

# To rebuild Kutch

A major challenge in the reconstruction of Kutch is to find solutions that are suited to people's real needs and are easy to adopt.



BY SPECIAL ARRANGEMENT

Putting up dwellings in Bhuj. There is a need to take into account the climatic conditions while drawing up schemes to provide shelter.

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in Bhuj

**M**ONEY is not the problem. It has poured into Gujarat in an unprecedented manner. The problem is how it will be spent.

The dust of the debris has not quite settled, but the people of Kutch, a strong, resilient community used to drought and famine in a hostile terrain, have begun picking up the pieces.

In Bhuj, sitting in a small maidan under crudely pitched tarpaulin tents, the headquarters of Abhiyan, a relief effort of 22 Kutch-based organisations started three years ago in the wake of a cyclone, this writer was privy to innumerable discussions on what needed to be done, how, when and where. Abhiyan was the most organised group in the area, and District Collector Anil Mukim made it a point to join the meetings held at 9 a.m. every day. The meetings were attended by a host of disaster relief and donor agencies from different parts of the world – the United Nations, the World Bank, non-governmental organisations, and so on. Together they tried to formulate plans and strategies to put in place an effective

rehabilitation policy. Many of those present were experts in relief work – they included those who had worked in Latur after the 1993 earthquake and in Orissa and Gujarat after devastating cyclones hit the States. The international groups had worked in Turkey, Bosnia and Rwanda. In short, they had seen it all.

The discussions covered issues that needed immediate attention, such as shelter, livelihood, environment, child protection, equity, health and, most important, the process of rehabilitation. Understanding the importance of the process may be a slightly complex task, but it is crucial if development is to take place in a manner that is suitable and easy to adopt.

The main concern is that the victims should get the kind of houses and rehabilitation programmes that they want and that will work. For instance, take the issue of shelter. State governments and well-meaning groups have rushed thousands of asbestos sheets and corrugated tin sheets to the earthquake-affected areas. Already it is unbearably hot in Gujarat during the day. By April, temperatures will soar and by May and June, it will be over 48°C. Who can survive under a tin

sheet or an asbestos sheet? It is clear that the scheme for shelter has been drawn up without taking into account the climate.

Every disaster brings in experts who offer solutions that are not entirely suitable. Most of the experts do not see the genius of indigenous construction techniques. In the Kutch area, traditional *bhungas*, circular houses made of mud, grass and sticks, with a conical roof, have withstood the test of time and are testimony to local skills and knowledge. In the quake-prone Himalayan Garhwal area in the Himalayas, traditional houses have withstood tremors.

The Abhiyan team, in consultation with the District Collector, architects, structural engineers and international experts, has come out with a document on shelter with a set of guidelines that will help avoid the mistakes committed in Latur and Orissa.

Relocation is a major issue. People in rural and semi-urban locations do not wish to be relocated, being more comfortable and secure near their original homes. The argument offered is that the removal of debris is prohibitively expensive. Shelter experts point out that the infrastructure that needs to be put in place for a major relocation programme is even more expensive.

Removal of debris can become the first component of a shelter package. This would provide work, and thus food, for the people. They would be engaged in reconstruction. Involvement in the process of restarting life would help relieve their trauma and give them control over their lives. After Latur, Anna Hazare, social worker, said: "Unplanned flow of aid into the area has crushed the spirit of self-help of the people of this region, and people in many villages have taken to drinking."

The shelter document of Abhiyan states:

"The process of rebuilding earthquake resistant houses should be demystified. It needs simple techniques which people are more than capable of handling. The process should be informed by a larger vision of building self-reliant and sustainable communities. The process of reconstruction is not merely one of rebuilding houses but of rebuilding the lives and communities of the people of Kutch. Local communities must have a stake and a sense of ownership in the process of rebuilding Kutch, and emerge from this crisis with a sense of dignity,



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**There is a plethora of agencies, organisations and groups that have been working on disaster relief in Gujarat, but there is a need to coordinate the work with the aid of a coherent plan.**

self-reliance and self-respect.

"The reconstruction project must have a multiplier effect on the economy of Kutch. Importing pre-fabricated materials would be a quick-fix solution but may prove costly in the long run since it would enrich outside economies at the cost of the local one."

