DOMESTIC ENERGY SAVING PROJECT

MONITORING SECTION

FIRST MONITORING REPORT ON HOUSING PROGRAM

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1.0 SCOPE OF THE REPORT:

During the project planning workshop held in Dec. 1988 for the next six months Monitoring Section was assigned the job to conduct its first activity on housing program of the Project, to make the flow of current and immediate information sure for further improving the housing program.

Monitoring Section submitted a proposal (see annex) for the activity to the Project Manager, the program was discussed and was approved for implementation. The proposed activity was started on 5th of Feb.

The report aims at providing information about the following areas:

* General impression of the program amongst the beneficiaries.
* Purpose and usage rate of the Dome Roof Houses.
* Demand situation.
* Average number of beneficiaries per dome.
2.0 INTRODUCTION:

"Gunbad" or dome roof housing activity of the Domestic Energy Saving project was initiated during January 1987. Bada Ber's Model Bakery was the first experimental construction and Mr. Dost Moahammed's house in Bada Ber camp was the first residential activity of the Domestic Energy Saving Project.

The primary objectives of the activity are to provide shelterless with an immediate shelter on self help basis and to limit the use of wood in houses construction, hence fighting against deforestation. These objectives are accomplished by constructing the domes instead of flat wooden roofs which has reduced the consumption of wood timbers used in roofing by 100%.

How much DESP has been successful in achieving its objectives is obvious from the figure of more than 500 houses constructed. Which is, of course, a great success.

As far as statistics of the activity are concerned up till now DESP has constructed more than 500 domes with a 100% usage rate. Constructing more than 500 domes mean providing shelter for more than (4.23*500) 2115 heads, saving of more than Rs 250,000 by the house holds and protecting more than 4000 trees. These results have a multifold effects for the benefits of the country and the nation. These results have been achieved during a short span of 2 years, which is indeed a very good result.
3.0 GENERAL IMPRESSION ABOUT THE PROGRAM:

3.1 USERS

Gunbad or dome roof houses have generally been identified with some Afghan tribes, because they are the frequent users of these domes. Out of the DESP constructed domes, in Pakistan, majority of the domes have been constructed for the same tribes. Although some individuals from other tribes have also accepted the dome type roofing but these figures are very less and even some of the tribes do not know about this type of construction.

If we go through the questionnaires of the users who have been using dome type of roofing it becomes clear that they prefer the dome roof construction due to the following reasons:

* Since this type of construction needs thick walls so internally a house remain cooler in summer and warmer in winter as compared to the flat wood roof houses which do not necessarily need thick walls.

* Since dome type of construction do not require any wood so it can not be attacked by the pests, insects and parasites. Hence not only the initial but also the total life cost of the roof is decreased. Majority of the users claim that if the domes are plastered with cement (as some of them have) these need no yearly plastering or yearly maintenance, and even can lost for decades if maintained in a proper way.

* The users also claim that a good ventilation is observed in the dome roof houses.

* Some of the users also say that they use dome houses because they can not afford wood weather it is in Pakistan or Afghanistan.

3.2 FIRST TIME USERS

General impression which comes from the first time users is an indifferent one. Neither they support dome roof housing nor they are against it. Some of them are very satisfied with their new roofs, have adapted it and are firm to build dome house in Afghanistan after they return back to Afghanistan. It is the Collapsing fear which plays an important role in determining their behavior.
For example one of the first time user said that when it rains he spends the rainy days in the tent instead of the dome roofed house due to the collapsing fear, but his brother living just aside is very satisfied and spends his rainy days into the dome roof house. Three of the first time users have argued that they were using the dome house just due to the reason that they had not got enough money to build wood roof house so they adopted this type of construction.

3.3 Non Users

Non users of the dome roof houses accept all the arguments given by the users in favor of dome roof houses but they counter these arguments with following arguments:

* Although the first (initial) cost of the roof of the dome roof house is less but this saving in roof costs is encountered by the increased cost of the walls construction which must be thicker than the minimum thickness of the wood roof house.

* Suitable mud cannot be found everywhere to make bricks required by the domes and if the area is a hilly one than suitable mud has to be imported from another area due to which the cost goes up.

* They also argue that the climate of the Afghanistan is different from that of Pakistan. In Afghanistan the probability of getting pests and insects into the wood is less as compared to Pakistan.

* In case of wood roof houses there is less collapsing risk, they also point out some collapsing cases happened in the camp during the past. So they argue that if the wood of (Nukhtar) is used then wood can not get pest and insects hence minimizing the maintenance costs.

* An important factor which supported the non users is the flat wood roof house can be used for other purposes also e.g. for sleeping in summer nights, building the second story putting the fuel to dry for.

