint discussions, mainly through people's organization such as SHGs, panchayats.  Constructing community building and bathrooms to set an example before financial institutes and government bodies.	Procurement of building material.  Construction of the houses of the approved model.  Repair of the houses.

Glossary

AIDS	:	Acquired Immuno Deficiency Syndrome
ASHGs	:	Artisans Self Help Groups
BDO	:	Block Development Officer
BPL	:	Below Poverty Line
CEEEEF	:	Cost Effective, Energy Efficient and Environment Friendly
DRDA	:	District Rural Development Agency
EMI	:	Entrepreneurship Management and Development Institute
FCR	:	Ferro Cement Roofing Channel
IAY	:	Indira Awas Yojna
IEC	:	Information, Education and Communication
MCR	:	Micro Concrete Roofing Tiles
NABARD	:	National Bank for Rural Development
NGO	:	Non Government Organization
NOC	:	No Objection Certificate
PMGAY	:	<i>Pradhan Mantri Grameen Awas Yojna</i>
PRA	:	Participatory Rural Appraisal
PRIs	:	<i>Panchayati Raj Institutions</i>















