RECONSTRUCTION OF WAR-DAMAGED RURAL AREAS OF KHUZESTAN, IRAN

(Two Volumes)

"Volume Two"

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CHAPTER X

RECONSTRUCTION AFTER WAR

Introduction: The aim of this chapter is to identify some of the common issues in reconstruction after war, through the literature. A few observations can be listed immediately; first, documents on this subject are limited. As evidence we refer to Davis (1988), who claims;

> "Whilst the literature on recovery from natural disasters is extensive, and writing in the science of warfare fills libraries, there remains the grossly neglected field that is the subject of this symposium" [Reconstruction after war] (p. 8).

Second, the little available literature on the subject is pre-dominantly from urban areas and the rehabilitation of villages has been neglected. Third, most documents in hand deal with the aftermath of Second World War in Europe, seldom have we succeeded in collecting any other documents, about Lebanon for instance. Fourth, the consequence of this situation is that with significant differences between the contexts of damaged European countries with the present devastated nations such as Iran, Iraq or Lebanon, drawing conclusions from then for the present situation, is not without difficulty. In addition, it must also be remembered that WW II was mainly fought between nations very different to the countries where civil wars are currently spreading over many Third World countries, particularly in Africa and the Middle East.

The fifth observation, as we mentioned at the beginning of our chapter on reconstruction following natural disasters, and in this case is much more acute, is that no satisfactory conceptual framework is

readily available for the study of reconstruction after war.

To start this chapter we briefly review the history of reconstruction of some of the European blitzed cities and some examples of devastated villages. Our attempt will be to identify some of the major issues faced in each case. A discussion will be made later on the emerging subjects.

10-1- Coventry, Britain

Coventry is one of the most famous reconstructed cities in Britain after WW II. Originally it was an ancient city and before the war started its economy was well developed. Its engine industry was particularly famous. Hewitt (1965), describes the city's situation, the attack and inflicted damages as follows;

> "With the Second World War, Coventry's enhanced industrial capacity gave it greater national importance than ever; and, consequently, the city became an obvious target for sustained enemy air attacks which, beginning in August 1940, reached their heaviest concentration on 14th November of that year and on the 8th and 10th April 1941. Work was disrupted, but, with able reorganisation, swiftly resumed; one of the factories was to give a local name to an effective riposte. The Whitely bomber. The havoc of the city centre was more slowly remedied. With forty acres devastated, of nearly one thousand buildings only thirty were undamaged; in the city as a whole over 5,000 dwellings, shops, offices and schools were destroyed with heavy loss of life. The Cathedral of St. Michael was burnt out. Its second church gone, the old tower and spire of Greyfriars still stood" (p. 9).

The City Architect Gibson, became immediately involved in preparing a reconstruction plan. In fact he was thinking of more than rebuilding a city, rather he was preparing a development plan for the city as a whole. Johnson-Marshall in his book, 'Rebuilding Cities' published in 1966, provides a comprehensive report of the process of reconstruction of Coventry. Since he had worked as an assistant to Gibson, his information is first hand. In his view, 'Nothing positive, however, could be done during the war except the tasks of clearing away the rubble, the demolition of derelict buildings and erection of temporary

shops for the bombed-out shopkeepers' (p. 296).

Hewitt (1965), after describing the damage inflicted continues;

> "But the City Architect was able to bring out the plans for the new city centre upon which, on his appointment, he had been bidden to work, and the City Council energetically set out to acquire the land to make the scheme practicable when war ended" (p. 9).

At the same time the City Council also asked the City Engineer to prepare a proposal. Unlike Gibson's plan, Ford's plan proposed little change in the existing structure and fabric of the pre-war city. The Council, however, approved Gibson's plan. Rigby and Boyne (1953), write;

> "It is difficult to tell what difference the war really made in creating opportunities for rebuilding. If it had not come, sheer force of circumstances would probably have led to the same amount of rebuilding, although probably in a different form. In other respects, the impact of war was terribly cruel. After London, Coventry was the first city to suffer from bombing. After the original and subsequent bombing only 31 out of 975 buildings escaped damage in the Central Area. ...Fortunately, devastation was not pressed too far; there was an immediate rally, with help from London, to create emergency services and undertake first-aid repairs, and soon thoughts again turned to planning" (p. 434).

The quick repair of repairable buildings and services is perhaps the most important point to remember as the first step towards reconstruction. The same authors also point to the fact that two different plans one by Gibson and the other by Ford were submitted to the Council. The first was a total renovation and re-design of the city, while the second was an 'as you were' plan. (p. 434) The council

chose the first one. It is true that change and innovation requires courage but it seems resistance to change, and restoration of the old situation needs more courage.

The actual reconstruction started fairly late. As Rigby and Boyne (1953), visiting the city, wrote;

> "On our visit to Coventry we received many impressions: subsequently thinking over these the one which struck us most was the blunt fact that **thirteen** years after the first bombing attack not a single building has been **fully completed** in the Central Areas .... Whatever the reason, however, it is a devastating thought. Then we noticed that some people still feel rather sore at the Council for having adopted the Architect's plan. They say that if only the Council had backed the 'as we were' plan, rebuilding would have been speeded up..." (p. 442). [emphasis added]

Three points can be observed so far; first the concept of replanning and redeveloping the city as opposed to retaining the structure of the old city has been a matter of debate. Second, that the reconstruction was not fast, as after thirteen years the city still looked damaged. Third, the reality of perceived opportunity provided by the war damage requires further study. As we will see all these three issues are in one way or another repeated in other cities.

The same authors also write;

> "As in other cities, rebuilding has not gone forward with zest. It has been a long rear-guarded struggle. Plans were produced, and accepted, optimistically and cheerfully enough. At the Coventry Reconstruction Exhibition of 1946 people were interested and hopeful, but delays followed and a resentful cynicism crept in. Then came a great gift and a heaven-sent opportunity. In 1948 the Dutch people, as a memorial for aid to Holland in the war, subscribed to a fund for presenting an English town with thousands of flowers and shrubs for planting in a town square. They selected

> Coventry and invited the authorities to suggest a suitable square. Sadly, none existed, but a high official suggested Broadgate Square, which they wanted to create, and that is how rebuilding in Coventry started" (pp. 439-442).

Another interesting issue in reconstruction after war is **land acquisition**. Often after a blitz, legislation comes to the aid of planners by approval of compulsory land and perhaps damaged property purchace. Rigby and Boyne (1953), in relation to this claim;

> "The Council's policy has been, and is, to buy up all the land needed, using powers of compulsory purchase more as a matter of convenience than anything, in order to let land as separate building sites on long leases, and to meet all reasonable objections to its proposals which do not lead to sacrificing a principle of policy or of design" (p. 439).

In conclusion they write; '**It remains to record that Donald Gibson seems to have won, to a remarkable degree, the support of his Council, of his fellow architects, and, to a limited extent, of the man in the street**' (p. 447). [emphasis added] This observation is very important. In the reconstruction of a city, the people might simply be forgotten and the politicians and planners become the major role players. This also affects the reports and literature available on reconstruction. They are mostly written by architects and planners or politicians and local government staff, but not by ordinary people. The question is in evaluating the efficiency of a reconstructed city, whose views really matter?

The two mentioned authors are not alone in criticising the reconstruction of Coventry. This became a common feature of appraisals of Coventry in Architectural Journals during the 1960s. Beazley

(1962), for instance reviews the Coventry situation from such a view point. His focus is however, on the architectural designs and style. Further more, even Johnson-Marshall himself confesses that some mistakes were made in reconstruction of Coventry. He writes;

> "Inevitably there are things which can be criticised. Apart from the near-disaster of the intruding road, a mistake in the levels enforces pedestrians to climb a flight of steps to the upper shopping-deck, whereas the original scheme had envisaged entry to this deck straight off Broadgate at the same level. ..
> Another mistake, flowing right from the original conception, was the creation of a traffic roundabout on Broadgate itself... The lessons of Coventry are clear. Cities are at heart a design problem and need teams of imaginative, devoted and practical designers, with outstanding leadership and with enlightened public patrons in order to create a civilised environment, but all this must be backed by **legislation** and **adequate finance**" (p. 297). [emphasis added]

In brief, the concept of war as an opportunity, the appropriate policy of modernising and change to the fabric of the city during planning, the importance of land acquisition, the role of legislation and finance and the slow start of reconstruction can be sketched out. (For Coventry see also Architects' Journal April 24, 1941, pp. 273-281)

10-2- Rotterdam, Holland

The devastation of Rotterdam during WW II was as great as of Coventry. For the reconstruction, however, their approach was to some extent different. Johnson-Marshall (1966), first argues that the economy of the city at the time was prosperous. Then he adds;

> "It was this thriving, pushing, developing seaport of about 600,000 people that Hitler selected for his first 'blitz' or terror raid, the technique that was designed to shock a whole country into submission, and so eloquently forecast by H.G. Wells a few years before. In May 1940, the centre of Rotterdam was obliterated, and an area of some 645 acres was laid waste. ... Approximately 11,000 buildings were destroyed, including 2,393 shops and department stores, 1,887 workshops, factories and warehouses, 1,483 offices, 69 schools, 21 churches, 4 railway stations, 184 garages, 26 hotels and 24,978 homes. Although the official death roll was put at only 1900, the scale of tragedy and misery may be gauged by the fact that 78,000 people were rendered homeless" (pp. 319-320).

The small number of people who perished is important. In fact with an effective warning system and quick evacuation this loss can be reduced. Benevolo (1971), writes;

> "The centre of Rotterdam had been destroyed in a single day, 14 June 1940, by a German raid followed by a tremendous fire. 260 hectares were razed to the ground, with 25,000 dwellings, 2,400 shops, 70 schools, 2,000 offices and storehouses, while over 78,000 people were left homeless. For over ten years the city appeared to visitors with a great hole in the place of the old centre,...
> The day of the bombardment the Army ... surrendered to the Germans, ... But already the municipal administration was thinking of reconstruction; on 17 June they began clearing away the debris, on 18 June they appointed the Chief engineer W. G. Witteveen to work on a new plan, and in the same month... they gained permission...

> for the compulsory acquisition of the whole of the centre of the city, i.e. the sites and bombed buildings..." (p. 740).

It is important to note that after ten years, as Benevolo claimed, the city still looked damaged. Concerning the first steps for reconstruction, Rotterdam is a significant example. In a few days the clearing of debris had started and planning was in process. Johnson-Marshall (1966), writes; 'They [Dutch] set to work on the docks with such a will that by 1949 they had not only rebuilt and re-equipped them with the most up-to-date cargo-handling equipment in Europe, but had greatly enlarged them as well' (p. 320). He also writes;

> "Let us now consider the city centre. As with Coventry, where we continued to plan, but with new conditions, almost while the ground was still warm from the conflagration, the Rotterdammers were quickly off the mark. Four days after the great raid the Municipality instructed the City Architect, Mr W. G. Witteveen, to prepare a plan, and within **three weeks he produced his first outline schemes**. This scheme was based largely on the old city pattern, but proposed a considerable number of new streets, street widening, and the opening up of public spaces in front of existing and proposed public buildings. Though it looked backward rather than forwards for its theoretical inspiration, it did enable a number of urgently required buildings, such as the Rotterdamsche Bank and a temporary City Theatre, to be started on adequate sites" (p. 320). [my emphasis]

As can be seen, the quick response by the architect was very helpful in starting the work of reconstruction. Such a plan can not ignore the existing structure of the damaged city. The same author also writes;

> "Parallel with this civic enterprise, the Government made a compulsory purchase order by military ordinance over most of the blitz land, and

> developed a special procedure for fixing and approving reconstruction plans for the damaged or destroyed parts. Planning studies continued during the war... Much of this work had to be done in secret during the Nazi occupation, but in May 1946 the second plan, ... was approved by the City Council and, not long afterwards, was endorsed by the Government" (p. 320).

So compulsory land acquisition was also practised in Rotterdam. The interesting point is that the plans for reconstruction were in progress during the occupation.

Benevolo (1971), in relation to Rotterdam's reconstruction planning writes;

> "The first scheme in the new plan was presented on 8 June - while the battle for France was being fought- and it was concerned with the most urgent works: the disposal of 5 million cubic metres of debris, temporary accommodation for the homeless, the completion of certain works already under way, for instance the tunnel under the Meuse" (pp. 740-741).

The disposal of debris is one of the first tasks in the immediate period of reconstruction. It is also obvious that temporary accommodation is another important issue. The literature in general does not provide sufficient information about approaches to this. It can be assumed, however, that a period of hardship was experienced by war victims not only in Rotterdam but in almost all blitzed cities during WW II. The Dutch author, Blijstra[1] in the context of reconstruction of war damaged cities in the Netherlands writes;

> "The reaction immediately after the war was therefore great interest in reconstruction, and at the same time a marked difference of opinion

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1.No date available.

> appeared: the mainly conservative sections of the population,... favoured a reconstruction in which the character of the original town would be preserved, whilst the progressive architects,... defended a complete renovation of the damaged or destroyed towns or town centres. During the war little or nothing had been built; on the contrary, still more had been damaged,.." (p. 16).

This debate between the two factions of 'conservatives' and 'progressives' seems not to be limited to Rotterdam or Holland, rather it tends to be a recurring issue in many other blitz cities. Another debate is whether any reconstruction should take place during the blitz. In fact many damaged cities and villages in Khuzestan were reconstructed during war time and by the end of the war they had not received any substantial damage. In a sense that was a good decision. There were of course cases, such as Hoveize, that was attacked again after reconstruction, but the physical damage inflicted was minor.

Blijstra then introduces examples of cities reconstructed on traditional lines and claims that the results were satisfactory. (pp. 16-17) It is important to see how the concept of change or modernisation in reconstruction has been a matter of debate both in Britain and Holland. Blijstra also claims;

> "Of considerable importance to the development of Dutch town-planning in the years after the Second World War was the 1946 basic plan for Rotterdam, drawn up by C. van Traa and his associates. True, this plan maintained the old pattern of the canals, partly because a number of important buildings had remained standing after the bombing, but it contained so many new elements that one can speak of a revolution in Dutch town-planning" (p. 17).

Johnson_Marshall (1966), who actually took part in reconstructing Coventry, had the idea of total modernisation and

development, then outlines some of his conclusions from the reconstruction of Rotterdam and writes;

> "First has been the determination of all the Rotterdammers to remodel their city as an up-to-date functional machine,... Secondly, to rebuild it as an important national shopping centre with ample opportunities for the smaller as well as the larger shopkeepers; and third to create it as a place to enjoy living in;..." (pp. 323-324).

He also adds;

> "Other lessons... that the comprehensive city reconstruction had to be made possible both legally and financially by the central government; that there was a continuity of design planning running right through in time. When one compares the first post-blitz plan with the present reality one sees what great strides have been made; but always there was an overall design, a design both flexible and capable of extensive modifications and improvements as time went on. ... I am sure that the planners and architects often say as we did in London 'if we could do it again...'. In spite of these and other defects the reconstruction of Rotterdam remains one of the best examples of its kind in the world" (p. 324).

In brief, from the reconstruction of Rotterdam we learn that a quick response in preparing reconstruction plans can have a major role in the rehabilitation of a blitz city. The plan should be flexible and in constant revision as time passes. The old structure of the city can be kept while remodelling it. The role of economic resources and legislation, particularly in land acquisition are decisive. The priority for economic and industrial buildings was also observed, before other sections of the community.

10-3- Warsaw, Poland

The reconstruction of Warsaw after WW II is one of the most outstanding and well studied cases. Its bombing started in September 1939 and it was heavily damaged. In 1944 the 'systematic demolition of the city' was executed by German 'demolition squads'. They fired and destroyed whatever they could of the houses. 'Of the 103 million cubic metres of buildings existing before the war, 74 million were completely destroyed, The Nazis ruined 782 of the 987 historic buildings and severely damaged others. Eighty-five percent of the city was destroyed and, the most cruel loss of all, more than 800,000 people were killed'. (Warsaw, Reconstruction of Towns in People's Poland, 1954, p. 5)

Ciborowski (1956), writes; 'World War II accounted for the destruction of forty per cent of Poland's public buildings together with 13,068 million cubic feet of residential buildings' (p. 9).

The former reference, also reveals that :

> "During the first, most difficult period, when there was a paralysing shortage of practically everything, the Soviet Union gave Warsaw invaluable, fraternal help. Soviet and Polish sappers cleared the town of 2 million mines and shells; they built a wooden bridge across the Vistula. Soviet specialists helped to rebuild the power plant, the water supply, the radio station. The spontaneous return of the population continued. Every month, 50,000 people came back to Warsaw. Warsaw town builders worked out in the Office for the Reconstruction of Warsaw, a General Plan for the Rebuilding of the City" (p. 5).

As can be seen, often the importance of financial help and skills supporting a devastated country from outside can be overshadowed by

other aspects such as design or architectural style. The same document reads; 'Reconstruction went ahead but there arose the question as to the extent to which the city was to be rebuilt and the extent to which it was remodelled' (p. 5). It also continues;

> "Today, [1954] in the fifth year of the realisation of the great plan, its outlines in brick and stone are already distinctly visible in the city. To sum up the principal achievement, which goes to make up the backbone of the New Warsaw: one of the basic tasks was the establishment of an important industrial centre in the capital" (p. 6).

Karsten (1988), reveals that in Warsaw 'all land within the administrative boundaries of 1945 (the same as 1939) was taken over by the city '(P. 45). It appears that in the case of Warsaw, in the immediate phase, rebuilding of the settlement did not get first priority. They emphasised economic revival and the restoration of vital infrastructures in the first stage. So it is not surprising if the same document in relation to housing reconstruction reveals that;

> "Accommodation for the working population is, alongside the development of industry, one of the chief tasks of the Six-Year Plan. The catastrophic destruction and the fatal legacy of pre-war neglect are responsible for the fact that, despite gigantic efforts, many Warsaw inhabitants are still suffering from bad housing conditions" (p. 6).

Ciborowski (1956), argues that after the war one of the major tasks in the reconstruction of damaged cities was to change the 'former spatial or functional arrangement' such as location of industry, communication network etc. (p. 10) He also claims that;

> "At the same time a question sharply thrown into focus concerned the scope of and methods for the reconstruction of historic quarters- a particularly

> unique problem for our country, whose national monuments of the past had been completely destroyed during the last war" (p. 10).

He also writes;

> "That is why the principal efforts during the first five years after the war were devoted to the restoration of existing and, frequently, the construction of new industrial plants and means of transportation, which were to serve as a basis for the complete reconstruction and the further development of the country" (p. 11).

The two important points are again restoration of existing damaged buildings and the priority of investment in industry. Ciborowski then continues;

> "In the first weeks of work on plans for the reconstruction of Warsaw, the possibility was considered of closing the whole area of the city and letting the population in only after the first stage of reconstruction had been completed. But life overruled this theoretically (perhaps) correct proposal" (p. 41).

Similar observations were made in Iran, in the reconstruction of the city Susangerd. The people did not want to stay away until their city was reconstructed, they poured into the city as soon as they could. Ciborowski (1967), writes; 'Why was it that over 300,000 inhabitants of Warsaw poured back to their ruined city within the first year of reconstruction? Practically speaking, all those that were to return at all, returned in that period' (p. 40). Ciborowski (1967), then adds;

> "A fact of prime importance for town-planning activities was the Act, passed as early as 1945, under which all land within the administrative boundaries of Warsaw became municipal property. This made it possible to eliminate the most rigid and lasting element in the pattern of almost all

> cities in the world-the fragmentation of ownerships" (p. 41).

Again, compulsory land acquisition was enforced by legislation in Warsaw. The same author also writes;

> "The linking of economic planning with the programming of the city provided a basis for working out models of the population structure, and of occupational structure in particular-and of its gradual evolution in the successive stages of the city's development" (p. 42).

Concerning the settlement reconstruction an important lesson can be learned from Warsaw. That is, that it is better to start with those damaged areas, where less debate exists about their change, so they can become useful in a shorter period. Ciborowski (1956), writes;

> "Vast building projects undertaken for the reconstruction of cities, were mainly concentrated in the newest districts which had sprung up during the twenty inter-war years in peripheral areas of the city. Such modern blocks of flats required only a minimum of changes and correction in the town plan,...since the chief problem was to supply the homeless people of many destroyed cities with roofs over their heads" (p. 12).

Ciborowski (1956), then summarises the basic principals of city reconstruction during the immediate period of rebuilding in Poland and writes;

> "Generalising on the character of town planning during the first period of the reconstruction of Polish cities 1945-1949, one could say that it was distinguished by:
> 1) concentration of the main effort on the revival of the basic elements of the economic life of a city, like key industries and connecting railway lines;
> 2) reconstruction of industrial buildings and transportation, simultaneously combined with

> redevelopment and expansion which was of primary significance for the entire layout of the cities being rebuilt;
> 3) concentration on reconstructing residential areas, mainly peripheral, while mid-town reconstruction, including various public services, proceed on a small scale, in fact, limited to a minimum.
> These are the features characterising the period of 'immediate reconstruction' of residential districts, exclusive of industrial areas" (p. 15).

After the First Phase of reconstruction the Second Phase starts, which Ciborowski calls 'Planned Urban Reconstruction'. He writes;

> "Just as the period of immediate reconstruction is characterised by an expenditure for housing construction preceded by capital investment in industry, so in the period of planned urban reconstruction we observe the phenomenon of simultaneously pronounced expansion of new urban areas alongside the former areas restored to use. This is the result of the further development of industry, the construction of altogether new factories in this period" (pp. 16-17).

The author then outlines some of the actual problems they faced and writes;

> "Due to a lack of experience in executing large-scale tasks and the extremely theoretical preliminary approach towards town planning, the first projects in urban reconstruction were marked by a certain lack of realism, particularly in the approach to existing economic and technical values of the city's structures and equipment. The necessity of reckoning with partially destroyed elements of an area was at first ignored. Another trait was the utopianism of the programmatic schemes that allotted vast mid-town areas exclusively for administrative purposes. If these mistakes had been criticised at the time they might have made for a delay of years in the reconstruction of cities, especially their central areas" (p. 17).

Land is another point since as Ciborowski explains, the planner was able to use the land whether 'communalised' or not. He claims; 'This is directly connected with the government taking over building construction (exclusive of one-family houses) and fixing a uniform rent, dependent on the size of the flat and not on its location' (p. 18). Ciborowski (1956), then claims that;

> "A total of approximately 1.8 million dwelling rooms had been rebuilt during the course of the last decade. ... Despite this, however, reconstruction had not been completed according to the plan, that is to say not all areas with a concentration of public buildings had been restored to their pre-war state of usefulness. Much still remained to be done in this field,.." (p. 34).

The same author also claims that due to 'post-war social and economic transformations the majority of them [small towns] lost their pre-war economic content that had been characterised by a well-developed system of retail trade and small handicraft centres serving the countryside' (p. 35).

Ciborowski (1956), then in relation to the reconstruction of historic quarters claims; 'The destruction of the history of a nation is a step on the road to the destruction of the nation itself' (p. 36). He explains about the principals adopted for reconstruction of historical quarters as follows;

> "1. Sections of towns of particular historic and cultural importance, irrespective of the degree of ruin, should be reconstructed to such an extent that, by producing the spatial proportions and general atmosphere of their main design,...
> 2. The rebuilt historic quarters cannot become just museum pieces within the living organism of a city, but must merge with the current of the city's daily life..." (p. 39).

Zachwatowicz and Bieganski (1956), write about the reconstruction of 'The Old Town Of Warsaw'. The most important point is the time which elapsed for each stage, for preparation of plans and execution of them. They claim;

> "The first reconstruction efforts were launched in the Old Town in 1945. When the cleared rubble opened a narrow access to the district, work began on the protection of burnt out houses, the walls and elevations of which stood erect despite the heavy damage they had suffered.... In 1948, the clearing of rubble in the Old Town became a national concern. Plans for the reconstruction were already in preparation... In 1952, plans were accepted for the entire reconstruction of the Market Place and certain streets... The reconstruction of the entire Old Town is now in full swing.... The completion of reconstruction in the Old Town, with the laying out of gardens, is planned for 1957" (pp. 15-16).

Gilhome (1988), in relation to the reconstruction of Warsaw claims;

> "The year 1947 marked the beginning of first Outline National Plan in three sections:
> 1- Rehabilitation and rebuilding up to 1950
> 2- Extensive industrialisation to change the economic structure of the country, during 1950-1965
> 3- After this, town and village development to flourish; emphasis on consumer goods and services" (p. 70).

These phases of reconstruction are most significant. It appears that in the immediate phase, planned settlement rebuilding is unrealistic due to many factors, including economics and time. He also writes; 'In September 1955, the first prefabricated housing was built ... Three years later, the first completely industrialised housing estates, based on this system, were completed ...' (p. 72).

There are many lessons to be learned from Warsaw. The important role of external support, whose resulting long-term political and financial dependency remains to be evaluated, is of course one of them. Again that in the immediate period of reconstruction, the priority was given to industry and not housing. And also the fact that plans for reconstruction were in progress from the very early stages even before the cessation of the conflict. Compulsory land acquisition also was practised. The way the rebuilding and restoration of historical monuments were handled is important. To rebuild, following overall conservation laws gave emphasis to the people's need for continuity through their built environment, is significant. However, again idealism for some time closed the eyes of planners and governments to the economic aspects and resources needed for reconstruction. The actual situation is often more limited than is initially foreseen.

10-4- Gdansk, Poland

Krzyzanowski (1967), in relation to reconstruction of the city Gdansk in Poland writes;

> "September 1st 1939 inaugurated a tragic period in the history of the town. It was from here that there resounded the first shots of the Second World War which resulted in almost complete destruction of the historical achievement of Gdansk. The three-weeks' hard battle fought for Gdansk in 1945 turned the latter into a huge heap of burning ruins. The Main Town was to suffer most - 90% of its buildings having been either completely or very badly destroyed" (p. 14).

The same author then in relation to the reconstruction steps writes;

> "The problem of the reconstruction of Gdansk was posed as early as 1945 - yet as one of extremely complex character, in view of the matters involved. Lack of adequate financial means as a result of the unusually difficult economic situation of war-ravaged country was but one aspect of the problem. No less essential and no less complicated was the need for determination of the new role of Gdansk and of the ensuing function of the historical districts within the new pattern of the conurbation into which the region of Gedansk-Sopot-Gdynia, the so called Tricity has turned upon abolition of the artificial border" (p. 16).

The shortage of financial resources was again mentioned here. In addition change in the future function of the city was another concern. This latter can easily prolong the decision-making process and consequently the recovery of the community. The same author also claims;

> "The first preliminary drafts of the physical development plan were prepared as early as June 1945 by the architects who settled in Gdansk....

> The years 1947 and 1948 were a time of friction of the preliminary concepts concerning the location and character of the future centre of Gdansk.... A year later (1949), reconstruction of Ogarna (Blood Hound) Street - a fragment of the Main Town - was started... The *simplified General Plan* ... approved by the Government in 1952, provided for the reconstruction of the Main Town within the area once enclosed by the city walls" (pp. 16-17).

Several lessons can be learned from the reconstruction of Gdansk. The financial factor again exist. The debate about the future function of the city prolonged decision-making about its new layout. In addition rebuilding, not necessarily restoration, in practice took some years to commence.

10-5- Molde, Norway

Stave Tvinnereim (1988), in relation to the war damage and reconstruction in Norway writes;

> "German troops invaded Norway the 9th of April 1940. During a few weeks this spring, 24 cities and urban settlements of different sizes were totally destroyed by German bombs. Later on, towards the end of the war in 1944, several settlements in Finmark were bombed, ..." (p. 26).

The author then takes the case of Molde as one example to illustrate the process and stages of reconstruction. About Molde he claims;

> "In 1940 about 4000 people lived here. The bombs destroyed the old centre, an area of about 0,125 Km^2. 75 properties were damaged or totally destroyed, and 800 persons lost their homes. The rebuilding of the bombed centre was finished by June 1966 ..." (p. 26).

It is interesting to review the history of reconstruction of a small city like Molde. 800 homeless is actually the number which might be seen in a village after an earthquake for instance. However, the planning in this case became a lengthy matter. The same author also explains that the Norwegian architects were determined to carry out the reconstruction planning themselves. The German occupier tried to take over several times but the actual plan implemented after the war was that prepared by Norwegians.

One of the issues once again was change or no change to the fabric of the city. Also he claims that;

> "Budgeting was never Professor Pedersen's task. During the first weeks of the war this was the municipalities' responsibility... After the war it

> has been criticised in Norway that economic consequences of the reconstruction had been too little considered during the war. According to Grebler's research, this was the fact in other European countries, too" (p. 38).

This latter statement by Grebler is of great significance. Why were the financial and economic consequences of reconstruction overlooked in Europes damaged cities? This requires a separate investigation.

The same author then reveals an unbelievable fact, when he writes;

> "To mention Molde once more, the centre was finished with the inauguration of the municipal building of administration June 1966. On the whole, it took more than 20 years after the war to rebuild Molde and the other cities that had been destroyed by German bombs in the spring of 1940" (p. 37).

As can be seen in the case of Molde, there was a long delay while the plans were prepared, before starting the reconstruction. On the other hand, the debate about remodelling also affected progress. Financial factors also clearly show themselves in this case. In brief, one should be quite clear that the reconstruction of cities, largely destroyed during the war, is not a matter of a few years, rather it is necessary to think in terms of one or two decades to rebuild them.

10-6- Basra, Iraq

The city of Basra is located close to the Iranian border in the south where the recent war was going on for eight years. (1980-1988) Due to its short distance from the border, easy access to artillery bombardment and its strategic significance, it was severely damaged and several attempts were made by Iranian troops to capture it. However, for a number of reasons, including its strong defence and the artificial flooding of vast areas around the city, this did not happen.

Barakat (1989), in relation to the reconstruction plans for the city of Basra, writes;

> "It was due to the war that Basra gained a special degree of people's sympathy and support, generated by its resistance and its stand against the continuous attempts to capture the city. That doubled its importance for the country and gave a flying start for its reconstruction and development. ... huge amounts of Government aid, public donations and gifts, collected by the Basra and Fao Reconstruction Committee" (p. 9).

It seems that unlike the Iranians, the Iraqis did not put much effort into reconstruction during war-time. The main measures were only to clear the debris and to arrange compensation payments. Barakat (1989), writes; 'In Basra ... the immediate concern of the government was to clean the city of rubble to fill the swamps. They will clean the small rivers and creeks, cleared the Shatt-al-Arab water way of ships and mines, maintained the infrastructure and restored the civilian services (schools, hospitals,...)' (p. 10). He then continues;

> "In December 1988, a big national campaign was organised to remove the rubble. Within one month 3000 damaged vehicles were cleared, 1.5 million

> cubic meters of swamps were filled and the front line fortifications at Shatt-al-Arab were removed, as well as thousands of cubic metres of rubble and ruins. This work was done by four military divisions with the participation of public" (p. 10).

We have not read[2] of using military personnel for reconstruction work in any other war damaged cities. Barakat also writes;

> "The other main concern was to reconstruct and restore the country's economic potential, to rehabilitate its essential factories and means of transportation, on which the physical rebuilding depended.
> A general decentralisation policy is to be pursued within the coming five years, a new satellite town (Saddam'iat al-Basra) is to be built 90km north-west of Basra city. Another four satellite settlements are to be constructed around the new city, each of 1000 housing units" (pp. 10-11).

The priority given to economic revival, and dispersion of industries as well as housing are of major importance. In fact that these were the same plans and policies debated and practised after World War Two. In addition, in terms of the priorities for reconstruction, the clearing of debris is again found as an essential first step, along with the restoration of public services.

2.Warsaw might be exception.

10-7- German cities

Concerning the extent of damage to German cities during the Second World War and their reconstruction, Benevolo (1971), writes;

> "Reconstruction in Germany took place under very special circumstances, because of the extent of the war damage, which was greater than that in any other country: of the ten and a half million dwellings in Western Germany, almost five million were damaged, 2,350,000 being completely destroyed. Naturally, the cities suffered worse than the countryside: almost all the centres of any size had at least half their buildings demolished, with as much as 70 per cent in Cologne, 75 per cent in Wurzberg and even more in Berlin, where one might almost say that the original city no longer exists and that two others have risen painfully from its ashes, East and West" (p. 733).

One inevitable fact is that the cities suffered more than the rural areas. Benevolo (1971), then refers to the more specific factors affecting the reconstruction of German cities and writes;

> "There has been a large-scale exodus of the population from the large cities: Cologne, which had half a million inhabitants, had less than 50,000 in 1945. Also, it has been calculated that ten million people have moved from East Germany into West Germany; so that the population distribution has been greatly altered" (p. 733).

This change in population is an important issue to remember. Some of the war immigrants may never return to their homeland, particularly if the period of hostility is long. Concerning economic revival and the availability of financial resources for reconstruction and housing rebuilding, the same author then continues;

> "Until 1948, when the currency was reformed, no effective measure could be made for rebuilding;

> between 1949 and 1950 [only] 100,000 dwellings were built and [but] in 1950 the new housing law was passed, aiming to build 1,800,000 new homes in six years. From then on, rebuilding went ahead at a steady rate and today the housing problem may be regarded as almost solved" (p. 733).

It is important to notice that for the first few years after the war no significant steps were taken. Benevolo (1971), then in relation to the concept of remodelling the damaged cities in reconstruction plans writes;

> "In the German cities that have been rebuilt, the remaining traces of their old and traditional faces were often assiduously preserved. Many ruined or even completely destroyed monuments were carefully rebuilt exactly as they had been, and sometimes whole complexes, like the riverside houses in Cologne near St. Martin's, were reconstructed exactly" (p. 733).

As can be seen in many German cities, early reconstruction planning did not aim at remodelling the fabric of the settlement. In addition, as was the case with Warsaw, any destroyed monuments were totally rebuilt.

Hajdu (1979), in relation to 'Phases in the post-war German urban experience' writes;

> "The first post-war phase is that of the immediate period after the cessation hostilities, with its problems of the clearance of devastated buildings and accumulated rubble and the replacement of the pre-war urban (particularly housing) stock. This phase lasted until the mid-1950s in West Germany, but in East Germany it overlapped with the second phase of urban change and bomb-scarred buildings were still visible there until the end of 1960s" (p. 297).

It is interesting to see how different priorities for investment during the reconstruction phase can result in different performances. More

important we learn that the damaged areas may remain untouched in the city for more than a decade. Concerning the Second and Third phases, Hajdu (1979), writes;

> "The second phase was one of increasing affluence and rapid urban population growth in West Germany and economic growth and population relocation to West Germany. ... Phase three of the post-war urban experience dates, in West Germany, from the latter years of the 1960s. It can be seen as a reaction against some by-products of mass urban affluence, and the excesses of cities whose form, dynamics and appearance are considered by some to lack humanity in the present and to lack sensitivity towards their past" (p. 297).

He then continues;

> "Phase one was dominated by the sheer size of the physical task of post-war rebuilding. At the end of World War II, roughly one-third of all homes in Germany were completely destroyed, and another third damaged, many of them seriously. These problems had to be faced at a time when the country was being flooded with about 12 million refugees from the lost eastern territories and other countries of eastern and south eastern Europe" (p. 268).

He also adds;

> "In East Germany the early emphasis on investment in heavy industry and lengthy reparation payment to the Soviet Union meant a much lower rate of home building. For example by 1956, roughly 3,500,000 house units had been completed in West Germany, the figure for her eastern counterpart was only 70,000" (p. 268).

It is important to note that different reconstruction policies, in terms of priority of economic revival, can directly affect housing reconstruction as well. The same author continues;

> "The provision of housing for the millions needing it was accomplished in a variety of ways; ... In most cases this did not lead to a comprehensive replanning of the urban areas involved. ... The urgency of the task of rebuilding, the problem of complex property titles and the general conservation of the German city dweller ensured that the pre-war physical fabric was rebuilt to a surprising extent" (pp. 268-269).

Germany's experience in the reconstruction of its damaged cities has many lessons for us. First, that they went through a period of unplanned reconstruction. The quick resumption of the normal situation was more important than improving the inherited deficits of the pre-war city. The immediate phase, however, provided planners with enough time for a careful study of the planned reconstruction in the second phase. And in any case, while the cities might remain physically scarred for a decade or more, the people's livelihood, employment and food must be supplied earlier.

10-8- Village reconstruction

As was mentioned in the introduction to the present chapter, few documents are available on reconstruction of war damaged villages. However, in this section we review the few documents available, which are concerned with cases from Greece after WW II, and two villages in Lebanon. Since, the present study provides plenty of information about the Iranian damaged villages, only brief reference will be made to an article published by one of my compatriots, Ali Madani Pour.

a- Greek villages- Doxiadis and Vafeiadis (1977), concerning the reconstruction of Greece's rural areas write;

> "A quarter of all buildings in Greece were destroyed during World War Two, 1939-1945. In Greece this war lasted from 1939 to 1945 and was followed by bloody guerrilla warfare which continued until 1949. By far the worst of the destruction was in remote villages, many of them high in the mountains and difficult to access. This was by German reprisals for guerrilla raids. Fifteen hundred villages were totally devastated and very many others were rendered uninhabitable" (p. 208).

It is interesting that in the case of Greece unlike many other European countries, villages were substantially damaged. It appears that this was mainly due to guerrillas located in the mountain villages. The same authors, concerning the planning for reconstruction of villages, write; 'The first year - 1946 - was spent in organising the project, which included setting up the staff and organising a system for distributing building materials over a countryside still in a state of civil war' (p. 209). They also continue to state that;

> "Then, between 1947 and 1950, about 50,000 nuclei were built and occupied. The project succeeded in its primary aim; to get the people back. Although it was started independently, the program was soon aided by the 'Marshall Plan', which operated in Greece from 1948-1953" (p. 209).

It can be seen that 'Marshall-Plan' played a major role in the reconstruction of Greece. It remains to be seen what outside financial support will be forthcoming for Afghanistan and Iran.

The same authors then continue;

> "As soon as the civil war was over, the country had quieted down and basic communications were restored, it was possible to inaugurate a second 'self-help' housing program. By this time the general agricultural program was in operation. The government provided housing materials and cash in instalments. The construction program was divided into four or five stages, each of which had to be inspected and approved before the next instalment was supplied. But the national economy and the confidence of the people had improved so much that the houses actually were normally two or three times larger than could have been provided by the government assistance. Under this second program about 150,000 houses were completed by 1953, bringing the total to around 200,000. Calculations had shown that, although some 450,000 rural dwellings had been destroyed, the construction of 200,000 new ones would meet immediate needs. This was partly because very many rural families formerly owned two dwellings, occupying one in the summer and the other in the winter. Also a substantial number were unwilling to return to rural life" (pp. 209-210).

The important observations are; first, outside aid supported Greek reconstruction. Second, the economic revival in the rural areas was a higher priority than housing. If that is achieved housing can possibly be solved by the people themselves. The third point is that some of the rural refugees may decide not to return home after being away for a

long time. This might be more serious with urban refugees. Finally, 'self-help' schemes can be practised in rural areas. At least in the context of Greece these seem to have worked.

b- Lebanese villages- Among very few documents available on the reconstruction of rural areas that one that can be mentioned is by Crouch, an Oxfam member of staff, who reports on the the reconstruction of two villages in Lebanon; Aintoura and Tarshish. The author, in relation to the reconstruction of the former village writes;

> "The project was started in May 1977. [almost two years after the beginning of civil war] Initially the village was empty as the people had fled and were living as refugees round Beirut, either as squatters or with extended families.
> The first task was to encourage people to return to the village. This was achieved with the incentive of assistance with reconstruction and by the very powerful personality of the project director, a Lebanese Priest" (p. 126).

The significance of the role of local leaders can be seen in this case. However, it must be remembered that when a 'priest' is in charge of an aid project, the response of Muslims might be different from Christians. In any case the author, when talking about the kind of damages and the first steps towards rehabilitation, writes;

> "The rocket and artillery bombardment had left holes in walls, holes in roofs and burnt out interiors. ... Many doors and windows had been looted.
> Initially each family was interviewed and the check-list (illustrated) was completed. ... Most of the work consisted of repairing roofs, holes in walls, plastering, painting, replacing doors and windows" (ibid).

The same document also reads;

> "There were certain rules that governed the repair work. These can be summarised as follows.
> 1. each family was encouraged to do as much work as possible themselves, the agency providing only the minimum amount of help that was necessary, usually the provision of materials, doors and windows.
> 2. Only the minimum number of rooms that the family would need would be repaired.
> 3. Wherever possible local craftsmen and materials were used.
> 4. Building materials were recovered from damaged buildings.
> 5. The project should depend as little as possible on outside resources.
> 6. all work was very carefully supervised" (p. 126).

The recovery of materials from the rubble and the emphasis on using local materials and craftsmen are useful lessons to remember.

The same article, in relation to the village Tarshish, reports that it was much more seriously damaged. Most buildings were in concrete. Bulldozers were called in to clear the streets and then families were taught how to extract 'the steel rods for re-use and to use the broken-up concrete as ballast'. In this case as well, most materials were provided by the agency. Crouch also writes; 'The very poorest villagers were reluctant to receive aid - they were keen to do as much as possible themselves and a great deal of tact was needed in order to persuade them to accept help' (p. 127). Perhaps the main problem is what comes after;

> "So far as cultural problems are concerned there were none in Aintoura which is an entirely Christian village. Tarshish, however, is part Christian and part Sunni Muslim. In May 1978 only Christian families had returned to Tarshish but they all expressed a strong desire to see their Muslim neighbours returning to the village. Nevertheless in reconstruction work of this kind it

> is important to be aware of any possible sectarian problems" (p. 127).

Initially it seems that Oxfam, Britain, being from a Christian country has supported Christian Lebanese villagers. The author did not reveal any clear reason why the poorer families were reluctant to receive help, neither does he explain what he meant by 'sectarian problems'. It is known that religious differences and segregations are if not the root, then the vehicle of the prolonged civil war in Lebanon.

Perhaps it is helpful to refer to the works of a Lebanese colleague to understand the sophistication of circumstances in war-torn Lebanon. From El-Masri, there are three documents available about Beirut. His contribution to the first York Workshop on 'The Housing Situation of the displaced people in Beirut Lebanon' May 1988, is the first one which is in fact a pre-draft of his MPhil dissertation he submitted the same year to CARDO, the University Newcastle Upon Tyne. These two focus on housing as the titles imply. However, he confesses that the highly tense political situation of Beirut made even the survey an impossible matter. He comes up, however, with a proposal for rehousing people even during hostilities. (see both documents)

In his most recent work, which was El Masri's contribution to the Second York Workshop on Settlement Reconstruction after War, was in fact an introduction to his DPhil research study which he started in 1989. It is about the reconstruction of war damaged villages in Lebanon. His paper was concerned with the consideration of cultural aspects of settlement during reconstruction. Generally he did not make any significant suggestion while it is true that he has clearly succeeded in illustrating how complex the task of reconstruction in a

country devastated by civil-war can be.

c- Iranian villages- Madani Pour (1988), examines the concept of 'Design and Change' in two cases of reconstructed rural areas of Khuzestan, Iran. One of the cases 'Geraia' has been designed and built by its inhabitants. The second one, 'Farsia' was one of the over-designed villages. The changes people made are discussed and the author argues that each of them have some advantages as well as disadvantages. The importance of users involvement in decision-making is concluded. (pp. 29-35)

Remark- The most important lesson which can be learned from the few rural cases mentioned is that the common issues faced in reconstruction of rural areas are significantly different from those blitzed cities. In villages, the concept of design, both of site and units becomes a secondary issue. Land and legislation are not outstanding either. On the other hand it seems that villagers showed a high degree of active participation in the reconstruction or repair of their settlements. The resumption of agricultural work at a very early stage, and the fact that its revival does not usually require much capital investment are important lessons. At the same time it must be remembered that rural life is more dependent on customs and cultural values. The design should take this into consideration.

10-9- Planning and reconstruction after WW II in Britain

The examination of the architectural journals as well as other references reveals that discussion about the concept of post-war reconstruction in Britain was started in a very early stage of the war itself. Initially building professionals were mostly concerned with the subject of air raid shelter or civil defence, such as evacuation camps and housing during war time. For example, RIBA in 1940 organised a competition among architects for 'Industrial Housing In Wartime'. This was to consider housing for workers of the many factories which were built to supply the war needs. Designs incorporated the concept of air raids.

The Architects' Journal (March 6, 1941), in relation to this book reads;

> "The R.I.B.A. has deserved the praise of all its members by the publication and circulation to all local authorities of a book called Industrial Housing in Wartime. This book, short and admirably produced, summarises the problems of wartime housing and alternative solutions, and describes and illustrates the winning schemes in the recent industrial housing competition" (P. 155).

But attention was soon being paid to anticipating the reconstruction of damaged buildings. For instance, the Architects' Journal February 20, 1941 reads; '... post-war reconstruction must consist of two parts: (1) formation of political and industrial policy and the organisation needed for its execution; (2) actual construction, including control of materials and the solution of structural and aesthetic problems' (p. 123) A similar series of suggestions for the post-war period are made

in another issue in the same Journal, (February 27, 1941) that reads;

> "First, for a period of from three to seven years building will be the pivot on which all politics and all economic or industrial politics will turn. ... The standardisation of building materials and equipment and reduction in the number of types which are now being carried out as war measures, will be continued. ... Lastly, it seems extremely probable that there will be an attempt to turn over many plants now producing war materials to the manufacture of building materials and equipment... The total effects of these changes on building methods and building design will be vast" (p. 13?).

The debate about prefabrication, as a response to mass building requirements was also discussed. This was mirrored for instance in AJ, June 19, 1941 which reads;

> "But so far we have had prefabrication only in special building types and parts. We still have to learn what to try to do with it. Prefabrication to some architects had been, romantically, a symbol of technical progress. To others, regretfully, it has meant the passing of the Good Old Days and proper buildings, a type of jerry building" (p. 397).

The same Journal (June 26, 1941) attempts to identify some of the other major issues which would be faced in the reconstruction period. It is interesting to see how, from the very early stages, the concept of remodelling cities was recognised. The latter reference reads;

> "The architects carrying out post-war reconstruction will be called upon to design much larger schemes than were common before the war. Some of these will be on virgin soil, but mostly they will be on land which, though devastated by bombing, will have roads and services intact and usable. Early in planning therefore he will find himself considering whether to re-use these existing communications or whether to lay out new; and the answer will be dictated by the relative

> economy of new engineering techniques and existing services, but all in terms of the relative running cost" (p. 413).

It appears that in Britain the war damage was perceived generally as an opportunity for planning or rebuilding cities. In fact not only those cities which were substantially damaged, such as London and Coventry, but even many of those with little or no damage, Oxford for instance, started to re-plan.

The planning originally started in July 1937, before the war began, a committee was appointed under the chairmanship of Sir Montagu Barlow whose 'Terms of reference' were;

> "To inquire into causes which have influenced the present geographical distribution of the industrial population of Great Britain and the probable direction of any change in that distribution in the future; to consider what social, economic or strategical disadvantages arise from the concentration of industries or of the industrial population in large towns or in particular areas of the country; and to report what remedial measures if any should be taken in the national interest." (Maps for the National Plan, 194?)

As can be seen the Report was mainly concerned with appropriate distribution of industries. Although this had some military value, that was not the major consideration of the Committee. For a recent appraisal of the Barlow Report, see Hall 1987.

Following the Barlow Report, in October 1941 a committee was appointed, chaired by Lord Justice Scott, whose its 'Terms of Reference' were;

> "To consider the conditions which should govern building and other constructional development in country areas consistently with the maintenance of agriculture, and in particular the factors

> affecting the location of industry, having regard to economic operation, part-time and seasonal employment, the well-being of rural communities and the preservation of rural amenities" (ibid. p. 35).

The heart of the Scott Report was concerned with agricultural land and land use and construction regulations. For a recent appraisal on the Scott Report see Wibberley (1987). However, in June 1941, a committee was appointed, its chairman Sir William Beveridge, whose brief was; 'To undertake, with especial reference to the inter-relation of the schemes, a survey of the existing national schemes of social insurance and allied services, including workmen's compensation and to make recommendations' (p. 71).