* If the house is to be expanded then it is necessary to destroy dome and then reconstruct it again, but in case of roof houses you can use the wood again and again.
4.0 PURPOSE AND USAGE RATE OF THE DOME ROOF HOUSES

Almost all except for 1% of the Domestic Energy Saving Project's constructed houses are being used for residential purposes with a usage rate of 100%. Exceptional 1% are used both for residential as well commercial purposes i.e. the users use these as residential and carpet knitting places.

5.0 ACCEPTABILITY

Although dome roof house are recognized with the people living in the north and north east of Afghanistan but a number of people from other regions have also adopted the dome roof houses. This shows the acceptability of program amongst the people of the different traditions of living. Since majority of the non users and the first time users are unaware of the forest situation of Afghanistan therefore they do not care to find out alternatives for their houses in Afghanistan. But first time users, to some extent, have recognized the problem and have found the alternative for the wood timber i.e. the domes. There are some limiting factors which influence the acceptability of the program amongst the non users:

5.1 Traditions

Majority of the non users have got the tradition of buildings the flat roof wood houses. This flat roof wood houses (according to non users) is used for many other purposes also e.g. drying their fuel, sleeping on the roof in summer, building double story etc. which also limits the acceptability.

5.2 Mud Availability

Suitable mud availability also measures the acceptability of dome roof houses to a greater extent. In some places, according to the users and non users, suitable mud is not available i.e. either it contains more sand or is not suitable for dome construction due to stones or other reasons. Also in Afghanistan the construction has been limited to only those areas where the wood is scarce and the soil mud is suitable for dome roof construction.
5.3 Collapsing Fear

Dome roof houses have been used in the Middle East, Persia and Afghanistan for a very long time but its use has been limited only to some specific areas and seems to be a new thing for the new user or non-users. Since they have not experienced the durability and suitability of the dome roof houses so they cannot believe its durability. This is the reason that they fear about its collapse.

Those users who have been using the dome roof houses for a long time are quite satisfied. But due to a few collapse cases, which happened in past due to carelessness of the owner of the house, users and the first-time users are afraid of domes. Also, they think that the domes will not stay against the earth quacks.

5.4 Know How

Dome roof houses construction skills are not distributed homogeneously throughout Afghanistan but are distributed according to the demand. Also, the skills for constructing the dome roof houses are less as compared to the flat roof house construction skills. Similar pattern can also be observed here in Pakistan amongst the Afghan camps.

6 DEMAND SITUATION:

Demand for the dome roof houses have been increased but it is increasing at diminishing rate due to the settlement of the Afghan issue and repatriation activities. But due to the involvement of the individual's other than the traditional users, the overall demand will still go on increasing during the near future. Also, in future the demand for the dome roofs will increase due to the increasing cost of timber wood and the introduction of the program (in Pakistan) to the other Afghan target groups. Demand for dome roof houses is almost zero in the Pakistani areas due to the not introduction of the housing program.
7.0 PAKISTANIZATION

During the study of the housing program the monitoring staff came across certain Pakistanis who were building their house. The monitoring staff discussed with them about the DESP and its various activities against deforestation.

After answering their queries the monitoring staff convinced them to build a dome and if it proved to be successful in future they will construct more domes for themselves. During the discussion with some non user Pakistanis it was found that they even did not about the dome roof construction and had never heard about the activities of the DESP in dome construction. It was also noticed that those Pakistanis who were knowing about the domes could not trace the origin of the domes back to DESP. Pakistani people were also unaware of how to find a mason for such construction and know how of the construction.

8.0 INPUTS

Dome houses are constructed on self help basis. The DESP provides the household with plastic sheet for covering, Mould, straw, drains and skilled mason with a trainee. While on the other hand the households is responsible to build walls and inside house plastering.

Following costs are estimated per dome.

INPUT by the DESP:
- Drains (2*Rs 20) Rs. 40
- Plastic covering Rs. 80
- Straw Rs. 260
- Mason (one day only) Rs. 150
- Trainee (one day only) Rs. 50

TOTAL INPUT BY DESP Rs. 580 (per dome)

INPUT BY THE HOUSEHOLDS:
- Four laborers for five days (4*5*Rs. 35) Rs. 700
- Food arrangement for 4 days (4*Rs. 40) Rs. 160
- Other heads Rs. 50

TOTAL INPUT BY HOUSEHOLD Rs. 910

TOTAL COST Rs. 1490
Very often these laborers are not paid because in Pushtoon tradition the neighbours, relatives and the family members assist construction without any charges.

