

## **WHO IS TO BUILD?**

### **Emergency Shelter For The Earthquake Victims**

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After the recent January 26<sup>th</sup>, 2001 earthquake in the district of Kutch, thousands of people are now living in fields or on roadside. Weather condition is not good, days are 35°C while nights go down to 8°C. From March onwards, the day temperature is going to rise upto 45°C to 48°C. Women, children and the old have to survive in the open under these conditions. A visual survey suggest that over 75% of the houses in the towns and almost 90-100% of the village houses in Bhuj, Bachao and Rapar Talukas have become structurally unsafe if not fallen. It will take months before reconstruction and rehabilitation programmes are implemented. Arrangements for temporary shelter have therefore become the most important need.

A quick assembly of emergency shelters, produced in very large numbers may be upto 1,00,000 units is immediately required. These structures must be earthquake resistant and could be made of bamboo or steel and covered with reinforced mud and tarpaulin for insulation. This approach will require minimum manpower and professional input. They can be placed in individual properties wherever possible or together in clusters in the common land of the villages. This will encourage community dialogue which is extremely important in the present situation in which families and communities have been separated. This proposal is different from quick supply of readymade tents manufactured elsewhere and delivered as finished products. Assembly of the different instances where entire villages and middle towns would have to be relocated on new sites becomes necessary to overcome the complexity of reconstruction in place of existing foundations, plinths and the super-structure debris. Also hundreds of dead bodies have been buried and cremated in these settlements. New sites would have to be planned and developed. Needless to say that new infrastructure and service will also have to be laid simultaneously.

Due to this complex situation and greatly varying conditions, a generalized or a single model approach for reconstruction and rehabilitation cannot be thrust upon the communities. As a matter of fact reconstruction attempts being pushed now by various governmental agencies and private corporate sponsors should be checked. We would have to persuade all the agencies to immediately provide temporary shelter as the first phase of the rehabilitation programme. Affected people have to settle down before they can begin to participate and plan for reconstruction. Community participation is essential to build a new future with values of their cultural architectural and social history.

The district has a tradition of `samaj seva', with several community-based organizations lending support to their respective communities in needy times. These social institutions will also play a vital role in the planning for reconstruction. Quick solutions and predetermined notions about reconstruction and rehabilitation being promoted by various architects, planners, corporate business houses including agencies of the housing to optimize land economy. This would have to be seen as a part of the reconstruction and rehabilitation plan.

New developments should be undertaken through individual and co-operative effort. This is unlike the present trend wherein private business houses, i.e. the builders and developers, largely promote the supply of housing. User led developments will enable participation of more and more people, which in turn will also promote better and safer conditions. Needless to say that this movement will have to be adequately backed by professionals who will disseminate knowledge and information about earthquake resistant construction and minimum structural standards.

### **EMERGENCY SHELTER FOR VICTIMS**

In the interim period that is before reconstruction programme is undertaken and completed, a temporary emergency shelter program is necessary in the village. Nearly 800 family units are being erected by Nivara Hakk Welfare Centre and financed by jet airways. There has been an overwhelming response with active local participation by the affected people in the implementation of temporary shelter program.

### **MODEL UNIT**

Various components of the unit are prefabricated at Ahmedabad and Bombay and transported by road to the village. Each truck carries materials for nearly 40 houses. Production is geared to 40 units a day.

Assembly of one unit takes about one and half-hours with the inputs of four people.

### **CONSTRUCTION AND MATERIALS**

The superstructure is made of square steel tubes. For the roof a double layer of bamboo mats, and tarpaulin is provided to effectively insulate the shelter. One side panel has a roll up door while the other side has a rollup window.

### **PEOPLES PARTICIPATION**

Erection of this temporary structure allows for active participation by the affected people. What is more interesting is that there is a lot of possibility of people adding to it and improving this core emergency shelter, for e.g. building a plinth, finishing the floor, extending verandah etc.

### **FUTURE INVESTMENT**

Design and production of this shelter is seen as a long-term investment for availability of emergency shelter in the area. During any future calamity-be it an earthquake or a cyclone there structures can be made available immediately and assembled in a matter of hours. It would be necessary for the village community or the district administration to disassemble the temporary structure upon the completion of the reconstruction

programmed and store them in emergency shelter godowns. Thus the expenditure now is a contribution to the disaster management scheme.

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