'Country and Town, A Summary of the Scott and Uthwatt Reports' with an introduction by G.M. Young (1943) is another useful document. It reads;

> "The impact of war has fallen not only on the towns and cities, the factories and offices, but also caused great changes in the countryside, in the farms and villages.
> Agriculture is once again playing a vital part in the national effort. The urgent need to increase home production of food has radically altered both the look and the outlook of the majority of country districts" (p. 46).

The same reference in relation to The Uthwatt Report reads;

> "In considering post-war reconstruction, it is perhaps natural that the replacement of buildings destroyed in the course of the war should be popularly regarded as the main objective. In many cases bombing has resulted in the destruction of isolated shops and houses or groups of buildings in areas otherwise undamaged, and for such properties straightforward rebuilding to the same lay-out may be the most satisfactory course. But where large areas have been laid waste they may well need to be re-planned. This cannot be done in isolation. The

> replacement must form part of a long-term policy for the whole of the town or city concerned, in which the plans for the devastated areas can be co-ordinated with plans for the adjoining parts" (p. 84).

It is interesting that the Report thought that small and dispersed war damage should be replaced in a piecemeal fashion, but in the case of large areas of damage, the replanning of the settlement should be pursued. The three Reports of Barlow, Scott and Uthwatt are the most important, however several individuals and institutions also stepped in to contribute to the needs of the moment.

'Britain's Town and Country Pattern', a summary of the Barlow, Scott, and Uthwatt Reports prepared by the Nuffield College, Social Reconstruction Survey with an introduction by G. D. Cole published in 1944 can be consulted. In brief the Reports mentioned which played a major role in shaping Britain's post-war life, were more to do with national planning than directly concerned with war reconstruction.

'A Report on Town and Country Planning 1943-1951', published in 1951 reads;

> "The war, besides creating an enormous need for houses and strengthening public opinion in its demand for the redevelopment of congested and inadequate quarters of towns, added its own complications to the already formidable collection of national problems. A considerable redistribution of population had occurred through evacuation, the destruction of homes, the dispersal of industry and the demands of the armed forces and national service" (p. 9).

It appears that in addition to the dispersal of industry and consequently the population, the next interesting point is the demands of the armed forces for housing and other services. In fact,

both during and after the war especial attention must be given to victims and combatants to keep up morale for any future recruitment, in addition to national responsibility. The same document reads;

> "While the war was still in progress, the government had begun to prepare fresh town and country planning legislation to embody the principal recommendations of the Barlow, Scott and Uthwatt Reports and to replace or absorb the 'temporary' Acts of 1943 and 1944. The chief problems still to be tackled were the location of industry and overcrowding of towns, compensation and betterment, and the coherent planning for larger areas" (p. 9).

The same Report also reads; 'The amount of actual rebuilding which has been done to damaged city and town centres since the war has been disappointing. But despite the difficulties, local authorities have got a long way forward' (p. 48).

London, as the capital of the country was at that time as now, a centre which absorbed many industries and businesses. The replanning of London and its reconstruction, therefore recieved major attention. The Report in relation to London reads;

> "The first of these plans, the County of London Plan, was prepared, at the request of the London County Council, by Mr. J. Forshaw and Sir Patrick Abercrombie. It was completed in 1943, and, since being accepted in principle by the Council, has formed the planning basis for the County" (p. 71).

The preface of 'The Greater London Plan 1944' prepared by Abercrombie published in 1945 reads;

> "The war, in addition to the complete cessation of normal life and growth, brought three new factors on to the scene- the destruction of large areas, particularly in the centres; the evacuation of a large proportion of the population; and the

> industrial upheaval due to almost universal war production. Not only the necessity for some plan of action became obvious; the opportunity presented itself to locate population and industry more logically, to improve transport radically, and to determine a proper use of the land. Finally, the ultimate size of London was inescapably involved. This plan is an attempt to make use of the opportunity. It continues without break the plan prepared for the London County Council and should. be studied and read together with it" (p. I).

Congestion or spread of settlements were among the first themes to be discussed in that period. For instance, Boumphrey (1942), in 'Town and Country Tomorrow' argues that;

> "Among planners of every school of thought, among social workers, among economists, ... agreement is found on one major point of town and country planning: the spread of the town should cease. If not all of these would go so far as to say, 'The spread of the towns *must* cease,' it is only because they believe the difficulties are too great to be overcome or because they are unwilling to interfere with what they feel is a natural process of growth" (p. 129).

In relation to the defence advantage of dispersion of cities Boumphrey (1942), writes;

> "Experience in Spain has shown that by far the greatest loss of life in air raids was caused by the collapse of buildings. The construction most resistant to collapse, either from blast or impact (or even earthquake shock, which is far more severe than either), is that of framed type, either in steel or ferro-concrete; and of these two the second is even less liable to collapse than the first" (p. 127).

At the same time there were others disputing the spread of industry as an advantage to reduce the vulnerability of bomb damage. Pick (1941), for example, argued;

> "First of all, there is the location of industry. Is its vulnerability in war to continue to be a dominant consideration? It seems odd to plan for the occasional war, and at the same time strive for the continual peace; but the world is contradictory and little confident in itself. But in any case the defence of industry can be tackled most effectively if it is concentrated rather than dispersed, so that war or no war, industry should be brought together and got out of the way, so to speak, with the least disfigurement of the land" (pp. 20-21).

The same author then argues 'Let housing be compact' and mentions traffic etc. Then he writes; In planning cities and towns there are still three major difficulties to be overcome. First: Site Control. (p. 40) The second he argues is 'Sentimental Fondness for the Old' and the third,' The Lack of an Architectural Style'.

It seems that there were at least two schools of thought, one more in favour of modernising the cities, with multi-storey housing estates and concentration of industry for defence purposes. On the other hand, there were those arguing that industry, as was recommended by Barlow, should be dispersed, and perhaps in favour of remodelling cities, instead of planning new ones.

The concept of multi-storey housing was also mainly started during this period. Boumphrey (1942), for example, was among those arguing for the advantages of multi-storey housing. (pp. 84-85)

Simon (1945), in 'Rebuilding Britain - A Twenty Year Plan', in conclusion writes that;

> "I have tried in this book not to paint a Utopia, but to consider as a practical proposal, by what method and how quickly we can get every family into a good house in well-planned surroundings without imposing on it too heavy a financial burden. ... But it should be made clear that success depends on

> favourable economic conditions. In the first place, it goes without saying that all this will only be possible if peace is preserved... But even assuming peace, there are three main economic conditions without which full success cannot be expected.
> The first condition is prosperity. ... Secondly, the people must be not only able but willing to provide the necessary finance. ... Thirdly, the rate of long-term interest must be low" (pp. 225-226).

It is interesting that the future prosperity of the economy was in one way or another taken for granted during the war. Cooney (1989), in relation to housing reconstruction in Britain after WW II writes; '... productivity of building did not recover to the level of 1939 until the late 1950s. Shortages of materials and distribution of established habits and practices of work were probably the main causes' (the abstract) In terms of housing needs Cooney refers to three factors. namely, 'Industrial inefficiency, Social policy, and Expectation'. His main argument is that the number of houses damaged or destroyed does not provide a real image of the quantity of housing needing to be reconstructed after the war.

Davis (1983), in relation to post-war reconstruction policies in Britain claims;

> "As a result of bomb damage, 2 million British homes were destroyed or damaged (this was however a small proportion of the 40 million losses throughout Europe). One of the Barlow Commission, Patrick Abercrombie, wrote his Greater London Plan in 1945. This proposed a ring of ten satellite towns surrounding the capital. Later his choice of towns was modified but the idea became the policy of successive government- until recently- so that by 1973 a total of 30 New Towns had been built in Britain" (pp. 301-302).

Johnson-Marshall (1966), in relation to The Greater London Plan, 1944 claims that ; 'The plan followed the general ideas recommended for the whole country by the Barlow Report that there should be a major decentralisation of industry and population from congested areas of London" (p. 200).

Remarks- Several important observations can be made from planning and reconstruction of damaged areas in Britain. First, that a significant planning movement started immediately before, and progressed during, the war. In fact the need of planning for future, both social and physical had already been felt when the war started. Secondly, many cities moved towards planning without even being damaged. Thirdly, some new issues became important during the war period with long-term implications, for instance, multi-storey and prefabrication in housing were first debated during and then after the war.

There were also arguments about dispersing industry and population to reduce vulnerability in case of war. Two contradictory views were expressed but the dispersion policy was pursued. The fourth observation is that the concept of financing reconstruction often had a low profile. We will explore this theme in more detail shortly. Fifth, as in other countries the debate of 'old' and 'new', 'preservation' or 'modernisation' existed during and after the war.

10-10- Discussion

In this section our aim is to review some of the common issues faced in reconstruction after war in the light of the case histories discussed earlier. We would also benefit from the few documents which are focused purely on the appraisal of the long-term impact of reconstruction after World War Two.

a- Opportunity and morale- There is evidence that the hope of a better life than before, when the war ends, was one of the policies to stimulate high morale during the hostilities. Here we refer to some examples of this claim. Whittick (1950), for example writes;

> "During the First World War there was a general feeling that there should be efforts to build a better world, and this was supported by a degree of propaganda, calculated not without its effects on morale.... Lloyd George, in a speech... said, ' We must make Britain a fit country for heros to live in'.... Yet, if we judge by the first five years, England failed and failed miserably in this task" (p. 148).

So it appears that practice did not necessarily follow the slogans. The same author later claims;

> "Everybody agreed that such an aim as Lloyd George indicated was right, and should be resolutely pursued. They probably agreed in every country in Europe. Yet the means whereby it might have been accomplished were rejected because of their interests and because of sentiment. On the one hand there was objection to controls which were essential to the work of reconstruction. People cried our for a return to the so-called **freedom of reconstruction**. On the other hand there was considerable nonsensical and sentimental objection to planning" (p. 149). [emphasis added]

Apparently, planning needs time and also requires control. It must be seen to what end the authorities and their associated planners have the right to obstruct the people's instinctive intentions to rebuild and recover freely and as soon as possible.

What Davis (1983), argues about the opportunity after disasters in 'Disaster as Agent for Change', also had been suggested by others several years before. In 'Reconstruction in the City of London' one reads; '...John Woodward [wrote]...to Wren.. ...however disastrous it (the fire) might be to the then inhabitants, had proved infinitely beneficial to their Posterity...' (p. III).

Lord Balford of Burleigh (1941), in the foreword to 'When We Will Build Again', writes;

> "To-day, save for the successful prosecution of the war, no subject it so much in the public mind as Reconstruction. During the last war people took it for granted that a better world would emerge almost automatically from victory. Hardly anyone doubted that homes for Heroes and all that that phrase stood for would be achieved. ... We have also, thanks to German bombers, a much greater opportunity for physical reconstruction" (p. vii).

Pick (1941), in 'Britain Must Rebuild, A Pattern For Planning' writes;

> "To-day democracy, facing its greatest challenge, faces also its greatest opportunity: the opportunity to build, during and after the war, an order of society which shall serve honestly and resolutely 'the forward march of the common people in all lands towards their just and true inheritance' of which Mr. Churchill has spoken" (p. v).

Ciborowski (1967), concerning the reconstruction of Warsaw claims; 'More and more of the inhabitants came to realise that the tragic

disaster was at the same time a great opportunity for the city, an opportunity of which full advantage ought to be taken' (p. 40).

Tvinnereim (1988), claims;

> "Catastrophes of this kind [WW II] have offered opportunities to city planning, and they usually carry the compensatory benefit of a challenge. Traditions will be shaken up and destruction of great dimensions will facilitate the adoption of new ideas. City destruction in Europe in world War II was an occasion of this kind" (p. 26).

Grebler (1964), in relation to the actual opportunity for change during reconstruction after war claims;

> "War destruction made it possible to replace the main station of Rotterdam and a secondary station in Milan (Porte Garibaldi); the latter has been an obstacle to full development of the Centro Direzionale, Milan's new business centre on a site of partial war damage rounded out by deliberate urban renewal" (p. 28).

Tafuri and Dal Co (1976), believe that the war played a significant part in changing the architects' role in the communities who experienced the war. They write;

> "The indeterminacy and fluidity that characterised the relationships between intellectuals and institutions after the profound socio-economic changes of the 1930s became radically modified after World War II. The processes set in motion after 1945, the special climate of the Cold War, the profound modifications in the capitalist order, and the consolidation of power in the socialist countries - all these brought about institutional restructuring and reinforcement" (p. 305).

Tanahashi (1984), looks to the other side of the coin, the social advantage of experiencing a war. He writes;

> "The great earthquake of Fukui broke out in 1948, shortly after the end of W.W. II. The city of Fukui had been a centre of damage and seriously affected by the war with major parts of the city centre burnt down. Therefore, the majority of Fukui people had experienced the disaster of war, and were able to protect themselves in a disaster with the knowledge of how to endure post-disaster hardship...
> During the war, citizens had much experience in fighting fires through neighbourhood units and had survived air bombing. In those experiences, the spirits of co-operation between neighbours had kept alive after the war came to an end" (p. 101).

In brief, on the one hand there is a great hope during and immediately after the war of a better future. This opportunity exists in some circumstances but not necessarily always. In fact very often reconstruction ends in a re-establishment of the status quo, as has been observed in earlier case histories, such as with many of the German cities.

b- Housing- Rehousing the people, undoubtedly is one major issue. Whittick (1950), in relation to the housing situation after the first World War writes;

> "In considering housing in this post-war period it is necessary to separate schemes of an emergency nature, some of which were of a temporary character, from houses built in conformity with long-term planning. In trying to provide houses quickly it was not always possible to wait until fairly extensive plans for residential areas could be put into operation" (pp. 141-142).

The same author also claims that; 'The high cost of materials was perhaps the most important reason for the failure in most countries in Europe to produce houses on a scale commensurate with demand' (p. 142).

Whittick (1950), continues;

> "The difficulties were especially acute in the defeated nations. Their failure to provide dwellings that were urgently wanted, particularly by the poorer people, was not wholly their responsibility. The uncertainties that existed until the peace treaties had been determined, the solution of the greater problem of feeding the people adequately and of reducing the numbers dying from malnutrition, the extensive alterations in national boundaries and the strife attending these adjustments, made it very difficult to formulate an adequate housing policy in the immediate post-war period" (p. 143).

This latter quotation is significantly important because many of the issues it raises, in one way or another, are faced nowadays in Iran. One major fact is the uncertainty of a long-lasting peace. The cease-fire has stopped the shooting but that is not necessarily a state of total peace. In addition, the priority for other basic needs such as food has affected the priority of house reconstruction.

As has been reviewed in almost all cases in the immediate reconstruction period, no significant steps were taken towards the rebuilding of permanent houses and the people had to undergo a period of hardship. The examples of Warsaw and East Germany were quite illustrative.

Peterson (1983), in the context of Beirut housing reconstruction suggests four basic principles for Government to pursue;

> "First, if possible, keep people where they are. When a disaster is a man-made, political one, this is not always easy. Many will want to seize the opportunity to redistribute the population, but as much as possible, people who want to stay, should be able to do so.
> Second, follow the concept of 'appropriateness' as it has come to be used in the last decade. That means using materials and methods that are

> appropriate to the situation.
> Third, self help: give as much responsibility to the people as possible, but be sure the necessary supporting facilities are in place and functioning: financial resources (grants or loans), materials availability, transport, infrastructure. That is, use the aided self-help concept. ...
> Fourth, try to avoid temporary housing if at all possible; it drains resources and energy, though the *immediate* distribution of tents or plastic sheeting can save lives" (pp. 43-44).

The trouble with some of the above mentioned recommendations is that often the urban population is reluctant or perhaps unable to live in shelters with emergency qualities such as tents. More indigenous Self-help schemes are also more viable in rural areas than in urban communities. This does not mean that any co-operative action by the people is not possible, but the need for popular organisations for support in most aspects of housing needs, such as finance, materials and skills must not be forgotten.

Parsa in two articles, both delivered at York Workshops on Settlement Reconstruction After War, was concerned with the role of building industry in the reconstruction of war-damaged areas of Iran. His attempt was to look for 'appropriate technology'. He argues that this term must not imply merely a return to 'adobe', but we must look for the technology which suits the circumstances of the area. The increased production of 'building components' for instance.

c- City plans- As was noticed in almost in all cases in the reconstruction of a devastated city, the concept of change through the reconstruction became a major issue. Whittick (1950), in relation to the rebuilding of the devastated towns of France and Belgium following

the Great War writes;

> "The policy in rebuilding these towns was dictated in a large measure by sentiment. There seemed to be a general desire to re-plan and rebuild them very much as they were before, but a distinction was made between the old and important buildings, and the majority of the houses of the working people. The opportunity was taken to effect improvements in the housing in these towns, but the old and important buildings reappeared generally as approximate copies of what they had been" (p. 145).

As can be seen after the Great War, often the rebuilt cities retained the pre-war forms and structures. Grebler (1964), then shifts to the traffic problem in the cities damaged and reconstructed because of WW II, and writes;

> "Substantial changes in the street system and especially the construction of ring roads had often been facilitated by demolition through bombs, but the activity is by no means limited to cities that suffered war damage. Thus, Stockholm and Amsterdam are in the process of constructing ring roads around their centres, and Athens and Barcelona are engaged in building multiple ring roads" (p. 26).

Grebler (1964), in relation to reconstruction of cities in Poland claims;

> "Poland's poverty is visible even in such a splendid accomplishment as the rebuilding of Warsaw, the one large European city that was almost totally destroyed in World War II. While the tempo of Warsaw's rebuilding and much of its planning commanded respect (except for the urge to express power by monumental layout and street fronts), the quality of construction is generally poor; acre upon acre of rough-bricked facades of apartment houses built in the early post-war years are yet to be finished with plaster" (p. 20).

The same author then refers to the transport plan in Warsaw and raises

a point often ignored in the literature. He writes;

> "A frustrated case of subway construction is that of Warsaw, the one admitted defeat in the remarkable rebuilding of the city. A start was made, but costs and perhaps also steel requirements turned out to be much greater than anticipated and certainly greater than Poland, heavily engaged in industrialisation, could afford. The project was scrapped. Since the plan for the city's reconstruction was based on a new subway system, the available streetcar and bus lines are incredibly inadequate" (p. 27).

Davis (1988), also claims that '... one of the reasons for the New Town policy was the desire to reduce the bombing target of London by de-concentration, following the devastation caused to the Spanish town of Guernica before the outbreak of the second World War' (p. 11). He also claims; "Reconstruction planning inevitably reflects whatever planning process is the 'norm' in a given country" (p. 12). In his view, 'The history of the reconstruction of towns and cities of war indicates that the normal pattern is for authorities to seek to introduce long-overdue changes with the reconstruction planning' (p. 16).

Breitling (1983), summarises 'lessons from reconstruction in Europe'. He writes;

> "... the *first lesson* ... those cities which kept and restored at least some important and beloved parts of their destroyed downtown got not only the approval of their inhabitants and visitors, but were economically the most successful. ...
> The *second lesson...* The only cities which found a satisfactory solution to their traffic problems are those which established a long-term over-all traffic strategy, ...
> The *third lesson:* It has been proven that reconstruction plans must be integrated in the overall development plans for the city and its surrounding region....

Lesson four: The tendencies of modern architecture and housing towards anonymous mass apartment buildings, isolation of slab and tower and boring open spaces, were more and more criticised. ...
Lesson five: It has become evident that reconstruction plans which are not supplemented with a strong development control produce a rise in land prices and speculation that can make all plans uncertain. ...
Lesson six: The history of reconstruction has proved that it is impossible to accomplish good redevelopment work without a procedure to make available to public authorities an adequate proportion of the land in the damaged areas without enormous cost. ...
Lesson seven: Fitting new traffic lines into an existing city pattern has proven to be the most delicate task. Many European cities have suffered more by brutal highway projects than by war. ...
Lesson eight: The need for usable open space for recreation, children's play, and above all, for coherent pedestrian networks has become more and more important. ...
Lesson nine: One of the most important reasons for the quick and efficient reconstruction in Germany, by far the most devastated country after the war, was the substantial aid the government gave to private investors in the form of low-interest long-term loans. ...
Lesson ten: In many cases where delicate planning decisions had to be taken, the best consultants were neither the local experts nor the great international planning authorities but those independent specialists who were on the one hand not caught in the network of local interests and quarrels, and on the other were well-experienced in the particular matters and in love with the place. ...
Lesson eleven: The experiences of thirty years post-war city development and architecture had created a complete change of mind. The antihistoricist, progressive approach to planning as exemplified by Brasilia has almost disappeared" (pp. 49-64).

Smets (1987), in relation to 'Belgian reconstruction after World War I' writes;

"The modernist view, which had taken over the professional magazines by the mid- 1920s, considered the venture as 'a lost opportunity to

> create the city anew.'
> This interpretation has survived until today. It does not take into consideration what was really intended by the historicist image of the new cityscape. Nor does it reveal the intensive efforts to introduce a comprehensive development plan. In the long-term development of Belgian planning however, these discussions have been crucial. The artistic perfection of the urban scenery which characterises Belgian reconstruction, marks the end of an era, whereas the norms and regulations intended to lay down a more efficient and socially acceptable environment, appear as the beginning of the new scientific approach to urban planning" (p. 1).

The classical processes of planning can be of little use in the first phase of reconstruction, other approaches might be implemented. For instance, Amirahmadi (1985), proposes a planning methodology for the devastated areas of Khuzestan, Iran. He talks about the method of 'Urban Function in Rural Development (UFRD)'. He writes;

> "The UFRD is an applied descriptive and macro-analytical method of quickly gathering and analysing information about the spatial distribution, and accessibility to various groups, of important human and material resources, physical infrastructures, facilities and services, productive activities, and functional linkages existing in or among various settlements" (p. 2).

He then writes;

> "Five principles govern the method (Rondinelli 1985). First it focuses on the spatial characteristics of a region and is place oriented. ... Second, the method seeks to create an ongoing analysis-planning process rather than offering a snap-shot, static method,... Third, the UFRD primarily uses descriptive, macro-analytical, and graphic techniques readily applied by local planners,.. Four, it keeps data requirements to a minimum and uses as much existing information as possible... Finally, the UFRD makes extensive use of local people (inside and outside of government) ..." (p. 2).

He then claims that ; 'The UFRD method involves four stages (Rondinelli 1985), namely, regional resources analysis, settlement system analysis, spatial linkage and accessibility analysis, and functional gap analysis' (p. 3).

There are a few other related factors to observe such as the one claimed by Prince (1989), who argues that development planning can contribute to the elimination or mitigation of hostility by appropriate location of investments or population in an area. Stollard (1989), on the other hand, in the context of Northern Ireland shows how the political constraints within the communities can affect the planning process and how complex it could become. It seems that the theme of planning theory in emergency situations such as after a war deserves an extra study in its own context.

Remark- So far we have seen discovered that for the planning of the blitzed cities different policies were practised; from total re-planning to slightly remodelling the city. It appears that in the cities with low percentages of damage, rebuilding according to the policy of 'as we were' was more practical. On the other hand in the larger cities with high percentages of damage the need to prepare a new plan attempting to solve the inherited physical problems was more realistic.

It must not be forgotten that the notion of replanning because of its implications, including land acquisition and compensation, can easily prolong the process. (the case of Molde in Norway for example) and still the final result may not be satisfactory. (the case of Coventry for instance). Perhaps the most appropriate approach is that

of Rotterdam, with appreciation of the previous structure of the city and quick preparation of flexible plans that can gradually be revised while reconstruction is in progress.

The Germans' experience was also important, that during the first phase of their reconstruction they did not retard the reconstruction with the preparation of plans, rather the pre-war fabric was more or less re-established. This of course provided the chance to carry out studies and prepare careful plans for larger cities with substantial damage for the second phase.

Finally we should add that our few case reports on the war-damaged villages did not indicate any particular importance to site design and layout, in fact these were overshadowed by other necessities, such as the quick revival of the peasants and their agricultural economy.

d- Phases and time- The most important observation from the reported cases, was that reconstruction of war damaged countries can easily take one or two decades to be completed. In fact, it was said that even after 45 years some of the restoration work, repairing Second World War damage in Poland are still in hand. The case of Molde, that was a tiny city with only 4,000 population is astonishing; reconstruction was in progress for more than 20 years, either its planning or implementation. It is unlikely that governments and politicians can speak publicly of such a long period to the people, who naturally expect the quick re-establishment of normal life and an end to the hardships of war.

It was also noticed that the actual reconstruction process would

follow three or more steps. In the immediate few years after the war in general some kind of 'restoration and repair' policy will be pursued. This is the period when the country, devastated by war, tries to come to terms with its realities and to recover as soon as possible. In this early phase the expectation of fully studied plans is unrealistic. The finance and skills are scarce and perhaps disorganised and often the acute needs of the people such as food, clothing, perhaps the provision of public services and more importantly the revival of the economy will undoubtedly consume the resources.

In the next phase, which might be some five years or so later, the administration system and the country as a whole have recovered to the extent that a 'planned reconstruction' can start. It is not clear how long this phase might take, since it is very much dependent on the each country's circumstances. But generally it seems that it is in the third phase that the country might expect to have sufficiently 'normal conditions' to pursue 'new' development oriented plans.

We also often found that the actual reconstruction of war damaged cities started late as Grebler claimed. Stave Tvinnereim (1988), writes;

> "Leo Grebler has found out that the rebuilding of European cities had a painfully slow start, but after 1950 the process was rapid. In 1956 a few small towns were already completely rebuilt, and in some larger cities such as Rotterdam, Plymouth and Le Havre 60 to 80 percent of the destroyed areas had been reconstructed" (p. 25).

Another example is from Wright (1983), who writes;

> "Almost exactly 43 years ago the blitz hit Bristol. On the night of Sunday, November 24, 1940, German bombs rained down on the centre of the city,

> causing great loss of life and scars of destruction that the passing years have failed to remove. ... Although a Reconstruction Committee was set up in 1944 and plans for a greatly improved city were foreseen in the 1952 Development Plan, little has happened until the early 1960s" (p. 1718).

e- Conservation- One of the important tasks in reconstruction after natural disasters, as was discussed separately, was the notion of the 'legacy of the past'. It seems that the same phenomenon has also been debated and considered for reconstruction after war. Grebler (1964), in relation to this writes;

> "The growing attention given in Europe to conservation and rehabilitation of historic towns and city sections reflects perhaps the losses sustained in many places during World War II and the uncertainties of our time which are making people everywhere more conscious of the historic continuum embodied in the urban scene of previous eras" (p. 44).

The same author then continues to state that;

> "The emphasis on restoration is also apparent in the rebuilding of war-damaged cities. Considerable resources are devoted to the reconstruction of historical and architectural landmarks in Italy and Spain, in London and Leningrade, and in German cities both east and west of the Iron Curtain. And the largest single project of this type can be found in Warsaw, in a country that is at the same time groping for a new socio-economic system. Here, the entire historic centre which the Nazis had destroyed in the most deliberate and thorough fashion was rebuilt from old plans and reproduction that allowed even more faithful restoration than the immediate pre-war conditions" (p. 45).

Ciborowski (1967), writes;

> "The reconstruction of historic Warsaw satisfied a social need that was not of a material, but of psychological nature. The rebuilding of the Old

Town was a protest of the Polish people against the barbaric destructive forces of Fascism. In the eyes of the inhabitants of Warsaw it was a symbol of the historic continuity and everlasting life of his own city, the city of his fathers and of his children" (p. 43).

Appelbom Karsten, (1988) in relation to Warsaw writes;

"Owing to the degree and character of the destruction - the feeling for rebuilding and reconstruction could almost present itself as an utopianism. The principle to reconstruct parts of the town scape which had disappeared did not agree with the conservation principles - formulated in Athen 1931" (p. 43).

Karsten (1988), also writes;

"Despite prohibitation of entering the town [Warsaw] on account of mining, the returning people very soon completed the place. They saw a pile of ruins in the place of their homesteads, searching in the rubble for something, anything, which was a link with the past, a reminder of their homes. While the urban structure of the town was lost, the sprit of the place, the genius loci - kept them alive. This led to an understandable urge for reconstruction of their memories. The reconstruction of Warsaw was to be a fact" (p. 43).

Zachwatowicz (1956), in relation to protection of historical monuments in People's Poland writes;

"During the first years after liberation of the country, and even before the termination of hostilities, work was undertaken for the protection of monuments. The vast scale of destruction required the use of all the means, materials and methods at hand. Cracked or leaning walls were shored up provisionally with wooden props, sometimes giving the impression of a large, complicated structure. In some cases temporary under-pinning was resorted to with the idea of later removal and reconstruction. weakened, cracked vaults were propped up and crevices filled. Greatest difficulties were encountered in covering

> burnt buildings. Various types of temporary roofs were covered with tar paper; if that was not available, a thatched roof turned out to be a good cover even for large buildings, as was proven in the protection of the large cupola of the church in Trzemeszno (Province of Poznan)" (p. 17).

Later he continues; 'There is no doubt that emotion was responsible for undertaking the enormous task of bringing these historical monuments and districts back to life, that it was a protest against the attempt of affecting for ever the achievements of Poland's culture and history' (p. 20).

al-Hasani and Weiss (1988), in relation to conservation methodology in Beirut write; 'It may sound odd to speak of conservation when Beirut bears the deepening scars of a lingering epidemic of war' (P. 1). However, later they continue;

> "Issues of architectural conservation thus constitute a very sensitive problem, especially in the context of a civil war. It is senseless to restore historic city centres while allowing people - who give life and meaning to cultural patrimony - to perish. Restoration, although often seen as a luxury, can play an important political role in offering a more promising future through continuity with the past" (pp. 2-3). (For the restoration of historic buildings after the war see also Paner R. in Museum, Vol. 3. (1) 1950, p. 78-89)

f- Economy- Allocation of resources for reconstruction is a decisive element in forming the reconstruction policy. The economic status of a damaged country is dependent on several factors; the pre-war economic conditions, the extent of damage and the degree to which the productivity and economy in general has suffered because of the war, the actual potential of revival and finally the availability of inside and outside resources for recovery (e.g. the support of

international agencies or other nations).

Hancock and Gowing (1949), in relation to the 'British War Economy' write;

> "Clear insight into fact may be fogged just as easily by disillusionment as by hope and we do not propose, at this stage of our history, to brood too mournfully upon 'the cruel real world'. But the radiance of the earlier visions of a 'brave new world' had certainly been dimmed by the time war ended. To quote Lord Keynes, Britain was faced with what might be called 'without exaggeration and without implying that we should not recover from it, a financial Dunkirk'. ....unless substantial new aid were secured from the United States to compensate for the imminent closure of lend-lease, the nation would 'virtually bankrupt and the economic basis for the hopes of the public non-existent" (p. 546).

The importance of economic resources for reconstruction of war-torn Europe was felt at a very early stage. Urban Edge, (No. 10, December, 1988) one of the the publications of The World Bank writes;

> "When the International Bank for Reconstruction and Development was conceived at Bretton Woods in 1944, its mandate was straightforward-indeed, embodied in its name. First, it would provide the capital so urgently needed to assist a war-torn Europe recover once the fighting ended..... Responding to the call, the World Bank approved its first four loans in 1947 to finance badly needed imports: $250 million to France, $145 million to the Netherlands, $40 million to Denmark, and $12 million to Luxemburg. But by 1949, according ...'it was clear that the medium term job of financing post-war reconstruction was beyond the capabilities of the organisation' as it could not borrow funds needed. In response, the United States created the Marshall Plan to assist the financing of European recovery" (p. 1).

Despite the fact that the availability of financial resources should be considered as one major factor of reconstruction planning, surprisingly

planners have constantly ignored it. For example, a proposal for Reconstruction in the City of London (1944), in conclusion reads;

> "We have not dealt with the financial problems of reconstruction. Pending legislation with financial provisions-especially financial provisions applicable to an area like the City-we are unable to make any recommendations thereon.... By as much as the funds available will be less than the total necessary to this plan, by so much must the plan be reduced in its ambition" (p. 32).

Doxiadis and Vafeiadis (1977), also in relation to reconstruction of war damaged rural areas of Greece, write; "Although it was started independently, the program was soon aided by the 'Marshall Plan', which operated in Greece from 1948-1953" (p. 209).

'The Greater London Plan 1944', prepared by Abercrombie published in 1945, in terms of finance reveals that the costs had not been considered. It reads; "In considering one or other of the various proposals which have been mentioned in earlier Chapters, there may be those who ask 'Can we afford it?' The correct answer is often another question, 'Can we afford to do without it?'" (p. 184).

In brief it can be said that while the economies of the war damaged countries were quite understandably ruined because of the war, it seems that planners paid little or no attention to this fact when proposing their schemes. It also seems that the role of external financial aid, such as that of the Marshall-Plan played a major role in the reconstruction of Europe after World War II. There also seems to be an emphasis on economic revival before the civic services and housing are rebuilt to normal conditions.

g- Comparison between reconstruction after war and natural disasters- Reconstruction after war has many similarities with that of natural disasters, but some differences also exist. For example, long term wars often ruin the economy more severely than natural disasters and the recovery process seems more complex.

Lewis (1988), argues; 'Reconstruction is much the same process whether it be after war, earthquake, explosion or any other source of destructive forces' (p. 1) He also quotes from Marshall, 1984, that ' The practical work to be done is often the same, irrespective of the origins of the situation which created the need'. (ibid) The same author also claims; 'Recovery manifests acceleration of pre-disaster trends of population growth and, in cities, of urbanisations. Thus, cities which were growing rapidly recover rapidly; stable, stagnant or declining cities recover slowly - and have their decline accelerated" (p. 2).

Davis (1986), in his contribution to the 'International Conference on the Reconstruction of the War Damaged Areas, Tehran, Iran' describes 12 principles for reconstruction. He attempted to draw lessons from the experience of reconstruction after natural disasters to apply to the war situation. However, he also outlined similarities and differences between the two situation (war and natural disasters). The main issues he discusses are 'Political Support', 'Mitigation Factors', Timing of Reconstruction', International Assistance', and 'Availability of Resources'. (p. 9) Mainly he believes that reconstruction should proceed after the 'reduction or cessation of hostilities'.

Davis (1988), introduces a comparison between reconstruction

after war and natural disasters. Particularly he points out that reconstruction after war might be more 'politicised', international assistance depends on 'political allegiance', pre-disaster planning is 'politically sensitive', 'de-concentration policies may be adopted to reduce bombing targets', the timing of reconstruction 'will be controlled by political judgement' and resources will be in short supply after war. (pp. 18-19)

Urban Edge (December, 1988) also quotes from Kreimer; 'However, after prolonged wars, there is greater disruption to the entire society, and institutions are apt to be functioning poorly. ...So along with physical reconstruction, you have to deal with the rebuilding of various agencies' (p. 6).

Ciborowski (1967), also discusses the differences which a natural disaster may have with a man-made disaster such as war. He says that in Warsaw there was a planned destruction of all valuable and important buildings while a natural disaster will usually choose the weaker parts of the city. He states; "In the instance of Warsaw and Skopje, nature has proved yet more 'humanitarian' as compared with man's activity" (p. 37). He continues by saying that;

> "In Skopje the buildings which survived were mainly the best ones, those of highest technical standard and highest use value... Briefly, what was left in Warsaw was the worst and weakest,.." (p. 38).

Another important point he raises is the 'Psychology of survivors' after the two disasters, and the notion of 'the will to rebuild'. He discusses the fact that in the case of war the people are aware of possible damage and are prepared for its reconstruction while the

damage of a sudden disaster is unexpected.

Ciborowski (1967), then refers to the possibility of preparing plans for reconstruction as another difference. He writes;

> "Plans for the reconstruction of Warsaw had already been prepared in an underground planning office during the Nazi occupation, but the actual damage went far beyond all that could have been expected" (p. 41).

In brief it seems, that despite several similarities between post-war reconstruction and that of natural disasters some differences also can be identified. For instance as Ciborowski claimed, the destruction of war might be selective and concentrated in special parts of the city or that, particular buildings receive more damage. Generally the economy of a war damaged country also suffers, while this is not necessarily the case with natural disaster. Consequently the revival of agriculture and industry gets a higher priority for investment during the reconstruction phase.

In the case of war a larger number of cities might be devastated and require reconstruction simultaneously, while in the case of an earthquake for instance, the spread of damage might be less. In prolonged wars the population migration can easily change the structure of the population <u>after reconstruction</u>, while this might be much less severe of natural catastrophes. In addition it seems that war reconstruction is a highly political matter as is war itself and both in people's expectation of a better life and in the government's political position as executor of war, more practical measures must be taken for reconstruction.

War also can create a climate where laws and legislation, such

as compulsory land acquisition are more easily enforced, which in the case of a natural disaster are pursued with more difficulty. In the case of prolonged wars, the possibility of planning for reconstruction exists, while in the case of naturally onset catastrophes it does not exist. The other major factor is the uncertainty of reconstruction after war while there is a situation of no-war no-peace.

h- Damage assessment and repair- We have already argued that one of the policies frequently implemented in the immediate phase of reconstruction is restoration of repairable buildings and services. In this relation it was thought to be useful to refer to some documents dealing with this subject. For repair of damaged structures a few references are available. The one by Formis and Giovannozzi (1981), in fact deals with the restoration of earthquake damaged buildings with the aim of improving their resistance. however, this might be useful for war damaged areas.

The second useful document is by Rhodes 1974. Under the title of 'The structural assessment of buildings subject to bomb damage', which is related to case studies of Northern Ireland, he classifies buildings, and provides a framework for assessing the damage. He also claims;

> "Some of the problems that arise in this work are very similar to those met when one is asked to repair ancient monuments. The significant difference is that there is usually plenty of time for the engineer to study the ancient monument and to bring the problems of stability back to the office for careful analysis. Bomb damage, on the other hand, usually presents an urgent problem, where time is short and assessment and decision have to be made on the spot and quickly" (p. 329).

For assessment of structural damage see also Tat-Seng Lok 1989.

Conclusion- During our 'Discussion' section, major issues emerging from the literature review were discussed at length. Thus our conclusion will be brief. First, there were significant differences between the task of reconstructing war damaged urban areas, and villages. Second, it was found that morale and politics play a major role in reconstruction after war; the promise of a better future is a policy to keep morale high during the conflict itself. Third, the concept of 'degrees of change' or modernisation in a damaged city has been a matter of debate. In practice, however, cities very often were rebuilt in their previous mould and in many others a totally new plan was implemented. The more reliable options were those, where the city was remodelled without harming its previous structure overall.

Fourth, the social and population structure of war damaged cities may substantially change if the war is fought for a long period. This adds to the complexities of planning. Fifth, usually reconstruction after war constitutes more than one phase. In the immediate phase, however, the restoration policy and the revival of the economy gets higher priority than housing and settlement. The victims have almost all had to experience a period of hardship in terms of housing. Sixth, land was identified as the major issue, should the replanning of the city be undertaken. Appropriate legislation should facilitate access to the land for planning and regulate the distribution of compensation.

Seventh, often the economy of war-damaged countries for some years after the cessation of hostilities, would be in such a situation as to necessitate external support, both in finance and skills. This has clear political implications. Eighth, the conservation of

historical monuments and complexes, and in general the restoration of 'signs of the past' has been widely practised as a measure to provide the people with a feeling of continuity. Often the international conservation regulations are put aside for this purpose.

Ninth, comparison between reconstruction after war and natural disasters showed that despite many similarities, several differences also exist. The damage pattern and spread, the morale of the population and political implications of reconstruction, the possibilities of preparing plans before the end of hostilities, and the uncertainty of more confrontation were among them. Tenth, it was found that reconstruction during war can be implemented as a mode of restoring normal life. Although the risk of further attacks exists, the risk of the population suffering in refugee camps or away from their homeland and the accumulation of damage over years must not be forgotten. Finally, it was often found in practice that reconstruction after war first starts late and secondly continues for long periods, often more than a decade.

CHAPTER ELEVEN.

CHAPTER XI

FIELD STUDY REPORT, (METHODOLOGY)

Introduction: Field study reports usually consist of a familiar structure. The objectives of the survey are defined, a questionnaire is designed, some interviewers are found or trained, data collected and finally desk work to compute the data and draw conclusions. Without undermining the logic of this framework, the present study will go into more methodological and operational detail. This is based on two assumptions;

First; The experience of this survey, if recorded in detail, could be used for other investigations as additional survey material, especially in the same area. Obviously the aim is not to list all the problems observed and solutions applied but to review the major questions and tasks involved.

Second; Although the survey area is familiar to the researcher because of his earlier involvement over three years, this visit was different due to the opportunity for constant contact with the people, over an extended period.

If it is agreed that Rural Development Plans have to start with understanding the people and their environment, their needs, resources and abilities, then the detailed recording of methodology of this survey may prove helpful. These issues are not going to exaggerate the reality of the field study, rather to highlight the very real problems involved in the work, which every honest planner knows and to emphasise the peoples needs and priorities.

For example, in this case the peoples language was entirely

different from that of the author and communication was usually possible through an interpreter. Moreover there is no manuscript version of it. Despite similarities in religion, nationality, this difficult situation was made possible by invaluable support from local interviewers, who were warmly welcomed by the respondents.

It is the authors belief that the making of these records are an integral part of the early stages of the practical development planning. They have an educational value beyond the resulting data made available. They introduce the 'outsider' to the 'respondent' in an organised, constructive and psychologically appropriate way. It is the first step on the tricky journey of 'development by participation'.

This section of the field study report, therefore is made up of the following sections;

a- Background
b- Definition of objectives
c- Method and tools for investigation
d- Construction of samples
e- Implementation and data collection

11-1- Background

This section first indicates the background to the studies of the reconstructed rural areas in Khuzestan, and secondly briefly reviews the literature of similar studies in other post-disaster situations.

Since 1982, when reconstruction activities in Khuzestan were launched, only a handful of reports and studies have been produced but rarely published. The School of Architecture of Shahid Beheshti University in Tehran took the initiative in 1982 and carried out the main share of this work. First a special workshop was established at the school, proposing reconstruction themes for students projects and research. Latter an office was established in Ahwaz, the capital of Khuzestan, with objectives of giving consultation to organisations involved in reconstruction, to carry out research and to collaborate with the workshop in Tehran for teaching courses. Perhaps the most comprehensive study of settlement reconstruction in Khuzestan is 'From Bardie to Sarie'[1], the dissertation of 'Miri and Shakeri' submitted in 1986 in the same school.

In this study Miri and Shakeri tried to classify the policies of village reconstruction and to survey the users response to the new houses. Living in the area for three years with their continuous and close contact they were able to evaluate the real performance of different policies. Their study consists of a brief review of the changing policies in rural areas. It is rich in terms of plans and

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1.Bardie and Sarie are names of two villages in Khuzestan.

building surveys, illustrating the manner in which the local people have been using and altering their reconstructed dwellings. From these results they draw important lessons from a critical review of the policies implemented. The present study is the first, and hopefully not the last, to use a more systematic and developmental context for its investigation.

Davis (1981a), clamied; 'Our knowledge of post-disaster housing is still in its infancy. It appears to date from 1970 following the Gediz earthquake in Turkey and various Bangladesh disasters of the same period' (p. 12). On the same page he continues that; 'The first major international conference on disaster area housing was held in Istanbol in September 1977'.

Classifying the most urgent research priorities in the disasters sphere are two categories:'software and hardware needs'. Among the first group , Cuny (1981a) claims that 'The first of these is the documentation of past experience' (p. 6) He also continues that; 'The total number of thorough studies which have been conducted on the impact of housing programmes can be counted on two hands' (p. 6). In his view the hardware research needs, concern the construction and building aspects. Thus there must be no surprise if the literature concerned with disasters refers to 'gaps' in our knowledge about post-disaster housing programmes. UNDRO (1982), Cuny (1981a), Davis (1981a).

Among these studies, despite their various objectives and their different aims and methods there are the works of Aysan (1987) from Turkey, Latina (1987) from Italy, Bates and Killian (1982) from Guatemala and D'Souza (1980) from Gediz in Turkey. While many of

these studies try to take a broad view and are willing to criticise the experience of the past to learn for future (e.g. Cuny 1987. p. 16), others may focus on some more detailed aspect such as engineering and technical aspects (e.g. Tanahashi 1984, or Razani 1984), or Social and developmental or economic, but rarely cultural aspects, (e.g. D'Souza 1986, Bates et.al. 1982, Aysan 1987). For the sake of brevity perhaps it is better to quote, a rather long but at the same time comprehensive statement produced by Aysan, (1987) when she claims:

> "Criticism of the impact of such post-disaster housing policies on the affected communities is relatively new and compared to the accumulated of knowledge on technical issues of disasters, research on the 'human' aspect is still limited. (Davis 1981, 1985) (Cuny 1975, 1985) (Taylor and Rosene 1977) (UNDRO 1982)(Mileti et.al 1975). There are only a few anthropological studies which call attention to the relevance of socio- cultural aspects of disaster situation (Drabekakey 1975)(Torry 1979). An equally small body of work measures the social changes brought by the post-disaster programmes (Oliver-Smith 1974, 1979) (Trainer and Bolin 1975) (Quarantelli 1978) and the community response to reconstruction and relocation over a period of time (Bates et.al. 1976-80) (INTERTECT 1976,77) (Kates 1975)(Snarr and Brown 1979, 80) (MItchell 1978) The impact of these housing programmes on the long-term recovery of the communities is perhaps the most important aspect to be evaluated in order to understand the validity of the inputs into the area following the event of a disaster. However, evident in the small number of studies on the subject, it is the least explored of all the implications" (p. 22).

In terms of the existing 'gaps' in our knowledge of the effects of post-disaster housing there are recommendations to study the social, cultural and economic aspects of housing improvement projects as well as the most effective way of implementing such programmes. (see for example, UNDRO 1982 p. 74 and Davis 1981a, p. 13). The past studies

of post-disaster housing programmes , although very 'thin' in number, as Cuny (1981a) states; '...indicate that housing aid often inhibits the recovery process and creates dependency relationships, and that the internal coping mechanisms of a society can be seriously affected by an ill-conceived relief programme' (p. 6).

It seems that the agencies and experts involved in post-disaster housing programme are aware of the result of their work and intervention. In brief it is a fact that not every thing that is provided is accepted by and useful for survivors. This has lead to an obvious emphasis on the importance of understanding the viewpoint of the recipients or survivors after a programme. The notions of the occupiers' needs and viewpoints which are highlighted in disaster literature are signs of an awareness of the fact that not every safe house can be a home to live in. If the main aim of a reconstruction programme is to build safe houses, which in most cases is not achieved, the problem of meeting the real users' needs become a separate problem.

The importance of the survivors' viewpoint is dominant in the literature as a recommendation for further study. (See for instance, Davis 1981a pp. 13. 14. 206; Cuny 1981a pp. 6. 8; Aysan and Oliver 1987. p. 5 and UNDRO 1977? pp. 14. 15. 16. 20). The root of the failure to meet the victims' needs has of course many reasons and interpretations. Among them exists the issue of the intervenors and survivors being from two different cultures . Oliver (1981), has raised this point. (p. 197) Mckay (1981) gives an example from Guatemala (p. 201) and Howard and Mister (1981) point to the same issue in other words. (p. 193)

Despite all these acknowledgements there is still much to be

done about understanding the viewpoint of occupiers towards their housing. Aysan and Oliver, (1987) Claim; 'Although many research projects have been conducted on the safety of housing from the point of engineers and designers, little has been undertaken on the success of housing from the point of view of the occupiers' (p. 5) Having that background in mind the next step is to see what are the main questions to ask or issues to raise. In relation to this, perhaps it is convenient to quote from Aysan and Oliver (1987) where they put it as;

> "How successful are the investigations into safe building? How suitable are the permanent houses that are provided by the governments or agencies for the accommodations of the homeless? To what extent are the settlement projects accepted by the people they house? Do the houses provided meet the needs of their occupiers? If they are built to be safe in future disasters do they remain safe? In other words- is the money these various undertaking being spent appropriately; so the results justify the vast expenditures?" (pp. 4-5).