Sometimes when the mud of the construction place is not suitable for construction then the household has to pay Rs 200 for mud which is brought from another suitable place. Also sometimes (as in Pana Kot) the household has to pay Rs 50 to Rs 60 for water also.
SURVEY SAMPLE 100 HOUSEHOLDS

NUMBER OF HOUSES VISITED 92
NUMBER OF DOMES CONSTRUCTED BY DESP 505
AVERAGE NUMBER OF DOMES PER HOUSE 3
TOTAL NUMBER OF PEOPLE USING DOMES 755
AVERAGE NUMBER OF PEOPLE PER DOME 4.23
% USED DOME HOUSES BEFORE COMING TO PAK. 55
% NOT USED DOME HOUSE BEFORE COMING TO PAK. 45

% BELONGING TO EAST 4.4
% BELONGING TO WEST 0.0
% BELONGING TO SOUTH 0.0
% BELONGING TO NORTH 67.4
% BELONGING TO SOUTH EAST 6.5
% BELONGING TO NORTH EAST 20.5
% BELONGING TO SOUTHWEST 1.2

NN: These statistics are based on a random sample of 92 households.
CONCLUSIONS AND RECOMMENDATIONS

1.0 STANDARDIZED CONSTRUCTION

The major constrained faced by the acceptability of the dome roof housing is concluded to be the collapsing fear of the dome. To avoid collapsing, traditional construction procedures must be standardized. The minimum requirement for the thickness of the walls must be determined on a scientific basis so as to decrease the walls building costs, causing a decrease in the total house construction cost for the households.

2.0 DURABILITY TESTS

Some sort of durability tests must be conducted on the dome roofs to assess its durability and make the people sure that the domes are as safe as the flat roofs are.

This study will also help the Project to convince the Pakistani people about its suitability and durability.

DEMAND AND AREAS:

Since the Afghan issue seems to be settled and the repatriation activities have started, the marginal demand for houses has been decreased, although the overall demand seems to increase. Since there is still an increasing overall demand for the dome roof houses, we should concentrate more in the mixed areas where the users and non-users are living together so that the non-users may develop an idea and concept of the dome roof houses and can judge practically the durability of the dome. When these non-users will return back to Afghanistan, they will be automatically inclined to construct the dome roof house due to the scarcity of the timber wood. Also the housing activity should be diversified towards the Pakistani target group to increase the marginal demand.

In Pakistan rural population is a vital component of the society where poor people are seeking shelter. In fact in areas when availability of mud is no problem the scheme can
be promulgated with some incentive. The low income group can not afford the construction of houses of medium quality and hence has to incline towards the scheme.

On the pattern of the housing scheme of in Hyderabad a survey can be for Kacha houses and results can be compiled in view of the existing requirements.

The introduction of this program can not only provide technical help to the poor community, but its impact on the nation in overall is yielding also. It can be a success if some support is provided to the interested groups in the initial stage of its application which can be abandoned later on.

3.0 TRAINING ASPECTS

Uptill now we have got four skilled masons and only four trainees which is a very small figure. Since the masons of the DESP have been building the houses in a more appropriate way as compared to the traditional masons. So it appears the need to train more and more people to encourage the dome houses construction and meet the expected future demand for the skilled masons in this field. This will also help homogenizing the distribution of the skilled masons. Also this is the exact time to train the people in dome roof housing field because they will be needed in future in Afghanistan due to scarce wood resources and other costly construction materials.

4.0 COMMUNITY INVOLVEMENT

In case of house construction activity community plays an important role in determining the structure and design of the house. In the community involvement phase, here, arises the need for demonstrative domes and psychological incentives. Demonstrative domes must be constructed in an important place and the decision making persons of the community should be invited in these domes to tea (etc.) and during the same time they should be briefed about the different activities of the Project with special emphasis on housing program.

This can be finally be concluded that the housing program of the DESP has performed very well and has been successful in achieving its goals.
PROPOSAL FOR MONITORING THE HOUSING PROGRAMME

OBJECTIVES:
To provide management with information about the following areas of the Housing program.

1- General impression of the program amongst the beneficiaries of the program.

2- For what purposes the houses are being used and the usage rate.

3- Acceptability of the program i.e the Dome type of construction in the Afghan tribes other than the traditional users i.e the Uzbek and Turkman.

4- Average no of beneficiaries per dome.

5- Number of houses existing in camps.

ACTIVITIES:
1- Preparation and pretesting testing of the questionnaires.

2- Visit to Baddah Ber, Jalozai and Sawabi for gathering information. Visit are proposed with the Housing Director.

3- Compiling the statistics, reporting the results to the management.

PLANNED RESULTS:
To provide information for a course of action for further improvement of the housing component of the DESP and to assist continuation of the flow of information.

FREQUENCY:
It is proposed by the Project Manager to carry out the survey two times a year and a sample of 20% is to be chosen.
RESPONSIBILITIES:

Monitoring Section:

Haji and Arshad : Activities 1, 2, 3
Housing Director : Activity 2

TIME SCHEDULE:

1- Questionnaires development one office day.
2- Pretesting the questionnaires two days.
3- Field survey five days.
4- Report compilation four days.

RESOURCES:

- Cooperation of the Housing section and Field section is expected.
- Stationary.
- One additional vehicle is proposed for visits to different areas.
- Computer time is proposed for two days.

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