The use of local materials is imperative because they are the only sustainable medium. They would be available for upkeep, repairs and maintenance. The people should not become dependent on outside sources for their basic building materials.

Another imperative of the shelter policy is that masons, carpenters, artisans and other skilled workers must be trained in building earthquake-resistant structures. T. Krishna, an architect, said: "Earthquake resistance techniques are essentially very simple techniques that any rural community can understand and grasp quickly."

The policy document points out that work on pilot projects using a range of designs, building materials and technologies should begin quickly so that communities may see the possibilities on offer and choose the most suitable one. The pilot projects may start with the building of community structures, such

as a school and a panchayat office. Where the community is in a state of preparedness to undertake reconstruction, pilot projects could take up entire villages. If the people are involved in the design and construction of their new homes, they are likely to overcome the fear and trauma caused by the earthquake. Abhiyan proposes to create model sub-centre structures at 27 locations in the district.

The document points out that rehabilitation provides an opportunity to upgrade and improve on the infrastructure and the village layout that existed before the earthquake. Drinking water could be a part of the shelter package. It can also provide an opportunity to regularise land titles, issue legal pattas to landless farmers and remove illegal encroachments. Grazing lands could be developed, afforestation taken up and dams repaired.

The main premise around which housing is to take shape is that "one structurally sound room as a semi-permanent structure should be built in the same location where the original house stood, to which later additions may be made." This is the best way to combine medium- and long-term shelter requirements.

The policy on child protection is of paramount importance. Neeraja Phatak

of Save The Children (STC) observed that the people of Bhuj, Anjar and Rapar were insistent that there was no child in the areas without someone to take care of it. This community does not give its children away, say the people of Kutch. Uncles, aunts, grandparents, cousins and so on make up a protective clanship. The government of India, being aware of the dangers of hasty adoptions, has announced a moratorium on adoptions and stopped children from being taken out of the district. STC and the Abhiyan have called for a "no orphanage" policy. They believe that as far as possible orphaned children should not be moved away from areas where they had their homes. On the other hand, there is the fear that some relatives may opt for the guardianship of minors in anticipation of any compensation from the government.

The question of orphaned children's inheritance also needs to be looked at. On no account should sibling orphans be separated.

Adoption queries have been pouring in. The question is: "Whose need is adoption – the parents' or the child's?" STC believes the child's need comes first. Children affected by the earthquake will still be in a state of shock and moving them out of their familiar environment will not help. Restarting schools is a priority on the government agenda. There have been discussions on putting up community structures on an emergency basis for schools, hospitals, and so on. Getting back to school might help children come to terms with their situation.

The Health Department has been flooded with offers of support. The priority is to get the workable hospitals going in the affected areas. In the immediate aftermath of the earthquake a large number of doctors rushed to Bhuj and worked under gruelling conditions for long hours. The need now is for a follow-up on their work. Artificial limbs and orthopaedic and physiotherapy specialists will be needed to take care of the injured. Many of the disabled will need not just medical care but also long-term support and rehabilitation.

Long-term trauma counselling is also necessary. In Orissa, ActionAid invited the National Institute of Mental Health and Neuro Sciences (NIMHANS), Bangalore, to train a cadre of barefoot counsellors from the community who can take care of the victims who were in a state of shock or depression. A series of manuals brought out by NIMHANS on trauma and counselling are being adapted and translated into Gujarati by the National Institute of Design, Ahmedabad.

**T**HE Self-Employed Women's Association (SEWA), a well-known women's cooperative in Gujarat, has begun work on producing livelihood kits for craftspeople who have lost their equipment. With about 60,000 members, SEWA has a sound network throughout the State. Apart from craftspeople, shepherds and herdsmen are in distress because Kutch was reeling under drought even before the earthquake occurred. Fodder and water are urgently needed for their animals. But the most pitiable plight is that of salt-pan workers. Predominantly Dalits and Muslims, they are in near bondage to salt traders. Even the pittance they used to earn in the salt pans has now stopped. When they deal with these groups, the government and the NGOs should go beyond mere rehabilitation, bearing in mind the exploitative conditions in which they lived in the pre-earthquake days.