However it seems that this handful of studies are all concerned with natural disasters and in that sense the present study concerned as it is with post-war housing reconstruction, might be unique.

In brief, the post-disaster study is less than two decades old and there is still a big gap in our knowledge which calls for studying the results of post-disaster housing programmes as a measure toward more effective intervention.

11-2- Definition of objectives

It is hard to dispute that the ultimate objective of any housing reconstruction after disasters should be the survivors' ,recipients', or, as some call them victims' satisfaction. In other words the reconstructed settlement should meet the users' needs. The record of post-disaster housing reconstruction, however, reveals that unfortunately this has not always been achieved. (see e.g. Cuny 1981a) There are as yet no criteria to achieveme this.

For the purpose of defining the objectives of the present survey two major sources were consulted. The first, were the handful of reports on the reconstruction of rural areas in Khuzestan published in Farsi and secondly a review of published international studies of other post-disaster housing programmes.

Changes in the policies resulted from the evaluation of the success or failure of the plans to complete the huge amount of work needing to be done. The costs on the one hand and the satisfaction of the recipients on the other were the basic criteria for examination of each policy. For example a study conducted by the School of Architecture, University of Shahid Beheshti in 1984, concluded that if the time factor was going to be considered, on the basis of experience to date, the rest of the damaged villages would take 25 years to complete. A period which was far from being accepted by any party involved in reconstruction.

Though if reconstruction is seen more in the development context than disaster relief, then this is possibly a realistic target. Our objectives, are an examination of the performance of different

policies, in terms of meeting the peoples' need, within the proper time and cost, in order to learn lessons for the future.

In detail the main areas of investigation can be grouped under three headings:

1- Social, economic and cultural effects of reconstruction, including family health and income.
2- The efficiency of different policies in terms of construction and management as can be understood from the local people's views and observations,
3- The attitude of the occupiers towards their reconstructed settlement.

In the circumstances there is emphasis on design and construction aspects of housing both as a 'product' but more importantly as a 'process'. The social, cultural and economic effects will be examined with the awareness that they are the constituent parts of the development context, so important to a view of this task in the immediate post war period.

The investigation mentioned above are counted round a number of important questions.

Social,economic

1- What changes in family income?
2- What improvements have to family life been achieved since resettlement?
3- Has any change in the structure of extended families occurred since the resettlement?

Efficiency of policies

4- Has there been any change in the ability of local people to cope with their housing needs since reconstruction? (i.e. The matter of self sufficiency and dependency.)
5- Is there any recognisable relationship between the degree of the local people's participation in reconstruction decision-making and their satisfaction with their reconstructed environment?

Peoples attitude

6- Are the reconstructed villages cleaner and more hygienic than their predecessors?
7- Are there any signs of expectation being raised in this area, as has been found in other post-disaster situations?
8- How satisfied are the occupiers with their dwellings?
9- To what extent do the reconstructed dwelling meet the users needs?

These are of course only examples and the details will be examined in more depth in the next section.

In summary, we found that, there are frequently recommendations to study the post-disaster effects and performance of programmes as a mean for learning for the future. In terms of housing, the social, economic and cultural consequences are areas of interest. In all cases, as far as we know while there are studies from the agencies' or agencies' standpoint, there is a lack of information about the views of occupiers, users and victims towards their reconstructed settlements. The main questions are to see how satisfied the occupiers are with their settlement and to what degree their priorities during the reconstruction have been observed and their needs after reconstruction are met.

11-3- Method and tools for investigation

This section will give details of the method selected for the field study; the design of the questionnaire and training of the interviewers and a description of the method and the tools employed for the survey.

a- Method- Nowadays the area of research methodology itself, has became a distinct area of knowledge. Different bodies regularly conduct research to find out about something new for their particular purposes. The value and accuracy of findings are critically sensitive to the research methods used. The present study is by no means an exception and therefore appropriate consideration should be given to this aspect.

A variety of research methods have been used in the past to study households in their residential setting. However, the selection of any particular method depends on factors such as, the type of information required, the degree of accuracy and sophistication of the information needed from the collected data, the characteristics of the respondents and the availability of resources (the time and manpower availability e.g the number of field assistants, finance etc.).[2]

Looking through the literature, there is not much based on 'surveys from the field'. One reason might be that they usually need time and other prerequisites to facilitate them. Many researchers are 'foreigners' to the area where the disasters occurred. The fact is that while most disasters occur in communities of developing countries,

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2.(see for example Coker, 1986. Dphil Dissertation p. 159)

most systematic research is conducted by 'outsiders', usually foreigners.

An enormous number of books are available on research methodology. They explain the related issues in a brief or extended manner. For the purpose of our study a number of approaches have been reviewed, such as the work of Godfrey Gardner (1978), Rafi Poor (1980, Farsi) , Susan Gustavus Philliber,et.al (1980), Gerald R. Adams and Jay D. Schvaneveldt (1985), Judith Bell (1987). Of these 'UNDERSTANDING RESEARCH METHODS' by Adams & Schvaneveldt was found to be most relevant and will be frequently referred to in this section.

Adams and Schvaneveldt (1985), divided their description of 'research design' into two kinds: 'exploratory' and 'descriptive'. 'The very purpose of *exploratory research* is to seek out new insights, ask questions, assess phenomena in a different perspective'(p. 103). On the other hand, '*descriptive studies* a designs of research in which the main goal is to portray an accurate profile of persons, events, or objects' (p. 106).

They claim; there are 'four research strategies associated with, or commonly used in doing, exploratory and descriptive research:(1) Case studies, (2) Surveys, (3)Cross-sectional, and (4) longitudinal studies'(p. 103). They also add that 'the *case study* and research *survey* are heavily used by the mass media and are therefore quite well-known' (p. 113).

> "A *case study* is confined to one or a few subjects(cases), the focus is usually broad in the type and quantities of variables that can be studied, and the approach tends to be in-depth and comprehensive. ... Since the focus is on a single case or limited number of cases the problem of generalisation is a major difficulty with the case

> study method. In addition, bias might be manifest in the very cases that were selected for study as well as the open-ended nature of the case approach, which may allow the investigator to influence the nature of the case under study" (p. 114).

Thus the 'case study' and its shortcomings are given. However, other methods or approachs are not without their problems. The important point here is to design a series of case studies that mitigate these criticisms.

'The term *survey* is used in a variety of ways, but a main feature refers to the gathering of data or information from a sample or specific population usually by questionnaire, interview, or telephone survey' (p. 114). We are concerned with collecting data from the area, by means of the 'Field study'. But Field studies covers two types, namely 'field research' and 'field experiment', 'Field research in this context refers to a place where research is conducted, such as work, play, street life, or training situations' (p. 121). The same authors also explain that;

> "Main activities in field research involve *entering* into a field, having a clearly defined *purpose* and organisation for the purpose, *observing* those interactions vital to understanding the social situation, *listening* to obtain understanding, *recording* what one hears and sees, and finally, *analysing* the field notes to create integrated profiles of the field setting" (p. 132).

They go on to define what 'field experiment' means. In their view;

> "The field experiment, in contrast to regular field research, takes advantage of assessing social situations and the people in these natural ongoing life situations, and in addition, manipulates one or more independent variables to determine the impact of such intervention in a natural environment" (p. 132).

Summarising, it appears that our work is a 'Field research' kind of 'Field studies'. This latter is one of four 'Data collection Approaches', and all stand together in a group of 'Descriptive Designs'.

There is no single way to collect data from the field. Observation is one approach. The most well known are 'participatory' and 'non-participatory' observation and depend on the circumstances in which the survey has to be conducted. Strictly speaking, observation, in the view of Adams and Schvaneveldt (1985), has 'four methodologies', however due to limitation of time this detailed approach could not be adopted.

In terms of data collection it is claimed that;

> "D.L.Philips (1971), reported that about 9 of every 10 articles published in two major sociological journals,the *American Sociological Review* and the *American Journal of Sociology*, use either questionnaires or some type of interview as the main device in collecting data" (p. 202).

Adams and Schvaneveldt present their judgement about the importance and the frequency of using the two major strategies for data collection as follows;

> "Questionnaire and interview procedures remain long-established devices for the collection of data in all realm of social science,...
> Either of these devices can be highly structured or rather unstructured in construction, and the style of questions within both questionnaire and the interview can range from closed-ended to open-ended, simple 'yes' and 'no' responses,..." (p. 226).

Our consideration however has much to do with opportunities and resources. The time factor was of major importance. The total period of my studies are limited to three years, therefore the time spent on the site could not be more than a few months. On the other hand, there are only a few research studies of the rural areas of Khuzestan and no opportunity to look at conditions on the ground should be missed. The final decision to save both time and cost, was the interview and a questionnaire built up by the use of closed-ended question (constructed questionnaire) The approach selected was found to be effective despite some difficulties faced in its operation, that will be discussed later.

b- Design of questionnaire- The next step was to decide on kind of interview to be conducted and therefore the questions to be asked and eventually the type of questionnaire itself. In this section the procedure for the design and the translation of the questionnaire will be discussed.

Adams and Schvaneveldt (1985), classified the interview into the following four types dependent on their precise 'nature and type'. The 'focused interview', the 'non-directive interview', The 'clinical interview' and 'telephone interviews' (pp. 216-219). Despite the variety of interviews it is also possible to have a combination of both questionnaire and interview. In this form the interview will closely resemble the 'focused interview'. The respondent is thus limited by number and type of the questions asked.

Before the survey was begun, as has already been mentioned it was known that the respondents, all from remote, rural areas were illiterate. It was also known from earlier visits that they were

happy to have lengthy discussions. In fact this is one of the most common pastimes of these people, sitting in groups with friends and neighbours, drinking tea and talking. It was very difficult, and perhaps to some extent risky, to conduct interviews by picking out points from their responses. Recording the answers was not possible because the respondent spoke a local Arabic language. Besides, the equipment was not available. The advantages and disadvantages of recording the interview are discussed by Adams and Schvaneveldt (pp. 224-225).

All these led to thinking more of closed-ended questions, centred round a few number of general topics, to discuss with the respondents. Another influential factor was access to skilled interviewers, it would certainly be very difficult to find those capable of handling the job in those very special circumstances. This move towards more closed questions later proved itself to be the correct decision.

By September 1987, while in York, the first draft of a questionnaire was prepared in English. (see Appendix I) It took some time to get advice about its form and content to suit further computer work. At this stage it was discussed with Dr Rob Fletcher from the Computer Centre , the University of York and also another expert, Eileen Sutcliff, who gave me her comments and advice. A series of questions were considered and the first draft was finally prepared.

This questionnaire contained 120 questions. However it became necessary that to revise and reduce the number of questions and adapt them to the situation in the area and, of course, translate them into 'Farsi'. With the main objectives in mind the questions were

grouped as follows;

1- The general characteristic of the respondents
2- The social and economic results of reconstruction
3- The attitudes of the inhabitants towards their reconstructed settlement and houses

This last group also contained questions relating to the;

a)-Location of the village
b)-Site layout
c)-Design and construction of Houses

In each group there were also questions referring to the process of reconstruction and people's attitudes towards it.

In November 1987, when the area was first visited in order to choose samples and make preparations for the survey in each village, a few questions were asked of local people in an informal way. This was very helpful and gave an idea of the kind of questions that might prove unsuitable, too difficult or too detailed to receive an answer. Adams and Schvaneveldt, list a series of factors to be observed in the design of questions which were found to be very useful. (pp. 206-10)

In Tehran, after the first visit to the area the translation of selected questions into 'Farsi' was begun. The author had the invaluable opportunity of discussing this process with Dr Rafi Poor, from the Department of Sociology University of Shahid Beheshti, Tehran, who is the author of a book on research methodology and a close friend. The first questionnaire in Farsi containing 60 entries was prepared. During the next journey this was tested in the area, in the village of 'Albuafri Jonubi' and amendments were made. This 'pilot survey' proved very important.

At this point it was still hoped that the interviews could be conducted with the help of an interpreter. However the test in one

village indicated that this was going to be risky and unreliable. The interviewers were found to be translating the questions with some differences that could not be overlooked. The main problem was that the local people who spoke their own Arabic language and though the interviewers used the same language, when they translated the questions from 'Farsi' into the local language, there were many differences in translation. There was no other choice but to translate the questionnaire into the local language, however, still other obstacles were faced.

Firstly, there was the risk of loosing quality during translation. This problem was overcame with the assistance of some educated local people. Secondly the local language is only used verbally, and does not exist in written form. (i.e. The local language originally is Arabic but there are many words and phrases coming from other languages including Farsi. However the Arabic language can be written in the same characters as Farsi. We decided to write the translation in local pronunciation). This led us to translate the questions into local language but not the answers. Further more the interviewers were able to speak the local language but had never written or read it.

Before conducting the main survey, time was spent with the interviewers as a group to practice reading the questions fluently. To summarise, the procedure for preparing the questionnaire followed these stages;

1- The first draft, 120 entries, in English, in York.
2- The second draft, 60 entries, in Farsi, in Tehran.
3- The revised drafts following testing in the area, 60 entries, in Farsi.
4- Questions only in the local Arabic language , in Susangerd.

c- Training the interviewers- In most surveys time is usually limited and if one person decides to tackle the whole job single hand, it may take months or even years to complete. Furthermore if the period of survey becomes lengthy it may affect the respondents' attitudes due to unknown factors, thereby biasing the results. It would serve no purpose to use students familiar with the technique of interviewing if they were unable to converse with the local people. In fact only one student, (Muhammad Saeid Darvish, from the School of Architecture) familiar with the local language was used.

Local people had to be trained and used as interviewers. During the first visit this task was discussed with head of the 'Jahad Sazandegi of Dashte Azadegan District' (Construction Crusade). They agreed to second a group of staff to assist as they were convinced that this would be an excellent learning opportunity.

The staff are usually young people, very often with a rural background. It was a great advantage to have people accepted by the villagers. The weakness was that they had no previous experience of this work and perhaps there was also a risk of influencing the answers during the interview. However, while they worked half a day for their normal job, for the other half, for a period of two weeks was organised as a course to talk over aspects of rural development and the issues surrounding the field study and interviewing techniques. At the end of the day, there were eight interviewers prepared to assist the researcher with the survey.

d- Lessons learned in practice- Here is a summary of the observations on the methodological aspects of the survey in practice. These might be valuable for further surveys, especially in the same area.

1- The method of interview, using constructed questionnaires, with most of closed-ended questions was useful but with weaknesses. The local people were used to chatting for hours but this was difficult to direct. Informal interviews of the not directed kind could be useful but, for a restricted number of respondents.

2- The value of observation must not be underestimated when dealing with the behaviour of occupiers.

3- Photography, making measured sketches, recording activities and use of space were essential.

4- The design and structure of questions is more crucial in rural areas. Words similar to those the people use in their ordinary conversation, helps to make the interview more relaxed and informative. This leads to less misunderstanding of the questions on the part of the respondents. There were some 'Farsi' terms , for example, that it was difficult to find any proper equivalent for in the local language.

5- Despite the advantages of local interviewers there is still the problem of being a stranger within these communities. This is especially so when one appears to be an official with asking questions. Every interviewer on the door step had to explain the purpose of the survey.

6- For the interview, the ideal is to be alone with the respondent, the presence of others may affect the answers, often it was impossible, simply because it was at odds with the traditional way of life, which

is to sit and chat in groups for as long as they wish. Who could ask one of them to go out? Once the interviewer had entered a house, the neighbours and others living in the same house, wanted to join the meeting to satisfy their curiosity.

7- The role of the interviewers is crucial. Not having people from the same culture, especially with language differences can make the results highly suspect. On the other hand it may be unreasonable to expect trained interviewers from the area. If the studies continue, however, they will become more experienced.

11-4- Construction of samples

This section, after a brief review of principles of sampling, aims to explain the procedures followed to select the zone to be studied, the criteria and method used for sampling villages, and the selection of householders for interview.

Sampling does not exist only in the scientific sphere. In our daily life we frequently use sampling for different purposes. In Iran the rice traders are not able to check all the rice, they take samples and judge the rest as being of more or less the same quality. In the hospital laboratory only a drop of blood is tested. In some countries elections are preceded by polls to predict the outcome.

In terms of surveys when the population is large, sampling becomes inevitable, nor is there any need to cover the whole of the population. There are two issues here; first, the methods of sampling, and second the sample size.

a- Sampling methods- The first of two methods is *'probability samples'* and the second *'non probability* samples'. The first is characterised by, '...each element or groups of elements having an equal probability of being included'. Adams and Schvaneveldt (1985 p.181). The same authors claim that; 'All samples that do not determine the probability that a given element will be included are referred to as *non probability samples*' (p. 180).

There are different approaches for sampling in each group. Selection of any of them will depend on the particular circumstances. Probability samples include *'Simple random sample'*, *'Systematic random sample'*, *'Cluster sample'*, and *'Stratified sampling*' (pp. 180-182).

The first technique is simple random sampling and is used frequently. The name of each element of the population under study is written as a word or a number on pieces of paper of equal size and colour. The numbers can be picked out at random and returned to the box to keep the probability of selection equal.

Another is systematic random sampling. A list of continuous numbers is prepared for all the population, the sample size is decided, beginning at one number the researcher decides how many samples he needs and selects those numbers accordingly. For a more confident choice of which number to start with, it is possible to select a number of one to nine randomly before starting the systematic random sampling.

Cluster sampling is usually used for 'logistic' problems. This is where the population is so scattered that access to it would be very time consuming and expensive. It starts by dividing the population into groups, usually chosen randomly. Further, population samples will be selected from these clusters, rather than from the whole.

The fourth technique is stratified sampling. This approach is used when the population is large and the researcher before starting the survey is able to identify or is interested in studying specific groups among the population. One example is a survey from a university. It is of course possible to list all the students, lecturers, staff, and to use the simple or systematic random method to select a certain size of sample for a study. But the researcher might be interested to know and compare the responses of students with those of lecturers, therefore the population of the university will be divided into 'strata', in this example 'student', lecturer',..etc.

Then from each of these strata or groups the samples can be selected by other methods. This can also be proportional or non proportional.

In social research there are times when probability sampling is not available or accessible. The next best is 'non probability sampling'. This can take different forms. Adams and Schvaneveldt (1985 pp. 182-184) describe them as *'Snowball sampling'*, *'Convenience sampling'*, *'Purposeful sampling'* and *'Quota sampling'*. This latter, they say, is in fact 'a special edition of stratified sampling in which one attempts to include the various elements in a population in a final sample' (p. 183).

b- Sample size- How large should the sample size be? Initially, one may try for some magic response, such as x percentage of the population under study. This figure seldom exists. Deciding on a proper size for the sample depends on many factors including ' ...the purpose of the study, design, data collection method, and the type of population available for the research problem' (ibid p. 184).

There are however some 'guidelines' which can help to make decisions about the sample size. The more the research population is *'homogeneous'*, the smaller the sample need be, like the example of blood which was given earlier. The other guide is the fact that, [...the smaller the difference between sample size and population size, the smaller will be the *sampling error*, and a more accurate "mirror" of the entire population] (p. 184). The method of *'data collection'* is another factor, which relates to the cost.

The same author also mentions other factors affecting the size of the sample. Among them are the *'degree of precision '* needed, also what type of *variable questions* will be analysed in the data. (p. 185)

This latter refers to the number of 'relationships' between the variables to be examined. If there are many the sample needs to be large. In relation to this, Gardner (1978), says;

> "There is no magic in any particular percentage though people often seem to think that 5 per cent is somehow respectable. Nor is there a universally ideal size such as 500. However samples of less than 30 or 40, from relatively large populations such as those covered in social surveys, are usually not adequate for statistical analysis" (p. 111).

In brief it is good to have a large sample size but going above a certain size would only be a waste of money and effort. The size of the sample is reflected in the 'standard error', which illustrates the degree of accuracy and precision of the variable. The example Gardner gives on (p. 113) is very clear. If the sample size is, for example, 100 and the standard error is 4.74, by increasing the number in the sample to 400 the standard error will be 2.37, something around half.

Using a computer programme, such as that used of the present study (SPSSX), the standard error and therefore the degree of accuracy of each variable is, in the case of the t-test, for example, calculated and reported. (SPSSX Users Guide 1986. Chapter 25). It is usually accepted that if the size of the sample is larger than 30 it is a large sample. (Anderson and Zelditch, Jr 1968, p. 255) Moreover usually there are statistical tables joined to books on statistics, here the size of the sample is usually not larger than 120 or 130, and very often only 60. (e.g. Guilford 1978, Clake 1978).

c- Sampling for the present survey- This section aims to explain how the zone under study was chosen, the sampling system it was decided

to use and how the villages were sampled and householders in each village selected for interview. The geographical location of the sample villages and the number of samples in each village will also be illustrated.

The zone- Through discussion with colleagues in Tehran it was found that nearly 100 villages out of the 315 damaged or destroyed in the Khuzestan province have been reconstructed. The rest are either in restricted zones or under reconstruction.

The first step toward the survey was to decide on the area to choose the samples from. The initial idea was to select the samples from all over the province, but after the first visit it emerged that the zone under study should be limited. There were two main reasons for such a decision; first, the logistics and second, the interviewers. During the period of this survey we had full logistic support from 'Jahade Sazandegi Dashte Azadegan'. This logistic support was crucial, bearing in mind the area is 1000 km from the capital where the researcher lives, and that in a small town like 'Susangerd', facilities are very limited.

In 'Susangerd' 'Jahad' prepared a room, sleeping facilities, regular food, and most importantly transportation over all the area. Having access to their telephone, and occasionally using their stationary and secretarial facilities was an enormous help in conducting the survey. More importantly the interviewers were from their staff, seconded to work for half a day on their own job and the next half on the survey. Getting these facilities in other areas was if not impossible, at least very time consuming, thus reducing the time available for the survey. The time spent organising a visit to areas

out of this district convinced the researcher of the inherent difficulties and risks. These practical issues suggested the 'Dashte Azadegan' District, where the distances involved make it possible to visit a village and return in three or four hours.

The car the Jahad provided was permitted to call on those villages under the administration of this centre. Moreover the interviewers had to come back to 'Susangerd' to stay over-night. Going to many parts of the province and working for a few hours in the village would have made it impossible to come back at night.

57 villages out of 100 had been reconstructed by that time and were in fact located in this zone. Furthermore the major criterion for selecting the villages was to put them into groups according to the policies by which they were reconstructed.

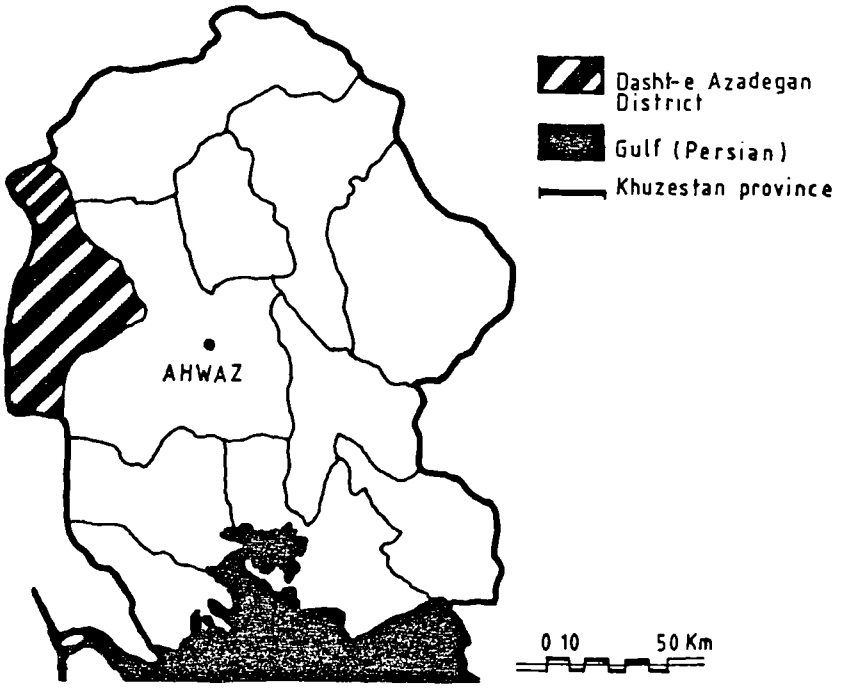

Fig 11-1: Khuzestan province and Dasht-e Azadegan District

Sampling Villages- With a list of all hundred reconstructed villages the next step was to select the samples. As discussed in Chapter I, the policy of reconstruction has changed substantially over the years and it is possible to recognise three main groups given below. In explanation there are two criteria for these groups. The main one is the degree of the local people's participation in the process. The second factor refers to the concept of design of the houses and the way it has been viewed in each policy. The three groups are ;

group 1- Participatory
group 2- Non-Participatory
group 3- Semi-Participatory

The participation of local people has become one of the major criteria for success as witnessed by the reconstruction of the famous village of Sarie. Here there was the highest degree of involvement on the part of the local inhabitants. It showed how the local people have the ability to get involved in many aspects of the reconstruction of their village, including project management. The time taken for reconstruction was only six months, while in another village, Jelizi, where there was a non-participatory programme it took three years with much higher costs. This evidence is supported by the literature where the importance of local people making decisions concerning reconstruction, cannot be overemphasised.

With all these in mind the **stratified sampling method** was used to divide the villages into three groups, according to their level of participation. Following that samples were selected from each group.

A list of the three groups of villages was prepared. In group

1, with maximum participation, there were only two villages, 'Bardie' and 'Sarie'. Both were chosen because Bardie was one of the first villages to be reconstructed, while Sarie was reconstructed almost three years later. A comparative study of these two could be very useful. Considering the time and manpower available, 11 villages were selected as samples. Two from the group 1. Five from group 2. and four from group 3. The list of villages and the groups they belong to is as follows;

Group 1	**2**	**01- Bardieh**
		02- Sarie
Group 2	**5**	**03- Jelizi(Shahrake Shahid Beheshti)**
		04- Soveidani
		05- Sachet Hamoudi
		06- Motayyer,Talayel,Hassan Dahish, Ayyash
		07- Moerez
Group 3	**4**	**08- Gheisarie Sofla**
		09- Choulane
		10- Abarfoush
		11- Seied Naser(Houfele Haddam)
total	**11 Villages**	

Selection of householders for interview- The next stage was to decide on the number of householders to interview in each village and to select them. A list of the number of houses in each village was prepared. Then the number for each village was decided according to the size of the village. The following table illustrates the actual number of houses and householders interviewed in each village;

Village name	No of houses	No interviewed
Sarie	296	23
Bardie	252	20
Jelizi	95	20
Soveidani	73	11
Sachet Hamoudi	39	11
Motayyer,	57	11
Moerez	36	7
Gheisarie Sofla	40	8
Choulane	37	10
Seied Naser	24	5
Abarfoush	22	6
		132

The number of houses is not a true indicator of the number of families in or the population of the village. For example, the village Choulane with only 37 houses has a population of almost 600, while in the village Abarfoush there are almost 127 people living in 22 houses. In other words the relationship between the number of houses, families, and population is confusing. And that is in addition to the confusions usually found in statistics provided by different sources.

Selecting the houses for interview was conducted using the simple random method. Fortunately there were maps of most of the selected villages available. In the past, this would have been impossible, but since reconstruction most villages have new site plans. In the case of Sarie and Bardie good surveys were prepared of the original plots clearly. These site plans were available from 'Bonyade Maskan Enghelabe Eslami', the principal reconstruction organisation. Moreover in the School of Architecture, there is a good library relating to Khuzestan reconstruction. Naturally it took some time to collect these documents.

In some cases the maps needed updating before the householders

could be selected. One house would be selected and then,for example, six houses away, the next house was selected untill every house was listed and marked on the map. Eventually nine out of 11 village maps were marked up for interview. For the remaining two villages, Seied Naser and Abarfoush no map was found, but fortunately they were small enough for the decision to be made on site.

11-5- Implementation and data collection

After preparing the questionnaires, training the interviewers, and selecting the samples, it was time to go on site, to launch interviews and complete questionnaires. Problems of transportation were solved by a Land Rover provided by Jahad Sazandegi and driven by one of the interviewers. A schedule was designed to visit villages which were on the same road. In designing this schedule it was decided to visit smaller villages for the first two days. This could be practice for interviewers and it would be easier to resolve any mishaps. As regards transportation there were a few problems. The rain, however, had started and the tracks were usually muddy, necessitating a very low speed. In one case, the road to Gheisarie Sofla, was so muddy that it was doubtful that the car would be able to pass. The villagers complained about this road saying that in the rainy season only tractors could pass.

The other notable case was the floating bridge over the river Karkhe became impassable. Thus the group had to hire a boat and go by water to the villages, Abarfoush, and Seied Naser. By chance both these villages were close to the river. On the return journey it rained and the group returned cold and wet in the dark.

a- Finding houses- In the first village finding the houses marked on the map was problematic as the interviewers were not able to read maps and orient themselves. It was therefore necessary for the interviewer to be shown the place he was to call at. In larger villages, such as Sarie this could have been impossible; fortunately after the second day, two other friends from the School of Architecture

in Tehran, (Shakeri, and Darvish), joined the group. Extra copies of site plans were provided and each of these three, (researcher, Shakeri and Darvish) helped to locate the interviewers.

My own situation and role was different from that of interviewers. It was necessary to co-ordinate the work and to find local people to assist as interpreters. On some occasions I found an interpreter and in some cases the householder was familiar with 'Farsi'.

b- Acceptance by householders- Two major factors facilitated the householders' acceptance to be interviewed. Firstly, these rural people customarily respect guests. Refusing a guest is forbidden behaviour and it is impolite to refuse their invitation. Secondly, since the interviewers work in Jahade Sazandegi and deal with these villagers as a matter of routine, their acceptance was simplified.

Altogether there were less than five instances out of 132 where the householder refused to be interviewed. The time to call on the villages in most cases during the late afternoon. This meant that the interviewers could do their normal jobs in the morning and then go on site in the afternoon.

If the householder was not available the interviewers were asked call at the house next door right, and then on the left. But in practice it was not always possible to find the designated householder. The female would not agree to the interview if the male person was not in. A brief introduction was very important effective way of establishing credibility.

Each interview was found to last 30 minutes on average. To this should be added the time to find the house and to give the

introduction, to go inside and have a cup of tea. Altogether that made the time for each interview up to 50 minutes.

Remarks- There are some further noteworthy points.

1- All the respondents of the present study were males. There was an idea to find and train some female interviewers because it was well known that the male interviewers would not be easily accepted by females. But in practice finding female interviewers tended to be very difficult. This made it impossible to get the view of housewives about their houses, although they obviously spend more time than men at home and make more use of the space.

2- The descriptive questions unlike the closed-ended ones resulted in certain problems. The interviewers were not able to pick out the relevant points and to record them easily. Moreover it took time to write the response down and the interviewers often had poor handwriting. In brief, the more optional responses which can simply be ticked by the interviewers, the better.

3- In some cases when requested to be interviewed, the householders referred the interviewers to the main committee, or to the older members of the village. However, this was not a serious barrier.

4- Though the interviewers worked hard without being paid, their enthusiasm was not that of the researcher. The interviews should be completed as soon as possible and certainly not longer than a week, to avoid a decline in the standard of the work.

5- The completed questionnaire had to travel from Khuzestan to York with the risk of loosing them. If in Tehran there were access to similar computer services as in York, then the data could be processed and copied in Iran. This is a point to consider for future studies.

CHAPTER TWELVE.

CHAPTER XII

SAMPLES PORTRAIT

Introduction: In this chapter each of the sample villages is described to help the reader understand the context of the data analysis in the following chapters. The information is divided into two categories; first the general characteristics of the villages (i.e. location, population, etc.) and second, the damage the village received during the war and the details of its reconstruction (i.e. total destruction or minor damage, design of houses, material for walling and roofing..).

Of the eleven villages selected the information available for some is more than for others but in some respects the eleven villages are homogeneous. The agricultural production, for example, is usually wheat, barley and vegetables and occasionally there are animal husbandries, including buffaloes. There were similarities in the materials used for the construction of houses. For example in all 11 villages, the doors and windows were made with steel frames. These similarities will not therefore be spelt out for each village. After briefly introducing each village, a summary will be presented in the form of tables.

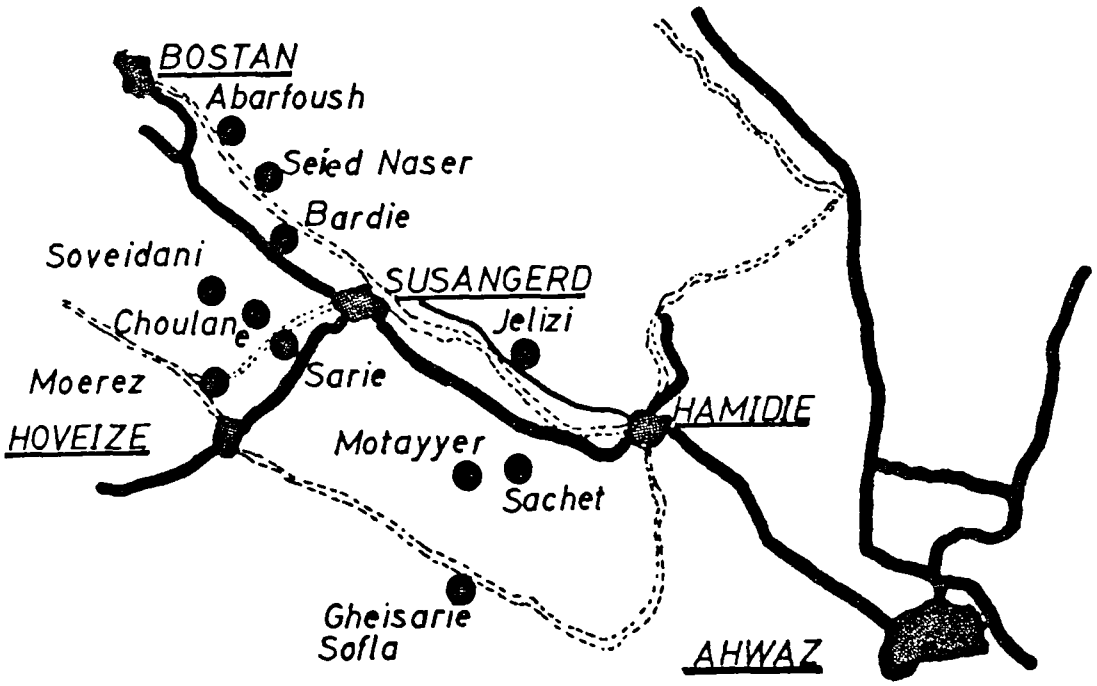

Fig 12-1: Location of villages selected as samples

[Source: The author]

Sample 1, Sarie

Group: 1 **Location:** 7 Km south of Susangerd, near the road to Hoveize

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Population: 2477, (1986) **No of families:** 356 **No of houses:** 296

Services: Mosque, clinic, school, co-operative, clean water, electricity.

Reconstruction started: 1982 **Completed:** 1983
Organisations in charge: Bonyade Boushehr and Dashte Azadegan.

Role of people: Labouring, decision-making about location of the rooms, management and control.

Materials used; Foundation: Lime mortar, cement blocks as wall base. **Walling:** Normal burned bricks and cement mortar. **Roofing:** Wooden beams, compact bamboo panels. **Finishing:** Mud and straw on the roof, cement mortar plastering inside walls and floors.

Total rebuilt area[1]: 17760 m^2. **Average/house:** 60 m^2

Approaching the village- From the main road it can easily be seen that the village is large. In fact Sarie is the largest village in the District, with some signs of urbanisation and prosperity. A road 1 Km long connects the village to the main asphalt road, which runs from 'Susangerd' to 'Hoveize'. Before getting to the centre of the village the road passes houses on either side. Though the landscape is flat with little vegetation.

The site- In the centre of the village there is a square, around which are the mosque, school and co-operative buildings. The height of the mosque and its location, just facing the main access road is the significant feature to the visitor. Not far away, there is also the village clinic. Unlike small villages, the houses are bounded by walls

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1.This only refers to the newly rebuilt domestic structures and does not include public buildings such as, the mosque, the school building, etc.

and entrance doors are fitted. A wide stream crosses the village from north to south. The outside of the houses is finished in mud plaster. No proper pavement can be seen and here and there pools of rain water attract the eyes as well as mosquitoes.

The site has three main parts, the first is called 'Sarie Shomali' (northern Sarie), the next is a series of houses built on two sides of two long street whose inhabitants are from a village called 'Loulie'. A few years ago their original village was destroyed by flood and they moved to Sarie. 'Sarie Jonubi' (southern Sarie) is the third part of the village and is more condensed. The people from 'Loulie' are nowadays considered as part of 'Sarie Jonubi', though, the village is officially known as 'Sarie'.

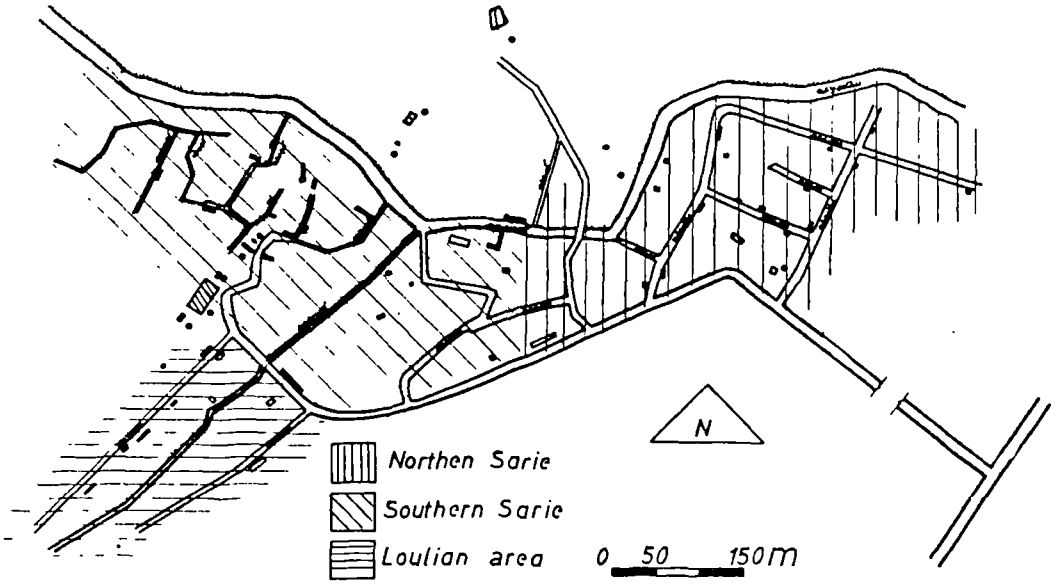

Fig 12-2: The site of Sarie and the three separate territories

[Source: Miri and Shakeri 1986]

Life style- Before the war the village had clean drinking water and electricity, also a school and clinic. When I visited the village, shortly after recapture, the remains of the water tank and concrete ponds for water purification as well some straight streets and bounded courtyards signified that village had been in a good economic situation prior to the war. Most houses were still in mud but here and there were rooms built out of bricks. Now most houses are in brick, the road is constructed and there is a new mosque that has a microphone to call people to prayer.

Plate 12-1: Centre of Sarie after reconstruction

[Source: The author]

Houses- The courtyards manifest the rural life style. Usually unfinished, with cows and sheep in one corner, chickens moving here and there and stacks of hay or fire wood in another corner. Although for villages like Sarie, which are closer to the city where gas cylinders are easy to buy, it appears that fire wood is still used for cooking, especially for baking bread. Around the courtyard there are separate rooms standing opening directly onto the courtyard, some in mud and some in brick. It can easily be seen that the old layout of houses has not be much altered during reconstruction.

Damage- From the very early days of the Iraqi invasion (1980) this village was occupied and for a long time it was on the front line. Iranian forces were based at a village 2 km to the north of 'Sarie'. In addition to the heavy bombing and shellings during the war the buildings suffered for another reason. The home army opened the waters of the river 'Karkhe' to the area to try to stop the Iraqi tanks. Though the trick was successful, it nevertheless damaged many mud built villages including this village. There were also a number of brick built buildings that resisted damage by flood and shelling.

Reconstruction- In summer 1982 the time came for the people to return to their village. They accommodated themselves inside the rubble of their houses and used bamboo or cloth tents for their temporary shelter. Many of them of course mended the damaged rooms and lived in them temporarily until the authorities arrived to reconstruct them. The first step toward reconstruction was taken by 'Jahade Dashte Azadegan'. they restored the clean water system, electricity, and the school. Moreover they also built a large mosque. It was necessary to cut all the reeds which had grown while the land was artificially

flooded and in a few months the canals, pumps and land were reinstated.

In autumn 1982 the reconstruction of houses was due to start. It was found that there were almost 80 rooms in the village that had resisted the war well, because of the good material they were built of. In 1983 'Bonyade Maskan' (Housing Foundation), became involved in reconstruction of rural housing, they commissioned a private consultant based in Tehran to prepare a design. Months later, it was found that the design paid no attention to the present layout and other existing circumstances in the village. Even the topography of the land had not been considered. The Local Authorities (Head of the District, Representative of Jahad, ...) consciously rejected the design.

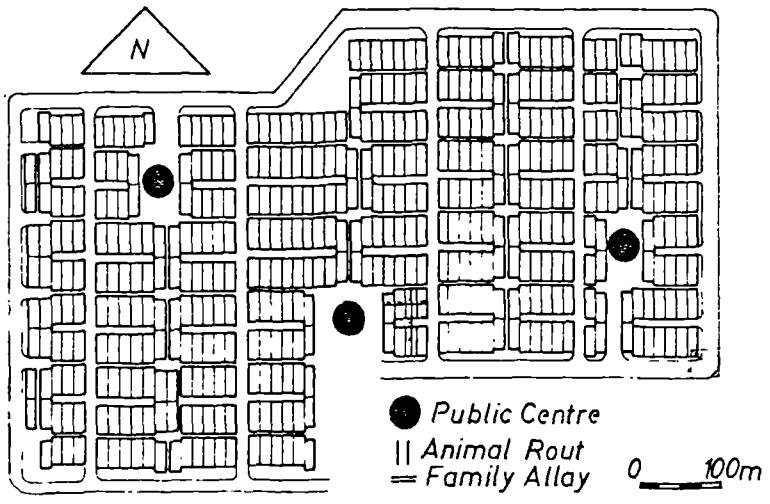

Fig 12-3: The first proposal site design for Sarie

[Source: Miri and Shakeri 1986]

Following that failure, another attempt was made by the consultant to make a new site design; a survey was carried out of the existing site to record the boundaries of agricultural land and buildings, such as, the mosque and the school. These were completely ignored in the earlier plan. When the new design was ready 'Bonyade Maskan Dashte Azadegan' took responsibility for implementing the project. The project was designed in such a way that it required the destruction of the existing buildings in order to reconstruct the new ones in their place. The plots of land were all equal in size and the design of houses were also uniform, the size of families, however much different.

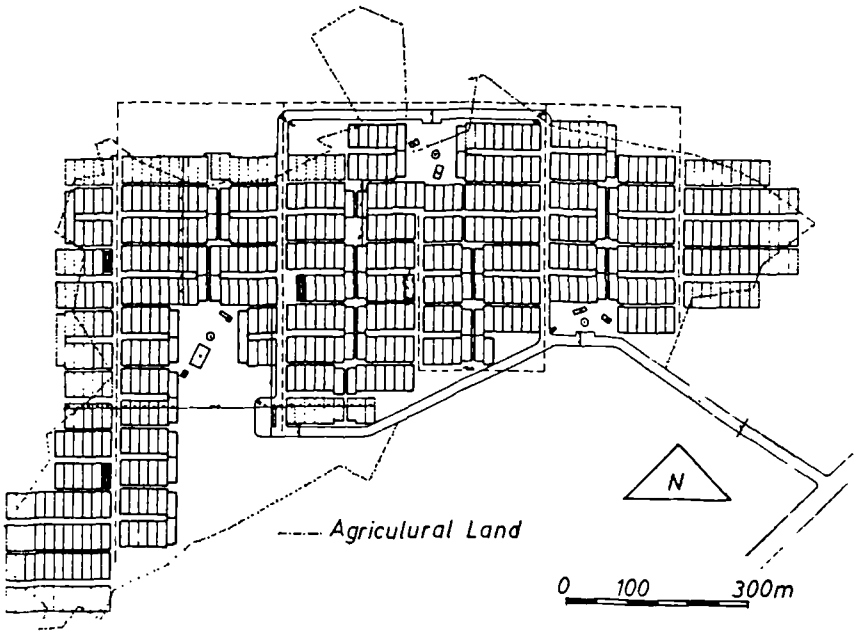

Fig 12-4: The second site design proposed for Sarie by consultant

[Source: Miri and Shakeri 1986]

The real trouble started when they wanted to destroy a part of the village in order to reconstruct it. The question was where to start? No one agreed to start with their house. Finally, after few weeks discussions, they decided to start with the construction of 20 units on a free piece of land on the west side of the village, as this would interfere least with the existing situation. Actually these 20 houses were never completed and are now standing abandoned under the sun and rain. The project was stopped for a series of complaints by villagers and legal problems concerning the ownership of that piece of land.

By this time the people had waited more than two years for the reconstruction to start. The Local Authorities asked the Ahwaz Office of Shahid Beheshti University, the School of Architecture, to find a practical solution. That was an important opportunity to introduce a more efficient new approach. This was the 'participatory' method introduced to give a sense of partnership to the villagers themselves. The main committee[2] of the village became involved from the very early stages of the new programme. A time-table and procedure for carrying out the work was agreed between the villagers and 'Bonyade Maskan Boushehr' who took responsibility for implementation. The new project started in August 1984 and in six months 296 houses were reconstructed.

Each family was allocated 56 m^2 which included one living room, a bathroom and toilet. The householder was to decide on the location and orientation of these rooms. The damaged houses were inspected by the architects based on the site, with the assistance of the Village

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2.This committe established by Jahad including elected members by villagers and approved by Jahad are in charge of all affairs of the village.

Committee. The standing remains of the houses were measured and the amount of material needed to repair each house was agreed and delivered. 'Bonyade Maskan' contracted masons to rebuild the houses. Payment was made by Bonyade Maskan only with the house owner's satisfaction and agreement. The family had to provide unskilled labour but in practice contributed to the construction as well. Electricity and plumbing was left to the householder to organise. This village became well known as a good example of efficient reconstruction, using the strength, skills and commitment of the of villagers, at the same time this helped to keep costs reasonably low.

Complaints- The village however is still suffering from some of the old defects. Although it was intended to conduct some public works, such as mending the alleys and preventing the stream from flooding the village, these works were not done. The reason is unknown.

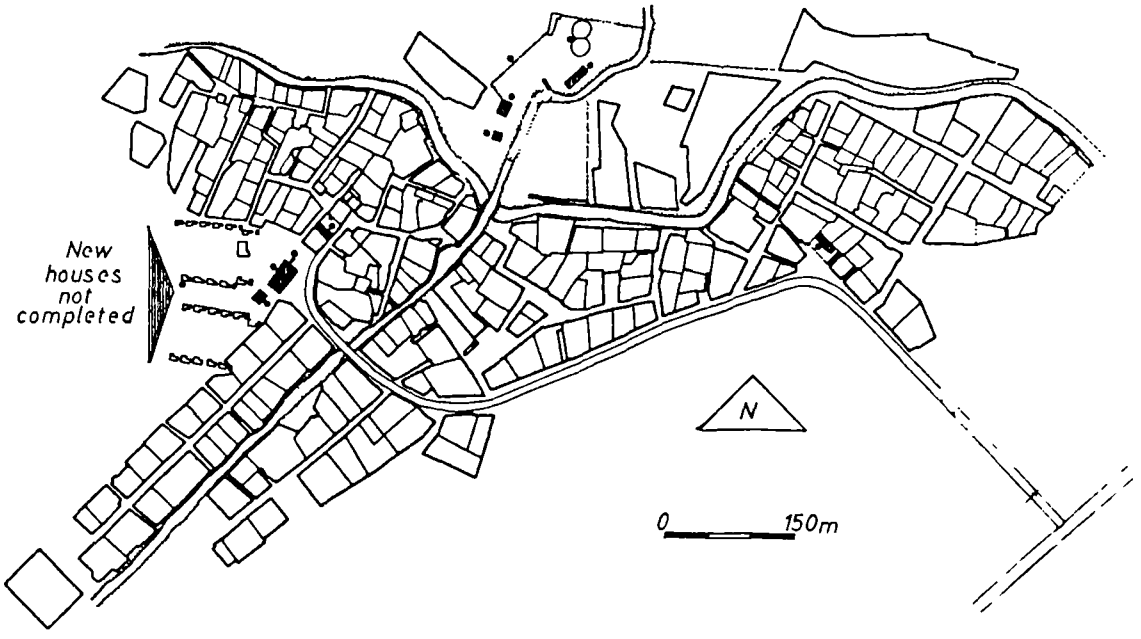

Fig 12-5: The actual site of Sarie unchanged after reconstruction

[Source: Miri and Shakeri, 1986]

Sample 2, Bardie

Group: 1. **Location:** 7 Km to the west of 'Susangerd' near the road of 'Bostan'.

Population: 1572, (1986). **No of families:** 220.

Services: Mosque (under construction), clinic, electricity, school, clean water, co-operative, and a rice mill.

Reconstruction started: 1982. **Completed:** 1982.

Organisation in charge: Jahad and Bonyade Maskan Kerman.

Role of people: Labouring, Decision-making about location of rooms

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Material Used; Foundation: Lime mortar **Walling:** Normal bricks **Roofing:** wooden beams, bamboo matts.

Finishing: Mud and straw on top the roof, Cement mortar indoor walls and floor, also walls from outside up to 60 cm covered by cement mortar.

Total rebuilt area: 10080 m^2 **Average/house:** 40 m^2

Approaching the village- After a ten minute drive from Susangerd on a good asphalt road, that goes from Susangerd to Bostan (and one should be surprised how it has resisted the pressure of a thousand tanks and military convoys during the war), Bardie appears on the right. From a distance the main feature to attract the attention is a new mosque under construction using yellow bricks. It is a sign of prosperity. The mosque with arches in the facade appears to be well designed and carefully constructed. The village stretches along the asphalt road, which is almost 1.5 metres higher than the level of the village. A view from the road reveals that there are still many mud buildings, although between them, rooms made out of bricks are apparent. Courtyards are usually enclosed by walls, although very often the entrance doors are open. On the south side, the big building

is the Agricultural Co-operative office. It seems the bigger the village and the closer it is to the city the more likely it is to have public resources allocated to it. Small hamlets in remote areas can be easily ignored.

Plate 12-2: Bardie after reconstruction

[Source: The author]

Site- The site is dense, squeezed between the road in front and a canal to the north. The 10 to 30 metre wide free land between the road and the houses is a mess. It is full of domestic garbage and pools of rain and waste water. A couple of scrapped vehicles stand in the ponds. Life seems to go on close to the road. The people use the asphalt road to go from one end of the village to the other to avoid being trapped in muddy alleys. In the centre of the village, narrow

main alley runs parallel to the road with a stream in the middle.

Life style- Before the war the village had electricity, a school, a clinic and a co-operative, as well as a clean water system and a rice mill. The public buildings were reconstructed near the main road usually in their previous locations. Many of the young people here understand 'Farsi', something, which in remote areas, may be found only occasionally. From the appearance of the buildings it can easily be recognised that the village is wealthy.

A householder took me to the 'Seied Neame Mousavi' head of the village an old man over 80 years old. He does not understand Farsi so I talked to him through an interpreter. 'Seied' in Arabic means gentleman, it is only used by those whose lineage goes back to the prophet Muhammad and his grand sons, the Shiite Muslims' Imams. The use of the title Seied is seen as a privilege all over Iran but among these people the convention is to give the highest priority to Seieds. Even the clan hierarchy respects this convention and many of the people of Bardie, including Seied Neame are proud to be called Seied.

Seied Neame has built a big 'Hoseinie' in one corner of his courtyard. He proudly insisted on showing me the building that was one big room 12 metres long and 4 metres wide with a porch in front. The floor was covered by hand made carpets. Although he personally paid a huge amount of money for the building it is used as a public place. It is used not only for religious services but also for meeting of the heads of families. The boundaries between private and public life are diffused in ways which for outsiders, is difficult to understand.

Houses- Inside houses the courtyard still has a stable in one corner, the oven is standing and a few cows are feeding. The

facilities of rooms and household hygiene seem not to have a general rule. Perhaps the income of the family is an important factor but I am convinced that it is not the sole factor. Perhaps it has to do with the culture of the family and the care they give to it. If we categories the features and life style of the villages from tents to large cities, Bardie and Sarie are good examples of villages which are

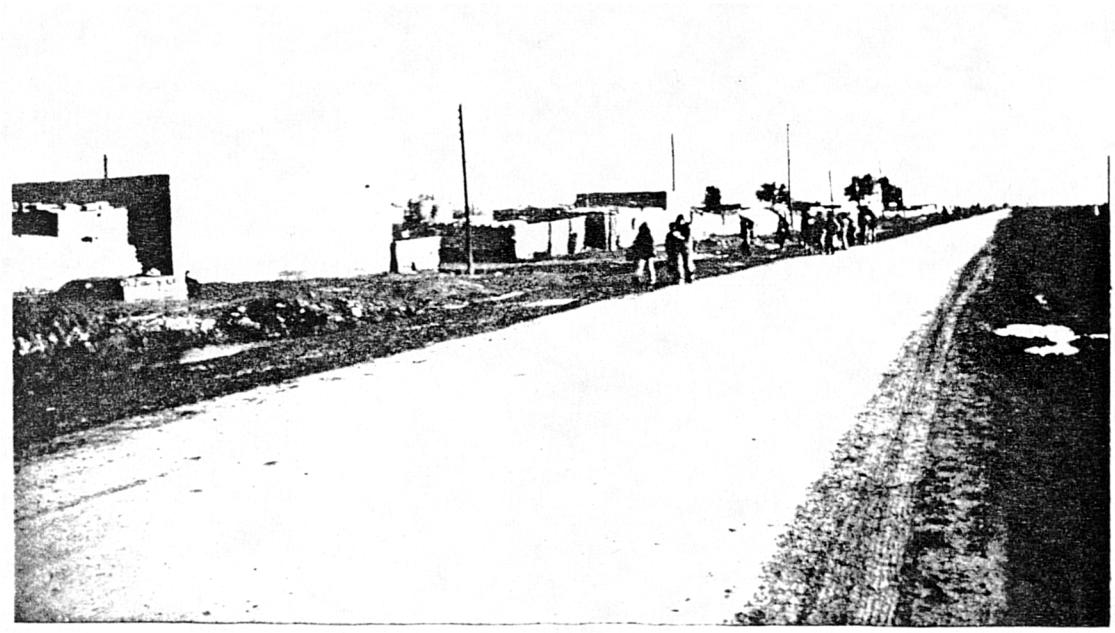

Plate 12-3: Another view of Bardie

[Source: The author]

Damage and reconstruction- Bardie was occupied by the enemy and since most buildings were of mud it was seriously damaged during the conflict. After two years, following the success in Beital Moghaddas operation, in the summer of 1982 the villagers returned to their homeland. The people used tents for temporary accommodation for their families in the ruins of their old houses. Reconstruction took place

before any regulations and principles for reconstruction for the rural areas were formulated. Within a few months the restoration of public services and agricultural land was completed and house reconstruction also started.

The approach was very simple. The plots of land were unchanged, for families up to 4, one single room and for larger families, two 3X6 m rooms were reconstructed. If in one house there was more than one family each was calculated separately. This approach was criticised by some authorities because no change in the existing layout of the village were proposed and the work was temporarily stopped. The village committee was involved and family members had to labour for their own houses. The householder also had the choice of deciding about the orientation and location of rooms on the plot.

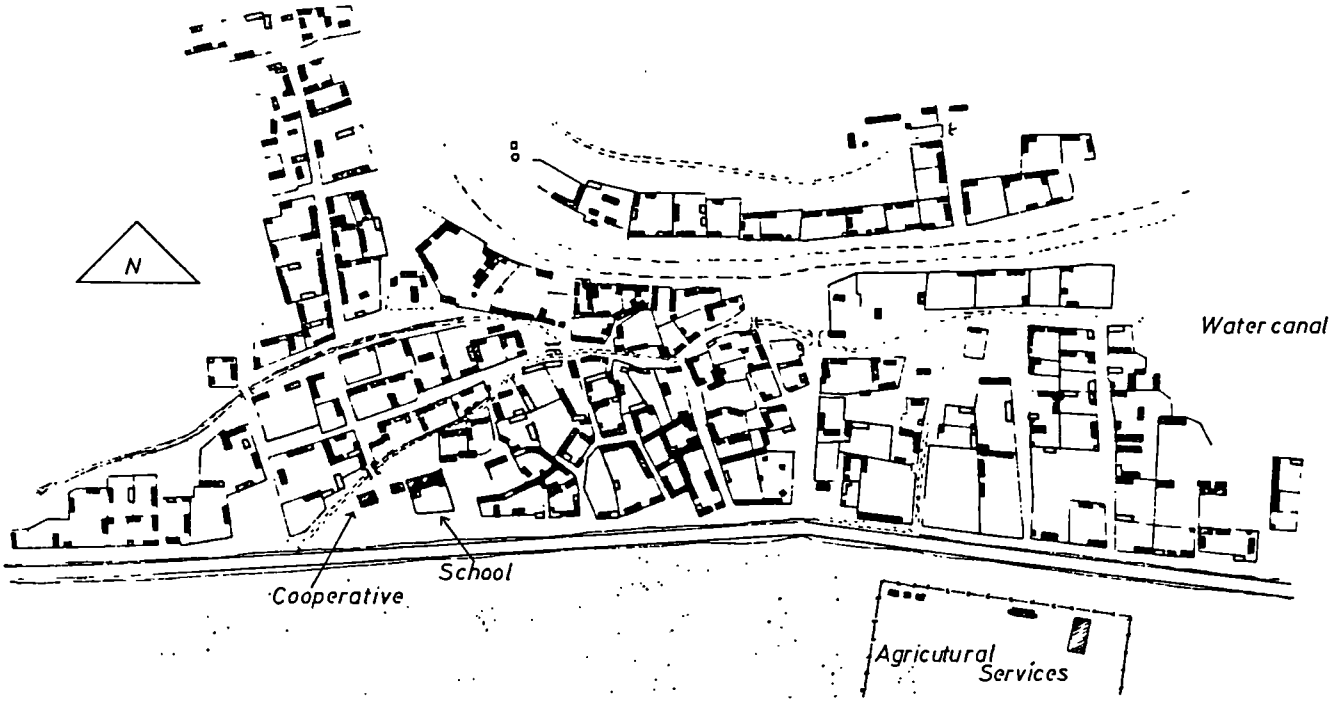

Fig 12-6: Site of Bardie unchanged after reconstruction

[Source: Miri and Shakeri 1986]

After reconstruction was completed there were some very obvious problems in the village. First, the buildings cracked because of inadequate technical attention due to poor foundations. The tree trunks used in the roofs were very often not the correct size and soon deflected and sometimes split due to the weight of too many layers of mud and straw for insulation. In addition there were complaints about the reconstruction agency not building the toilets. Also some of the old problems, such as muddy alleys, lack of a proper sewage disposal and traffic accidents to children and animals, still made life difficult for the inhabitants of Bardie.

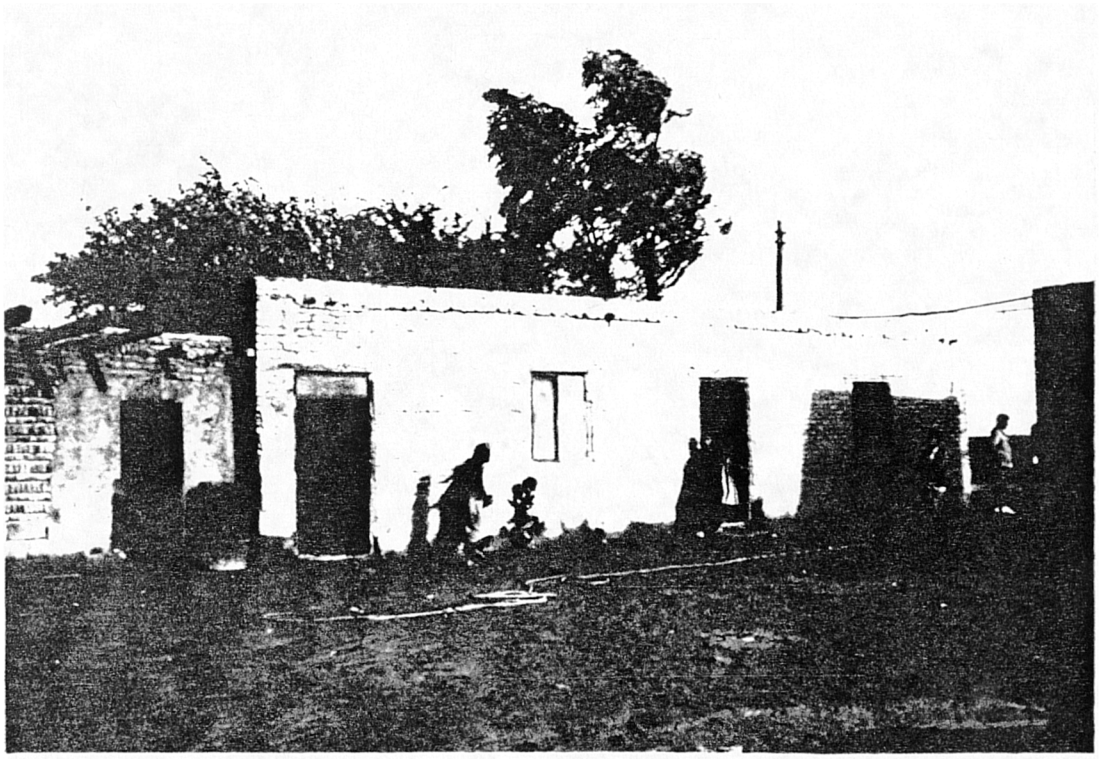

Plate 12-4: A reconstructed house in Bardie

[Source: The author]

Sample 3, Jelizi (Shahrake Shahid Beheshti)

Group: 2. **Location:** 15 Km to the north east of 'Susangerd'.

Population: 849. **No of houses built:** 200. **No of families:** 116.

Occupation: Majority farmers (Jelizians), minority shepherd (Sogurians)

Services: School, clean water, police station, electricity, local centre of Jahade Sazandegi.

Reconstruction started: 1982. **Completed:** 1984.

Organisation: Gold merchants of Tehran.

Material used; Foundations: Lime mortar, Cement blocks as base of wall
Walling: Cement blocks. **Roofing:** Steel beams
Finishing: Mud and straw on top the roof, gypsum for indoor walls.

Total rebuilt area: 13000 **Average/house:** 65 m^2

The word 'shahrak' in 'Farsi' means small town. It refers to a small settlement, which has some of the services of a town without being large enough to be called a real town. This village is important because it was the first one in this district to be reconstructed. Also the plan, material used and even the intervenor were different from all the other villages.

Approaching the village- Jelizi is to the north bank of the river Karkhe, so it is necessary to cross the river either near Susangerd or near Hamidie. The villagers cross by boat, but vehicles use a ferry. Building a bridge here would be very difficult, the river is sometimes up to 100 metres wide. Also the water level changes up to 3 metres during the year, which could damage a floating bridge. As the river changes its route during the year the banks are not stable.

The cheap and easy way to cross the river is by ferry locally

called 'Dobbe'. It is an floating iron platform attached to a steel cable stretched across the river. There is no engine and it only uses the flow of the river. A Dobbe might carry a few people or be big enough to take three cars. Crossing the river near Susangerd an earth road runs in the north of the river and gradually moves up to 5 Km away from it. In the far north also the hills of Allaho Akbar can be seen. From a distance the first outstanding feature of the settlement is the local centre of Jahade Sazandegi, with a large store and pitch roofs covered by galvanised sheet.

Plate 12-5: Site of Jelizi

[Source: The author]

Site- As the visitor gets closer the main street in the centre of the village comes into sight. Rows of grey houses queue up on both

sides. A wide concrete water canal passes to the south of the village. Between the canal and the houses there are the remains of mud houses, which in fact were the temporary accommodation of the villagers. In the main street the human scale is lost, it looks like a long desert. The village centre has the remains of public buildings, which were never completed. More important are the empty houses which have been vandalised or have farm animals in them. The narrow three metre wide alleys are full of rubbish and waste water. The designers never thought that such a scale of settlement required a municipality to keep it tidy.

Peoples background- Jelizi's inhabitants are from two previous villages, called 'Jelizi Haji Milishe' and 'Sogure Zamel'. 50 years ago the people of this village were separated from their tribe and settled near the river and built 'Jelizi Haji Milishe'. Like most others this village has the name of the head of the clan. The first village was had 65 families most of them farmers. A few worked as labourers on farms belonging to the Ministry of Water and Electricity.

Only two km west from 'Jelizi Haji Milishe' there was another village called 'Sogure Zamel', its previous name was 'Sogure Hanzale'. But the new village was started when half the population abandoned it and moved to a new site in the north called 'Sogure Eisa'. The hamlet only had 20 families, partly farmers and partly shepherds. It was made up of houses scattered over the land. This is usually the pattern among the settlements of those who were previously nomads. However, during the war all the houses were razed to the ground and the families came together to form a new village.

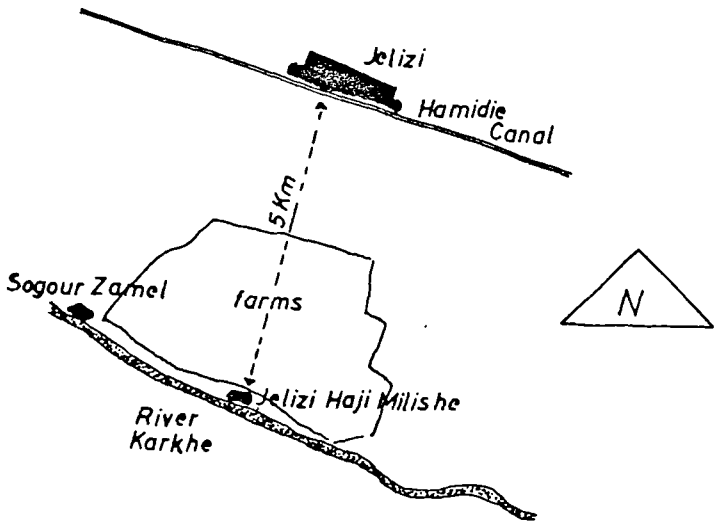

Fig 12-7: The present Jelizi and previous location of the two villages [Source: Miri and Shakeri 1986]

Reconstruction- In mid 1981 the areas near the hills called 'Allaho Akbar' were recaptured and the peoples of these two villages (i.e. Jelizi Haji Milishe and Sogure Zamel) were temporarily settled in the north part of the river on sandy land, close to 'Hamidie' canal. In the same year, the gold merchants of Tehran asked the Local Authorities to allow them to make some contribution to the reconstruction of the rural areas and they agreed. Since the original land had been flooded and the merchants were in a hurry, the villagers agreed to move to the present location, almost 5 km to the north of their original land.

A graded site was set out by the engineers with full details of the costs. Their layout implied that perhaps they had never been to

the rural areas. For example, a central street 45 metres wide was planned, crossed by smaller alleys each 3 or 12 m wide, far too grand a scale. The plots of land were each 320 m^2 and typical houses had three rooms and a porch in front. In the middle of the site, a square was set out with a public bath, mosque, clinic, school and co-operative centre in the four corners. These public buildings have never actually been built.

We have to ask why the site allows for 200 house units, while the number of families is around 100. The houses are formed of four units back to back and similar to in urban areas. Perhaps the large scale was for propaganda purposes on behalf of the gold merchants. They also suggested the village be called 'Shahrak Shahid Beheshti' (Small Town of martyr Beheshti[3]).

Quite exceptionally, cement blocks were used for walls and steel beams to support the roof. The rooms from inside were also plastered with gypsum mortar. A contractor was appointed and from early 1982 reconstruction started. The villagers were never asked to help with anything concerning the construction of the new village.

It took three years for the project to be completed and that was without finishing the public buildings. The villagers decided to rebuild their new temporary houses with wooden roof beams from their previous houses and in few weeks they had built a new village in mud, using traditional construction methods, close to the site where the 'formal' reconstruction project was slowly going on.

3.Dr Beheshti was one of the religous political leaders of the Islamic Revolution terorized with 72 other people by a military opposition group.

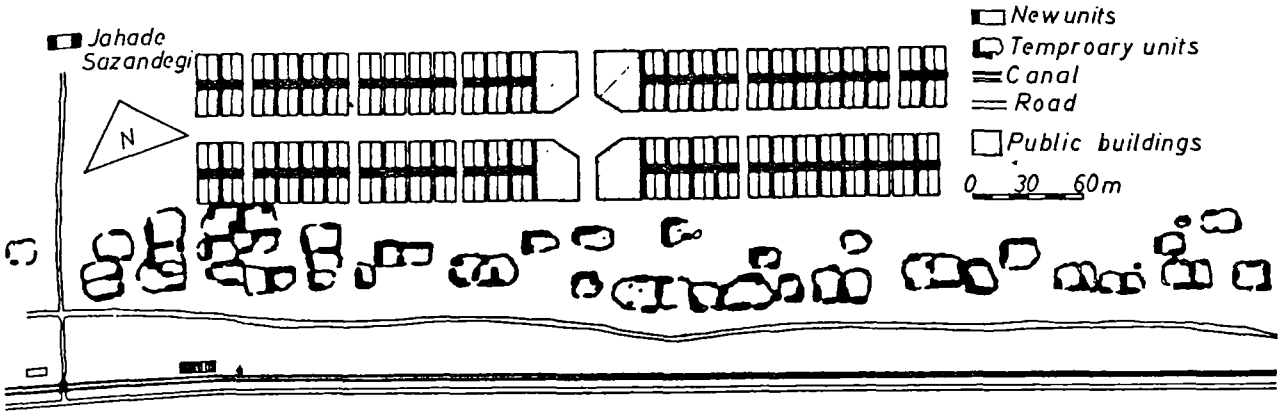

Fig 12-8: The site plan of Jelizi

[Source: Miri and Shakeri 1986]

In 1984 these buildings were eventually finished and the Tehran shopkeepers in an opening ceremony, handed the 'golden key' of the 'Shahrak' to the Local Authority. This was when the trouble really started. The question was, how to distribute the completed houses. There were complaints from the other nearby villagers, saying that they also wanted to live in such modern houses. Who can claim that steel beams are not better than wooden ones?

Concerning the distribution there were two major problems; first the houses were built to the same size, all with 3 rooms, while the size of families could vary from 2 to 18 members. The second problem was to do with the number of houses built, 200, which was twice the number of families. It was argued that if all the buildings were

distributed among the existing families, each could gain twice rooms as people in other villages received. This was obviously not right. No doubt this kind of situation could create complaints and eventually lead to a crises in all the 300 villages of the region.

The School of Architecture was invited to resolve this. They surveyed the original site (i.e. previous village), draw up a list of eligible families and their size. 117 families from both villages were given house. For distribution size of the families were observed, so the small families received only two rooms instead of a house and larger families up to five or six rooms. 16 units were set aside for public services. This left 67 empty and by now vandalised units.

Life style- In the new Jelizi, the two previous villages (i.e. Jelizi Haji Milishe and Sogure Zamel) are located at opposite ends of the site, between them are the empty houses. After a year the outlook of the village has changed a great deal. The old Jelizians have established their courtyards, planted gardens, and installed big and expensive steel entrance doors. At the other end of the village the 'Sogurians' are living very similarly to the way they did in their previous village. No proper courtyards or boundary fences have been established. They have just adopted the land around their houses to accommodate several hundred sheep. The contrast between these two communities in one single settlement is hard to credit.

Today Jelizi has clean water and electricity. The school is using one of the houses, and no less important, a local centre of 'Jahade Sazandegi' has been built close to it. The people's main complaint, however, was about the small size of the courtyards and the lack of sewage system.

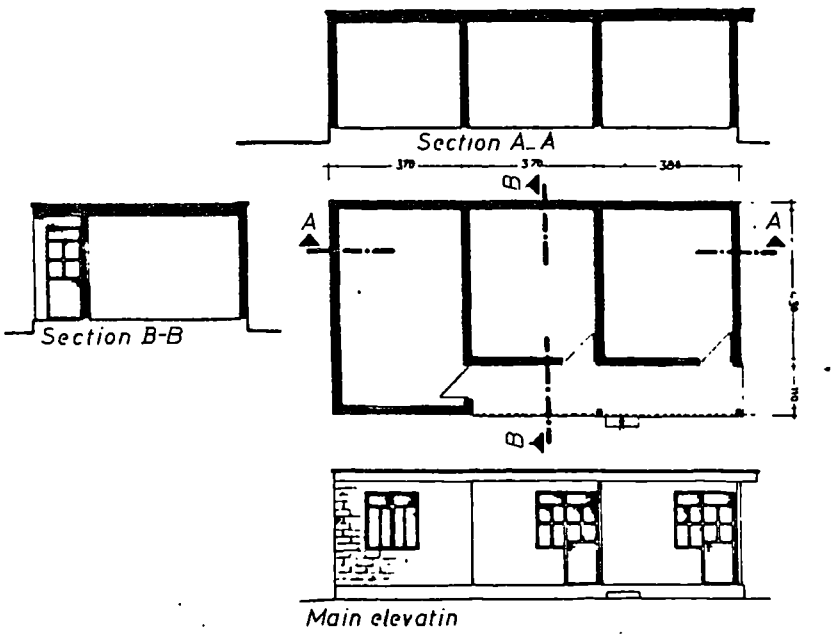

Fig 12-9: House plans of Jelizi

[Source: Miri and Shakeri 1986]

[Source: The author]

Sample 4, Soveidani

Group: 2 **Location:** 10 Km south west of 'Susangerd'.

Population: 506 (1986) **No of families:** 70. **No of houses:** 73.

Services: Primary School **Reconstruction started:** 1984 **Completed:** 1984

Role of people: Almost nothing. **Organisation:** Bonyade Khorasan

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Material used; Foundation: Reinforced concrete **Walling:** Bricks
Finishing: Mud and straw on the roof, cement mortar for indoor walls.

Total rebuilt area: 5000 m^2 **Average/house:** 68 m^2

Getting to the village- The poor state of the road causes problems with transportation. From a distance like many other reconstructed villages the water tower can be seen on approaching the village. On getting closer you see new, shiny and expensive school buildings with large courtyards bounded by brick walls and steel fences. But a closer look results in disappointment. In one corner a cow is standing under covered way. Some rooms are occupied by refugees and almost all the doors have no handles.

Site- The village is far from the river, water intended for farm in a nearby canal is used by women for washing dishes and clothes. Most alleys are narrow and the mud is ankle deep. Here and there the villagers have laid fire wood or spread straw to walk on.

Houses- The courtyards are undefined and merge into the streets. The house consists of two or three rooms built with bricks with a some covered way in one corner. Some richer families have built walls in cement blocks and totally ignored the size of the intended courtyards. It is hard relate what is on the map with how the actual site looks.

Women were working and moving all the time, it seems there is no end to their work, this is true for all the villages in this District. Even six or seven year old girls take care of the younger children.

Inside the 'interview' room an old woman was sitting near the fire place. She was sick and continuously coughing. The father was preparing for prayer. Apart from the light through the door the room is dark. When the father finished praying he came and sat with us. The women in the courtyard arranged the tea from an old and dirty tea pot. In the faces of the family around me there was no sign of hope. Even not much joy at having a guest. The only person who understand 'Farsi' is the son of the family whose recently returned from military service.

Plate 12-7: Soveidani after reconstruction

[source: The author]

Damage and reconstruction- During the war this village was levelled by artillery and bulldozers. The reconstruction was carried out by 'Bonyade Maskane Khorasan'. The new site lay out is to the north part of the old village. The design of the site and the houses were typical of the plans prepared for many villages. The main design idea was a consideration of hygiene by making the routes for people and animals separate. In practice however, the narrow family alleys are used by vehicles and animals as well. Two schools were also to be built, one primary school to serve the village and the other secondary covering all the villages around. However at the time of my visit, (December 1987), only 3 classrooms were occupied by some 60 pupils the others were occupied by refugees. The second school was totally empty.

In 1984 the people were permitted to return to their homeland. The village had mostly been reconstructed while they were away. The village at present has an elevated water tank but the people have no access to clean water because the electric pump is not fitted yet.

The main complaint from the villagers was the lack of clean drinking water, in fact they were washing in the same water that runs in the canal for the farms. Drinking water had to be supplied by tankers of Jahade Sazandegi. The other complaint was about the narrow muddy streets. No proper sewage disposal is installed and the waste water from the houses runs into the alleys. Even in the future it would not be easy to install a sewerage system because the land the houses are built on is low lying.

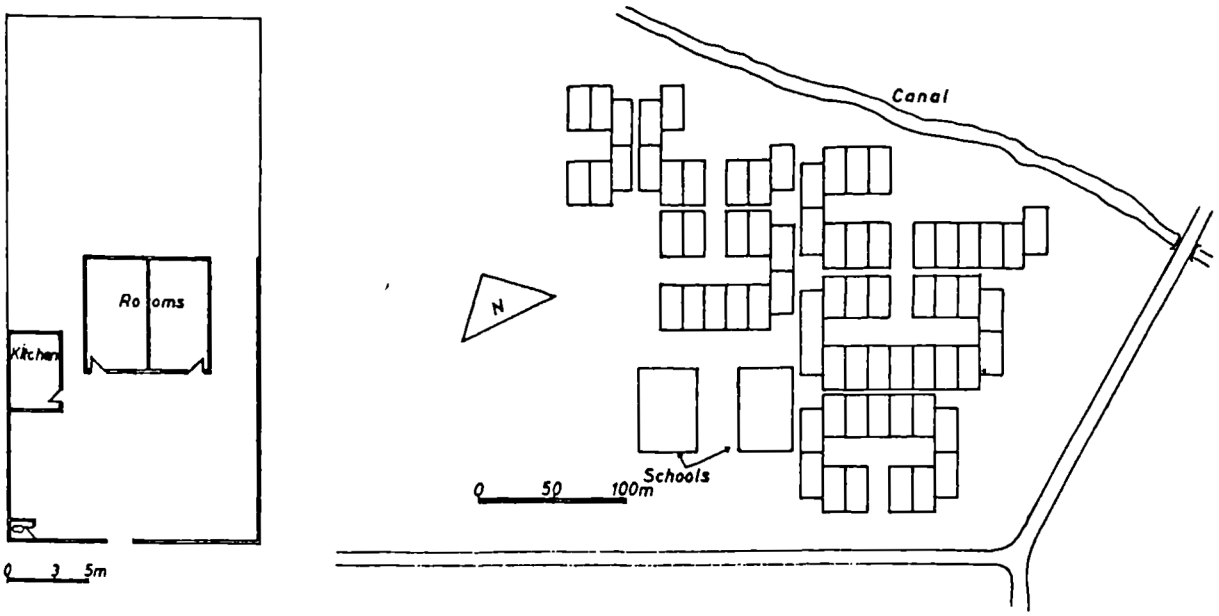

Fig 12-10: The site and house design of Soveidani

[Source: Bonyade Maskan]

Plate 12-8: Inside a house in Soveidani

[Source: The author]

Sample 5, Sachet Hamoudi

Group: 2. **Location:** 20 Km south east of 'Susangerd'.

Population: 200 (1986). **No of houses:** 39.

Services: School, clean water, electricity.

Reconstruction started: 1984 **Finished:** 1984

Organisation: Bonyade Khorasan. **Role of people:** Almost nothing.

Material used; Foundation: Reinforced concrete. **Walling:** bricks and cement mortars. **Roofing:** wooden beams and bamboo matts.
Finishing: Mud and straw on the roof, cement mortar indoor walls and floors.

Total rebuilt area: 3120 m^2. **Average/house:** 80 m^2

Approaching the village- South of the main asphalt road from Ahwaz to Susangerd, only two km away, the first village is Sachet. From the road three main features attract the attention; first the water tower, high enough to dominate the view, second a continuous rhythm of brick walls indicating that the is reconstruction is according to a regimented plan and the third, remains of the previous village.

Site- Getting closer, there is the big doorway and green fence of the school building. Opposite the school are the reinforced concrete foundations of a large building intended to be the future mosque. In the middle of the village the first narrow alley can be seen, although sometimes this is confused with the courtyards. Looking from the west, the view is of wide streets which meant for the animals, marked on either side with the courtyards piled with hay and firewood. The general impression is that the site is fairly ordered.

Houses and Reconstruction- Before the war, all the buildings were made of rammed earth. The only service they had in those days was a mud floored room used as a school. The village was seriously damaged during the war. The new design, like the others in this group, has a gridiron pattern with hygiene given a high priority. Each house has a plan area of about 80 m^2 and constitutes three rooms, bath, kitchen and a narrow porch in front of the rooms to provide shade from the sun.

In the design of the facades brick arches were used to give the building, as some of those involved said; 'a traditional look'. However, in this area, for as far as a hundred kilometres, one can never find an arch in local buildings. In fact the arch is the traditional architecture of central Iran, not of the plain of Khuzestan. Bricks for walling and wooden trunks for roofing with bamboo matts were used, very similar to other villages. But here the houses also have reinforced concrete foundations.

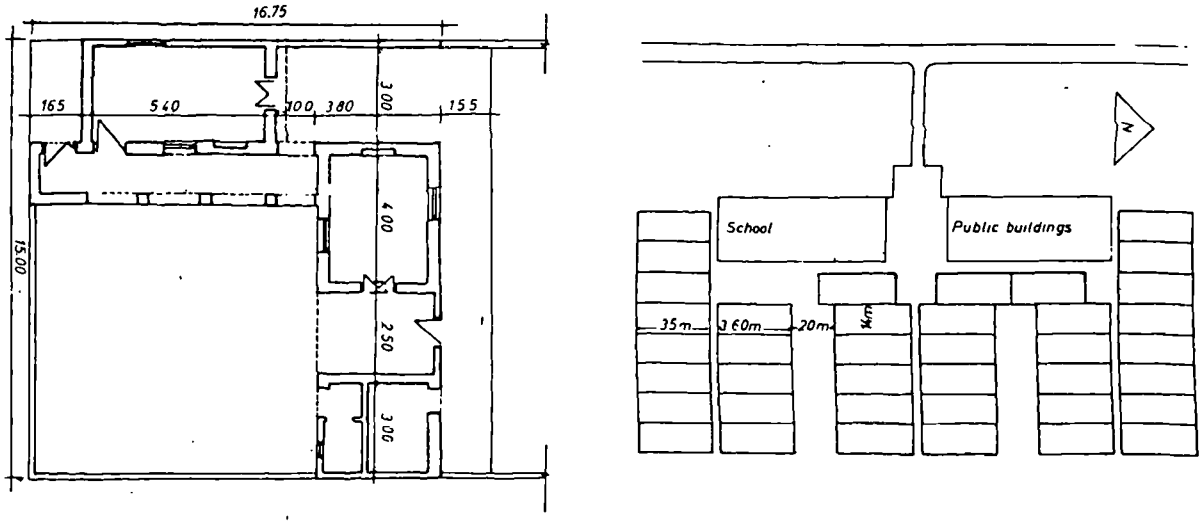

Fig 12-11: Site and House Design of Sachet"

[Source: Miri and Shakeri 1986]

On several occasions during the survey, it was found that many of the main courtyards are without fences and the house doors were open. It has to be assumed that in this respect at least privacy is not so important as the designers thought. Also it was usual to find one room converted to a stable, the bathroom used as a kitchen and the kitchen as a store.

The main complaint of the dwellers was about drinking water, although there is an elevated tank the pump, which serves several villages simultaneously has broken and apparently the payments for repairs were confused.

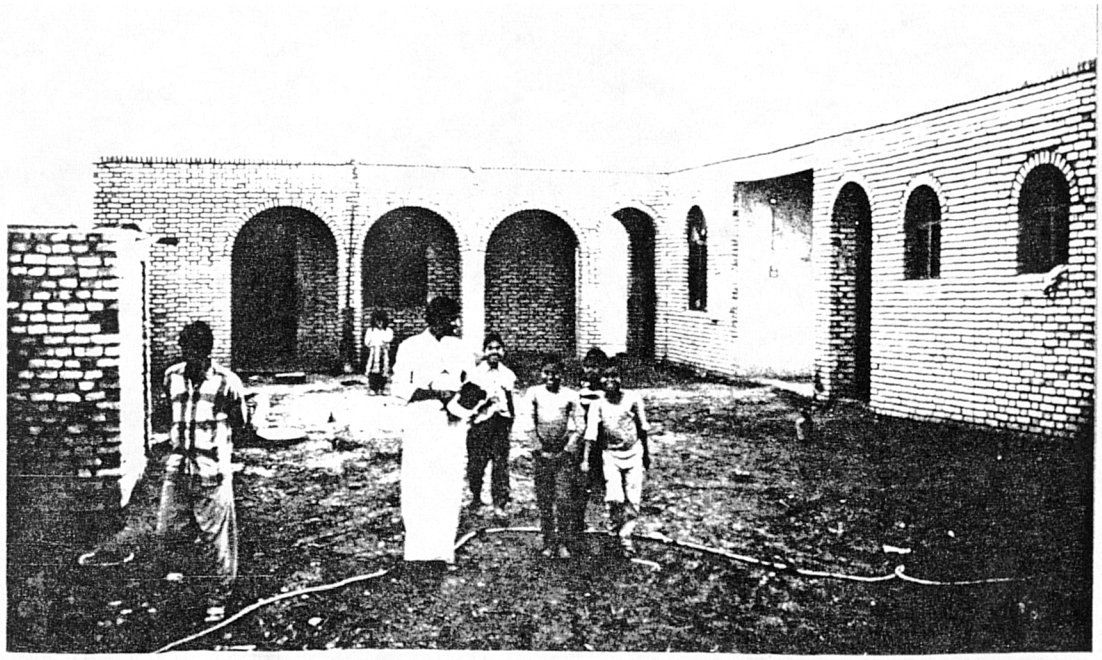

Plate 12-9: Inside a house in Sachet

[Source: The author]

Sample 6, Motayyer, Talayel, Ayyash, Hassan Dahish

Group: 2. **Location:** 25 Km south east of 'Susangerd'.

Population: 300 (1986). **No of houses:** 57. **No of families:** 50

Services: Mosque, school, clean water, electricity.

Reconstruction started: 1984 **Finished:** 1984

Organisation: Bonyade Khorasan. **Role of people:** Almost nothing.

Material used; Foundation: Reinforced concrete. **Walling:** bricks and cement mortars. **Roofing:** wooden beams and bamboo matts.
Finishing: Mud and straw on the roof, cement mortar indoor walls and floors.

Total rebuilt area: 3120 m^2. **Average/house:** 80 m^2

The view of the village- Five km beyond Sachet to the south west Motayyer appears inside the curve of the road. The huge brick mosque dominates the village and makes the water tower seem quite insignificant. Initially it seems as if there is one the village stretched along the road, in fact there are four small villages combined. It was argued that they were too small to be separately serviced and difficult to build only a few houses in each location.

Site- Although rows of houses are clearly visible the design of the village generally is not very clear. To the west of the Mosque there is the school building. In the middle of the village there is a large open area just as if the desert continues among the houses. In the middle of that there is a borrow pit and now there was a dead dog at the bottom. It stayed there for at least two months during the period I visited the village.

The Houses are attached to each other and built in four groups,

each group is one of the previous villages. There is no sign of vegetation or trees. The big mosque is not properly cared for, everywhere is dusty and I felt that in a few years time it will have deteriorated. The cost of maintaining such a huge building is a heavy burden on the villagers.

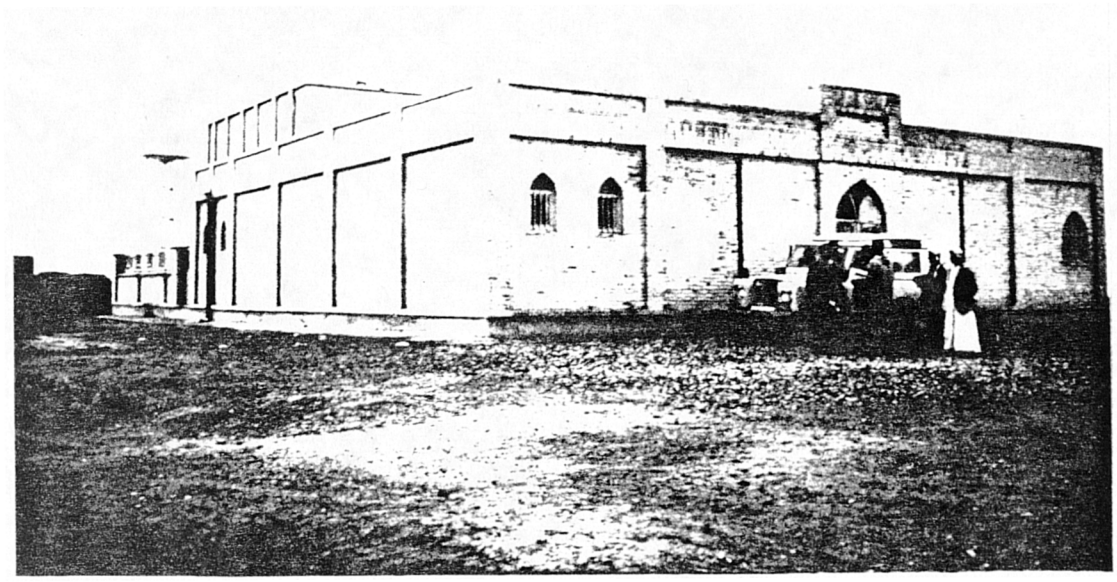

Plate 12-10: The new mosque in Motayyer

[Source: The author]

Houses- Some houses have enclosed their family courtyards, although without an entrance door. The family courtyards are small and it seems there is not enough space for different possessions they usually have such as a bed they use to seat and to sleep on during the night. In a few cases toilets had been built away from the house, the reason was that the toilets provided were too close to the rooms. Inside the courtyards there is also a water tank. Houses have tapped

water but they claimed that the water tank was not big enough because supply was often cut off. Since the villagers need to watch their animals they built a stable in the small front courtyard.

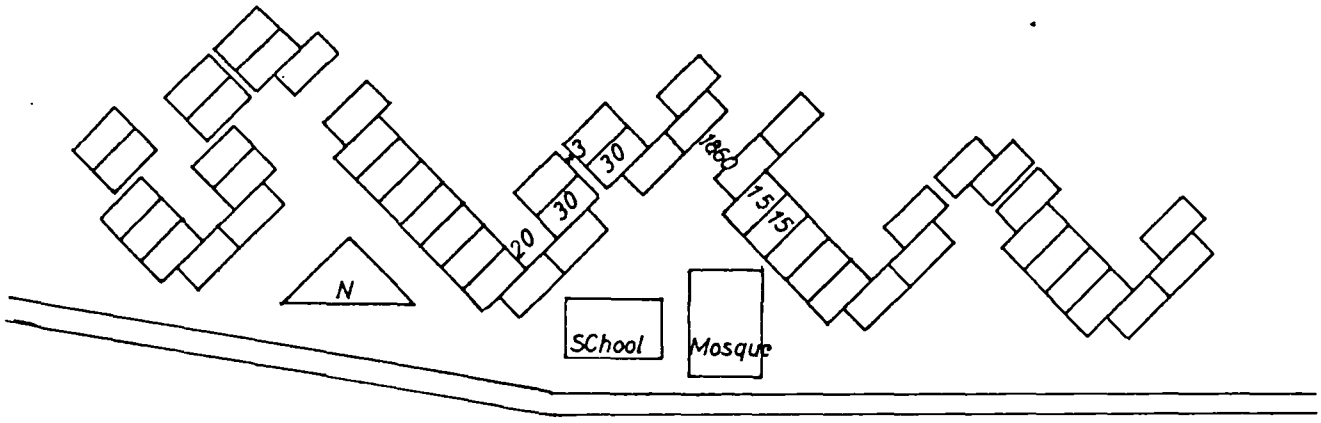

Fig 12-12: Site design of Motayyer

[Source: Bonyade Maskan]

Reconstruction- A school with 7 classrooms was built, at present only one of the rooms is used. Huge mosque was constructed, which can seat all the three hundred people of the village. There is a special entrance to that mosque for females, even though it is not common here for females to go to the mosque.

Sample 7, Moerez Ommolhebar

Group: 2. **Location:** 5 Km to the west of 'Hoveize'.

Population: 311 (1986). **No of houses:** 36. **No of families:** 40

Services: Mosque, school, clinic, electricity.

Reconstruction started: 1982 **Finished:** 1982

Organisation: Bonyade Arak. **Role of people:** Almost nothing.

Material used; Foundation: Reinforced concrete. **Walling:** bricks and cement mortars. **Roofing:** wooden beams and bamboo matts.
Finishing: Mud and straw on the roof, cement mortar indoor walls and floors.

Total rebuilt area: 1848 m^2. **Average/house:** 51 m^2

On the way of the village- The road to Moerez starts from the northern gateway of the city of 'Hoveize'. It runs almost parallel to the river 'Karkhe Nour' which nearly dries up in the summertime. Always the colour of the rivers in this area are the same as mud, because of the soil floating in the water. I was told of an artificial lake for breeding fish developed by peoples of Moerez in co-operation with Jahade Sazandegi. That was a good news.

Site and houses- Moerez was formed from two earlier villages, 'Moerez Banisaleh' and' Ommolhebar'. They were only one km apart. The site design again is an example of over design by trying to physically express private and semi-private areas in the houses and surrounding streets, at a scale and with a community that would not be required. This notion of separate access for animals and people on hygiene ground are the preoccupations of big city professionals trying to impose their views. The land designated for the new site is compact and does not

become muddy during the winter. At present the respective populations of the two previous villages have settled separately.

South of the village there are houses built of mud and salvaged materials by refugees. The school children are lucky, their village is close enough to the city to have a teacher. There is a village square which is not used.

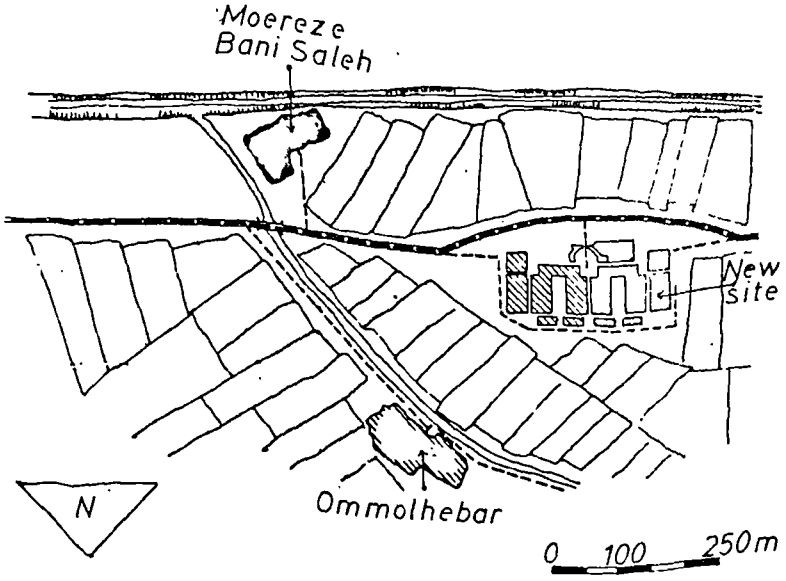

Fig 12-13: The location of previous two villages and present Moerez

[Source: Miri and Shakeri 1986]

Life- The clinic was minimal with two small rooms and a shelf for medicines, most of which can be purchased without prescription from a pharmacy in the city. On the walls there are large posters illustrating the most common diseases, such as diarrhoea and the way they should be treated. It was not really very clear whether these posters are for the people or for the young and active medical man. He said he was not a doctor but a paramedic with a few months training. He can give injection but the patient must have the prescription from

the doctor in the city. He has an amazing box that measures the purity of the water. He demonstrated with a bottle of water from the public tank outside, it was not pure enough to drink till he had added some some purification tablets.