A few thousand migrant workers from poorer States live in conditions of bondage and exploitation. When many of them died in the cyclone that hit Kutch last year, the bodies were disposed of by their masters without proper identification and without informing their relatives. Migrants need special attention. As most of them do not have any papers that help establish their identity, they are often not eligible for any kind of aid. There have been instances of bureaucrats demanding proof of identity from people who lost everything in the earthquake. Intelligent, sensitive officials need to be deployed, to cut through the red tape and reach out to the needy.

Kutch is a fragile ecosystem, a unique one. It has a special kind of soil, which produces grass that supports its sparse population of birds and animals. A community of nomadic herdspeople moves around in its distinctive, jaunty attire, feeding cattle, goats and sheep.

Local people say that the Indian Army, in an attempt to prevent infiltration from Pakistan, planted a thorny

shrub along the border, which has spread alarmingly and threatens to wipe out the indigenous species of grass. This has reduced the natural fodder available to the hardy, indigenous cattle.

It is in this context that the question of afforestation assumes importance. Nikhilesh, a young volunteer from the National Tree Growers Federation, said: "If we're starting from scratch, we may as well get it right." Any afforestation programme should be taken up keeping in view the fragile ecosystem of the Rann.

In its strategy paper, ActionAid India has raised certain other issues as well. On the basis of its experience in Orissa, it has noted that women and the aged are vulnerable groups. In a patriarchal society,

women are often physically or sexually abused and their inheritance is usurped by powerful older men in the clan. ActionAid proposes to deal with this and other issues by attempting to create Sneh Samudayas, that is, community-based rehabilitation programmes for vulnerable groups such as widows, their children, the aged and the disabled. They will also form Asha Samudayas, or "communities of hope", under which people from local communities will be trained to help the affected cope with the trauma and rekindle their hope in the community. Samudaya ka Adhikar groups will help survivors assert their rights and insist on transparency, accountability and information. Local people will be trained as

## Structural questions

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**"D**ELHI is sitting on the ridge and could collapse if there is an earthquake. There has been no preparedness for an earthquake of this dimension in any of our cities," said T. Krishna, a Gudalur-based architect, and Yogananda, a structural engineer from Bangalore. The two were in Khavda, close to the epicentre of the quake, on the fateful morning of January 26. "It was a cold morning and we were outside, freezing, when the ground began to shake. It was the most frightening experience of my life," Krishna recalled. "Six of us held on tightly to each other. We couldn't stand upright. It seemed as if the ground would open up and swallow us." One of them was Meena of the Abhiyan team who learnt later that her mother had been buried in the rubble in Bhuj town.

This writer accompanied Krishna and Yogananda through a tour of the debris-filled Bhuj. They examined each building technically. "Finally," they explained, "you can't come to any conclusion. On one side of a street every building is standing and on the other side every single one has collapsed. It is probably owing to the intensity of the shock and the pattern or path the tremor travelled. Some buildings are definitely substandard. But some prefabricated structures, which ought to have survived, have col-

lapsed. All in all, no one was prepared architecturally for this kind of a shock. Seismic zoning is not at all scientific. They are relying on pre-Independence data to predict quakes. Often they declare an area earthquake-prone after the event."

Yogananda and Krishna directed this writer to Professor Jagadish of the Indian Institute of Science, who has been working on earthquake-proof solutions. Jagadish said: "The two essential components for earthquake proofing are connectivity and ductility. Concrete, brick and stone masonry have poor ductility. They need small amounts of ductile materials such as bamboo, timber or steel in a strategic combination to enhance the connectivity and ductility of buildings. The rehabilitation process can use the materials of the fallen buildings with appropriate design modifications to produce ductility and connectivity for safe structures."

Krishna said: "We (India) had brilliant design ideas and aesthetics. But from the 1950s we gave it all up in the rush to be modern. We aped even expensive Russian buildings of concrete and steel, which are climactically and economically unsuitable for India. Concrete houses proved to be death traps. There has been a trend in architecture to move back to suitable, effective, local, low-cost buildings, incorporating traditional design. Hopefully we'd have learnt some lessons from this disaster." ■