Meanwhile a young woman came with a baby in her hands removed her shoes before entering. There was no need to, as the floor was covered with cement tiles. The clinic looks after the medicines of those patients who need regular injections. The baby had a kind of skin infection known as Oriental sore.

On the wall there was a map painted by the paramedic staff showing roads and cars. He said that it was a map of the area showing the villages he has to visit. The work of this dedicated young man ensured that all the children received their vaccinations at the proper time. This was a sign of hope, that it is possible to change people's life style so that they take care of themselves and their children if they Know what to do about it. Is development anything more than education?

A man approached us from one of refugee huts. He looked quite healthy and cheerful and could speak Farsi perfectly. He did not start complaining but explained how he was happy to settle here because his children could go to school. From then on he act as interpreter.

The main complaint was the small size of some of the rooms and that the toilets were too near to the rooms. Another example of 'foreign' thinking derived from a different way of life. Here the householders built new toilets in their animal courtyards.

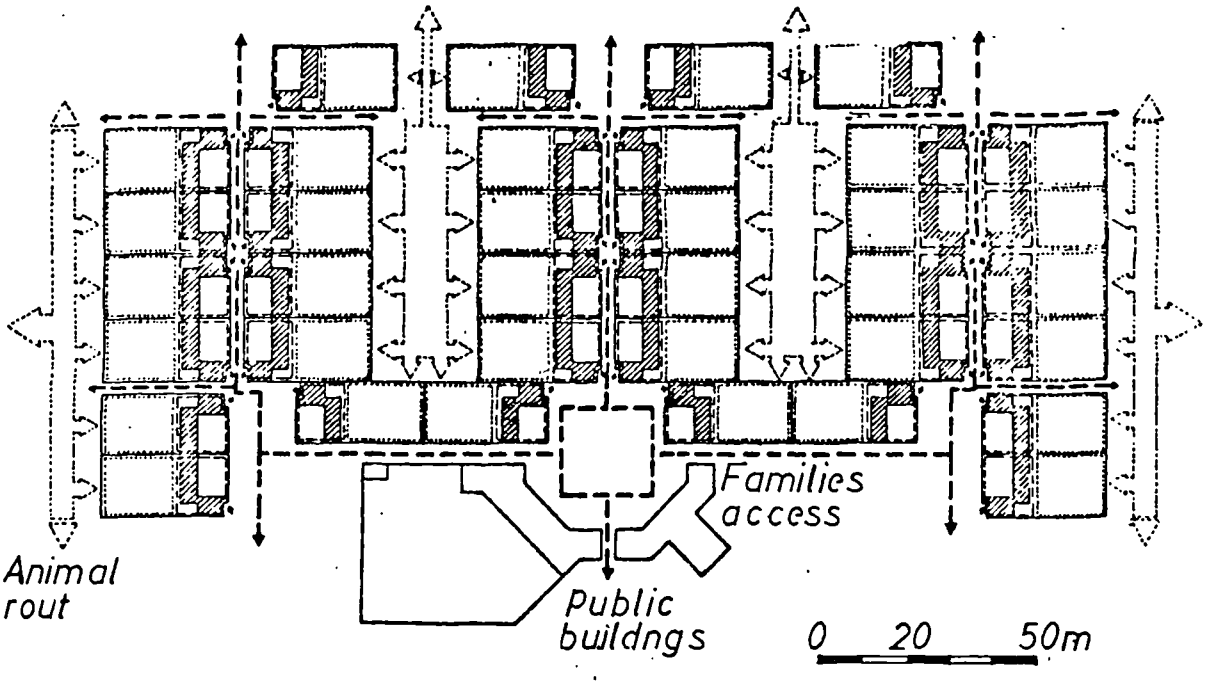

Fig 12-14: The new site of Moerez

[Source: Bonyade Maskan]

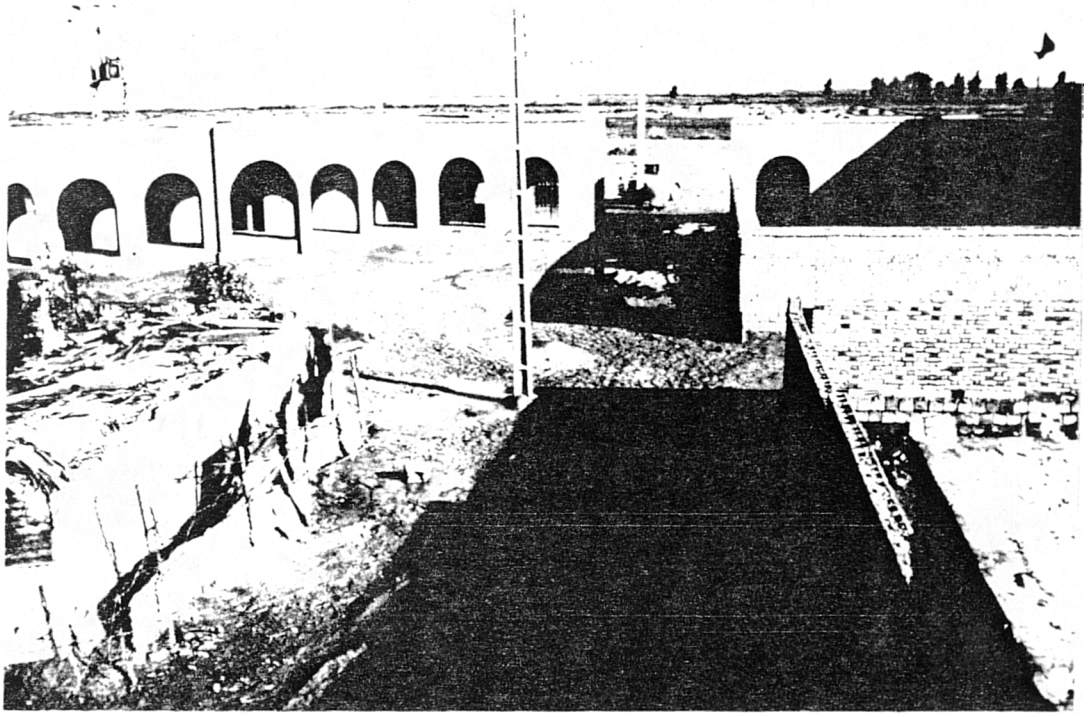

Plate 12-11: Central square of Moerez

[Source: The author]

Sample 8, Gheisarie Sofla

Group: 3. **Location:** 16 Km to the east of 'Hoveize'.

Population: 329 (1986). **No of houses:** 40. **No of families:** 46

Services: electricity ? **Reconstruction started:** 1983 **Finished:** 1983

Organisation: Bonyade Arak. **Role of people:** labouring, paying for some of the roofing materials.

Material used; Foundation: lime mortar. **Walling:** bricks and cement mortars. **Roofing:** wooden beams and bamboo matts.
Finishing: Mud and straw on the roof, cement mortar on indoor walls and floors.

Total rebuilt area: 2120 m^2. **Average/house:** 53 m^2

Getting to the village- There is a new military road constructed during the war running from the city of 'Hoveize' west-east. However the villagers have to walk 2 km along a road which is so muddy in the rainy season that most of the time only a tractor can travel it. This has caused many complaints by villagers. The village is on the south bank of the river 'Karkhe Nour'. From a distance the only feature of the village is a facade of bricks like a wall.

Site and houses- The orientation of the site and houses is towards the south where the road joins the village. But the life of the village is dependent on the river which is to the north of the village. The same concept of separating animal routes from the families access has been used. The site has a huge U form opening to the south 60 metres wide which was intended to be the main square. Its grand scale means it in effect becomes part of the land surrounding the village. From northern corners of the square there are alleys leading to the river. Untypical are too narrow, muddy and full of waste water.

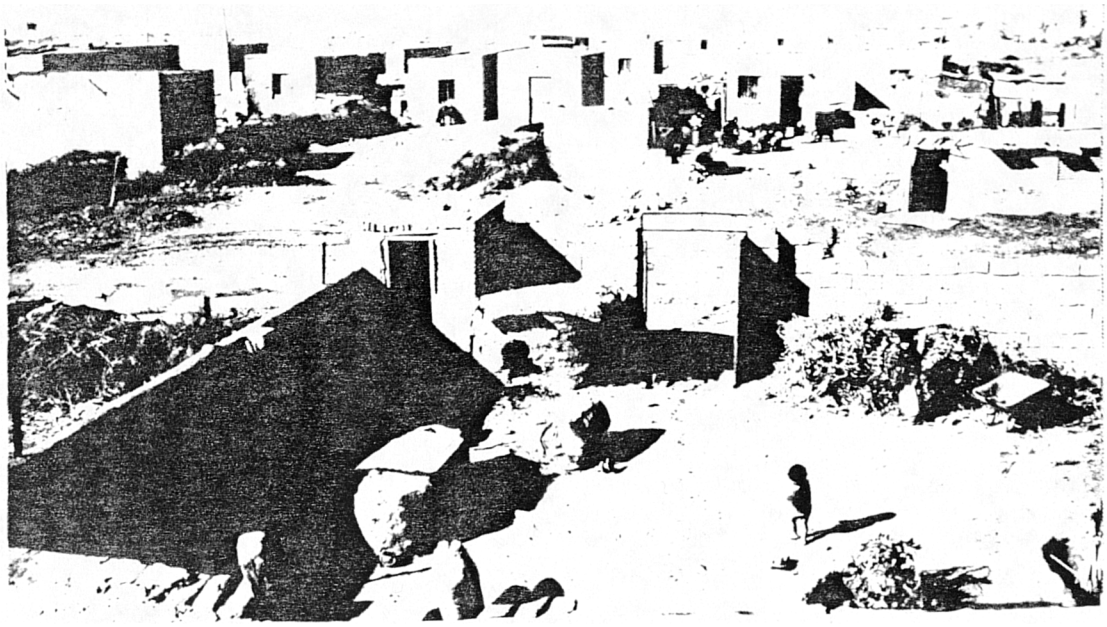

Plate 12-12: Site of Gheisarie Sofla

[Source: The author]

The village looked in poor conditions, the houses often have no wall around their courtyards, although most are markedout in some way. Inside the houses are not comparable with those of Moerez in terms of hygiene. Here rooms are usually less tidy. On the site it was found that one of the alleys is closed at two ends and is converted in to a barn.

The old mud village, has been completely destroyed during the war. In the reconstruction the people were involved as labours. The village is safe from flood, according to the inhabitants. There is no school building built and the pupils were found to study under a tent and inside a room provided temporarily by one of the villagers.

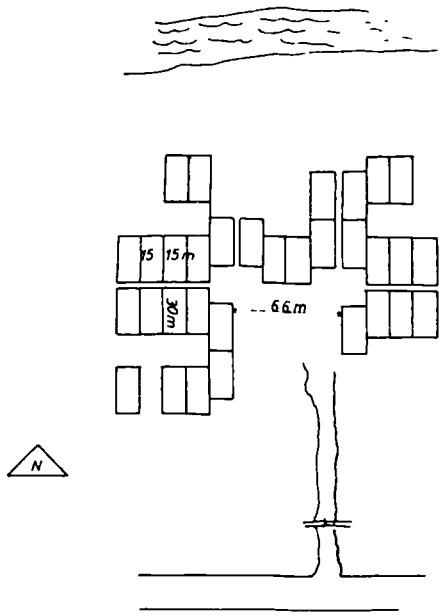

Fig 12-15: Site design of Gheisarie Sofla

[Source: Bonyade Maskan]

Plate 12-13: The muddy road to the village Gheisarie

[Source: The author]

Sample 9, Choulane

Group: 3. **Location:** 10 Km to the south west of 'Susangerd'.

Population: 384 (1986). **No of houses:** 37. **No of families:** 58.

Services: Mosque, school, drinking water, electricity, co-operation.

Reconstruction started: 1985 **Finished:** 1985

Organisation: Bonyade Fars. **Role of people:** labouring, organising and managing the work.

Material used; Foundation: lime mortar, cement block bases.
Walling: bricks and cement mortars. **Roofing:** wooden beams and bamboo matts. **Finishing:** Mud and straw on the roof, cement mortar indoor walls and floors.

Total rebuilt area: 3996 m^2. **Average/house:** 108 m^2

How does the village look? - The first view of Choulane is a line of houses settled along the road on the right hand side with only a few buildings on the left. The river runs on the left(east) side. The first building to come into sight is the small school, an old building separated from the houses.

The houses are of bricks with walls and entrance doors, they all look tiny and tidy, although the land is muddy. Inside the small courtyards are paved with cement tiles, a toilet and bathroom can usually be found. It seems that generally their economy must be in a good state. The people look tidy and washed, many of them were able to speak Farsi.

Ghader, a member of the village committee was the one I talked to. He works in Ahwaz in a factory and speaks Farsi fluently. his house was clean, so was the guest room. He could fully understan objective of our research and co-operated with the interview. He was

well aware of their situation and had a clear idea about the village problem and how they could solve it. The rural areas need these kind of people, bright, positive and confident. We were surprised, when an old man with the traditional long white dress, started asking us what we were doing. He was a retired teacher, over sixty years old, with much to say about the village, and like an anthropologist, he started to describe the background of the people in the area. He also taught me an Arabic poem to read against the aggressive dogs, of course by way of fun. The general impression of the village is an improved version of many remote villages. I could imagine that this could be a model for the transition of remote and poor villages.

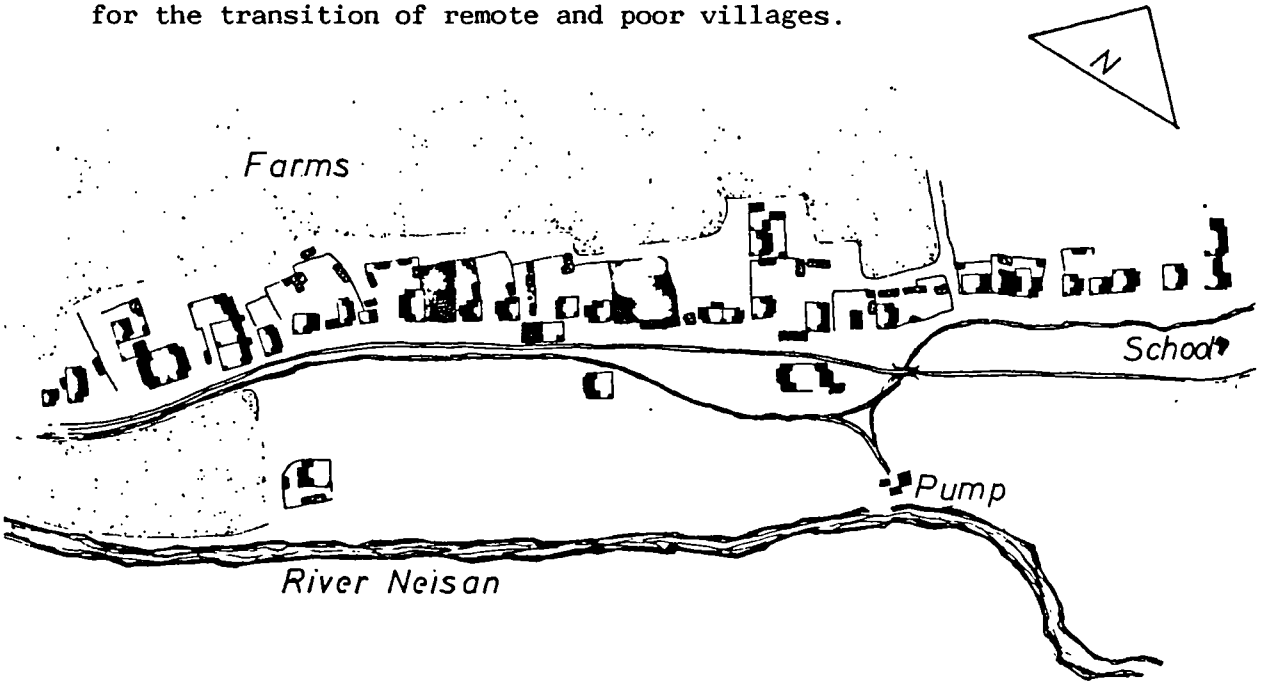

Fig 12-16: Site of Choulane

[Source: Miri and Shakeri 1986]

Reconstruction- In 1982 the people returned to the rubble of their village and sheltered their families inside repaired rooms or tents. They could not start their agricultural activities because of

the mines laid in their fields. By 1983 the land was meant to have been cleared, however there were still cases of people or animals injured by undetected mines.

The previous site of the village was unusual, as the houses plots were laid out in a line along the side of the road. The land for extra housing here is very scarce, the village is squeezed from one side by the road and from the other side by the farms.

A few months after the people returned, 'Jahade Sazandegi Khorasan' restored the school building, water pumps and canals. Also a new mosque was built in that period. In early 1985 'Bonyade Maskane Fars' became involved in the reconstruction of houses, meanwhile the people had accommodated themselves for more than two years. The reconstruction was finished in less than six months. The method chosen by Bonyade Fars for reconstruction was another example of implementing the method of 'Sarie' with some modifications.

The scarcity of land and the high density of population made it almost impossible to develop one of those 'over designed' projects. The land itself is so important, that in another village not far from Choulane called 'Hajjie', the reconstruction never started because the villagers were not able to find suitable land for new housing. What was decided in 'Choulane' was to respect the existing plots and like 'Sarie', to build on each plot, in proportion to the size of the family. Even the same area of 56 m^2 for small families, as in 'Sarie' was agreed.

The main design consideration was as usual the separation of the animals from the family. In the reconstruction for each house a minimum of two rooms, a toilet and a bathroom have been built (for 2

members) and for any extra member, 7 sq/m metres was added. Each family did their own labouring work and to some extent helped with the management of the project. The people were very happy with their success in speeding up the reconstruction by their own involvement.

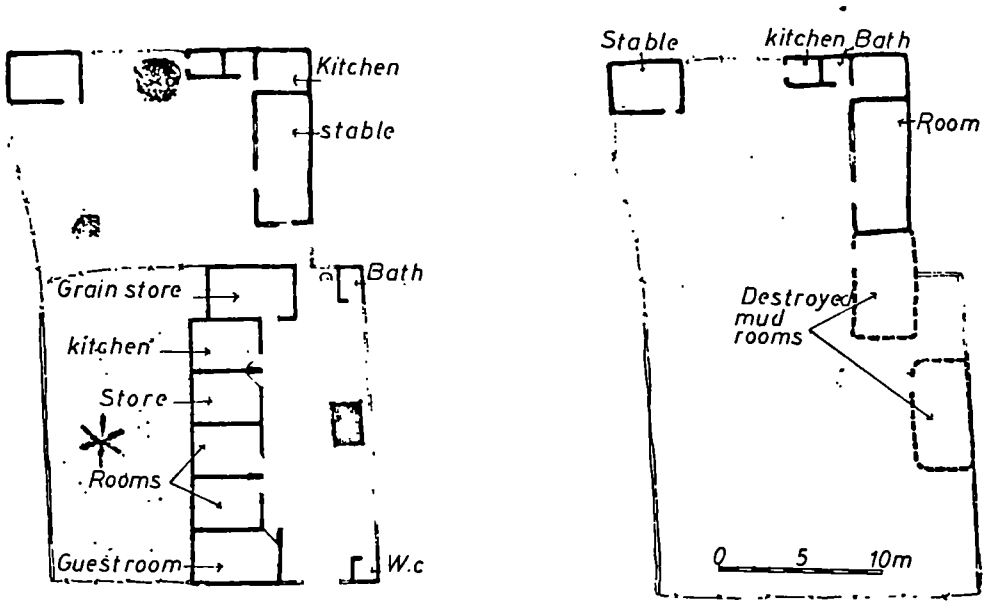

Fig 12-17: Layout of a house before and after reconstruction

[Source: Miri and Shakeri 1986]

The villagers' complaints were, one that they were not allowed to make decisions about the design of their houses, and two the availability of drinking water during the day.

Plate 12-14: A view of Choulane after reconstruction

Plate 12-15: Inside a house in Choulane

[Source: the author]

Sample 10, Seied Naser

Group: 3. **Location:** 15 Km to the north west of 'Susangerd'.

Population: 277 (1986). **No of houses:** 24. **No of families:** 37.

Services: school, drinking water, electricity

Reconstruction started: 1985 **Finished:** 1985

Organisation: Bonyade Kerman. **Role of people:** labouring.

Material used; Foundation: lime mortar, cement block bases.
Walling: bricks and cement mortar. **Roofing:** wooden beams and bamboo matts. **Finishing:** Mud and straw on the roof, cement mortar on indoor walls and floors.

Total rebuilt area: 1386 m^2. **Average/house:** 57 m^2

The aspect of the village- Close to the north bank of the river Karkhe, separated by a earthen embankment which runs along the river Seied Naser is settled on muddy and flood prone land. It is far from the city and the road has squeezed the village between itself and the river and itself. Occasionally trees can be seen in the courtyards of the houses, half of which are made with mud and half with burned bricks. It becomes apparent that for reconstruction the layout of the village has not changed. Houses have no bounded courtyards and the rooms open directly to the outside. The general impression was that the village had hard times. It was found that some of the houses were abandoned or in fact never occupied. Because the village was close to the restricted zone some families had still not returned from their place of refugee.

A closer look indicates that inspite of a programme of reconstruction on the same plots, few rooms had in fact been built by

design. The village has a school with four rooms, two of which are actually used as classrooms. During the war, the buildings were seriously damaged. The plots have not been changed and for each family two or three rooms have been reconstructed with a toilet at one end of the courtyard. The appearance of the village is very similar to its earlier form.

The main risk for the village is flood, as its land is very low lying. There is an earthen embankment built all along the river to protect the villages, however, it depends very much on the villagers' luck, whether the water level rises too much and whether the embankment can resist the pressure. The main complaint of the villagers was the bad road and the lack of a bridge to cross the river.

Plate 12-16: A reconstructed house in Seied Naser

[Source: The author]

Sample 11, Abarfoush

Group: 3. **Location:** 20 Km to the north west of 'Susangerd'.

Population: 127 (1986). **No of houses:** 22. **No of families:** 18.

Services: electricity. **Reconstruction started:** 1985 **Finished:** 1985

Organisation: Bonyade Kerman. **Role of people:** labouring.

Material used; Foundation: lime mortar, cement block bases.
Walling: bricks and cement mortar. **Roofing:** wooden beams and bamboo matts. **Finishing:** Mud and straw on the roof, cement mortar on indoor walls and floors.

Total rebuilt area: 1189 m^2. **Average/house:** 50 m^2

The view of the village- The word 'abarfoush' in the local language means turtle. At the time of carrying out the survey it was the last village before the restricted war zone, and the sound of shelling from the front could easily be heard. The village is remote enough not to have a school or clean water. However the electricity has reached them and the clean water is on the way.

The same plots have been kept and on each two or three rooms have been built with a toilet at one end. Looking at the village, it is a series of scattered rooms over muddy land. In terms of flooding it was the worst village visited. In fact in 1986 it completely flooded, the water rose 2 m inside the rooms. When asked if there was any other land nearby with less risk of flooding, they claimed there was not, in fact they had to take refuge on the top of the embankment that was built to stop the floods in the first place. Perhaps Abarfoush is the only example where the reconstructed buildings have shown that they can withstand flooding.

The land is very muddy, the village is a series of brick rooms queuing along the side of the road. Like Seied Naser the road runs to the north of the village and the river to its south. There are no signs of courtyards or private areas. Cows move in freedom here and here. In front of the rooms in the open area, stables have been built in mud or bamboo, mud oven have also been built and stocks of firewood and hay can be seen. The conditions of the site indicates that this remote village is perhaps the poorest among our samples.

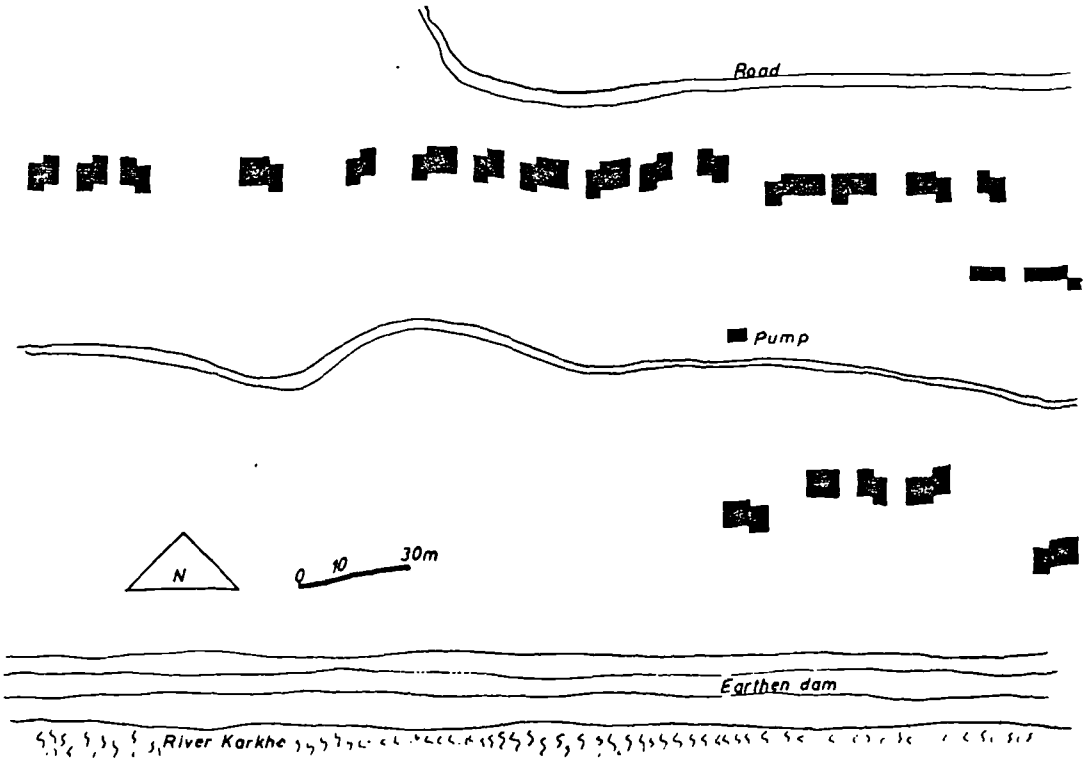

Fig 12-18: Site layout of Abarfoush

[Source: The authour]

When I visited it the first time, I met a man called Ghader, he was sick with fever and lying in his room, I asked him why he did not go to the doctor, he answered, "that means I have to go to the city and that is too far and costly". I gave him some relief tablets. Rarely

people do understand Farsi and they were surprised and perhaps to some extent happy to have visitors. The children in a few minutes came and sat down all together in the room near the entrance door. There is no school for them. Again it reminded me that the closer to the urban centre a village is the more likely it is to have the opportunity to benefit from facilities.

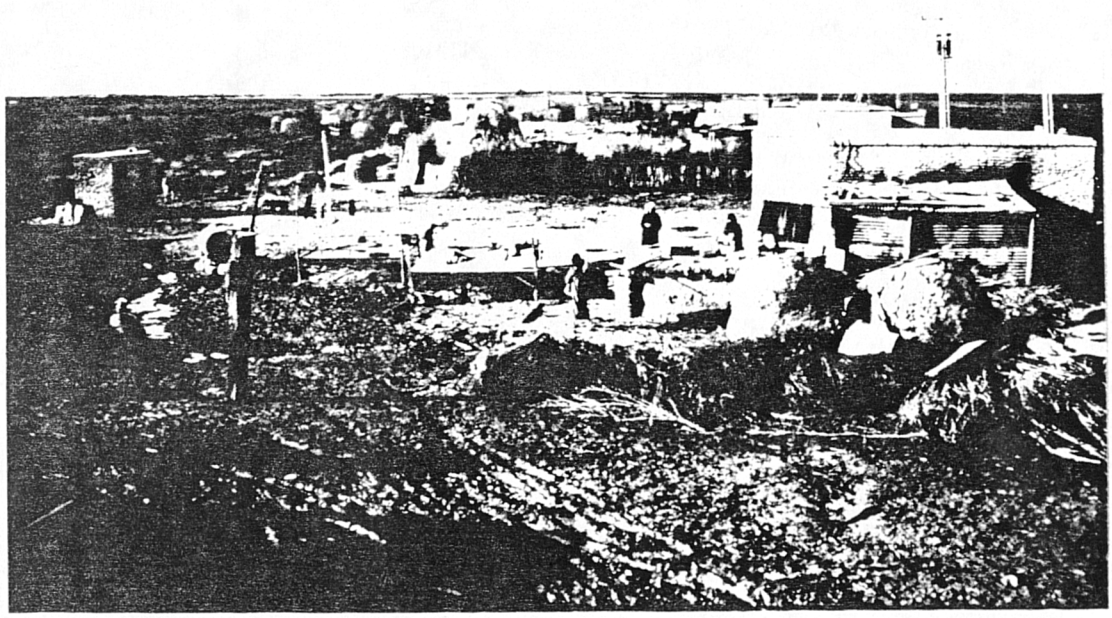

Plate 12-17: View of Abarfoush after reconstruction

[Source: The author]

Lessons learned- The following is a summary of major lessons learned from this chapter.

1- As was discussed in Chapter I, government policies for reconstruction has changed substantially over the period of the war, with the result that some villages have received more and the others less of the benefits of reconstruction. In other words, there was no thought through and co-ordinated plan for dealing with the problem.

2- It seems that the larger centres and those closer to the bigger towns had a better chance to state their needs and to be allocated the resources. Conversely the remote hamlets could easily be neglected. This has of course some reasons, for example the costs of providing clean water to a large village such as, Sarie with nearly 2000 population which is close to the city is comparable with the costs of the same supply to a village such as, Abarfoush with around 150 people but 20 km away from Susangerd. Here is a critical decision-making for the authorities when the question of the distribution of resources is raised.

3- The newly planned settlement are frequently found not to match the villagers needs. There is a demonstrated ignorance on the part of architects concerning the needs of people who live in small rural based population centres. This gap presumably can to some extent be bridged by 'respecting' the life-style of villagers, rather than ignoring their established ways and either deliberately or by default imposing an alien environment.

4- The long-term consequences and costs of using the new settlements are overlooked by the planners. Public buildings and services such as, the mosque, the school, the drinking water system and even the streets

have to be maintained even if they are presented free in the first place. If the scale of these capital goods are too big for the existing organisation such as, the village committee, to afford to manage properly, then the investment is wasted and community moral suffers. For example, although many of reconstructed villages have new water tower but many of them have broke down and repair and the maintenance must be provided by Jahade Sazandegi which in fact is unable to handle the job. This arrangement happens time and again and lies at the root of much of the waste of resources and inefficient management of services. This issue will be raised again in the recommendations.

5- The reconstruction programme has focused mainly on houses and less attention was paid to address the public needs such as, controlling the main stream of flooding in Sarie. In those villages reconstructed on their previous location most if not all the pre-war site problems still exist. (e.g. see Bardie, or Sarie) It seems that for rebuilding houses families can show interset to participat. For public tasks such as, streets organising the families to get involved seems more difficult to organise.

6- The notion of 'Integrated rural development' is quite relevant in this area. The people are actually living in traditional life-style in a 'modern' settlement. It is naive to believe that development starts with housing or buildings. Change in way of life of people is by its very nature an 'educational activity'.

It is also assumed by recipients that the activity of development just means the supply of additional resources and services. This could simply end up by making the community more dependent, if it

is not accompanied by the 'mobilisation' of local resources as well. It is well established that people's needs have no end. The dilemma for the planners is that the higher the level of the people's lives, the more sophisticated and expensive services they feel they need. In other words more inputs leads to seemingly more needs. There must be a relationship between the intervenor and the recipients. It is the nature of this relationship that we will incorporate in the recommendations.

7- From the observation of the sample of villages covered there are positive signs for hope. Undoubtedly the most significant is that the people themselves have the potential of being the major resource for any 'new' development programme. They are not only able to do some of the physical works but they are capable of getting involved in the planning and management. This is a fundamental conclusion from our observation that has to be built in to the terms of references of any future development initiatives. What is necessary is an understanding on the side of outsiders.

8- The hopeful example of Choulane is very significant. Here we have a thriving, buoyant community in-spite of poor physical conditions. The site is dense but still houses are tidy, so are the people. Perhaps it could be a model of transitional phase for many other villages. What this village shows is the importance of 'educational factor'. We do not exactly know how it happened that this village is that much different from others, what we do know is that it is not affected by their physical conditions.

Summary of some of the data available for 11 villages samples

So far an introductory explanation has been compiled of the characteristics of each of the 11 villages sampled. Here there are some tables providing a summary of relevant information for each village.

group	village	no of families	Popul	Popul >6 years	Educated	%	Employed	no of workshops
	Sarie	356	2477	1199	633	52%	363	17
1	Bardie	220	1572	1174	367	31%	237	15
	Jelizi	116	849	628	153	22%	172	6
	Soveidani	70	506	382	118	30%	98	2
2	Sachet	--	--	--	--	--	--	-
	Motayyer	50	299	234	38	16%	66	2
	Moerez	40	311	235	75	31%	44	4
	Gheisarie	46	329	253	50	20%	29	3
3	Choulane	58	384	291	138	46%	56	5
	Seied Naser	37	277	221	56	25%	51	5
	Abarfoush	--	--	--	--	--	-	-

Table 12-1: Demographic information of 11 villages.
[Source: Public survey of population, Iran 1986]

Village	rooms	classes	pupils	staff	servants
Sarie	3	2	118	5	-
Bardie	5	3	167	8	1
Jelizi	4	3	126	6	1
Soveidani	8	3	60	3	-
Sachet	5	2	32	2	-
Motayyer	7	1	27	1	-
Gheisarie	-	-	--	-	-
Choulane	3	3	77	3	-
Seied Naser	4	2	47	2	-
Abarfoush	1	1	28	1	-
total	40	20	682	31	2

Table 12-2: Educational facilities of villages
[Source: Dashte Azadegan Education Office]

Year start	Village	Houses Recon	M^2 Recon	Average Unit size (M^2)
1982	Bardie	252	10080	40
	Jelizi	200	13000	65
	Moerez	36	1848	51
1983	Sarie	296	17760	60
	Motayyer	57	3551	62
	Gheisarie	40	2120	53
1984	Soveidani	73	5000	68
	Sachet	39	3120	80
	Choulane	37	3996	108
1985	Seied Naser	24	1386	57
	Abarfoush	22	1189	50

Table 12-3: Reconstruction data
[Source: Bonyade Maskan. Report of Reconstruction progress until 65/12/29 (March 1986)]

CHAPTER THIRTEEN.

CHAPTER XIII

DATA ANALYSIS, (SECTIONS 1&2)

Introduction: This chapter begins with a brief review of the procedure of data reduction and the kind of tests which have been executed and continues with a description of the statistical results. In York, the first step of data reduction was to sort the questionnaires and to encode the items. Each questionnaire was given a three digit identification number: the first number 1, 2 or 3 corresponding to the group it belongs to, a digit (e.g. 4) which identifies the villages in each group and a number from 1 to 132 which is a serial number for the questionnaires. For example (2-3-78) indicates that the questionnaire is number 78 , from village number 3, (Sachet Hamoudi), and belongs to Group 2, (Non-participatory villages).

The second step was content analysis which involved reading the answers to open ended questions, classifying the answers, distinguishing similar responses and encoding them, to facilitate input into the computer. This was a relatively slow and time consuming task. After completing this stage it was time to enter the data into the computer.

The computer used was the mainframe, Vaxa 8650. The SPSSX package was used to carry out the statistical tests. At this stage more training on the computer was necessary. An Iranian colleague who is studying for a DPhil in the Psychology Department (Bahman Najarian) spent invaluable time teaching me how to use spssx and explaining the intermediate stages leading to an acceptable understanding of the

results and their implications. The advisory service of the University Computer Centre was also consulted.

The third stage was to create a data file and to transfer the written responses from the questionnaires into a digital form suitable for input into the computer. Although a data processing service is available at the Computer Centre, it was preferred to handle this personally, in order to gain insight into and practice with the computer. After completing the data processing and random checking everything was ready for the execution of the intended tests. The basic test was frequency distribution and wherever necessary other tests such as the Pearson Correlation, t-test etc. were carried out. The bar charts and histograms were also produced and drawn by computer. In some cases, other information such as the size of houses and rooms was also extracted from other available sources to enhance the understanding of the statistical values which emerged.

For the sake of clarity, the questions and related analyses are grouped under four broad headings and will be discussed in the following 4 sections:

SECTION 1= General characteristics of householders

SECTION 2= Economic, environmental and cultural consequences of reconstruction

SECTION 3= The physical aspects of reconstructed settlements.

SECTION 4= The managerial and construction aspects of reconstruction.

It should be mentioned that the first two sections are described in the present Chapter and the two latter in the Chapter XIV.

13-1- General Characteristics of Householders

The respondents' characteristics in the present survey include age, job, educational attainment, size of family and number of families living in the houses interviewed.

1-1- Age- The data derived from the questionnaires indicate that the minimum and maximum values for the age of the respondents are 15 and 90 years respectively. It should be noted that at the time of the interview a number of aged respondents claimed that they did not know their precise age. The mean, standard deviation and median values for the ages of the 127 respondents are, respectively, 41.2, 16.3 and 40; there are 5 missing values for this item. The data for the three groups is summarised in (Table 13-1).

group	mean	sd	minimum	maximum	median	Valid Cases	Missing cases
1	37.2	14.4	15	80	35.5	41	2
2	43.3	17.8	15	90	43	59	2
3	43.2	14.8	19	65	39	27	1

Table 13-1: Age characteristics of the three groups of samples

Since the mean age of Groups 2 and 3 were very similar and both were higher than Group 1, further exploration appeared to be necessary. Group 1 consists of the two villages, Sarie and Bardie. The means for these two villages are, Sarie= 32 (sd=11.8), and Bardie= 43 (sd=15). It can be seen that the mean age for the village Bardie is also very close to that of Groups 2 and 3, and the only exception is that of the village Sarie. The means and standard deviation of all the 11

villages are presented in (Table 13-2) for a closer examination.

Village	mean	sd
Sarie	32	11.8
Bardie	43	15
Jelizi	47	18.8
Soveidani	46	11.8
Sachet	42	21.5
Motayyer	42	18.9
Moerez	34	15.1
Gheisarie	44	12
Choulane	38	16
Seied Naser	47	17.6
Abarfoush	49	12.1

Table 13-2: The means and sd of age scores of the 11 villages

Table 13-2 shows that three villages, namely, Sarie, Moerez and Choulane, have a mean of age under 40 years. The date and the time when these villages were visited for data collection was checked, no potentially peculiar condition was found.

Figure 13-1 illustrates the age distribution of all the respondents, in graph form, while the corresponding distribution for all three groups is presented pictorially in Figure 13-2.

```
  COUNT    MIDPOINT     ONE SYMBOL EQUALS APPROXIMATELY    .40 OCCURRENCES

      0          12
      6          16  ***************
      7          20  ******************
     11          24  ****************************
     11          28  ****************************
      9          32  ************************
     16          36  ****************************************
      9          40  ************************
      8          44  ********************
     10          48  *************************
      8          52  ********************
      7          56  ******************
     14          60  ***********************************
      6          64  ***************
      0          68
      0          72
      1          76  ***
      2          80  *****
      0          84
      1          88  ***
      1          92  ***
                     I....+....I....+....I....+....I....+....I....+....I....+....I
                     0         4         8        12        16        20
                               HISTOGRAM FREQUENCY

MEAN          41.283      STD DEV       16.282      MINIMUM       15.000
MAXIMUM       90.000

VALID CASES     127       MISSING CASES     5
```

Fig 13-1: Frequency Distribution of respondents age

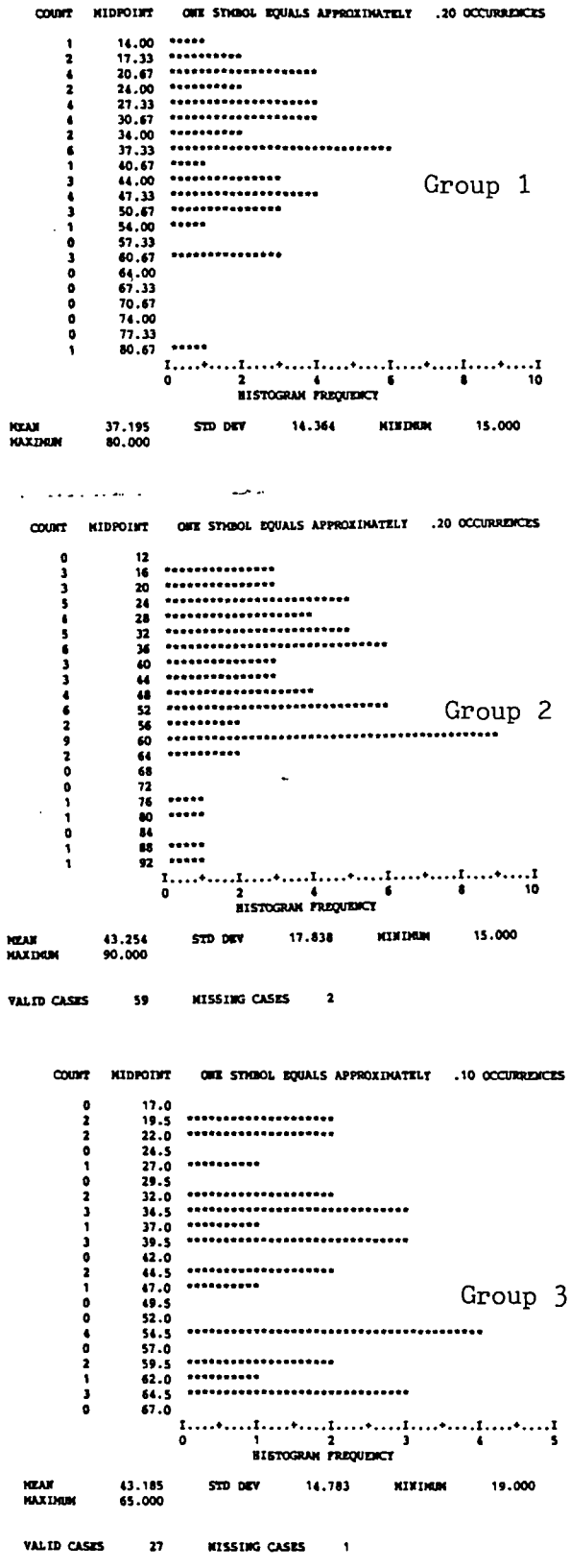

Fig 13-2: Frequency Distribution of age for the three study groups

1-2- Respondents' occupation- The data collected, comprising 132 responses, indicate that 76% of respondents were land owning farmers, 0.8% were shepherds, 10.6% land-less farmers, 4.5% labours, and 8.3% engaged in other activities. Combining the two groups of farmers, land holders and land-less, it appears that 86% of respondents were engaged in agricultural activities. The scarcity of shepherds is no surprise: it is known that particularly in those villages now in the restricted zone, which are close to the Hour Alhoveize, there are many families involved in animal husbandry especially keeping buffaloes. Although the proportion of labours is very low, a closer examination revealed that they are mainly from three villages (Sarie, Bardie, Jelizi) which have a larger population size and relatively easy access to the urban areas. The frequency distribution of respondents' occupation is illustrated in Figure 13-3.

	COUNT	VALUE	ONE SYMBOL EQUALS APPROXIMATELY 2.00 OCCURRENCES
1 - Farmer	100	1.00	**********
2 - Shepherd	1	2.00	*
3 - Landless	14	3.00	*******
4 - Labour	6	4.00	***
5 - Others	11	5.00	******

I.....I.....I.....I.....I.....I
0 20 40 60 80 100
HISTOGRAM FREQUENCY

MEAN	1.689	STD DEV	1.308	MINIMUM	1.000
MAXIMUM	5.000				
VALID CASES	132	MISSING CASES	0		

Fig 13-3: The job distribution of the respondents.

1-3- Educational attainments- Out of 132 respondents 99 (i.e. 75%), were illiterate and only 7 (i.e. 5.3%) had received secondary school education. This poor rate is not representative of the community because those interviewed were mainly heads of family and as has been revealed earlier their mean age was 42 years. An association between age and educational attainment was assumed. The results of Pearson correlation tests support this assumption for all the samples ($r=-0.55$; $df=127$; $p<.001$). The same relationship is also found for Group 1 ($r=-0.69$; $df=41$; $p<.001$), Group 2 ($r=-0.42$; $df=59$; $p<0.001$) and Group 3 ($r=-0.68$; $df=27$; $p<.001$). In brief, there is a significant negative correlation between age and education, which means that the younger generation had a greater opportunity for education than their elders.

The codes for the different levels of educational attainment in the questionnaire were as follows;

code	educational status
1 =	Illiterate
2 =	Reading and writing
3 =	Primary school
4 =	Intermediary school
5 =	Secondary school

The mean values of the 11 villages indicate that the villages Sarie with a mean of 2.26 and Choulane 2.20 are on the top of the roll. In further inspections implemented to examine the relationship between location, (i.e. distance from urban centres) and educational status no significant correlation was identified. However, the analysis reveals that some of the villages located in the remote areas, including Abarfoush, Gheisarie Sofla and Motayyer, have a higher percentage of

illiteracy when compared with other villages. Figure 13-4 illustrates

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
1. - Illiterate	1	99	75.0	75.0	75.0
2. - Reading & Writing	2	9	6.8	6.8	81.8
3. - Primary School	3	11	8.3	8.3	90.2
4. - Intermediary School	4	6	4.5	4.5	94.7
5. - Secondary School	5	7	5.3	5.3	100.0
	TOTAL	132	100.0	100.0	

```
   COUNT       VALUE    ONE SYMBOL EQUALS APPROXIMATELY  2.00 OCCURRENCES

      99        1.00  **************************************************
       9        2.00  *****
      11        3.00  ******
       6        4.00  ***
       7        5.00  ****
                      I.........I.........I.........I.........I.........I
                      0         20        40        60        80        100
                                HISTOGRAM FREQUENCY

MEAN          1.583      STD DEV       1.153      MINIMUM       1.000
MAXIMUM       5.000
```

Fig 13-4: Frequency distribution of respondents' educational attainment

For the present survey, the rating scale was the following:

Code	size of family
1 =	1-5
2 =	5-10
3 =	>10

The computed data obtained from 132 respondents indicate that the mean family size is 2.3 (sd=0.63). The same figure for Group 1 is 2.5 (sd=0.55), for Group 2, 2.0 (sd=0.64), and for Group 3, 2.4 (sd=0.62). his means that in Groups 1 and 3 the means of family size are similar. e lower family size in Group 2, which refers to non-participatory villages, required further investigation. To do this it is necessary to review the criteria or the distribution of houses among rural families.

In previous chapters the criteria for the recognition of each family to receive material or housing were discussed. However, it should be mentioned in passing that in those villages which have been reconstructed with site designs and unit designs prepared by architects, the base for identifying 'a family' was 'every married couple with or without children'. In other villages where the existing plot of land was not changed, and new rooms and services were built inside the same house according to the size of family. (e.g. Sarie, Choulane), the family structure remained more or less unchanged. In short the assumption is that in the villages of Group 2 a movement towards nuclear families has been encouraged.

If we sort the 11 villages according to the type of reconstruction with respect to the consideration of family as a nuclear or whatever existed prior to the war, they can be split up into the two

following groups;

-A-			-B-		
Existing family	mean	sd	Nuclear family	mean	sd
Sarie	2.5	0.51	Sachet	1.8	0.60
Bardie	2.5	0.60	Motayyer	1.8	0.60
Seied Naser	2.8	0.40	Gheisarie	2.0	0.00
Choulane	2.4	0.69	Moerez	2.3*	0.51
Abarfoush	2.2	0.83	Soveidani	2.0	0.63
Jelizi	2.3	0.65			

With the exception of the village Moerez, our assumption seems to be relatively accurate. However, it should be remembered that this comparison is based on the supposition that the average family size prior to the war in all the 11 villages was relatively equal. Also for cross-checking purposes a significance test was carried out to see if the difference between the means of Group 2 and Group 1 are significant. Comparison with Group 3 will not help because, as has been mentioned, in this Group there are villages with both types of family. The result however, reveals that the assumption is valid. ($t=3.57$; $df=102$; $p=0.001$).

1-5-Number of families in house- This question relates closely to the prior one. If the number of families living in each house increases, the size of the family will be larger. Thus the analysis of the data related to this question could be a control measure for the prior one.

The rating scale devised to record the number of families is as below:

Code	No of Families
1 =	Single
2 =	two
3 =	three
4 =	four
5 =	five or more

The frequency distribution of the number of families in 132 cases with a mean of 1.79 (sd=.87) is illustrated in Table 13-3.

Value	frequency	valid percentage
1	61	46.2%
2	42	31.8%
3	24	18.2%
4	5	3.8%
5	0	0%

Table 13-3: Frequency distribution of number of families

As Table 13-3 shows, 54% of the houses questioned are inhabited by more than one family. There was no case of more than 4 families living in a single house. According to the statistical population survey 1978, published by the Iran Statistical Centre (1984), the average number of families in each individual house in rural areas of Khuzestan is 1.25, which is smaller than the 1.79 of the present survey. However, no figure for the Dashte Azadegan District, the zone of the present survey was available. Figure 5 illustrates the frequency distribution of number of families in the houses interviewed.

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
1. - One family	1	61	46.2	46.2	46.2
2. - Two families	2	42	31.8	31.8	78.0
3. - Three families	3	24	18.2	18.2	96.2
4. - Four families	4	5	3.8	3.8	100.0
	TOTAL	132	100.0	100.0	

```
 COUNT       VALUE    ONE SYMBOL EQUALS APPROXIMATELY  1.50 OCCURRENCES

    61        1.00  ****************************************
    42        2.00  ***************************
    24        3.00  ****************
     5        4.00  ***
                    I.........I.........I.........I.........I.........I
                    0         15        30        45        60        75
```

Fig 13-5: Frequency distribution of the number of families per house

Comparing the three groups of villages it appears that the means and standard deviations differ:

group	mean	sd
1	2.07	0.98
2	1.55	0.74
3	1.89	0.83

Table 13-4: Number of families in the three groups

The above table reveals that Group 2 has the lowest mean for the number of families in each house. There is no need to repeat the explanation given for family size which could help to interpret the present values. To check this a t-test was carried out whose result makes evident the significant difference between Group 1 and 2.(t=3.02; df=102; p=0.003)

Summary of section 1 and remarks- Data collected concerning the five main characteristics of age, educational attainment, job, family size and number of families living in the houses were explored. The minimum and maximum age of respondents were 15 and 90 with a mean=42 (sd=16.3). Regarding the householders' occupations majority were farmers (86%). In those villages with easier access to the urban areas there was a higher rate of non agricultural activities. In terms of education a large proportion (75%) of the householders were illiterate. No significant relationship was found between the location of a village and the educational status of its inhabitants.

The size of families was found to be relatively larger than the average reported for the province, Mean=2.3 (sd=0.63), (2=5-10 members). It was also found that more than 54% of those houses interviewed are inhabited by more than one family. The major point was that in the villages of Group 2 a tendency towards smaller size of family and a lower number of families living together is apparent.

13-2- Economic, environmental and cultural consequences of reconstruction

Introduction: This section deals with analysis of the values obtained for those questions corresponding aspects of the economic, environmental and cultural consequences of reconstruction in the villages surveyed. In terms of the economy, only the income of the families and any changes in their access to the working place have been considered. The cultural consequences, which one should be aware of their broad dimensions, are concerned with the expectations of the villagers with respect to housing needs and their ability to cope with future housing expansion and maintenance after reconstruction. Among the environmental consequences the level of hygiene in the settlement is examined. In all cases the discussion and evaluation are based upon the respondents' views as evidenced in their responses.

In Chapters I and XII the policies of reconstruction of the area were discussed comprehensively. Whatever the reason, the government has been challenged to improve the life of these rural communities during the reconstruction process. Therefore a huge investment has been made in the area and reconstruction aimed at more than the regeneration of life. The much discussed phenomenon of development through disaster opportunity has for some time been a dominant issue in reconstruction policy. The understanding of real performance and long term effects requires comprehensive study. The present survey might contribute, albeit to a very minor degree, to this task.

2-1-Economic effects

2-1-1- Income- The villagers were asked whether their income after reconstruction had changed compared with that of before the war. The rating scale constructed was as below:

code	answer
1 =	lowered
2 =	no change
3 =	increased

The analysis reveals 132 positive answers, mean=2.73 (sd=0.60). In other words 82% of respondents claimed that their income has improved, 10% claimed no change and a minor proportion of 8% said they are less well off since reconstruction Figure 13-6 illustrates the frequency distribution of the responses.

	COUNT	VALUE	ONE SYMBOL EQUALS APPROXIMATELY 4.00 OCCURRENCES
1 - lowered	11	1.00	***
2 - no change	13	2.00	***
3 - increased	108	3.00	**********

I.....I.....I.....I.....I.....I.....I
0 40 80 120 160 200
HISTOGRAM FREQUENCY

MEAN	2.735	STD DEV	.604	MINIMUM	1.000
MAXIMUM	3.000				
VALID CASES	132	MISSING CASES	0		

Fig 13-6: Frequency distribution of change in income

An examination of scores for the three study groups does not indicate any special differences among them. Table 4 presents the

respective values for the three groups.

group	mean	sd
1	2.72	0.63
2	2.65	0.68
3	2.92	0.26

Table 13-5: Income change of the three study groups

The important point to notice is that the change in families' income is not related to the policy of reconstruction implemented in the village. (i.e. This means that the improvement in income stems from other sources, for instance provision of agricultural facilities).

2-1-2- Access to work- The villagers were asked whether their access to their place of work had changed since their resettlement, compared with before the start of the war. This was especially important for those villages which have been relocated. The rating scale devised went from 1= 'It became more difficult', to 5= 'It became much easier'. The data comprised 130 cases, 2 were missing. The analysis indicates that 45% of respondents said that their access has improved while 15%, claimed it had improved substantially. On the other hand 27% claimed no change and 13% found their access more or much more difficult. Figure 13-7 shows the frequency distribution of the answers.

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
1 - more difficult	1	3	2.3	2.3	2.3
	2	14	10.6	10.8	13.1
3 - no change	3	35	26.5	26.9	40.0
	4	58	43.9	44.6	84.6
5 - much easier	5	20	15.2	15.4	100.0
	0	2	1.5	MISSING	
	TOTAL	132	100.0	100.0	

COUNT	VALUE	ONE SYMBOL EQUALS APPROXIMATELY 1.20 OCCURRENCES
3	1.00	***
14	2.00	**********
35	3.00	**************************
58	4.00	**
20	5.00	**********

I.....I.....I.....I.....I.....I
0 12 24 36 48 60
HISTOGRAM FREQUENCY

MEAN	3.600	STD DEV	.953	MINIMUM	1.000
MAXIMUM	5.000				

Fig 13-7: Change in access to the work

The reasons for improvement in access to place of work may differ. However, among them the construction of new roads seems to be a relevant factor. It might prove interesting to review the relevant scores for the 11 villages. These are presented in Table 13-6.

village	mean	sd
Sarie	4.08	0.79
Bardie	3.63	0.68
Jelizi	2.70	1.20
Soveidani	3.90	0.70
Sachet	3.63	0.80
Motayyer	3.36	1.02
Moerez	3.50	0.75
Gheisarie	4.00	0.81
Choulane	4.00	0.66
Seied Naser	3.83	0.75
Abarfoush	3.00	0.81

Table 13-6: Change in access to place of work in 11 villages

As the Table illustrates the village Sarie comes out top and the village Jelizi bottom of the list. This might be because the construction of a road connecting it to the main road of Susangerd to Hoveize has improved access to the town. Whereas the present site of Jelizi is almost 5 km from the previous one and the villagers have to walk this distance to get to their farms because no road has been constructed for this purpose. Indeed, at the time of the survey the inhabitants were complaining about this problem. From this, we can point out that when relocation involves reconstruction, the access of the rural people to their land should be carefully considered.

A further point needs to be made. The government has invested in many projects in the area. Attention has been paid to agricultural

equipment such as pumps and tractors. The area also benefits from many roads constructed for military purposes during the war, some of which were constructed by the enemy during the occupation. But any judgement about the change in the economic situation of the rural peoples in this area requires adequate information from other villages all over the Province, where no damage was sustained and therefore no reconstruction was necessary. Moreover since the Islamic Revolution the government has always shown an interest in improving the rural people's lives and investing in the agricultural sector as part of the move towards self sufficiency in food production. Thus it is possible that in many other rural areas of the country the present income of the people is an improvement on that of before the war. In brief, the majority of respondents claimed that their present income had improved when the situation is compared with pre-war.

2-2-Environmental effects- It is obvious that the environmental consequences of a reconstruction programme might be for reaching. In the present survey the focus was on hygiene. The earlier studies of the area indicated that the majority of villages had no access to clean water, sewerage systems and the houses rarely had toilets or bathrooms. During reconstruction the provision of toilets and clean water was attended to. Sometimes a small washing space was built to serve as a bathroom. The earlier visits found that while many people were using these facilities, others had altered and converted the washing space into, for example, a store. The aim here was to obtain the villagers' views on the improvement in the level of hygiene in their settlement comparing the previous situation with the present.

2-2-1- Change in the level of hygiene of the village- The question asked was very general: in the view of the inhabitants, had the level of hygiene of the village changed. A five option rating scale was designed, going from with 1='It is much lower', o 5= 'It has substantially improved'. Analysis reveals that 132 responses were obtained with none missing, mean=4.09 (sd=0.50). The answers can be summarised as follows:

value	Frequency	Valid percentage
1	0	0%
2	0	0%
3	11	8%
4	98	74%
5	23	17%

There is no claim of a decrease in the level of hygiene of the village. A minor proportion of 8% claimed no change, while a majority of 92% responded that it had improved to varying extents.

```
        COUNT        VALUE    ONE SYMBOL EQUALS APPROXIMATELY  2.00 OCCURRENCES

3 - No change   11     3.00  ******
4 - Improved    98     4.00  **************************************************
5 - Substant-   23     5.00  ************
  ially improved
                          I.........I.........I.........I.........I.........I
                          0         20        40        60        80        100
                                   HISTOGRAM FREQUENCY

MEAN            4.091      STD DEV        .501      MINIMUM        3.000
MAXIMUM         5.000

VALID CASES      132       MISSING CASES    0
```

Fig 13-8: Change in the level of hygiene of the villages

It seems necessary to examine the performance of the different groups in this respect. For the three study groups the means and sd are as below:

group	mean	sd
1	4.0	0.4
2	4.18	0.5
3	4.03	0.5

Table 13-7: Change in the level of hygiene of the three study groups

There does not seem to be any significant difference between the values of the three study groups. However, the results of the t-test for the means of Group 1 and 2 show a tendency towards a higher level of hygiene in Group 2. ($t=1.83$; $df=102$; $p=0.07$) This is a crucial point, because the main aim and hope for the over-designed villages of Group 2 was an improvement in hygiene. For this purpose the sites were designed so as to separate the family's alleys from the animals' routes. This concept was also observed in the design of the houses, with the design of separate courtyards. Not only during the visits, but also in the views of the villagers it was found that this idealistic functional division exists only on paper. The data reveals there is no significant difference in the level of hygiene between those over designed villages and those in which the site and house designs were unchanged. The reasons for and sources of the improvement in the level of hygiene must be due to other factors. Presumably a supply of clean water and the building of toilets and perhaps, of no

less importance, the education the people received through experiencing life in urban areas during the refugee period can be considered influential factors.

To examine the performance of the 11 villages the value of the mean and standard deviations are presented in the following table.

village	mean	sd
Sarie	4.08	0.51
Bardie	3.90	0.44
Jelizi	4.35	0.48
Soveidani	4.09	0.70
Sachet	4.18	0.40
Motayyer	4.00	0.44
Moerez	4.12	0.35
Gheisarie	4.00	0.57
Choulane	4.00	0.66
Seied Naser	4.00	0.00
Abarfoush	4.20	0.44

Table 13-8: Change in the level of hygiene in the 11 sampled villages

The village Bardie has the lowest score: mean=3.90 (sd=0.44). The village Jelizi stands towards the top of the list with a mean of 4.35 (sd=0.48). The result of the t-test support the significance difference between the means of Bardie and Jelizi. (t=3.04; df=38; p=0.004)

It must be remembered that the inhabitants of Jelizi were previously living in high density accommodation on muddy land, while

the present site is sandy and they have large areas around them. In contrast to this, the village Bardie still suffers from previously existing problems such as muddy land, and depressions which fill up with water during the rainy seasons. Generally Bardie is suffering from environmental problems.

2-2-2- Houses hygiene- Another question, very similar to the one discussed above, asked the villagers about the change in the level of hygiene of their houses when the past and present situations were compared. A five option rating scale was devised, going from 1= 'It has substantially worsened' to 5='It has substantially improved'. All 132 householders answered this question, mean 4.12 (sd=0.56). The analysis of the data collected reveals that there is not even a single instance of a decrease or worsening in the level of hygiene in the house. A proportion of less than 11% claimed no change, while the majority of 89% thought it had improved to a greater or lesser extent.

	COUNT	VALUE	ONE SYMBOL EQUALS APPROXIMATELY 2.00 OCCURRENCES
3 - No change	14	3.00	*******
4 - Improved	88	4.00	**********
5 - Substant-ially improved	30	5.00	***************

I.....I.....I.....I.....I.....I
0 20 40 60 80 100
HISTOGRAM FREQUENCY

MEAN 4.121 STD DEV .567 MINIMUM 3.000

Figure 13-9: Change in the level of houses' hygiene

The relevant values for the three groups of villages constructed the following table.

group	mean	sd
1	4.09	0.61
2	4.16	0.55
3	4.07	0.53

Table 13-9: Change in the level of hygiene of the three study groups

The scores are very similar. A t-test between Groups 1 and 2, shows no significance. This implies the very important point that an increase in the level of hygiene in the houses, as far as the view of the dwellers are concerned, has nothing to do with the design of the houses. To demonstrate this more clearly it is possible to examine the values for all 11 villages.

Village	mean	sd
Sarie	4.08	0.66
Bardie	4.10	0.55
Jelizi	4.40	0.50
Soveidani	4.18	0.75
Sachet	4.00	0.44
Motayyer	4.09	0.30
Moerez	3.87	0.64
Gheisarie	4.14	0.37
Choulane	4.20	0.63

Seied Naser	4.16	0.40
Abarfoush	3.60	0.54

Table 13-10: Change in the level of hygiene in houses in the 11 villages

As can be seen from the above Table Jelizi with a mean of 4.40 and Abarfoush with 3.60 are at the top and the bottom. Other villages are relatively close to a score of 4. What is known about these two villages is that in Jelizi the people are relatively better off. Some of the houses use a water heater in the bathroom, that is very costly and is not seen frequently in other villages. In contrast to this, in Abarfoush there is as yet no supply of clean water. The land is a low lying area and the people are still living, in more or less, the same conditions as before the war.

As far as the level of hygiene, is concerned, the data analysis reveals that according to the villagers the level of hygiene in both the village and houses has improved substantially since reconstruction. There is a small proportion of 'no change' responses but there is not even one response claiming a decrease in the level of hygiene.

2-2-3- Toilet in house- The householders were asked if they had had toilets in their houses before the war. The analysis of the data (132 answers) reveals that 76% replied 'no'. It was thought that those who had had toilets were probably in the larger villages and the percentage of positive answers from the 11 villages were listed to see if this was true. (Table 13-11)

village	+ valid Percentage
Sarie	39%
Bardie	30%
Jelizi	30%
Soveidani	09%
Sachet	09%
Motayyer	09%
Moerez	25%
Gheisarie	43%
Choulane	10%
Seied Naser	33%
Abarfoush	00%

Table 13-11: Percentage of houses with toilets before the war

The table does not suggest any especial correlation.The scores of the villages Gheisarie and Seied Naser are comparable with those of Sarie and Bardie. This means that the size of the village does not play significant role in determining the presence or absence of toilets in the houses. However, the small and usually remote villages such as

Abarfoush, Choulane, Soveidani and Sachet had a low percentage of houses with toilets.

The same householders were also asked whether they had a toilet in their house after reconstruction. The total number of answers received was 132 with none missing, of which 96% responded positively. The reason is clear: in almost all the reconstructed villages, with the exception of Bardie, the toilets were part of the reconstruction. Even in Bardie the people themselves constructed toilets for their houses. It seems that the use of toilets has spread and become common over all the rural areas under the present survey.

There are a few points worthy of note in relation to this. First, these people have a tribal background. The nomads live in tents and do not usually build toilets. This is consistent with my own observations of nomads such as the 'Eil Savan' and 'Ghashghaei' in central Iran. So since the people settled down only a short while ago, many have kept their attitudes and behaviour. The second point is the difficulty of constructing toilets. In this area the water level under the land is very close to the surface. In those villages which are particularly close to the 'Hour Alhoveize' the land might well be flooded by rising water. This in turn has made the construction of wells or sceptic tanks very difficult.

The third point is that having a space as a toilet does not necessarily mean that the family will use it as such. In the village Farsie the people claimed that the waste storage units are full and they do not have the ability to clean them out, so they returned to their traditional method of using the farmland surrounding the village for relief. The problem becomes more complicated where a single

storage unit is provided for two neighbours. This may of course reduce costs, but it is harder to allocate responsibility for maintenance.

In two of the villages to the north of the river Karkhe a few villagers claimed not to use the toilet because its entrance door was facing the other rooms and they were shy to use it while other members of family, or even neighbours, were watching them. Surprisingly they did not feel shy, when following their traditional method, of reliving themselves in front of the family or other villagers.

The fourth point concerns the location of the toilet in the house. There were frequent complaints that the toilet's septic tank was inside the courtyard and that it should be out in the alley instead. Soveidani is one example. There were more complaints where the toilets were built close to other rooms. (i.e.Moerez). The main point to be drawn from the data and discussion is that although in the past toilets were not in common use in this area, since resettlement they have became part of every house. It would seem necessary to review the location and construction of toilets to reduce the associated problems observed.

2-2-4- Bathroom- Bearing in mind that many of the villages in this area are located near rivers, and remembering that the area generally benefits from a moderate temperature, it is not difficult to imagine how the rural people were used to washing themselves. For the men the river was the best place for most of the year. On cold days, and in certain other circumstances, religious ablutions, for example, they used to wash with a pot of hot water in the corner of one of the rooms. The women were generally restricted to taking indoor baths.

Unlike in many other villages all over the country here there was no signs of 'communal bathroom' in these rural areas. Even in the city Susangerd, it was found that the newly constructed communal bathroom was not operating fully. There were not enough customers and most families prefer to have a small washing space in their own houses. The women are usually forbidden to go to the communal bathroom.

Some of these observations are similar to Aysan's (1987) reports from villages in Turkey, where the rural people would add a new washing space in the corner of a room, even though a bathroom had been constructed in the house.

As part of the reconstruction programme, in some of the villages in Khuzestan bathrooms have been built. In no case did the space have any special equipment such as shower, rather it was only an enclosed space, around $2m^2$, usually close to the toilet. During the interviews the respondents were asked if they had had bathroom in their previous house or if they had one now. The analysis of the data reveals that from the 132 answers received less than 17% claimed they had had one in their previous house. A closer examination also indicates that of the 22 families who had a bathroom before the war, 12 of them were in Group 1 (Sarie 9 and Bardie 3).

It is not difficult to realise that having running water in the houses facilitated the building of bathrooms. On the other hand, in the majority of reconstructed villages under the present study the supply of clean water has not yet been extended to the houses, so the families have to prepare a pot of hot water and take this into the washing space. There are exceptions such as Sarie, and Jelizi where the the houses have running water and some times the families have

built a bath with a heater and shower.

The figure for those who have a bath after reconstruction are more than 77%. The following table reveals the performance of the three groups.

group	frequency	+bath	+ percentage	mean	sd
1	43	36	84%	1.83	0.37
2	61	47	77%	1.77	0.42
3	28	19	68%	1.67	0.47

Table 13-12: Frequency of houses with a bathroom in the three study groups

The table shows that the percentage of houses with a bathroom is higher in Group 1 than in the two others. It should be remembered that the same group had a higher proportion of houses with a bathroom prior to the war. Moreover, in the majority of villages, running water is still not provided for individual houses. This might also be a relevant factor in encouraging the building of bathrooms.

In brief it can be said that the use of small washing spaces in the houses is accepted and the people are willing to make use of them. At least instead of washing in the corner of a room they can do it in a separate and private space. As regards the size of the bathroom it should be mentioned that if there is enough space the families prefer to take the stove for heating the water inside the bathroom. Thus ventilation and a chimney to let the fumes escape are required. It should also be added that the communal bathroom do not seem to be working in this area, because the villages are usually small and the costs of maintaining and running an engine and finding the fuel are not

easily met by the families. Moreover, the weather is usually good and the men can take a bath in the river. In addition, unlike in many other rural areas of the country the use of communal bathroom is not common. Even in the city of Hoveize, after almost half of the population had returned the communal bathroom was found closed.

Remarks- So far it seems that the majority of villagers claimed that the level of hygiene in the village and houses has increased substantially. The provision of clean water and the building toilets and bathrooms in houses seems to have contributed greatly to this. The families accepted the use of toilets and baths, but there are some additional points to consider for a more effective performance of these services. The communal bathroom does not seem to have worked in this area.

2-3- Cultural effects of reconstruction- A description of the cultural effects of a post-disaster reconstruction programme would require a comprehensive study. The present survey, however, focuses only on a few aspects, especially those related to housing. Looking through the literature one finds reports of the raising expectations of survivors.(see Cuny 181, Aysan 1987) The scenario is very clear. Where strong new materials and new designs and techniques are 'imported' and used in the reconstruction of houses, people's expectations change. It is likely that in future they will wish to use the better material and techniques instead of going back to their indigenous building style. Whether this raising of expectations, is a positive or negative feature is an open question and very much depends on the availability of resources within the community after the reconstruction period is over. One major factor is whether after reconstruction the survivors can have access to the new materials and techniques at a reasonable cost. Also it is important to see to what extent they are able to participate in the process of construction, perhaps a matter of training during reconstruction process. The present survey attempted to find out about these factors.

2-3-1-The construction of the previous house- The householders were asked who had built their previous house. The three possible answers were: 1= 'Myself and my family', 2= 'Family plus builder' and 3= 'Builder only'. The analysis reveals that of the 132 responses 122 householders, (i.e.93%) said that their previous house had been built by their own family. This means that they paid only for the roofing material, the door and the window, the walls were made of mud which cost nothing. Of the 10 people who said they used masons for part or

all of the construction of their houses, 7 were from the two main villages, Sarie and Bardie. Generally the extension of a house and construction of a new room was not difficult: In two or three weeks the family, sometimes with some assistance from other relatives or neighbours, could easily construct a room. In 1980 the costs of roofing materials and a door and window could well stand below £300.

2-3-2- Material for a new room- This question was open ended. The householders were asked which material they would choose if they were going to build an additional room. Altogether 124 responses were received, of which 119, (i.e. 96%) claimed they would use either bricks or cement blocks. A small proportion of 4% said they would use mud, the traditional material used for years. The analysis also indicates that for the construction of rooms brick is favoured over cement blocks. The responses were often conditional, the householder replying that if he had enough money he would use bricks, if not cement blocks, but never mud. Observations on the site supported the accuracy and strength of this statement.

2-3-3- Material for building stables- This question was similar to the previous one but related to the construction of a stable. The analysis of the data collected reveals that of the 125 answers a high proportion (76%) said they would use cement blocks. Only 24% replied they would use local materials such as mud, bamboo etc. An examination of the values of the three different groups and 11 villages did not show any significant differences. In practice, as was observed on the site, the actual construction of stables might be different. Stable are essential for the animals' well-being, so it was found that if the householder could not afford cement blocks, the stable was built in

mud. But nevertheless his aspiration for quality materials still remained. It is interesting to note the association of cement blocks with animal dwellings and the favouring of bricks for the construction of rooms. This might relate to the poor performance of cement blocks in the extreme heat of the area.

Discussion- Is this change in peoples' expectations about housing material positive or negative? It seems that in the rural areas of Khuzestan not enough attention has been paid to the long-term provision of building materials. A conversation with a young villager in Jelizi highlighted what is likely to happen in terms of housing in this area.

> -Do you have enough rooms?
> -No we do not, we need more.
> -Why?
> -I want to get married, but first I need a room.
> -Why do you not build one?
> -I can not afford the cost, it needs a huge amount of money.
> -What did you used to do about it in the old village?
> -We built with mud.
> -Why do you not do the same now?
> -(slightly surprised smiling) Mud?, mud is dead. That was from the time of Shah, now it is the Islamic Revolution.

Materials such as brick, cement and sand used in the reconstruction of houses were usually brought from a long way away, entailing high costs. (e.g. quality brick may come from Tehran, a 1000Km away). Obviously not many villagers are able to afford such expenses. On one hand the need for more living space is very real. On the other, the indigenous cheap approaches are devalued and no longer match up with the peoples' expectations. The villagers may either suffer from this lack of resources to meet their needs, or may try to raise the necessary funds which are unlikely to be obtainable from

farming. In future, more people may will migrate to urban areas where they are more likely to be able to gain the means. This is undoubtedly counter to the logical policy of the government to control the flood of rural migration and to increase agricultural productivity.

2-3-4-The attributes of previous house- The villagers were questioned about their feelings towards their previous house. This could be a yardstick to show how the people's view might be affected by intervention. It must be admitted that we are not aware of the degree of satisfaction and the kind of feeling people had towards their houses before the war. It is therefore assumed that they were happy with their existing houses. To finding out about the villagers' feelings they were asked how was your previous house? were you satisfied with it?. The rating scale comprised five options, ranging from 1='It was very bad', to 5= 'It was very good'.

The analysis indicates that there were 132 replies to this question, mean=3.0 (sd=1.0) The values of the 11 villages are illustrated in the Table 13-13.

village	mean	sd
Sarie	2.9	1.0
Bardie	2.8	0.9
Jelizi	2.8	1.2
Soveidani	3.3	1.1
Sachet	3.0	1.3
Motayyer	2.5	0.5
Moerez	3.2	1.0
Gheisarie	3.2	0.9

Choulane	3.1	1.2
Seied Naser	2.6	1.0
Abarfoush	2.6	0.8

Table 13-13: Villagers' attitudes towards their previous houses

It seems appropriate to examine the scores of the three groups. The relevant values are tabled below:

group	mean	sd
1	2.9	1.0
2	3.1	1.1
3	3.0	1.0

Table 13-14: Respondents attitude towards their previous houses in the three study groups

As can be seen the values for the three groups of villages are very close. This can be interpreted to mean that the villagers' feelings about their previous houses bears no relationship to the policy of reconstruction. Moreover since the majority find them acceptable (score 3= Acceptable), it implies that for these dwellers their previous houses had some advantages which presumably they can not see in their present accommodation.

2-3-5- Maintenance of buildings- Alongside the issues discussed above, another aspect of the housing reconstruction concerns the ability of the dwellers to repair the building. In previous houses

there were no problems; those who know how to construct a building could easily repair it as well. Very often the women would repair the base of the walls, damaged by rising damp, by adding more mud. With the new buildings, however, the situation is very different.

2-3-5-1- Learning building skills during reconstruction period- The householders were asked whether they had learned any building skills during the reconstruction. There were three possible answers; 1= 'No', 2= 'A little' and 3= 'Yes'. The positive broad answers were examined in more detail with further questions which will be described later. Generally two aspects are important; first, what kind of skills had the villagers acquired and second, the relationship between people's participation in the reconstruction process and their learning building skills.

The analysis of the data from 131 responses, indicates that 104 persons (i.e. 80%), claimed they did not learn anything. An examination of the relevant scores for the 11 villages reveals that the village Sarie with 35% of positive responses is at the top, and Soveidani with 0% is at the bottom of the list. In Sarie, as was explained in Chapter XI, the people participated to the maximum, while in Soveidani the villagers were not on the site during reconstruction.

It should be mentioned here that it was difficult to distinguish those skills which the people may have learnt during the refugee period, from those they learned during the reconstruction of their own villages. The circumstances of different villagers varied. For the scores of the three groups of villages, the percentages who learnt construction skills are as follows:

group	percentage
1	23%
2	17%
3	25%

It seems appropriate to examine the difference between the scores of Groups 1 and 2, and 2 and 3. In both cases the results of the t-test do not reveal any tendency or significant differences between the groups.

Three categories of building skills learned by the respondents were recognised. Firstly, simple tasks such as labouring; secondly, moderately difficult tasks such as plastering and thirdly major tasks such as brick laying. Altogether 27 people (i.e.20%) claimed they learned something. Analysis reveals that of this proportion, the 9 people who claimed acquisition of the first kind of skill can be ignored because, in fact, many other villagers had exactly the same role during reconstruction. 16 people (i.e.12%) claimed they learned skills of the second type. Only the very low proportion of two people said they learnt any major construction skill. The scores are too small to provide a reliable comparison between the three groups and 11 villages, because they are spread among all the villages. What is important is that there has not been any intention on the part of the intervenors to encourage the training of construction skills among the villagers.

2-3-5-2-Ability to repair their houses- The villagers were asked whether they were capable of repairing their houses. Three classes of

repairs were recognised, from simple tasks such as putting layers of mud and straw on the roof, to major repairs such as those of wall restorations. It was found that the question was sometimes misunderstood. Some respondents thought that the question concerned financial resources, so the total of reliable responses numbers 102, of this number, 64 respondents (i.e. 60%) claimed they were unable to carry out any repairs. Of the remaining 40% only a small group of 6 people claimed to be capable of some of the uncomplicated repairs. The examination of the scores of the 11 villages not show any special tendency. Moreover the values are poor and scattered. It seems that in the village Jelizi, where the walls are built of cement blocks and roofing exceptionally, of steel beams the villagers said they were less able to carry out any repairs. It was also interesting that those who misunderstood the question said that if their financial situation could not meet the costs of repair' they would call on the officials for assistance.

It can be concluded that on one hand the expectations of villagers regarding housing have been raised. While on the other hand there does not seem to be affordable access to the material and skilled man power. Housing therefore became a costly task. It also seems that the importance of training the users has not been recognised in reconstruction programmes and so the people have become very dependent on skilled builders, who have to be hired from the town. Findings suggest that in the long term the rural areas may face new problems that never existed in the past: **Housing.**

2-3-6-Cooling equipment of house- In the hot weather of Khuzestan it is essential to make the rooms comfortable. In mud built

houses, in addition to the good performance of mud in hot weather, the main cooling system is natural ventilation. As described in Chapter I, this ventilation was provided by creating a number of small holes in the walls. During the high temperatures of the middle of the day, the inhabitants would pour water outside on the ground near the holes, or in their own words, 'Rouzane', to increase the humidity of the air and make the room more pleasant. The reconstruction programmes were considering the cooling system based on the use of electricity, abandoning the traditional approach. The villagers were asked about their cooling prior to the war and after reconstruction.

The data comprised 131 responses, the analysis of which reveals that a majority of 108 people (i.e. 83%) answered that they had used natural ventilation in their previous houses. The 17% which had artificial cooling facilities, were not surprisingly, from those villages which had electricity, mainly Sarie and Bardie which included 18 families. The remaining 5 families from the other villages either had small generators or were using the electricity produced from water pump generators, which can provide power for only a few users. However, during several visits, neither of these situations were seen to be common, in particular it should be remembered that water pumps do not work continuously.

When the same people were asked about their present cooling equipment, there was only one family who did not have a fan or cooler. There were 132 positive responses, whose analysis indicated that 61% had fans and the rest electrical coolers. The choice of fan or cooler depends entirely on the financial status of the family. Different villages were not in the same economic situation. The kind of cooling

facilities they use might be a good indicator of the level of their income. In the two villages of Sarie and Bardie, for example, nearly half of the respondents claimed to possess coolers. In remote and small villages such as Gheisarie and Moerez the proportion was much lower. (0% in Gheisarie, and 12% in Moerez).

It can be concluded that the use of traditional cooling methods has been abandoned and electrical facilities substituted. Where there is electricity, fans and coolers were found. The question remains, would it be sensible to consider using natural ventilation, or even 'improved' natural ventilation in these rural areas ?

2-3-7-Expectation for reconstruction in case of further damage induced by the war- In the rural areas of Khuzestan, before the war broke out, most houses were built by the inhabitants themselves. In other words, the villagers were largely self-sufficient in terms of their housing needs, eside the issue of the quality, that means these rural people were able to cope with their housing needs in resettlement by implementing their usual indigenous methods of construction. Actual evidence for this is provided by cases such as in Jelizi, where the survivors constructed a whole new village, due to the slow progress of the reconstruction programme and Choulane, where the villagers were able to accommodate themselves for more than two years. This has happened in many other villages.

Since reconstruction started and new building materials and techniques were introduced it is doubtful whether the villagers will continue to undertake any reconstruction, without government intervention. They may feel that it is their right to receive quality houses and perhaps infrastructure. A true, if rather extreme

examples, provided by the village Shakerie. The village was almost undamaged by the war, but because the construction of Jelizi was in progress not far away the people from Shakerie demanded and insisted on the renewal of their village. Their request took five years to succeed. During the authors last visit in December 1987, it was found that a new brick village had been constructed in the northern part of Shakerie, but the people were still living in the old village. The reason, they claimed, as that the electricity had not been not transferred from the existing settlement to the new one.

During the early stages of the rural people's return, one often heard from them, that they expected the government to restore the land, canals and water pumps, all of which are crucial to production. In practice the reconstruction programme went further and included housing. The question is, then, what was the minimum expected by the rural people? And whatever the answer, after their experience of the last 7 years, what changes could they expect to have occurred. This issue is related to another fundamental question: do the survivors have different expectations of the government's role in repairing damage depending on whether it is caused by war or natural disaster. The significant difference is that a natural disaster is an event which is completely out of the government's hands, whereas war is actually prosecuted by the government. This issue needs further discussion in its own right.

The present survey could not record the rural peoples' opinions and expectations prior to reconstruction. Nevertheless a question was asked, to gain an indication of the villagers' attitudes and expectation: Who do you expect to intervene in reconstruction in case

of further damage caused by the war? The two major components, of the government's and the survivors' participation, were focused on. A five option rating scale for answers was designed that at one end placed total responsibility on the government and at the other on the survivors themselves alone.

The analysis of the data collected reveals that 132 people responded to this question. Among them a tiny proportion of 3% thought they should carry out the reconstruction themselves. The value of those expecting full intervention by government stands at 39%, the remaining 58% claimed that reconstruction should be implemented by co-operation between the government and the survivors. The lessons to be drawn from these values are that, it is unlikely that the survivors will re-settle themselves, on their own, even if they are able to. Some outside aid and intervention is expected. On the other hand, a good proportion are still ready to take part in the reconstruction of their settlement. This is a large resource whose importance is very often neglected. An examination of the scores of the three groups does not indicate any significant differences between them.

group	means	sd
1	3.3	0.68
2	3.3	0.62
3	3.2	0.50

Table 13-15: Values of the three study groups related to reconstruction in case of another damage

Summary and remark on section 2- In this section aspects of the economic, environmental and cultural effects of reconstruction were discussed. In terms of income a majority of respondents claimed an improvement. The analysis reveals that in most cases their access to their place of work has become easier. A large majority claimed that hygiene is one of the environmental aspects that has improved since resettlement. It was found that most villagers had not had toilets in their houses prior to the war, but now had them.

A bathroom or washing space, was rarely found in houses prior to the war. Since resettlement, however, a good proportion have added this to their houses. It seems that, in the view of the householders, the provision of clean water and the building of toilets and bathrooms in houses, has facilitated the improvement in hygiene. One major point is that this increase in the level of hygiene bears no relationship to the design and construction of the houses.

Some cultural aspects of housing were examined. Computing the data collected it was found that the majority of respondents had constructed their previous houses with their own family. The present feelings of householders towards their old houses ranged from criticism to a feeling of regret. This might mean that they saw some advantages in their old house which they could not see in the present one. The issue of raising survivors' expectations, as has been reported in other post-disaster situations, is found very relevant here. The use of indigenous techniques has been devalued since reconstruction.

The majority of respondents indicated that they did not learn

any construction skills during the period of reconstruction. The analysis also shows that the villagers became very dependent on outside help for the construction and repair of their new houses, which in the long run may cause the area to face housing problems for the first time. Another aspect dealt with was the cooling equipment in houses. Before the war natural ventilation was widespread. since reconstruction this has been abandoned and fans and coolers predominates. In brief, as might be expected, it was found that a reconstruction programme can affect, perhaps substantially and lasting, he economic and social life of the survivors.

CHAPTER FOURTEEN.

CHAPTER XIV

DATA ANALYSIS (SECTION 3 & 4)

Introduction: In chapters I and XII the history of reconstruction policies in the rural areas of Khuzestan has been inclusively gone over. It was shown that there are a variety of factors about the location, design, material, construction and management of the reconstruction programmes. The earlier observations from the villages revealed that *the actual use of the houses and* settlements by inhabitants, in some cases, was very different to what was intended by the initial design proposed by the architect. In this section the reaction of the villagers to the physical aspects of reconstruction will be discussed. In this context it is believed, that the success or failure of a reconstruction project can only be properly evaluated by noting the viewpoint of the users. The questions are under the following sub-headings:

1-Land and Location,

2-Site organisation,

3-House design and construction.

14-1- The physical aspects of reconstructed settlements

1-1- Location and land- The practice of reconstruction in rural areas of Khuzestan involved three options of location : 1- **To construct on existing sites**, that has been applied where there was a scarcity of appropriate land for housing, (i.e. Choulane or Abarfoush), or when the structure of the village largely survived the war, (i.e. Sarie, Bardie). 2- **Limited relocation**, usually where the village has been totally levelled,(i.e. Soveidani) or nothing much was left from the settlement, (i.e. Sachet). In the case of Group 2, (over-designed villages), limited relocation was found economically more sensible instead of razing the remains of the existing structures, in these cases the new site was a matter of a few hundred metres distance. And 3- **Relocation**, which applies to those cases where the new site was far from the previous one. The extreme example of this was Jelizi, where the relocation was 5 km away from the original settlement and less so in the case of Moerez, or Motayyer, where two or more villages were joined.

The questions raised during interviews concerned with land and location referred to the suitability of present land for housing, whether the villagers opinions were solicited for decision-making about location and in case of inappropriateness of the land used what are the disadvantages, and finally the very important question of determining the villagers' opinion about joining with other villages for the construction of a new settlement.

1-1-1- Suitability of land- The first question asked was, whether the present land of the village is a suitable one. The devised

rating scales were, 1= 'Absolutely not suitable', to 5= 'It is ideal'. The analysis of the data collected reveals that 132 answers were received from which a majority of 115 person, (i.e. 87%) claimed that it was acceptable or good.(mean=3.75, sd=0.86). The related values for the three groups of samples are illustrated in the following table;

group	total	frequency	+percentage	mean	sd
1	43	36	74%	3.62	0.9
2	61	53	87%	3.8	0.94
3	28	26	93%	3.85	0.59

Table 14-1: Suitability of land used for the groups of the villages

A t-test was carried out to examine any meaningful values among the means of the two groups 1 and 3. The result however, reveals no significance.

The values computed for the 11 villages are manifested in the following table;

group	village	mean	sd	(relocation: no - yes - too much)
1	Sarie	3.7	0.76	*
	Bardie	3.6	1.05	*
2	Jelizi	4.2	0.56	*
	Soveidani	3.2	1.40	*
	Sachet	3.8	0.98	*
	Motayyer	3.5	0.93	*
	Moerez	4.1	0.35	*
	Gheisarie	3.9	0.90	*
	Choulane	3.8	0.63	*

3				
	Seied Naser	3.8	0.40	*
	Abarfoush	4.0	0.00	*

Table 14-2: Suitability of land used for housing in 11 villages

Table 14-2 also shows that there are no significant differences between the groups. It seems that in Groups 1 and 2 more villages are reconstructed without any change in the location, on the other hand most villages constituting Group 2 have minor relocation. Deeper understanding of the values requires examination of two other questions; First whether the villagers' opinions were asked for designation of the land and second, what reasons were offered by those who are not satisfied with the choice of land.

1-1-2- The reasons for unsuitability of land- This question was designed to understand the reasons which may exist for unsuitability of land used for reconstruction. The percentage of negative responses as was mentioned earlier is only 13%. However, the answers offered indicate that two major reasons are referred to; first risk of flood and second muddy land in rainy seasons. The examination of values among the three groups and also the 11 villages shows that they are scattered and no specific rule can be drawn.

1-1-3- Soliciting villagers' opinions- Before designing the final draft of the questionnaire it was known that in many cases for designation of land the intervenor asked the views of local organisations, especially Jahade Sazandegi, and also the representatives of the villages. The question was asked, whether the representatives of the village at that time were consulted for the land

designation. Two optional answers were proposed 1=No 2=Yes. The analysis indicates that altogether 129 responses were received and 4 are missing. The percentage of those who gave a positive answer amounts to 79%, the other 21% gave negative answers. The examination of the values of the three groups does not reveal any special changes. The same applies when the scores of the 11 villages are reviewed.

Bearing in mind that 87% of respondents had a positive attitude towards the land used for reconstruction and remembering that 79% of respondents, claimed that their representatives were involved in designating the land, it could be said that these two might be related to each other. That requires further explanation which will be done in the discussion section.

1-1-4- Risk of flood- The householders were asked whether their present village is at risk of flood. The fact is that in the plane area of Khuzestan the risk of flood is serious and it is well known how often part of the area is flooded each year. In any case, the analysis reveals that all 132 householders replied to this question, of which 40% said no and the other 60% claimed their villages are vulnerable to flood. It is necessary to scrutinise the values of the 11 villages, because it is likely that they have different situations. The following table is taken from the scores extracted for the 11 villages.

village	no	yes	
Sarie	17%	83%	*
Bardie	15%	85%	*
Jelizi	85%	15%	
Soveidani	36%	64%	*?

Sachet	9%	91%	*
Motayyer	82%	18%	
Moerez	87%	13%	
Gheisarie	100%	00%	
Choulane	20%	80%	*
Seied Naser	00%	100%	*
Abarfoush	00%	100%	*

Table 14-3: Risk of flooding of the 11 villages

As Table 14-3 illustrates, the 11 villages can be split into two groups of vulnerable and safe. It also seems that if the settlement is exposed to flood the majority of villagers are aware of it and therefore give similar responses. For example the two villages of Abarfoush and Seied Naser have in fact already experienced a flood since resettlement.

1-1-5- Experiencing flood in the past- The same respondents were also asked whether they have ever been stricken by flood. The computed data showed 129 responses from which 78 people claimed yes and 42 people claimed no, and 3 cases are missing. It is sensible to examine the percentages of the 11 villages and to compare them with Table 14-3.

village	**no**	**yes**	
Sarie	9%	91%	*
Bardie	20%	80%	*
Jelizi	39%	61%	*
Soveidani	73%	27%	
Sachet	18%	82%	*

Motayyer	9%	91%	*
Moerez	63%	37%	
Gheisarie	100%	00%	
Choulane	50%	50%	?
Seied Naser	17%	83%	*
Abarfoush	00%	100%	*

Table 14-4: The experience of flood in the past in the 11 villages

If we compare the two Tables 12 and 13, it can be seen that those villages which are reconstructed in their previous sites including Sarie, Bardie, Choulane, Abarfoush and Seied Naser are those which, in the past have been stricken by flood and there is no surprise if the villagers claimed they are still at risk. In case of Jelizi, it seems that on their previous site near the river Karkhe they have experienced a flood but they are convinced that the present site is safe. The people of Gheisarie have not been stricken in the past and because the new site is very close to the old one they are sure there is no risk of flood. In Moerez, despite the relocation, the villagers have experienced flood in the past and are almost sure about the risk of future flood.

1-1-6- Discussion- To sum up and draw lessons from what has been discussed in relation to the location and land for reconstruction, it could be said that the majority of respondents claimed the location and land used for reconstruction is suitable. It is interesting to point out that even in villages such as Abarfoush which have been flooded since reconstruction they still agree with the suitability of land, which is in fact their own previous site. When questioned why they are

satisfied they replied that there is no safe land around the present village which gives reasonable access to their farms.

The other important factor is the people's involvement in designating land for reconstruction, as has been observed in this area. There are many advantages in this suggestion; first, as was found from Tables 14-3 and 14-4, the local people are well aware of the attributes of their environment. On the contrary it is unlikely that intervenors, especially if they are in haste to start the work as soon as possible, can study the geography of land and collect sufficient scientific data to come to a correct conclusion about the land situation. The fact is that in Khuzestan, those who were involved in reconstruction relied on specialists such as geologists to relay their scientific conclusions.

In addition, it should be noticed that there are other problems which can enhance local people's involvement. One major one is land ownership and legal aspects. In one village near Choulane called Hajjie, the reconstruction could never start because of restriction of land available for housing and the fact that the local people could not agree on another piece of land. It seems a quite correct decision to leave the work until they can come up with a practical proposal, disregarding this fact can cause contention among the local people.

In Sarie, for example, the reconstruction was stopped for several reasons, among which was the problem of land-ownership. In another case, Soveidani, there was one respondent who claimed the present site is occupied without the permission of its owner. The land owner in fact was among those anti-revolutionaries who escaped to Iraq when the war started, but still it could not convince all the local people that building on such land is completely acceptable.

Beside the local people, it has been the convention in this area for Jahade Sazandegi to be involved in decision-making concerning land issues. This is right because, first, this organisation deals with rural development and is well aware of the special circumstances of each individual village, so they will have valuable knowledge to contribute. Second, they will have in future to deal with these villages so it is better to get them involved.

If the intervenor does not respect the villagers and also the local peoples' involvement on the designation of land, the new site might be suspect from many different facets, including neglecting the access to farms, land ownership and even causing disputes among the clans within the same village. In brief it has been correct and still is recommendable to consult the local people and organisations for the designation of land for reconstruction.

1-1-7- Conjunction with other villages- When the reconstruction was launched in Khuzestan one of the issues the authorities faced was the fact that many of the damaged villages were small in population and size. This issue was important for two reasons; first because it was intended to improve rural life by providing public services such as clean water, schools and mosques. Provision of these services for small communities was thought not to be economic. The example of a school might highlight the validity of this idea. If for instance, in a village, there are only 10 families, the number of school age children will be small and therefore the construction of a school and more important seconding teachers to teach a few children of different ages and grades will be difficult. This assumption turned out to be true, when the area was visited last time, some villages such as

Farsie, had been waiting for a teacher for more than two years.

The second important factor was that for intervenors it was much easier to have a bigger workshop instead of having a lot of small and scattered sites. The construction could speed up if larger and centralised sites were accepted. These two factors, among others perhaps, have stimulated the authorities to propose the conjunction of small villages for reconstruction. During the survey the villagers were asked what they think about this combination. In practice many villages, including a few of our samples are inhabited by more than one previous village (i.e. Motayyer, Moerez). In addition, perhaps it could be argued that some intervenors, in Jelizi for example, had the intention to build 'large and plentiful' in the hope of some propaganda to satisfy their contributors and the public.

A rating scale with five options for answers was devised, starting from 1= I do not agree at all to 5= Yes I do agree completely. The analysis reveals that 132 responses were received from which 82% disagreed with conjunction with other villages, mean 1.95 (sd=.92), the other 18% were either indifferent or satisfied with it. The scores of the 11 sampled villages are illustrated in the following table.

village	**- percentage**
Sarie	74%
Bardie	95%
Jelizi	80%
Soveidani	91%
Sachet	91%
Motayyer	46%
Moerez	88%

Gheisarie	71%
Choulane	90%
Seied Naser	100%
Abarfoush	80%

Table 14-5: Villagers idea about conjunction with other villages

As Table 14-5 shows the majority of villagers disagree with joining with other villages. The values also do not indicate any tallying among them. For example, those villages which in practice have been combined with others, have different scores, (Motayyer=46%, Moerez= 88%, Jelizi=80%). The two latter figures are comparable with those of other villages which did not experienced combination (i.e.Abarfoush). Thus it might be understood that the degree of peoples disagreement has no relationship with their experience of joining and in any case the important fact is that the vast majority of respondents do not agree with it.

Many factors can play a role in forming the size of rural settlements. In Khuzestan the fact that land in most areas is fertile and the source of water is the river, means that quite naturally most villages are located on the banks of rivers. Others, if far from the rivers keep close to their farms and the water flows through a canal. The size of settlements therefore tends to be small if the security exists and if there is no special services such as main roads, hospitals etc, there is no reason for creating expanded settlements. One other factor is the tribal nature of rural people in this area. The village usually has a clan structure, most of the time people from

one village are from the same clan, and even in a larger area different tribes have their own territories including villages and land.

The real examples of the conjunction of villages during reconstruction are important. At present in no cases are the families of different villages mixed, rather they insisted on keeping their own territories in the new settlement. In Jelizi, for example, the previous Jelizians are living at one end of the village and the Sogurians are living at the other end. In Motayyer the four previous villages have kept to their own communities.

Another example is the case of two villages in the north part of Khuzestan called Hassan Seyhoud and Mazal. These were originally far from each other and when the time came for reconstruction they were asked to share a new settlement. After long discussions both villages agreed subject to the criteria that; first, the new site must be somewhere in the middle of the old location of the two villages, none of them wanted to feel a guest in the other territory and second, the villagers keep their existing structure and do not mix with the other. So they asked for two different villages that were only physically built near each other, that was put into practice.

There is however a criticism with this artificial joining of villages. If the main aim is to supply public services for two or more villages in the same place, this could be a problem as well. If a public building, a mosque for example, is not denoted to a single village the villagers may not count it as part of their 'possessions' and become careless about it. Although some people may claim that putting the villagers in a position of sharing something will persuade them to find the means to compromise and solve their problems, but that

is very idealistic and may not necessarily take place.

To sum up, it could be said that in Khuzestan as far as the view of the villagers is concerned they do not like to join artificially to other villages . If it is unavoidable, in special circumstances it is better to let them keep their own territories. And in any case the maintenance and proper use of public services might be neglected if it is 'artificially' shared with different communities.

Remark- As far as the aspects of location and character of land used for reconstruction are concerned, it was found that a majority of respondents agree that the designated land is suitable. It was also found that in most cases the representatives of the villages have been consulted for land nomination and location of the villages. It was discussed that involvement of local people and organisations in turn could be an effective factor in making an appropriate decision. The analysis also revealed that some of the villages which have experienced flood in the past are still at risk. No especial measure seem to have been taken to alleviate the risk. Concerning the combination of small villages, the view of rural people was basically negative. Real examples were introduced and some possible obstacles, in the way of proper use of public services were raised.

1-2- Site design- In Chapter XII different approaches for site design were discussed. In some of the villages the existing site was almost unchanged. (i.e. Sarie, Choulane) In others a new site with the main objective of 'hygiene', has been proposed. (i.e. villages of Group 2). The third approach can be seen from those villages where the focus has been on the construction of only a small number of rooms, without any attention to the design of the site. (i.e. Abarfoush).

Earlier observation of the area revealed that in most cases the actual use of the sites, especially in those over-designed villages, is very different from the initial intention of the design. For example, it was noted that the villagers in practice are not paying any attention to the separation of pass ways of families from those for their animals. The initial idea was to ask the householders a global question about the site design. Later it was found that it would not help because the respondents can not easily explain and analyse their opinions, therefore more detailed questions were designed and asked. The questions were concerned with the form and size of the streets and alleys, the size of the plot of land used for houses and whether, at present, the value of houses vary in different parts of the village.

1-2-1- Form and size of the streets and alleys- The householders were asked what they think about the size and form of the streets and alleys in their present settlement. A rating scale comprising five options was devised. Starting from 1= 'they are very bad', to 5= 'they are ideal'. It was also noticed that three of the villages surveyed do not in practice have any main street. The settlement is rather a

series of scattered units over the land, therefore it was decided to ignore the responses received from these three villages, namely Abarfoush, Seied Naser and Choulane.

The analysis indicates that from the eight villages described above, altogether 111 responses were received, from which 40% claimed that the streets and alleys are unacceptable and the other 60% expressed positive attitudes. It is apparent that a closer examination of each individual village is necessary. Having access to the site designs and the scores, the analysis suggest it might be possible to have a finer exploration and to draw some lessons. The values obtained for the eight villages are displayed in the following Table.

village	+ percentage
Sarie	78%
Bardie	25%
Jelizi	100%
Soveidani	36%
Sachet	65%
Motayyer	82%
Moerez	50%
Gheisarie	00%

Table 14-6: selected villages satisfaction of size and form of street

As the above Table indicates there seems to be no general rule for any group of villages, rather each individual village is unique in this respect. At this stage it seems sensible to illustrate again the site design of the eight villages to facilitate a comparison between

them and to understand the values obtained from the data.

1-2-2- Discussion- In the first instance, it is better to sort the villages according to the higher percentage of inhabitants satisfaction. This will help to compare the villages and to find out the factors which the villagers are in favour of.

village	+percentage
Jelizi	100%
Motayyer	82%
Sarie	78%
Sachet	65%
Moerez	50%
Soveidani	36%
Bardie	25%
Gheisarie	00%

Table 14-7: Satisfaction of the size of streets and alleys in selected villages

Let us start with the village Jelizi, where all the respondents have expressed their satisfaction about the size and form of the settlement. Looking at the site design it appears that there is a main street 45 metres wide in the centre and there are alleys 3 or 7 or 12 meter wide crossing this main street. On the site it was found that the narrow alleys only 3 meter wide became dirty and full of garbage. Rarely are these narrow pass ways used. All the houses at present have easy vehicle access to their houses. This is a very important point which seems to have ignored in many other 'planned' villages.

The vehicle access is important to bring the produce from the farms for storage in the houses. Also the villagers often have to transport heavy loads, such as sacks of wheat or barley, weighing more than 100 pounds. Often the householder may have a delivery of 1 ton of flour or wheat and so on. This requires vehicle access to the houses. An additional function of the streets and alleys is the access of flocks of animals which require wider routes.

In Jelizi, as can be seen on the map, all the houses have easy vehicle access and there seems to be no problem for animals. Moreover the function of the street is not only access, but also other activities such as storing fire wood, or some times making a small garden. There are other reasons for peoples' satisfaction with this large size of street. Obviously 45 metres is more than necessary and it can be assumed that if it was half that size in terms of function, it would still be satisfactory. One reason which might be relevant to evaluation of size and satisfaction with the streets, refers to the cultural background of these people. The previous settlements usually were scattered units on a wide area of land, and the villagers could have easy access and enough land around them to put to any desired use.

In some areas where the available land for housing has been restricted this has changed. In some cases such as Bardie the site is dense and the villagers said they were not satisfied with the size of alleys and streets. Another noticeable point is that having a large area, including very wide streets, is not only of cultural value, it might also be a sign of urbanisation or an urban feature that the villagers can be proud of.

Looking at the map of Motayyer it also appears that easy access

to all houses is available and they are not 'closed in' with narrow alleys. Therefore there it is no surprise that the majority of respondents are satisfied. At the bottom of the list is the village Gheisarie. The main complaint here was that most houses have no vehicle access and unloading heavy deliveries is very difficult. In addition, here, perhaps, the designer thought that the villagers could go around the settlement for access, while in practice this is often impossible because of muddy land and farmland running up to the houses. It was found that one of the alleys was closed from both ends and converted to a stable by one family.

In those villages where the design involves different routes for families and animals in practice the separation is meaningless for the villagers. They live with their sheep and cows, they keep them close to watch to feed and milk them. During the day for hours they are close to each other while the design of the separate pass ways tries to impose only separation for a few minutes when the animals are on their way in and out of the village. This piece of design nonsense is the product of a city dweller, totally ignorant of the ways of rural people, who is imposing his arrogant and misguided views on others. It is doubtful to what extent the village can be polluted by walking animals in it, while many other factors such as unpaved streets which lead to gallons of water waste from houses, or lack of any sewers may create more risk for the health of people. In any case the fact is that the animals are living close to the family rooms, some times they are even found in the family rooms and courtyards. The important point is that the villagers do not, and perhaps can not accept this physical separation of animals from themselves, so the design of separate routes

is a nonsense.

It must be added that there is no evidence that the narrow pass ways are any more healthy when compared with the wide ones which both people and animals can use. The narrow alleys create shade and block ventilation so the waste water from houses or the muddy land in the rainy seasons does not dry up. This in turn may jeopardise the health of inhabitants. Perhaps wider passage ways would get more sunshine, dry up quicker and absorb the waste water from houses instead of accumulating it.

The discussion can be summarised as; The villagers prefer wide pass ways. The vehicle access is important for them as their livelihood depends on it. The separation of animal routes and those for families, is not working in practice rather it might endanger the health of the community. If enough land is available it can be recommended to have wide and scattered units with wide passage ways between them. Having a long-term view on the development of these settlements it is necessary to consider also the costs of improving the streets and alleys and the costs of maintaining them in long-run which should be affordable by the inhabitants.

1-2-3- The size of the plot- The householders were asked their opinion about the size of the plot of land of their present house. A five option rating scale was designed going from ; 1= 'It is very small' to 5= 'It is very large'. The analysis reveals that 132 responses give a mean 2.5 (sd=0.7). Remembering that in the rating scale 3= acceptable, means that in the view of the householders the size of the plots are below the satisfactory size. The data also indicates that 43% of respondents claimed that the size of the plot is small or very small, while 57% think it is acceptable or large. The following table illustrates the values calculated for different rating scales.

rating scale	percentage
1= Very small	8%
2= small	36%
3= acceptable	53%
4= large	4%
5= very large	0%

As can be seen only a minor proportion, 4% of householders contended that their plot of land is large. The general tendency is to feel that the plot is acceptable or that it is small. The analysis of scores of Groups 1 and 2 may help to see if there are any differences between them. The result of t-test reveals a significant difference between values of the two groups. ($t=3.93$; $df=102$; $p<0.001$). This means that generally in those villages with site design planning the plots satisfy only a minority. The reason will be explored in the following discussion section.

1-2-4- Discussion- It seems sensible to check the values of the

11 villages selected as samples and to find the way plots size have been dealt with. The following Table can be constructed from the data analysis.

village	+ percentage
Sarie	78%
Bardie	80%
Jelizi	40%
Soveidani	55%
Sachet	55%
Motayyer	46%
Moerez	50%
Gheisarie	43%
Choulane	10%
Seied Naser	84%
Abarfoush	60%

Table 14-8: Satisfaction of size of the plots in 11 villages

If we sort the 11 villages according to highest score, the following order will be constructed;

01-Seied Naser
02-Bardie
03-Sarie
04-Abarfoush
05-Soveidani
06-Sachet
07-Moerez
08-Motayyer
09-Gheisarie
10-Jelizi
11-Choulane

What the above list highlights is that the first four villages on the top of the list are those in which the reconstruction did not change the existing plots of land. The following six are those villages with 'site design', that means the size of the plots was decided by a planner. At the bottom of the list stands Choulane with the least degree of satisfaction. Although the plots of land were not changed during reconstruction, as has been discussed in Chapter ??? Samples Portrait, this village has a very special situation and land for housing is scarce and the site is very dense. However it appears that although the villagers wish for larger plots of land in practice such land is not available.

An examination has been made to see if there is a direct relationship between the size of the plots and satisfaction of the inhabitants. The result does not indicate any significant correlation, there are many factors influencing this satisfaction. However, it was noticed that among the villages reconstructed with 'planned' plots, Jelizi has the lowest score of satisfaction and in fact the lowest size of the plots.

Apart from the size of the plot the real efficiency of land has to be considered with inclusion of other factors; such as the layout of plots, size of alleys and streets, number of families living in the same plot and the availability of the land in the area and in general words the way the people 'use' the settlement. Though it seems to be difficult to draw an accurate rule for the proper size of plots. It is only known that in each village the local circumstances should be considered. The occupation of householders (farmers or animal

husbandries) should be taken into account, shepherds need a large area for their animals. In addition from our analysis the size of the plot traditionally is not less than 500 m^2. In the case of Jelizi, for example, where the plot size is at 325 m^2 in the least, the complaints are the most, when compared with Sachet with plots about 500 m^2.

It seems that dwellers and planners have two different views and intentions towards the size of the plots. For the inhabitants the land should be large enough to provide space for their activities such as storing hay and firewood, keeping animals, sitting and sleeping in an open area and many other household activities which traditionally take place in the courtyard. In addition, one should remember that traditionally these people have been nomads and used to live in open land, therefore they could still favour larger areas.

The planners may have different views. They may decide about the land with considerations of the costs of providing public services, such as water supply, costs of construction of walls surrounding courtyards etc. It appears that they also had some sort of vision of urban low cost housing, which led them to regular, graded patterns. These two views seem to contradict each other and it can be suggested that priority should be given to the users' view. Choulane is a good example; although the actual plot size is small the local people say they understand the circumstances and are aware that there is no more land available unless they sacrifice their farms. In other areas such as Motayyer, or Jelizi there was no restriction of land and the plots could easily be larger than they are now.

1-2-5- The value of house- The villagers were asked if the value of different houses in the village are different. A rating scale was devised with three options; 1= 'Very different', 2= 'different', and 3= 'almost identical'. The aim of this question was to see if, those villages which were not 'site designed', the value of the houses was different. It was felt that this trend, if it existed before, after reconstruction of houses with the same size of land and design, the situation might be changed.

The analysis reveals that all 132 people responded to the question from whom 61 (i.e. 46%) argued for differences in values, while 71 respondents (i.e. 54%) claimed similarity. A comparison between the values of the three Groups seems to be necessary. The relative scores are as follows;

group	percentage (different)
1	79%
2	20%
3	54%

What can easily be seen is that in Group One the values of houses are different. This means that before the reconstruction they were also different. In Group 2, where houses are built with the same size of land and building, in peoples' view the value of houses are more homogeneous. Somehow this is imposed on the villagers and is different from their previous situation.

The related scores of the eleven villages support our discussion. They are constructed in the following table.

village	percentage (similar)
Sarie	13%
Bardie	30%
Jelizi	85%
Soveidani	45%
Sachet	100%
Motayyer	73%
Moerez	100%
Gheisarie	43%
Choulane	30%
Seied Naser	50%
Abarfoush	80%

Table 14-9: Similarities in values of houses in the 11 villages

The Table indicates that in those cases where the previous existing plots were not changed the values of houses are different. (e.g. Sarie 13%, Choulane and Bardie 30%). In contrast to that in other villages with similar size of plots and site design, the degree of similarity is higher (e.g. Sachet and Moerez 100%, Jelizi 80%). In two cases; Soveidani and Gheisarie despite the site design and similar size of plots, the percentages are (45% and 43%). This lead us to see whether other factors can influence the value of houses. Among them perhaps the size and form of alleys and streets might be relevant. The result of a correlation test is; (r=0.28; df=113; p=0.001). That means our assumption of there being a direct link between the degree of satisfaction with the form and size of the alleys and streets, and

variation in the values of houses is proven.

Remark- To sum up our discussion of site-design it can be said that; the size of streets and alleys should be designed with consideration of vehicle access. Narrow alleys not only do not work in practice as they were intended to, but they may even create a health hazard for nearby residents. It is better to design alleys at least 7 or 8 meter wide. Where enough land is available there is no reason to compact the site. The size of plots for houses should be in most cases at least 500 m^2. Of course the actual circumstances of each individual village have to be considered, perhaps getting the local people directly involved in decision-making about the size of the plots can be helpful. It also seems that the values of houses in the villages reconstructed with typical units, are more similar than those without much change in existing layouts. The design of the site, especially the size of the alleys and streets tends to be an important factor in house values.

1-4-Houses design and construction- This section of the report concerns the design and construction of houses. Three major concepts are examined; First, the view of the dwellers concerning the layout, size and quality of different spaces provided, secondly, the degree to which these spaces match the peoples needs and requirements and thirdly, their views on the materials used and the strength of the buildings. This review could finally lead to recommendations on appropriate layout of houses and also appropriate spaces standards.

1-4-1-Plan of the house- The question asked was; How is the design of your house? The devised rating scale included; 1= It is very bad, to 5= It is ideal. The analysis of the collected data reveals that 132 responses were received with a mean rating of 3. 2, (sd=0. 94). In the rating scale 3= acceptable, so the mean of responses is over that level. The distribution of the responses is as follows;

1= Very bad	4%
2= Bad	20%
3= Acceptable	36%
4= Good	35%
5= Ideal	5%

It appears that 24% are dissatisfied with the plan and the rest 76% are happy with it.

Examining the scores of the three groups, the analysis indicates that in Group 1, 86% and in Group 2, 80% of respondents were happy with the design of their houses. What can be understood from this simple comparison is that in Group 1, where decision-making about the layout of the house was left to householders a higher degree of satisfaction has resulted. However, a t-test conducted showed no significant differences between the values of groups 1 and 2.

The examination of values of the 11 villages reveals that Sarie with 96%, Jelizi with 90% and Seied Naser with 84% are on the top of the list. It seems again that the people are happier with their traditional layout of houses. The example of Jelizi is very important, the plan of houses in Jelizi is very simple, three rooms attached to each other at one end of the courtyard with a toilet located at the other end near the main street. No small space like a store or kitchen is provided, no attempt is made to separate the family courtyard from animal courtyards. In fact the dwellers had a lot of opportunity to adapt the space and to add new spaces where ever they wanted to. The result is generally very similar to their own traditional patterns.

In villages with over-designed plans, small rooms are built and animals are isolated in the back yard from the family. This has made the care and control of their animals difficult. In Farsie, for example, it was found that a member of the family had to sleep in the barn to watch the sheep during the night in case of theft. The concept of privacy, as conceived by designers in plans for Sachet or Moerez, in practice has became irrelevant. The villagers, especially women do not care about it and in their way of life the private space starts from the room not from the house.

A summary of the major issues concerned with house design based on data collected and observations made on site is given below;

1-villagers are happier with traditional layouts,

2-with simple plans that gives them freedom to add rooms where they want,

3-complex and over-designed plans are recognised ignored, for instance

when the users ignore the designer intention,

4-privacy of the house is not as important as the designers thought.

5-the design for future expansion is an important factor.

1-4-2- Size of the room[1]- The question asked was; How is the size of your rooms? A five optional rating scale was constructed starting with 1= Very small to 5= Very large. The analysis indicate that 131 responses were received with a mean rating of 2. 7, (sd=0. 53), from which the following percentages for different scales can be drawn;

1=Very small	1%
2=Small	30%
3=Acceptable	67%
4=Large	3%
5=Very large	0%

The first thing to notice is that in global responses the size of the rooms is less than satisfactory, mean 2. 7 (3=Acceptable). The next step is to examine the values of the 11 villages and the actual size of the rooms to see if it is possible to find a norm.

village	**+ percentage**[2]	**size of the rooms**
Sarie	74%	----
Bardie	80%	6. 0x3. 0=18. 00 m^2
Jelizi	100%	5. 7x3. 7=21. 09 m^2
Soveidani	55%	6. 7x3. 6=24. 12 m^2
Sachet	73%	5. 4x3. 0=16. 20 m^2 4. 0x3. 0=12. 00 m^2

1.The word 'room' in this context only implies sitting or living room and do not cover other spaces such as kitchens or store rooms.

2.'+ percentage' includes those responses satisfactory or acceptable or more

Motayyer	91%	6.	0x3.	0=18.	00 m^2
Moerez	13%	4.	5x3.	0=13.	50 m^2
		5.	0x3.	0=15.	00 m^2
Gheisarie	14%	5.	0x3.	0=15.	00 m^2
		6.	0x3.	0=18.	00 m^2
Choulane	100%	3.	0x4.	0=12.	00 m^2
		3.	0x5.	0=15.	00 m^2
Seied Naser	33%	6.	7x3.	6=24.	12 m^2
Abarfoush	20%	6.	7x3.	6=24.	12 m^2

Table 14-10: Satisfaction with size of the rooms

What can be learned from the above table is that a model of 6. 0x3. 0 m is usually suitable. Where the room is smaller (i. e. Moerez), or where it is much larger (Abarfoush and Seied Naser) it does not suit the users'needs perfectly. In the case of Choulane, although the size of the rooms is usually small, the users are happy with them. One reason might be the restriction of land and high density of population in each house. (see Chapter XII).

Another starting point is to inspect the size of traditional rooms. For this purpose size of the rooms of more than 15 houses were measured. The result shows that the minimum size was 15 m^2 from Choulane, and most rooms are 6.0x3.0=18.00 m^2. If the room is larger the width is again usually 3 m and the length up to 7.5 metres, that means an area of 22.5 m^2. Thus there is no surprise for the findings of the analysis. In brief, rooms with a width of 3 m or slightly more and a length of 6 metres are well accepted and can be recommended.

1-4-3- Number of rooms- How do you find the number of rooms reconstructed for you? This was the question asked. A rating scale comprising five options starting from 1= Very few to 5= Too many, was proposed. The analysis indicates that 131 people responded to the question giving a mean rating of 2.2, (sd=0.65). 89 people(i. e. 68%) claimed the number is less than satisfactory and 42 people (i. e. 32%) said it is acceptable or better. It is important to notice that there was no single case claiming that the number of rooms reconstructed were too many.

In the villages of Group 2, a house was provided for each family regardless of its size. In such cases 'each family' was designated as a couple with or without children. So those who were small families have benefited and those families with seven or sometimes more children have lost. In some other villages, such as Choulane and Sarie, the amount of assistance was provided proportionally to the size of the family, which sounds more appropriate.

Sorting the values of the 11 villages it appears that Choulane with 60% positive answers followed by Jelizi with 58%, Motayyer with 45% and Sarie with 44% are at the top of the list. We know that in Choulane, Jelizi and Sarie the area built for each family was proportional to its size. At the bottom of the list there are the villages of Seied Naser and Gheisarie 0%, Bardie 10%, Moerez 12% and Sachet 18%. In all these cases the number of rooms reconstructed were regardless of the size of the families. A very simple, but none the less important lesson to deduce is that the number of rooms built should be proportional to the size of the family.

1-4-4- Built area- The villagers were asked about the area built in their houses. The rating scale comprised five choices, starting from 1= Too little, to 5= Too much. The analysis of the collected data reveals that 129 responses were received, 3 responses are missing giving a mean rating of 2.4, (sd=0.63). The distribution of percentages for each option is shown in the following list;

1= Too little	6%
2= Less than necessary	45%
3= Acceptable	47%
4= More than necessary	2%
5= Much more than necessary	0%

A high proportion- 51% of respondents claimed the area built was less than acceptable. A minor proportion of 2% thought it was more than they would expect and still a high ratio of 47% are happy with the area built for their houses.

The values found for the Groups 1 to 3 were; 60%, 50%, and 32% respectively. That means the highest percentage is in Group 1, Participatory villages and the lowest one in Group 3. There is still a need to review the scores of the 11 villages, because it is known they had different regulations. The results derived from computing the collected data provide the following table;

village	**+ percentage**
Sarie	70% (1)
Bardie	40% (6)
Jelizi	65% (2)
Soveidani	46% (5)*

Sachet	27%	(9)
Motayyer	46%	(5)*
Moerez	50%	(4)
Gheisarie	14%	(10)
Choulane	30%	(8)
Seied Naser	33%	(7)
Abarfoush	60%	(3)

Table 14-11: Satisfaction of built area of houses in the 11 villages.

The interesting point is that again Sarie has the highest score followed by Jelizi and Abarfoush. In Sarie for a family with four members 56 m^2 was built and 70% claimed they are happy with it . In Moerez, 65 m^2 for a family of the same size is provided but 50% are happy with it. Although it seems that the layout of the houses is an effective factor in efficiency of the space, the result of the Correlation Test executed did not show any significant association. The data collected indicates that generally for a small family of up to five members, if the householder has the chance to decide about the design 60-70 m^2 is acceptable.

1-4-5-Size of the courtyards- The importance of the role of courtyard in houses in this area was described in Chapter I. The courtyards are used by rural inhabitants as place for working, sleeping, storing fire wood and hay and also sheltering animals. It should also be remembered that in some of the reconstructed villages two different courtyards, one for the family and the other for animals, were built. In order to discover how satisfactory the size of the

courtyard is a five optional rating scale was devised, with 1= Very small, to 5= Very large.

The analysis of the data collected reveals that 132 people responded giving a mean rating of 2.5, (sd=0.7). The frequency distribution of the answers is as follows;

1= Very small	11%
2= Small	35%
3= Suitable	48%
4= Large	6%
5= Very large	1%

The first point to notice is that the average response is below the acceptable level, mean=2.5, (3= Suitable). The second, that only a minor proportion of 7% claimed the size of their courtyard is more than enough and in turn a high proportion of 46% are not happy with their existing courtyard. The next step is to evaluate the scores of the three Groups. The analysis shows that the percentages of positive answers (i. e. Suitable or above) for Groups 1,2 and 3 are; 74%, 48% and 39% respectively. It appears that again the highest degree of satisfaction is among Group 1, participatory villages.

It is necessary to examine the values of all the 11 villages to see which factor or factors can be relevant to the degree of satisfaction.

village	**+ percentage**
Sarie	78% (2)
Bardie	70% (3)
Jelizi	60% (5)
Soveidani	45% (7)*
Sachet	45% (7)*

Motayyer	27%	(9)
Moerez	50%	(6)
Gheisarie	29%	(8)
Choulane	10%	(10)
Seied Naser	67%	(4)
Abarfoush	80%	(1)

Table 14-12: Satisfaction with size of the courtyards in 11 villages

Sorting the villages according to the higher values the first four are; Abarfoush, Sarie, Bardie and Seied Naser. All these villages are those in which the existing plots of land have been kept unchanged during reconstruction. In other words they are living more or less in their previous courtyard.

At the bottom of the list stands the village Choulane with only 10% positive response. Two major reasons can explain this poor ratio of satisfaction; First as has been described in Chapter XII, this village is suffering from a shortage of land available for housing and therefore the site is very dense. Secondly, for reconstruction the intervenor imposed separation of family and animal courtyards. This in turn decreased the efficiency of the open area and caused complaints by the villagers.

Comparing the results of this question with that of the size of the plots of land designated for each house, interestingly it appears that the same four villages are at the top of the list. In addition the village Choulane in both cases stands at the bottom. So there

seems to be a relationship between the size of the plot and size of the courtyard. The result of a correlation test proves the assumption, ($r=0.65$, $df=132$, $p< 0.001$).

An examination of the actual size of the courtyards and values found by the test shows that size is not the only factor influencing the satisfaction of the users. Other factors such as the layout of the house must be relevant. For example, in Jelizi, the courtyard is only about 230 m^2 and 60% are happy with it. In Soveidani the size is 380 m^2 but 45% claimed they are happy with it. This concept of dividing the courtyards into two caused alot of trouble.

In brief it can be said that; First,the villagers are in favour of large courtyards, secondly, the layout of the house is important and dividing the courtyards into two separate areas does not seem appropriate. Generally a courtyard between 350-400 m^2 for an ordinary family seems to be enough, that figure is almost the same as they had in their houses before the war.

1-4-6- Size of windows- The question was raised to understand the view of rural people about the size of windows. The rating scale consisted of five options; 1= Very small to 5= Very large. The data collected comprises 131 responses, mean 2.9, (sd=0.3). The analysis indicates that a high proportion of 122 (i. e. 93%) claimed the size of windows is suitable. A review has been made on the actual size of windows. Usually they are 1 to 1.5 metre wide and 1 metre high. In most cases the main entrance door also has glass frames.

The examination of the values for the three different groups indicates that the highest positive responses belong to Group 2, (i.

e. 90%). The scores of the 11 villages have also been sorted, the result, however, shows that Soveidani with 73% has the lowest score. Seven out of 11 villages show 100% satisfaction. Generally it seems that the size of the windows have been properly selected. Usually the windows were produced in workshops en masse, and all to the same size. The size of the windows in traditional houses were more or less similar to the new ones.

Despite the size of the windows a small number of observations might be noteworthy. In most cases windows were fixed in a way which facilitated natural ventilation, which is a good measure. There is a problem where glass frames are provided in the construction of the door. It was noticed that frequently the villagers have been unable to replace the broken glass. This is because they have to buy the glass from the city, which makes it difficult to transport it to the village and also fixing the glass needs special tools to cut it. So the villagers instead of renewing the glass usually used pieces of cartoon or wood and some times they even blocked in the window with mud or bricks. An additional point is about the height of the window and vision into the room. If the glass used is transparent, the people usually painted them to obstruct vision into the room, so it could be recommended to use opaque instead of clear glass. Size wise a 2 m^2 opening for a room around 18 m^2 seems to be appropriate.

1-4-7- Location of the toilet- Earlier observations from the area indicated that in some villages the dwellers complained about the location of toilets. A three optional rating scale for answers was devised including; 1= No good, 2= Acceptable and 3= Good. The analysis of the data collected indicates that 131 people responded to

the question, giving a mean rating of 2.1, (sd= 0.37). It also become apparent that 22% of respondents are dissatisfied with the location of the toilet and the rest (i. e. 78%) are happy with it. A review of the related positive scores for groups 1 to 3, gives the following figures; 93%, 65%, and 82%. Again it can be seen that the score of the first group is the highest.

The next step is to examine the scores of all eleven villages. The following table is constructed for this purpose.

village	+ percentage	
Sarie	100%	
Bardie	85%	
Jelizi	95%	
Soveidani	54%	
Sachet	100%	
Motayyer	27%	*
Moerez	12%	*
Gheisarie	100%	
Choulane	80%	
Seied Naser	83%	
Abarfoush	60%	

Table 14-13: Suitability of location of the toilet in 11 samples

As Table 14-13 shows in two villages namely, Motayyer and Moerez the situation is worse than in the others. Remembering the design of these houses, in both cases toilets were constructed close to the

rooms. In fact most villagers have removed the toilet and built a new one far away from living rooms, in the animal court.

In Soveidani the major complaint was that the cess pit of the toilets was built inside the courtyards. However, in Chapter XIII the issues relating to the proper place to build the toilets has been discussed. In brief the major points to consider are;

1- The location of the toilet must be far from the rooms, where this distance is about 15 metres it seems acceptable to the villagers.

2- The waste storage must not be built inside the family courtyard.

3- The concept of privacy of the toilet space must be considered. The entrance door should not face the main facade of the building.

4- For the same reason it is better not to join the toilets of two neighbours close to each other.

5- It is more reasonable to have a separate waste tank for each house, it may cause problems when it is shared with two or more families.

6- Our analysis shows where the people themselves made decisions about location of the toilet there is less problem. Why not simply ask the villagers about it?

1-5- Strength of the building- It should be admitted that discussion of the strength of buildings tends to require special knowledge and can usually be judged more accurately after a long period. However, it was found that in some cases the buildings were damaged after few years, so the question became relevant. From the questions about strength of the building it could also be discovered whether in view of the villagers there is any association between a certain kind of material or technique and the strength of the

buildings.

1-5-1-Strength of built parts during reconstruction- The question was designed in such a way as to include the variety of policies implemented in the area, from where a single room was reconstructed with full participation of the villagers, to where a completed house was handed over to them without any involvement on their part. There were five optional answers available; 1= Absolutely non-resistant, to 5= Very strong. The analysis of the collected data reveals that 132 people answered the question, giving a mean of 3. 3, (sd=0.85). (negative 16%, Positive 84%). That means that generally in the view of villagers the reconstructed buildings are strong enough. Reviewing the scores of the three groups of villages Group 2 appears at the top with 93%, followed by Group 1 with 81% and Group 3 with a score of 68% is at the bottom.

There must be no surprise about Group 2, because it is known that in some of these villages quality material was used and sometimes even the foundations are reinforced concrete. A better *insight can be* achieved by looking through the values of the eleven villages.

village	+ percentage	
Sarie	100%	*
Bardie	60%	
Jelizi	100%	*
Soveidani	82%	
Sachet	100%	*
Motayyer	100%	*
Moerez	75%	
Gheisarie	57%	

Choulane	80%
Seied Naser	83%
Abarfoush	40%

Table 14-14: Strength of buildings in 11 villages

The most important point to draw from this is that four villages, Sarie, Jelizi, Sachet and Motayyer claimed 100% positive answers about the strength of the building. Among these four, only in Jelizi were steel beams used in the roof and the walls were built out of cement blocks. In the other three villages the walling material is brick and roofs are supported by wooden beams and bamboo matts or panels.

Among the villages with low scores (i. e. Abarfoush, Gheisarie and Bardie) it is known that in Bardie many reconstructed buildings cracked because of poor foundations and frequently the wooden beams of the roof were split because they were too small. It should also be mentioned that the quality of bricks used for walling in different villages were a very different quality from each other.

1-5-2- Walling material- When the villagers were asked about the quality of material used for walling, the analysis of their responses shows similarities with the earlier question about the strength of the building. Altogether 130 people responded to the question with a rating scale of 1 to 5, giving a mean of 3.5 (sd= 0.91). The scores taken from the analysis show 84% positive and 16% negative responses. The positive values for Group 1 to 3 are , 79%, 91% and 75%. (The scores for the previous question were, 81%, 93% and 68%). The next

step is to examine the values of the eleven villages. These are set out in the following table;

village	+ percentage
Sarie	91%
Bardie	65%
Jelizi	95%
Soveidani	80%
Sachet	100%
Motayyer	100%
Moerez	71%
Gheisarie	57%
Choulane	100%
Seied Naser	83%
Abarfoush	40%

Table 14-15: Satisfaction of walling materials in 11 villages

The table shows that in this respect again the village Abarfoush is at the bottom of the list, just before it are Gheisarie and Bardie. What seems to be interesting is firstly, that the cement blocks are not stronger than bricks in the villagers' view. (i. e. Jelizi with 95% satisfaction with the cement blocks and Sachet with 100% satisfaction with bricks). Secondly, it appears that the quality (not the kind) of the material used for walling is a major factor in judging the strength of the building. The result of a correlation test proves this proposition; ($r=0.42$, $df=130$, $p<0.001$).

1-5-3- Roofing material- The people were asked what they think about the quality of the material used for roofing their reconstructed rooms. The analysis of the collected data reveals that 132 answers were received, giving a mean of 2.9, (sd=1.1). The rating scale was again five options in the same order as earlier questions. Perhaps it is better to look at the scores of all 11 villages, simply because the quality of the materials used for roofing was not the same for all the villages.

village	+ percentage
Sarie	70%
Bardie	20%
Jelizi	85%
Soveidani	72%
Sachet	36%
Motayyer	36%
Moerez	63%
Gheisarie	43%
Choulane	70%
Seied Naser	83%
Abarfoush	00%

Table 14-16: Satisfaction with roofing materials in 11 villages

The above table clearly shows that the villagers have a good understanding of the performance of the material used in their houses. For example there is no surprise if Bardie's score is 20% and

Jelizi's, with steel girders is 85%. It is also important to see how the scores of two villages like Seied Naser with wooden roofs and Jelizi are similar. It seems that the fact that wooden beams were used in most villages as roofing material led rural people not to expect better quality materials.

1-5-4- Resistance of building against bombing- The question was asked whether the resistance of houses after reconstruction compared with prior to the war has changed. This question is important as a facet of contingency planning. Of course investigation about the change in resistance of the building is a complex subject which will be explored shortly. Before that let us review the findings of the data analysis and see what the villagers think about it and which factors might be relevant in forming their perceptions.

The *inspection of the data collected and the results of a* distribution test reveal that 132 people responded to the question with a five optional rating scale, giving a mean of 3.4 (sd= 1.0). The distribution of answers to each scale is as below;

1= Present house much less resistant	4.5%
2= Present house less resistant	20%
3= No tangible difference	4.5%
4= Present house more resistant	67%
5= Present house much more resistant	4.5%

As it can be seen, in view of the majority of the villagers (i. e. 71.5%) the new building is more resistant than the old. There is still a proportion- 24. 5% who claimed their old building were more resistant. The scores indicating positive change, for Groups 1 to 3 are, 77%, 80% and 64% respectively, which means that in Group 2, Non participatory villages, there is a higher confidence rate. The values

of the 11 villages are displayed in the following table;

village	+ percentage
Sarie	83%
Bardie	60%
Jelizi	85%
Soveidani	54%
Sachet	100%
Motayyer	100%
Moerez	50%
Gheisarie	71%
Choulane	40%
Seied Naser	66%
Abarfoush	100%

Table 14-17: Improvement of buildings' resistance to bombing in 11 villages

A correlation test was executed to see if there is any association between the global strength of reconstructed buildings and change in the strength of buildings against bombing. The result shows no significant relationship. The examination of the scores of the 11 villages does not indicate any specific finding. One reason might be that the villagers had no reliable criterion for judgement. Our assumption was that in the village Jelizi with steel girders on the roof, the people may claim a higher degree of resistance, however the analysis did not prove it.

Discussion- A discussion about contingency measures in reconstruction of the rural areas will appear later. (Chapter XV) There are some brief points to review in this section. First, vulnerability of the settlement depends not only on the quality of the material used and the techniques implemented, but also on other factors such as, the density of the settlement and the kind of artillery which might be used for attack. Secondly, there is no apparent evidence that brick walls, which are usually thinner than walls of rammed earth, are more resistant. Thirdly, in the worst cases where a mortar bomb lands inside a room, the light weight roof lifts from the explosion and settles down again. These roofs made with wooden beams and bamboo matts are very flexible, though the roof may receive minor damage the walls do not always collapse from the pressure of the explosion. In those rooms with heavy steel roof beams and brick walls, not only is the roof but also the walls are likely to show cracks or be totally destroyed.

Fourthly, there is the difficulty of deciding whether to invest in increasing the resistance to bombing, or to invest in increasing the quality of life of rural people. The fifth point is that usually small rural settlements, in comparison with urban settlements, are less likely to be a target. More damage can be created with the same bomb in urban areas. The sixth point, is that the rural people can easily be evacuated, or even in the case of a sudden attack, escape into the open. In contrast, in urban areas people are almost trapped in their houses. The seventh point, is that victims and casualties from bombs are mostly due to buildings falling on their heads, if the people are

outside and spread over the area the risk is often less.

To sum up, at the time of reconstruction it should be remembered that the more compact and dense the site, the higher the risk and the actual damage from bombing. In some important respects mud built rooms can perform better against bombing.

1-5-5-Observation of bombing- The villagers were asked if they have experienced a bombardment. That was important to know because it would prompt the people to demand stronger buildings. The options were Yes or No. The analysis indicated that from 131 respondents, 109 (i. e. 83%) have witnessed a bombardment and the other 22 people (i. e. 17%) have not. Generally the villagers have had the experience of observing bombing.

1-6- Further needs to spaces- In earlier questions the villagers were asked to what extent the reconstructed rooms of their houses match their needs. Another question was raised to see what they would wish to add to their houses. This could help to see what the present needs of the people are and whether their needs are different from before the war. The question was open-ended, however, the answers were classified into four groups;

1-Family space (e. g. room)
2-Services (e. g. kitchen, toilet, bathroom)
3-Open space (e. g. courtyard, surrounding walls, etc)
4-Animal space (i. e. stable, barn)

There was no attempt to ask for priorities and also each respondent could claim several needs. The analysis of the collected data reveals that 121 people responded to this question, 11 did not answer it.

1-6-1-More rooms- From 121 respondents 95 (i. e. 79%) claimed they wanted to build additional rooms. The value of the Groups 1 to 3 are : 78%, 76% and 84% respectively. It seems that the scores are close to each other. The scores of the 11 villages are shown in the following table;

village	+ percentage
Sarie	82%
Bardie	74%
Jelizi	65%
Soveidani	100%
Sachet	78%
Motayyer	56%
Moerez	100%
Gheisarie	100%
Choulane	75%
Seied Naser	83%
Abarfoush	75%

Table 14-18: Peoples needs for more rooms in the 11 villages

It seems necessary to compare these scores with those of earlier questions on sufficiency of the rooms reconstructed. The result of a correlation test shows no significant relationship between them. This might mean that people's wish to build more rooms stems from factors other than actual need. For example, the contrast the dwellers feel between old and new in their house may persuade them to attempt to

renew the old mud built rooms. There is no need here to repeat the discussion, about raised expectations due to reconstruction, which was gone over in Chapter XIII.

From Table 14-18 it can also be understood that in some villages the tendency towards building more rooms is more than in others. Gheisarie, Moerez and Soveidani are among the former. In fact in these villages the size of each house was out of proportion to the size of families and it is therefore understandable that they should want more than the rooms provided.

1-6-2-More services- Among the responses 26 people (i. e. 22%) said they wish to build a kitchen or bathroom in their houses. The review of the scores of the 11 villages does not indicate any general rule and the scores are scattered. It was supposed that the dissatisfaction of those villages closer to the urban centres might be higher. The problem is that we do not exactly know what the situation of each house before the war was or what they added to their houses between resettlement and the survey. It should be remembered that the kitchen can not be a closed space because of the high temperature. Usually cooking takes place in the open. In urban centres the kitchen is still a small space usually open to the courtyard from one side, more like a cooking corner. In some villages it was observed that a corner of the house was adapted for cooking.

1-6-3-Courtyard- The role the courtyard plays in houses has been discussed earlier (Chapter I). In none of the villages, however, was the construction of courtyards intended by the agencies involved. The analysis of the data collected indicates that from 121 answers received, 48 people (i. e. 40%) claimed they wish to alter their

courtyards. This intention obviously, in those villages which already have their courtyards bounded by walls or even covered by cement tiles, is less than with others. For example, in Sarie only 23% of respondents claimed more work in their courtyards is necessary, while in Motayyer 78% and in Abarfoush 75% said they wish to do something about it.

It also seems that there is a new tendency among the villagers to claim their personal plot of land by building walls around it. This was not the case in most villages before the war. Generally the design and construction of the courtyard must receive more attention.

1-6-4-Animal spaces- Sheltering animals is an urgent task. Fortunately the locally available materials can easily be used to provide sufficient shelter for them. Among the answers received, a minor proportion of 15% claimed they want to build a stable or barn. In fact most, if not all the villagers have built their stables and barns since they returned and settled down. The only noteworthy point is that some villagers wish to build their stables with cement blocks and not indigenous materials. In other words the task of renewing the stables is anticipated by some villagers.

In brief it can be said that most villagers aspire to building more rooms. Courtyards are the next priority followed by services such as a bathroom, and there is no strong desire to build more animal shelters.

Remark- Some of the major findings of this section can be listed as follows;

1-The villagers are more happy with traditional designs for their houses. In the case of new designs where there is a similarity to the

traditional there is more chance of a sucess for plan.

2-The size of rooms 3x6 m is acceptable. This can be increased to a maximum of 3.5x7 m. Rooms smaller than 18 m^2 and larger than 24 m are usually inconvenient.

3-The number of rooms built is very important, almost 68% complain of not having enough rooms.

4-Concerning the size of built up area, more than 50% complained. In cases where people had the opportunity to decide on the type and location of their building they are more satisfied although the plan area of their houses is less than in other villages.

5-A high proportion, 46% complained about the small size of their courtyards. Where the pre-war existing plots are retained the people are more satisfied.

6-The size of the windows is usually acceptable. It seems a window between 1.5 to 2 m^2 for a room 20 m2 is large enough.

7-The toilets must not be built close to the rooms. Between 10-15 metres distance is best. The cess pit should not be built in the courtyards. Also it is better not to attach the toilets of neighbours to each other.

8-The majority of people are happy with the strength of the buildings. In some cases the bricks used were of poor quality and the wooden beams the wrong size.

9-The highest satisfaction from roofing material is with steel girders. However, in other places where correct size of timber was used for roofing, the people can still be happy with it.

10-A majority of 70% think the resistance of their building against bombing at present is more than before, which is a speculative

judgement. Mud structures may in some respects perform better against bombing than brick ones.

11-Most respondents had witnessed bombing.

12-Concerning future expansion, 80% want to build more rooms, 22% want a bathroom or kitchen, 40% want to improve their courtyards, and only 15% want more space for their animals.

14-2- Construction and implementation

Introduction: So far questions have been concerned with the built structures (product) of the villages. This section aims at the procedural aspects of reconstruction (process). Unlike the buildings, the process of reconstruction, its side-effects and long term results, seem to be invisible and therefore can be more easily neglected. It is said that in post-disaster reconstruction 'the process is more important than the artefact'. The subjects examined in this section of the present survey deal with temporary accommodation of families, observation of justice among the people, satisfaction of the built environment, observing the priorities of the community etc.

2-1-1- Temporary shelter- The concept of emergency shelter has been inclusively gone over in Chapter III and in the context of Khuzestan in Chapter XII. The earlier observance of the area indicated that the issue of temporary accommodation for the period of reconstruction was easily overcome by the people themselves with minor intervention by the government. An open-ended question was asked of the villagers to find out how they approached this. The answers were read and classified and the following approaches were recognised;

1-Living in refugee camps, out of the area.
2-Using the remains of their houses after repairing.
3-Tents
4-Bamboo and reed shelters.
5-Using salvaged materials from the war such as corrugated iron sheets.

The analysis of the collected data reveals that 130 people responded to this question. It was found that usually a combination

of different approaches were implemented. In those villages where the old settlement was razed to the ground, obviously the people were forced to choose other ways to shelter their families. Access to building materials was also found to be very important. Some of the villages had easy access to bamboo, or were supplied with it. In most cases tents were found to be used as a secondary shelter, but almost all the families, when they returned to their homeland had tents. They even sometimes used their own traditional black tents.

Remembering again that a single family may have used different facilities for temporary shelter, the following figure came out of the analysis;

1-Refugee camp	12%
2-Repaired rooms	52%
3-Tents	48%
4-Bamboo	17%
5-Salvaged materials	7%

As can be seen more than half of the villagers were able to repair the remainder of their houses and almost half of them made use of tents. The major conclusion is that the rural survivors are capable of sheltering themselves temporarily by making use of indigenous material and techniques. If their access to materials is obstructed, the authorities can help to provide these material. It is also interesting to see how the rural people can make use of new materials, such as corrugated iron sheets, which were for them entirely new, or they can even use ammunition boxes or empty shell cases as building material.

2-1-2- Observation of justice- 'In the reconstruction of your village, was justice observed?' This was the question asked. The

reason for bringing up this question was that the quality and quantity of government input in different villages were different, thus it was suspected that this could cause complaints among the people. It could also give a general view of people's perception of the process of reconstruction. In the case of a negative answer, another open-ended question was raised to seek the reasons for not observing that justice had been done. The devised rating scale contained five options, starting from 1=Absolutely not, to 5= Yes, excellently. The analysis reveals that 131 people answered the question, they gave a mean of 3.15, (sd=0.94). This means that on average, the people observed that justice has been done in terms of reconstruction programme.

The positive and negative percentages are : 66%, and 34% respectively. It was thought that there might be a relationship between the amount of work done in reconstruction and the people's satisfaction. The result of a correlation test did not prove this assumption. The positive values for Groups 1 to 3 are, 60%, 72%, 63%. Initially it seems that in Group 2 there is a higher degree of positive answers. It is necessary, therefore to inspect the related values of the eleven samples.

village	+ percentage
Sarie	70%
Bardie	50%
Jelizi	65%
Soveidani	45%
Sachet	100%
Motayyer	82%

Moerez	75%
Gheisarie	57%
Choulane	50%
Seied Naser	80%
Abarfoush	80%

Table 14-19: Observation of Justice for reconstruction in 11 samples

The next step is to find out about the reasons why the people claimed justice had been neglected. The following four major reasons were recognised:

1-Unfair regulations of distribution of houses or building materials
2-Bad handling of regulation
3-Not meeting the people's expectations
4-Not taking the users opinions into account

The examination of values of different villages shows that there is no clear tendency towards any of these reasons. However, in Group 1, participatory villages, there is no complaint about the lack of people's involvement. It should also be added that each respondent had the chance to claim one or all these reasons.

2-1-3-Location of house- It is known that in this area the structure of families and clans are very strong. This was also apparent in the location of houses in the village. Close families prefer to live near to each other, in fact, very often in the same house. This custom could be to some extent affected by building houses all the same size and with unfamiliar plan. It was also known that distribution of houses with regard to choosing neighbours usually took into account the dwellers view. The question was asked whether the

villagers were happy with the present location of their house in the village. Again the rating scale for answers contained five options.

The analysis reveals that 132 people responded to the question, giving a mean of 3.7 (sd=1.0). The percentages of the negative and positive values are, 20% and 80%. That means a high proportion of villagers are happy with their present location. The positive values of the three groups 1 to 3 are accordingly, 84%, 79%, and 75%. That means again that in participatory villages the degree of satisfaction is higher. Sorting the list of scores for the 11 villages results in with the following table;

village	+ percentage
Seied Naser	100%
Sarie	96%
Motayyer	91%
Jelizi	90%
Abarfoush	80%
Sachet	72%
Choulane	70%
Bardie	70%
Moerez	62%
Gheisarie	57%
Soveidani	55%

Table 14-20: Satisfaction of the present location of house in 11 villages

The above table shows that in Seied Naser and Sarie, where the previous plots were unchanged, the people are happy with their neighbours. For the distribution of houses in Jelizi the existing components of families were respected. It also appears that regardless of changes caused by reconstruction of new houses, some villagers were not happy with the existing location of their house. That is quite natural and understandable. It is also important to notice that the last three villages of the table are all from Group 2, non-participatory villages.

It is assumed that the satisfaction with house location in the village might be correlated with the design of the streets and alleys. The result of the correlation test indicates only a moderate association, ($r=0.34$, $df=113$, $P<0.001$). In brief it is wise to account for the villagers views when distributing reconstructed houses.

2-1-4-Selection of house- Along side the previous question the people were asked whether they decided about the location of their house. This could help to see whether this is an important factor for their satisfaction with the location. It is better to inspect the scores of the 11 villages separately. In general 131 people answered the question from which 24% claimed they had no voice in selecting their house. At first glance that is very close to 20% dissatisfaction with the location. The sorted list of the 11 villages according to higher degree of involvement is as follows;

village	**+ percentage**
Sarie	100%
Bardie	100%

Seied Naser	100%
Choulane	90%
Motayyer	90%
Abarfoush	80%
Moerez	75%
Sachet	73%
Gheisarie	57%
Soveidani	45%
Jelizi	21%

Table 14-21: Villagers' involvement in selecting location of their house

Obviously in those villages where the existing situation before the destruction has not been changed, the location of houses was naturally the families' decision. At the bottom of the list the village Jelizi is an exception. Although the people did not decide whether the house should stay, as was discussed in Chapter XII, the School of Architecture team who handled the distribution of houses were preoccupied with keeping family groups together, therefore it is no surprise if the majority of people are still happy with the location of their houses.

2-1-5- Where would you like your house to be? This question is similar to the earlier one asking whether the villagers were satisfied with the location of their houses in the village. The data collected comprises 132 responses, from which 111 people (i. e. 84%) claimed they

prefer the present location of their house. 16% claimed they would like to change the place of their house. The result is almost similar to that of the earlier question asked about the location of the house, when 80% of respondents claimed they are happy with it.

2-1-6- Happy with neighbours- The villagers were asked if they are happy with their present neighbours. The analysis reveals that 131 people answered the question, from which 129 (i. e. 99%) respondents claimed they are satisfied. This could be a sign of the strength of the community spirit and the power of family and clan relationships. It is also important to note that the opportunity to choose neighbours might be an effective factor in creating such solidarity within the community.

2-1-7- Period of reconstruction- It was known that the length of time for reconstructing different villages varied from six months to three years. The villagers were asked how they perceived this time span. A five optional rating scale was devised, from 1= Very long, to 5= Very short. The collected data comprises 129 answers, with a mean rating of 2.6 (sd=1.1). That means the average length of time for reconstruction was perceived by the villagers as longer than they expected. The examination of values for the 11 villages indicates that Jelizi with 90% claiming delay, is at the bottom of the list. In fact it took three years to complete this project. Gheisarie with 83% follows Jelizi, and the people clearly are dissatisfied with the time taken.

At the other end of the list stand the villages Moerez and Choulane with scores of just over 20%, indicating a short period of reconstruction. It was also known that in the case of Choulane only

six months were taken to complete the project. It is important to consider the time factor when policies are made. If it is too long the people have to suffer by living in temporary accomodation for longer.

2-1-8- The source of funding the project- How important is it that the survivors know the source of funding of their project? Initially the intervening body in a reconstruction project may think that its involvement will make the beneficiaries grateful. The government, for example, intervenes at least aiming for a reputation by giving the proper response at the proper time. The question was asked to see whether the villagers knew who funded the reconstruction of their village. The question was open-ended and 132 people responded to it. The computed data results in the following table showing the percentages of those who claimed they did not know at all who funded their projects.

village	percentage
Sarie	13%
Bardie	15%
Jelizi	35%
Soveidani	36%
Sachet	46%
Motayyer	36%
Moerez	25%
Gheisarie	29%
Choulane	20%

Seied Naser	33%
Abarfoush	40%

Table 14-22: Not being aware of financial source of the reconstruction in the 11 samples

The mean of the above scores is almost 30%. This means that this percentage of the people said they did not know at all who paid for their reconstruction. It was also discovered that most people were not aware that contributions from people of other parts of the country were spent on their project. The most surprising point is that in Jelizi, despite the three year period of reconstruction and the fact that villagers were living during this period close to the site, still 35% of them claimed they did not know who funded the reconstruction of their settlement. The scores made it difficult to recognise any clear factor influencing the people's awareness of the intervenor. But is that anything other than a sign of the intervenors keeping their distance from the recipients?

2-1-9- Priority for reconstruction- In rural areas of Khuzestan restoration of land and canals were usually given high priority. As has been described in Chapter XII sometimes villagers were living and working on their land for more than two years before the construction of houses started. It seemed necessary to find out about the priorities for reconstruction from the villagers' view point, therefore the question was raised. It should be admitted that at the time of interview the villagers were no longer in the real situation of reconstruction taking place. It was attempted to put the villagers in

this situation and ask 'which of these should be rebuilt first in the reconstruction of your village? 1-Houses, 2-Land and canals, 3-School, clean water'.

The computed collected data reveals that 126 people responded to the question. The results of the priorities are laid out in the form of the following table.

activity priority	Houses	Land+water	services (e. g. clean water+school)
1	48% *	39%	16%
2	36%	47% *	14%
3	16%	14%	70% *
	100%	100%	100%

Table 14-23: Priorities for reconstruction in the view of the villagers

As can be seen, in the villagers' view, reconstruction of houses was the first priority, (48%). Land and other production facilities the second (39%) and public services such as clean water and school the last priority (16%). It is quite clear that if land and farming facilities are not restored and houses not reconstructed there is no interest in public services. The result of the analysis is to some extent contrary to our observation from the very early days of people returning home.

In those days, what they usually asked for was restoration of land, canals and pumps, so they could start their life again. That was put into practise and it was found that for the survivors preparing land or buying new pump or cleaning and repairing ten km of canals were really beyond their capability, while they were more easily able to

shelter themselves . It is strongly suspected that if the same interview had been carried out on people's arrival, the results could well be different. However, scores of giving first priority to houses among the 11 villages can be sorted as follows;

village	percentage
Sachet	88%
Jelizi	59%
Bardie	55%
Seied Naser	50%
Sarie	48%
Choulane	40%
Abarfoush	40%
Moerez	38%
Soveidani	37%
Gheisarie	29%
Motayyer	27%

Table 14-24: First priority to house reconstruction in 11 villages

The values are varied and it is almost impossible to draw any general rule or to diagnose the factors influencing the degree of priority. Something which can be noted is that the last five villages are small and to different degrees more remote. At the top of the table three out of the first four villages are larger and close to the towns. One thing can certainly be learned, that the best way is to ask the people

themselves, they will say what is most important and urgent for them.

2-1-**10-Present needs-** 'At present what are the most important needs of your village?' This was the question aimed at seeing the relationship between alleged needs and what the village has already been supplied with. The question was a descriptive one, later all the answers were read and the three most important needs according to the villagers were extracted and listed in the following table.

village/**priority**	1	2	3
Sarie	streets	drinking water	road
Bardie	drinking water	streets	agricultural land
Jelizi	mosque	road	agricultural land
Soveidani	drinking water	road	streets (alleys)
Sachet	mosque	streets	irrigation
Motayyer	road	agricultural land	clinic+shop
Moerez	drinking water	sewage system	streets
Gheisarie	drinking water	road	school
Choulane	drinking water	road	embankment
Seied Naser	drinking water	road	embankment
Abarfoush	embankment	drinking water	agricultural land

Table 14-25:The first three priority of the 11 villages needs

The interesting point is that most villagers emphasised the same needs and priorities as each other. The table shows that drinking water in 8 out of 11 villages is still among the three most important needs. Roads are needed in 7 cases and then restoration of streets or alleys

are among the priorities of 5 villages. It can also be seen that land and irrigation is only occasionally mentioned, that could mean they are already have an acceptable level of access and supply.

Some kind of pecking order for needs can also be seen. If the facilities for production are available, then drinking water becomes important. In the case of Abarfoush the village is seriously flood prone so construction of an embankment is asked for before drinking water. In others such as Seied Naser, Choulane, Gheisarie and Moerez drinking water becomes the first need. After drinking water a road becomes important and if all these are available the people will think about a mosque or improvement of their alleys and streets, a completely new notion in these villages.

Remark- Many questions dealing with the process of reconstruction and the effects this might have, were discussed in previous sections. To conclude this aspect of the reconstruction it was found that the local people's involvement in different stages of the work, especially in decision-making, can play a crucial role in the final result of the activities. In terms of emergency shelter it was found that survivors were able to cope with it on their own. It was also recognised that an intervenor may simply ignore the final outcome of his intervention and aim at greater number of units. It was surprising that in some villages more than half of the inhabitants (e. g. Soveidani) feel that the justice has not been observed. Something that few intervenors will normally show any interest in.

The criteria established for reconstruction and the way these are respected and taken into account are found to be carefully observed by the rural people. The people's needs and priorities for

reconstruction seem to vary depending on each individuals circumstances. That makes the process much more difficult and the only way to avoid failure is simply to ask the people about their needs.

Global results- After completing the analysis of the survey in detail, it seems that some villages in many respects had a better and more successful reconstruction than others. Usually Sarie and Jelizi were on the top of the list and villages such as Soveidani and Gheisarie were at the bottom. It was decided to execute another test on the computer. This is to create a new variable by putting together a series of small variables which were discussed separately during the report. This test can help to give a global evaluation of the success of the 11 villages and to sort them out. Altogether 14 questions could be included in the new variable. They are concerned with;

01-Observation of justice
02-Period of reconstruction
03-Sufficiency of work done for reconstruction
04-Suitability land for the settlement
05-Size of the plot
06-Satisfaction with location of houses
07-Built area of the house
08-Size of the courtyard
09-Size of the rooms reconstructed
10-Design of the house
11-Quality of walling material
12-Quality of roofing material
13-Strength of building
14-Desire to change the house

It is obvious that these questions can not provide a reliable picture from the results of the reconstruction programme without all the others. However, they might give an outline picture of the outcome. In any case after executing the frequency distribution test the following mean scores came out from which, after sorting the villages

according to higher score, the following table was constructed.

village	mean
1-Jelizi	3. 11
2-Sarie	3. 09
3-Sachet	2. 97
4-Seied Naser	2. 90
5-Motayyer	2. 84
6-Choulane	2. 77
7-Soveidani	2. 75
8-Moerez	2. 75
9-Bardie	2. 67
10-Abarfoush	2. 65
11-Gheisarie	2. 34

Table 12-26: Sorted list of global success of the villages

The table clearly shows that for a reconstruction programme the actual input is not the only important factor. The money and resources spent on Sarie were much less than what was spent on building a new village like Moerez. But in many respects Sarie is still a more successful project. If we compare Sarie and Jelizi with very close scores, and if we remember that it took three years for Jelizi, having the financial support of the Tehran gold merchants, whereas Sarie was completed in six months and the government spent much less, then the significant differences between approaches and policies becomes much clearer. In brief "**The process is more important than the artefact**".

Conclusion of the field survey- By way of introduction we would like to refer to Robert Chambers' (1983) book, 'Rural Development, Putting the Last First'. In this book he highlighted many shortcomings of rural studies. He talks about, 'We, the outsiders', 'Rural development tourism', 'Survey slavery' and picks out a series of 'biases' which result in 'Rural poverty unobserved'. One should confess that the reality of life in villages is more complicated than can be understood in short visits and more fragile than can be properly illustrated in dry scores and figures. The 'outsider' remains an outsider unless he has grown up within the community. It is the irony of professionalism that those with a rural upbringing only occasionally become professionals, and when by chance they do, it may be at the expense of alienation from their origins.

This field survey report consisted of three main parts; methodology, portrait of sample villages and data analysis. The latter part contained four headings; general characteristics of respondents, economic and social aspects, physical aspects of reconstruction and finally managerial aspects. It seems convenient to follow the same order in this section as well.

Concerning **methodology** the following few points were found important;

1- Using a structured questionnaire seemed to work in the circumstances that existed in that area. Descriptive questions were to some extent troublesome.

2- Finding interviewers, was a crucial task. If the interviewers are selected from local people, there is usually a dilemma, as they were in

our case, mostly because of language constraints, it is unlikely that they will be skilled. On the other hand they may have the advantage of being more easily accepted by the villagers. If they are taken from other areas, and strangers to the villagers, the degree of acceptability and trust of the respondents is likely to decrease and this could lead to less accurate findings.

3- We used short interviews with a constructed questionnaire that could sometimes be insulting to rural people. For instance, when the villagers had plenty of time and desired a long chat, sometimes we were in a hurry because our time was limited.

4- We had to focus our survey on certain aspects of rural life, so we consciously blinded ourselves to a comprehensive view of their lives, We lost sight of the single integrated community with the interaction of all its good and bad, belief and values and of course its physical environment. However it seems that for the urban researchers, short of time, this obstacle is unlikely to be overcome.

From the chapter on **sample portrait** the following observations can be summarised;

1- Different villages are reconstructed with different criteria, some gained more than others from government investment.

2- Those villages which are larger and closer to urban centres had a higher chance of being allocated public resources. One of the main reasons is that in these villages provision of services can usually be organised in a shorter time and at a cheaper cost per head.

3- The villagers are more or less continuing their traditional life style in a new settlement. It is unlikely that they would give up their original life style in occupying any new settlement unless new

work was provided.

4- Much of the money spent on public services is wasted. The use that villagers will get from schools, mosques, and so on is over estimated. Two factors are missing; first, the lack of local community based organisations, or any attempt to train the local people to take responsibility for running these facilities, and second, the facilities themselves are usually on such a scale that the local communities are unable to afford the cost of maintenance.

5- The development policy implemented in the area so far has been to introduce more capital intensive services, such as school buildings, water towers and so on. Cultural and institutional changes have been overlooked. During the reconstruction period these may be could have been planned for by involving the community.

The **analysis of the collected data** clearly showed some aspects of the traditional life in the villages. Of the families visited the most common were as follows; the majority were farmers, 75% were illiterate, and living in extended families. (54% had more than one family in each house, and there were on average 1.8 families in each house).

Concerning the **economic, environmental and cultural** consequences of reconstruction the observations can be summarised as follows:

1- Cuny recommends (personal communication), that examination of the social and economic and the results of a reconstruction programme as a whole should be carried out at least after five years. In our study most villages were re-settled less than five years ago. Most villagers (82%) claimed they are better of than before the war. However it is difficult to relate this improvement to reconstruction programmes,

since there is no evidence suggesting that in other rural areas of the region or even the country have the same improvements been achieved.

2- Generally access to work for the villagers has improved. Among many possible reasons is the construction of roads, most of them for military purposes, some of them were constructed by the enemy.

3- The hygiene level of the families, in their own view, has substantially improved since reconstruction. The use of toilets and bathrooms has became common while before the war houses only occasionally had these facilities. The important point in this context is that change in the level of hygiene shows no correlation with the policy of house design. It seems that the provision of clean water, building toilets and perhaps the experience of living in or close to urban communities, while taking refuge, had influenced the villagers' considerations of hygiene.

4- The 'raising of expectations' of villagers due to reconstruction was found to be serious. For example although 93% of respondents claimed that they built their previous houses with indigenous materials and by themselves, 96% of them claimed they would now look for only new materials for any extension to their houses. Even for animal shelters only 24% said they would use 'local materials'. Obviously obtaining costly building materials, not locally produced, has increased the dependency of these people on the outside world. It may be that housing becomes a new problem for these rural people in the future.

5-It is important to note that a high proportion (80%) of those questioned claimed they are unable to repair their houses should it be necessary. Maintenance is a new expense which the villagers are having to face since reconstruction.

6-To avoid most of these problems on the one hand, while emphasising the increase of local production of building materials and on the other involving the people in construction through training schemes seems to be recommendable.

7-Traditionalism among the villagers is a major concern. Language is just one example. The majority of rural people did not understand the official language of the country. It is difficult to decide what to do about it. Language can act as a means of preserving their local identity, which in a democratic way of thinking they have the right to do so. At the same time language can affect the people in a negative way. Communication with the whole nation, is most possible through 'Farsi', so preservation of traditions may cost them isolation which may end in deprivation. How can we strike the best balance?

Concerning the **physical aspects** of reconstructed settlements, three subjects of land, site organisation and house design and construction were examined.

1-Land was mostly acceptable and this could have been guaranteed by the fact that for land designation the villagers representatives and local organisations were consulted. The unfortunate fact is that even so, according to the villagers, 60% of sites are subject to floods.

2-In site organisation as well as house design, the concept of separating animal spaces and routes has been the preoccupation of the designers. The observations made in the area as well as the analysis of the collected data make it evident that this has been a superstitious idea. There is no evidence to suggest that this separation was useful in terms of the villagers' health, adversely in some respects it might jeopardise the families' health.

3-The villagers satisfaction with their settlement was found to be related to the efficiency of the reconstructed areas and not to the quantity and quality of building materials used. Similarity of the layout along the lines of older villages ensured that the users would be satisfied.

4-Through the analysis of data a series of guidelines can be extracted for the size and form of houses. These guidelines include the size of the plots, size of the room, the layout of house etc.

5-The survey found that in most cases where the users were consulted or entirely free to decide about characteristics of their dwellings, more satisfaction has been achieved. The problem, however, remained not in accepting this approach, but rather in facilitating it.

In terms of **managerial** findings the followings could be noted;

1-It seems that the official institutions involved in reconstruction, even voluntary organisations, to some extent are reluctant to involve the local people in the operation on a large scale. This may have many reasons including the fact that organising local communities is not always easy, is not an engineering task and moreover could be quite time consuming.

2-It might be dangerous to become over-enthusiastic about using a single approach. The example of 'Jelizi' clearly illustrates that even without people's participation a successful project can be built. However, if the time and especially 'cost' factors are taken into account the usefulness of communal approaches become more apparent.

3-Community participation in reconstruction is not just a semantic theory learned through the books. The practice of the projects at Sarie and Choulane, have clearly shown how effective this approach

could be. Nevertheless, there are difficult obstacles, not all of them from outsiders, which limit the use and spread of this approach.

To **sum up our conclusion**, in terms of development policy, it is better to give priority to the basic needs of the communities and infrastructures. Investment in housing is not recommended because it is doubtful whether it has a clear role in people's betterment. Moreover, local people themselves can play the major role in this area. In terms of settlement reconstruction if proper sites and basic services are provided the houses can be built largely by people. The role of government should be shifted from builder to planner and organiser as well as interfering as outsider to find a solution for local disagreements within the communities concerned with reconstruction programmes. Identifying the potential sources for producing, as much as possible, the building materials locally, developing training schemes for local builders, or even whole families, should be pursued as being more worthwhile.

In terms of housing design, it can not really make a tangible contribution to the improvement of the lot of rural people. The role of designer should be minimised, and the concept of design should be mostly left to the villagers. Wherever intervention in layouts is necessary, the users view must be seriously taken into account.

The reconstruction period and activities could be used to increase the ability and qualification of local institutions especially Jahade Sazandegi. So we recommend giving a greater role in management and organisation of activities to this type of local organisations.

CHAPTER FIFTEEN.

CHAPTER XV

TOWARDS A PROPOSAL FOR RECONSTRUCTION OF WAR DAMAGED RURAL AREAS OF KHUZESTAN PROVINCE

Introduction: The aim of this chapter is to pull together the conclusions of previous discussions and to propose some guidelines for reconstruction of war damaged rural areas of Khuzestan. These guidelines must be suggested in relation to the policies of settlement reconstruction (urban and rural), which would be in harmony with the general strategy for the reconstruction after the war.

Not only the economy of the country but also its social and political situation are influential factors in shaping the reconstruction strategy. Even if there were no limitation in economical resources, planning, administration and implementing the reconstruction would still be a daunting task. Thus it is necessary to have a clear and realistic image of the country before moving to examine possible reconstruction strategies.

In this chapter, we attempt to provide an image of present day Iran and the magnitude and complexities of the reconstruction task it is facing. The factors constraining decision-making on reconstruction will be sketched out and the position of settlement reconstruction, including the rural areas, will be evaluated. On this basis some guidelines will be proposed for the rural areas of Khuzestan.

15-1- Iran after the ceasefire- In the first Chapter it was mentioned that the Iraqi invasion was launched shortly after the Revolution. In fact, the country was taking its first steps towards rehabilitation, recovery and reorganisation according to the new priorities, when it was attacked. Without the foreign war this transition could still have been complicated and perhaps in some respects painful. However, defence and liberation was deliberately made the main priority and somehow over-shadowed and thus postponed the transitional stage. In fact after the ceasefire, the country is struggling with two major inter-linked tasks; the transformation of the society towards the values and merits of the Islamic society promised by the Revolution and secondly, the replacement and reconstruction of huge amounts of destruction sustained over the eight years of conflict.

Development model- The establishment of an Islamic society in Iran is not merely a semantic idea as the Western media continuously suggests. Some Western scholars are already alarmed by its seriousness. Wiarda (1983), for example puts forward the Iranian Revolution, as one instance of a general movement in the Third World towards finding their 'indigenous' model of development. This is not surprising, since in one of the earlier Chapters, we argued that a definition of development is only possible when based on particular philosophical and ideological principals. It was also argued that there is no reason why the core values of development theories to date, either Western or Eastern, should be relevant to the future needs of the Third World.

Wiarda (1983), initially states that; 'A revolution of far-reaching breadth and meaning is presently sweeping the Third World,

and we in the West are only partially and incompletely aware of it. ... The ongoing Iranian Revolution may not be typical, but it is illustrative (p. 433). He then claims;

> "The proposition argued here, however, is that the rejection of the Western (that is, North-West European and United States) model of development, in its several varieties, is now widespread throughout the Third World, and that there are many new exciting efforts on the part of intellectuals and political elites throughout these areas to assert new and indigenous model of development" (p. 434).

The same author continues; ' The Iranian Revolution, with its assertion of Islamic fundamentalism and of a distinctively Islamic social science (or model) of development, is in fact but one illustration of a far more general Third World phenomenon' (p. 434).

He follows by identifying the six common features of critiques of Western development models, starting with '...the bias and ethnocentrism perceived in the Western model and on its inapplicability to societies with quite different traditions, histories, societies, and cultural patterns' (p. 435). He then claims that both Marxian and non-Marxian variants are 'exclusively European and hence less - than - universal origins'. The second point, Wiarda raises is that there is no evidence that the stages and sequences of Western social and economic change are replicable in the Third World. Capitalism may not necessarily replace feudalism, rather these two may exist together. (p. 436) Thirdly, he claims; 'Not only are timing, sequences, and stages of Third World development likely to be quite different, but the international context is entirely altered as well' (p. 436). By that he means the Cold War, dependency on outsiders in terms of politics,

technology etc.

The fourth bias, he argues, concerns the 'role of traditional institutions'. That if modernisation initially imposes the disintegration of traditional backward institutions such as caste, and tribe, which in practice in the Third World may be useful. (p. 437) The fifth criticism is that there is no evidence that the modernising institutions such as trade unions, and political parties can be meaningful in the Third World. Furthermore, another argument is that; 'The Western development perspective...[tries] ...to keep the Third World within the Western orbit' (p. 438). Finally he argues that '...perhaps most harmful in terms of long-term development of the Third World, is the damage that has been inflicted on their own institutions because of the Western biases' (p. 438).

The author then reviews some of the 'indigenous development models' arising from the Third World. Particularly he introduces the view of 'Indian political theorist Vrajenda Raj Mehta'. (pp. 439-441) Then he writes;

> "The new and often parallel currents stirring the Islamic world have received far more popular attention than have those in India. There can be no doubt that a **major religious revival** is sweeping the world of Islam, but our understanding of the forces at work has been obscured, biased, and retarded by events in Iran and by general **Western hostility** to them" (p. 441). [emphasis added]

Wiarda's argument continues by identifying the major obstacles to asserting indigenous development models in the Third World. The six points he raises can be summarised as follows; Firstly, '...the search for indigenous models of development may prove to be more romantic and

nostalgic than realistic.' He argues that many of traditional institutions practised in the Third World did not work just as the Western version of them didn't either. (p. 444) Secondly, the challenge for an indigenous development model may require defending an existing political system, justifying existing castes, classes, etc. The third point he argues is that the overall results of indigenous development models have not in practise proved to be successful. The fourth point refers to the present international economic and political situation, which makes the 'isolation' of a country an impossibility, thus outside forces have influence in forming and distorting indigenous development models. The fifth point is that there is not a general agreement among the intellectuals and politicians of the countries concerned, that indigenous models are the correct answer. Finally he believes that variation of people's race and religion make achieving a consensus development model, either indigenous or imported difficult, if not impossible. (pp. 444-446)

Criticism of Western development theories is not restricted to Third World intellectuals. On other grounds they have been criticised by several Western scholars as well. (see for example, Seers 1979; Shumacher, 1973; Redclift, 1987; Sorensen, 1987) However, our aim was to illustrate how difficult the task of finding an indigenous model of development could be, even without a war. For a country composed of several ethnic groups with varied geographical environment, cultural background, in the present situation of the World, under the pressure of economic and political forces of West and East, it is not easy to design a new model into which society can be moulded. Furthermore, as yet little theoretical study is available to throw light on the ideal

indigenous Islamic model of development. (see for example, Al-Buraey, 1985, Chapter 2) However, some steps have been taken and the constitution of the Islamic Republic shows some general directions. Here we bring in a few examples to provide a general image of the society the Iranian Islamic Revolution aims at.

Principle 4 of the Constitution makes all laws and regulations subject to Islamic rules and standards, as determined or interpreted by the religious jurists of the Council of Guardians. Principle 2 accepts negation of all kinds of oppression and dominance, and according to Principle 19, the people of Iran regardless of ethnic and tribal origin should enjoy equal rights. Participation and consultation are also emphasised in Principles 3 and 7 respectively. Specifically, Principle 3 accepts participation of all the people in determining their political, economic, social, and cultural destiny but does not accept regional autonomy for the Iranian nationalities[1].

According to the Principle 43, the economy of the country must be based on providing the basic needs including shelter, food, hygiene, health, education and possibilities to have a family. The same item also emphasises that wealth can not be concentrated in the hands of certain people or groups, neither can the State become master of the economy. Principle 44 says that the economic system of the country is based on three sectors; the State, cooperatives and private. The State will be in charge of big industries, foreign trade, major mines, the banking system, dams, electricity, radio and television, the airline, shipping, transport, railways and so on. The co-operative will be both

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1.These translations are adapted from Amirahmadi, 1986, p. 318.

productive and distributive.

According to Principle 151, any kind of contract which facilitates the sovereignty of foreigners on natural, economic, cultural, military or other affairs, is prohibited. The same notion is also emphasised in Principle 3. as 'Absolute alleviation of colonisation and obstructing the foreign influence'.

This brief review on the constitution may only provide a rough picture of the system. However, the major point to note is that after the ceasefire, one of the Imams in his Friday sermon in Tehran[2] stated that, '...in the constitution the basic guidelines are discussed, but that is only a manuscript on paper and we for the first time are willing to implement the principles written in the Constitution..'. Some of the debates which we will refer to later, can be traced to this review of the Constitution.

Ceasefire or peace? The security of the country obviously is an influential factor in reconstruction and development decision-making. The most important point is that the ceasefire must not be confused with peace[3].

The first reaction of the Iraqis to the Iranians' acceptance of the Resolution was to categorise it as a tactical manoeuvre. When they found that Iran's position was strategic, they followed by sabotaging the movement, imposing other pre-conditions none of which existed in Resolution 598. The first demand was for direct talks, to put the UN

2.Ayatollah, Mousavi Ardabili, Keyhan-e Havaei, 23/6/1368 (14 September 1988

3.Shortly after the ceasefire, Behzade Nabavi, Minister of Heavy Industries also stated the same notion. Keyhan-e Havaei, 16/6/1367, (7 September 1988).

out of negotiations, so that Saddam could force other conditions out of the Resolution. Saddam is particularly afraid, that if the Resolution is respected, the item establishing an International Committee of Inquiry, to find out who started the war, will very likely condemn Saddam[4]. That condemnation must be followed by compensation for all war damages to Iran. When direct negotiations were to some extent accepted by Iran, 'Saddam demanded that dredging Shat Al-Arab waterway should start immediately, something that will take about 5 years and cost some $20 billion.' (Amirahmadi, 1988, p. 6) After this Saddam again raised the demand for unimpeded shipping for Iraq in the Persian Gulf, which was granted by Iran. 'Yet the most critical demand raised by Saddam, concerns his total sovereignty over Shat-Al-Arab, a demand no [Iranian government would]... be able to accept without endangering its existence' (p. 7). Despite all these *concessions*, *eight months* after Iran's acceptance of the UN Resolution, the peace negotiations are '...still fragile and in a dangerous deadlock' (Amirahmadi, 1988,p. 7)[5].

The circumstances are such that it is unlikely in the short term that either side will return to full scale military attack. But it is also unlikely that in a short period any kind of lasting peace can be achieved either. This position lends a degree of uncertainty to investment for reconstruction. For instance, astronomic investment in oil and petrochemical industries in Khuzestan, as well as

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4.Looking through several references, most of them written by the opponents the Islamic Republic, non of them debate that Saddam was the initiator of the war.

5.The most recent meeting in late April again ended without any fruit.

reconstruction of steel factories, ports, etc requires total security against military attack, nevertheless, the work of reconstruction has already started in Iran[6]. More important is the need to reconstruct the defence system of the country. The army must be reconstructed, weapons must be purchased and soldiers trained. The reason is very simple, in our present world the rule of the jungle is dominant, if you are weak either you will be eaten or obey others' wishes. This means the reconstruction of the army is the first priority, since without it there will be no security for any of the other investments.

Foreign policy- The hostility of the superpowers and their grievance towards the Islamic Revolution has already been mentioned. Since the Islamic Republic, according to its constitution is against the exploitation by big powers and does not want to be in their orbit and is against their colonisation, in every form and in any part of the world, so apparently they are hostile to Iran.

The strategy of the superpowers during the war was that neither of the two sides must win. As long as the continuity of the war provided a good market for their armaments and the flow of oil could continued, they seemed not to object to the war and were even rather in favour of it. (see for example, Wright, 1983, Pp. 185-189) In brief we would like to argue that the hostility of the superpowers to Iran and vice versa is an established fact, with the implication of course being that no great economic support will be available even if the country asks for it.

6.The first phase of reconstructing Abadan refinery was finished by the end March 1989 with production of 130,000 barrels a day. Keyhan-e Havaei, 12 April, 1989.

One of the major debates after the ceasefire among the politicians in Iran was how to deal with the contribution to reconstruction by foreign countries. Shortly after the ceasefire envoys of several countries, from the region and Europe, both West and East, travelled to Iran with messages of congratulation for peace and their desire to have a share in the reconstruction. No doubt it is good business for them and it is quite understandable that they should look for economic opportunities. The main danger, however is that with foreign experts and manufacturers, the 'rope of dependency' may become a reality, something which unfortunately in the short term at least, Iran can hardly avoid.

Economy- The inherited economy of the Shah was characterised by poor agriculture, high foreign dependency for food supplies, a mortgaged industrial sectors, concentration of income in an elite group, particularly the royal family. Even without the war, redirecting such an economy towards self sufficiency could be a major task for years. However, the war, both with its high costs and damage has almost shattered the remains of the economy.

During the war, almost 5 million lost their employment, 2.5 million of people migrated from their homelands. Another 2 million Afghan and half a million Iraqi refugees, who are still in Iran, also added to the problem. Some 900 factories were damaged and many others were closed, as there was not enough currency to buy the raw materials or spare parts.

In a country where some 90% of the income is based on oil revenues, by 1985, 60% of its port capacity was disrupted by the war, and 60% of its refinery capability destroyed. From its eight

petrochemical plants, seven were damaged, six of them closed.[7] With the current ceiling set by OPEC for Iran at 2,6 million barrels, of which 800,000 barrels are for domestic consumption and with the current price of oil at $18.5 a barrel, some $12 billion a year will be earned. This $12 billion of course can not be all spent on reconstruction at least $3 billion must go to the reconstruction of the army, $4.5 billion must go to buy food and with other costs not more than $3.5 billion will remain for reconstruction. 'Yet, just to revive the industries to the pre-revolutionary level, some $6 to $7 billion is needed. (see Amirahmadi, 1988, pp. 10-12)

There are also other vital areas consuming the budget, which by no means can be overlooked. For example, the rapid population growth rate (currently over 3.2% per annum), the unprecedented flow of population from rural areas to urban centres[8], particularly the evacuated war zones, all create other constraints which can not be ignored. Recently the Minister of Education in an interview[9] claimed that, in the New Year more than 1 million new pupils will be added to the number of school children, who even by the modest standards of 40 pupils to a class, need 25,000 classrooms. If each school consisted of 10 classes, it means building 2,500 new schools every year, not to mention the number of teachers who must be trained and employed.

Another factor is that the possible revival of the war could justify some shortages in food and other basic needs, as well as high

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7.Ahmade Rahgozar, Keyhan-e Havaei, 19/11/1367. 8 February 1988.

8.The population of Tehran for instance from 5 million in 1979 has jumped to million in 1985. (Amirahmadi, 1986, p. 523)

9.Muhammad Ali Najafi, Keyhan-e Havaei, 16/9/1367. (7 December 1988)

inflation rates and so on. It is undoubtedly true that when the ceasefire is settled, the people will expect some kind of relief in their material life. They assume that with the end of shooting at the front, the budget could be used for extra subsidised food and housing facilities. In reality no such tangible saving exists, since the army although with a lower profile must be kept alert, and moreover must be reconstructed. The new area of expenditure, the reconstruction, must now have a much higher priority while during the war it was not so urgent.

We know that the World Bank with the original name of the 'International Bank for Reconstruction and Development' was established in 1944 to provide the 'capital so urgently needed to assist a war-torn Europe recover once the fighting ended.' (the *Urban Edge, Vol 12, No.* 10 December 1988) However, the same reference reveals that

> "by 1949,...it was clear that the medium term job of financing post-war reconstruction was beyond the capabilities of the organisation, as it could not borrow the enormous funds needed. In response, the United States created the Marshall Plan to assist the financing of European recovery" (p. 1).

The political independence of the Islamic Republic is such that no 'Marshall-Plan' can exist. Although borrowing from international agencies such as the World Bank, is still not ruled out by the Iranian government, the basic idea is to avoid borrowing as much as possible. For instance Hojatol Eslam Hashemi Rafsanjani, the Speaker of the Parliament, in an interview with foreign correspondents claimed; 'Concerning borrowing money from foreign banks we have not decided yet, but we are definitely prepared to use foreign currency sources.

Concerning the negotiations for long term credits from foreign governments or other forms of 'buy-back ...we will see later.'[10]

The economical situation suggests three alternatives; 'open-door', 'closed-door' or a mixture of the two. Either the foreign investors must be invited, so their conditions must be accepted and the country must go into debt, which so far, it is proud of not having a outstanding sum. Alternatively we must take the other option; the 'closed-door' strategy for reconstruction, using domestic resources in all aspects and as far as possible. The third option is to let foreign companies contribute to reconstruction in certain sectors. There is strong evidence that the latter course will be decided on.

Recently Imam Khomeynie responding to a letter sent by the Oil Minister stated that; 'The people who under bombing have prepared themselves for a *long battle and conflict, will* never agree to compromise again with world imperialism. It is apparent that the shortages after the war can not be overcome and will require some years to return to normal. The people must make their decision, either to move for comfort, consumption and compromise or to bear the hardship and keep their independence. This may all take some years to achieve, but our people will definitely choose the second way, the route to independence, honour and pride'.[11]

Planning and administration- The present planning and administration system of Iran is originally and largely the remains of the pre - Revolutionary system. With the war starting so quickly

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10.Keyhan-e Havaei, 16/9/1367. (7 December, 1988)

11.Keyhan-e Havaei, 28/10/1367. (18 January 1989).

after the Revolution there was no opportunity for the global revision that should have been done. However, new national developmental oriented organisations were established. The Sepah-e Pasdaran (Guardian Corps), parallel to the army, Jahade Sazandegi (Construction Crusade) parallel to the Ministry of Agriculture, and Bonyade Maskan (Housing Foundation), parallel to the Ministry of Housing and Urban Planning were formed. For the time being all attempts are being made to co-ordinate the activities of these dual organisations. For the first two, some suggestions have been made to Parliament to integrate them. However, the Parliament decided that they should continue as they are. This is not of course without problems and sooner or later the global planning and administrative *system must* be decided on.

The inherited planning system basically is a centralised one. Although the new *Constitution* suggests more decentralised and provincial planning, it has still not been completely implemented. Amirahmadi (1986) reviews the Regional Planning in Iran in depth. He also writes that;'...the *first* development plan of the Islamic *Republic* (1982-1986)..[has] never [been] approved by Parliament; it did not spell out a clear national-development strategy' (p. 523). To the best of our knowledge that plan is still in the Parliament.

It is not surprising if the national-development strategies are not yet clear. We realise that while the country is engaged in a war and is dependent on oil revenue, the income from which can suddenly fall by half and while large numbers of immigrants are living in conditions of 'utter limbo', planning becomes neither imaginative nor efficient.

One major element in reconstruction during the war was the role

of people. It is also unanimously agreed that after the ceasefire the people must have a major role in reconstruction. For instance Imam Khomeynie after the ceasefire stated that; 'For reconstruction if the people want to act on their own it would create perversions, if the State wanted to act alone it has not the capability, people must help and bring whatever in their power to the scene but under the supervision of the State.'[12] The stimulation and co-ordination of people's initiatives, especially in bad economic conditions is not an easy task, as we extensively argued in an earlier chapter. Nevertheless the maximum participation of people must be an important ingredient for reconstruction policies.

Remarks- Our discussion so far has lead us to imagine the characteristics of a global reconstruction strategy for Iran. The unclear development policy, uncertainty about security with a position of no war no peace, the long term hostility of the superpowers and the revolutionary goals of Independence, are major considerations. The ruined economy, limited income and unlimited expenditure needs, the lack of efficiency of the centralised technocratic planning system to cope with the new situation of reconstruction will all together, eliminate any developmental oriented strategy for the short term. The only viable strategy, expressed by the leaders of the new Islamic Republic, is a strategy that we call it of **'Survival'**. This should aim to rehabilitate the country and return the people to normal life as soon as possible. This is manifested by the maximum use of limited national resources plus maximum involvement of the people.

12.Keyhan-e Havaei, 16/6/1367. (7 September, 1988)

15-2- Reconstruction planning and priorities- The reconstruction of damaged areas during the war was basically focused on settlement reconstruction. The infrastructure and industry were found so in danger of further attack that new investment did not seem advisable. However, there has been a change in priorities since the ceasefire altered the situation. Some people have even debated that the reconstruction of the damaged settlements during the war, was not advisable since the risk of further attacks existed (see for example Pudnak, 1988 p. 63 and Davis, 1988, p. 15). In fact some of the reconstructed houses in Bostan were raided again and reconstruction efforts had to be stopped. Even the new city of Hoveize was on a few occasions bombed again causing further evacuation. Susangerd was also bombed several times after being rehabilitated. However, by the time of ceasefire the reconstructed villages had not been attacked again and normal life has been going on in them.

On the other hand we must consider the terrible situation of the war immigrants and refugees, being away from their homeland for years and usually having to live in densely populated temporary accommodation. This is not a situation that can remain for long. Moreover, postponing the reconstruction could result in an accumulation of the damage, to an extent, that later reconstruction could get out of control because of its magnitude. However, particularly with the reconstruction of the rural areas, increased food production could help lead to a more normal situation for the refugees, so this was a sensible decision.

In May 1989, the Government's programme for reconstruction was

published.[13] The ten general policies are as follows;

> "1- The principle of participation of people of each region and popular forces in reconstruction according to the regulations clarifying the method and areas of co-operation. (Housing and commercial buildings as much as possible should be reconstructed by their owners according to the programmes, direction and support of the Government).
> 2- The damaged areas should be connected with the regions capable of giving support to stimulate popular aid from other regions.
> 3- The observation of cultural characteristics, customs and the psychological situation of the people in each area and in every activity must be adhered to.
> 4- The establishment of co-operative and non co-operative companies, giving priority to combatants and voluntary fighters.
> 5- To built the minimum accommodation for use and to consider the possibility of physical development for future.
> 6- It is necessary to study and pay attention to the possibility of combining rural complexes and farm lands, the repair of irrigation canals and water sources and housing lands, observing the right of their owners to the supply of services and exploitation of water and land, and reducing national expenditures.
> 7- To produce necessary materials for reconstruction of war-damaged areas with the help of different sectors.
> 8- To consider the security and civil defence measures for populated areas particularly for those cities and other regions close to the border against any future attack.
> 9- To strengthen the crucial industries and strategic centres.
> 10- To conserve those parts of war damage that can best manifest the history of the sacrifice and resistance of the martyred Iranian people" (p. 19).

The same reference in relation to the priorities for reconstruction reads;

13.Keyhan-e Havaei, 68/2/27 (17 May 1989)

"1- Oil and energy (reconstruction and development of oil refineries and petro-chemichal complexes and power stations)
2- Agriculture
3- Reconstruction and restoration of factories producing building materials.
4- Housing (first priority is with those units which require restoration and repair. Priority is also with housing of families with employment)
5- Give priority to the reconstruction of those factories and industries that have the three following characteristics; maximum employment and production, anti-inflation and minimum foreign currency.
6- Reconstruction of villages" (p. 19).

As it can be seen housing reconstruction is not a high priority. The country is trying first to rebuild the refineries and then to tackle agriculture. With village reconstruction at the bottom of the list and yet agriculture in second place, the implication, in our view, is that the rural people will return to their homelands and restart their farms, before their settlements are rebuilt.

Settlement reconstruction- The next step is to sketch out the implications of the 'survivor strategy' in terms of settlement reconstruction. There must be the maximum use of local materials, as well as the involvement of the people. On the other hand, there must be the minimum interference with the pre-disaster norms and standards, coupled with as little delay as possible in implementing a speedy rehabilitation.

Initially all these goals may seem unattainable but the reality of the situation and our earlier studies in this dissertation, support the need for solutions in all these areas.

In an earlier Chapter, we examined the validity of the assumption that after a disaster a 'unique opportunity' to introduce

change exists. In fact this has been one of the basic factors governing the conduct of development programmes after disasters. Our conclusion however, was that in reality such an opportunity is only perceived by parties other than the survivors and both theoretical analysis and empirical findings proved that this assumption was false. Several investigations have indicated that the actual re-establishment and continuity of pre-disaster norms after disasters. (For example, Drabek, 1986, Hass, et al, 1977) In addition we found that, particularly in tribal communities, recommendations exist for re-establishing pre-disaster norms before introducing new changes in these communities. (See, Torry, 1978)

Our discussion on development through reconstruction concluded that the concept of development is perceived variously by different people and agencies and is usually simplified by the intervenors, who expect too much of their often scarce resources. If the aim of development programmes is to address the roots of underdevelopment and they are defined as 'a shift in the existing situation' of disaster stricken communities, such as reorganising land ownership and employment for example, the intervenors are invariably not able to take any significant steps.

As far as the mitigation of hazards in reconstruction is concerned, despite efficient warning system, our study on 'War as a Disaster' indicated that little can be done to mitigate the loss of human life and property in a war situation. Evacuation, shelter construction, keeping a distance from more vulnerable targets such as barracks, factories,.. and dispersal were identified as major approaches. We will see to what extent they are possible in Khuzestan.

The study of the psychological recovery of disaster victims also supported the idea of rebuilding the 'familiar' pre-disaster environment. It was argued that a new and therefore 'strange' environment can become an additional stress factor, retarding their mental recovery. Another major finding, was that the active participation of disaster victims in all stages of rehabilitation can be a positive factor in their psychological recovery.

The study of peoples participation also found that the higher the degree of direct involvement of people and their indigenous institutions, the better will be the result of their labours. Nevertheless some critical obstacles were also shown to remain, such as the problem of co-ordinating local initiatives and popular activities inside a broader framework of regional and national plans. In this respect the higher the decentralisation of decision-making the greater will be the chance of a positive result.

The findings of our field survey, as well as the literature review also indicated that people cannot easily accept an imposed global shift in their life style. An 'unfamiliar' settlement could only become another burden disrupting the social and economic life of the disaster-stricken community. We observed that particularly in the reconstructed villages of Khuzestan, the traditional life often continues in the modern settlement. The maximum satisfaction from the reconstructed settlements, in the view of their inhabitants, was in those cases where the design of the buildings, site layout and so on were decided by the villagers themselves or were similar to the traditional forms. The best results were to be obtained, when the inhabitants expressed <u>their</u> ideas and needs and more importantly,

decide upon and became directly involved in, implementing the reconstruction projects.

From the review of reconstruction of war-damaged cities in Europe and some villages elsewhere, several important conclusions emerged; first, reconstruction was a long-term effort, often taking more than a decade and sometimes two. Second, different phases of reconstruction were identified, the immediate phase was characterised by the restoration of the remains of buildings, services and crucial infrastructure with little effort at wholesale rebuilding. In this phase, housing usually had a very low priority and resources were general better devoted for the revival of industry and the economy as a whole. It could be called a non-planned phase of reconstruction. Particularly in small cities or where minor damage was incurred this was the most common policy. It was also observed that often people returned to their settlements before they were rebuilt. A period of hardship in terms of accommodation was quite obvious in most cases.

As a result of all these observations, we can say that the long period of reconstruction should be divided in three phases; first, in the Immediate Phase, where policies of quick restoration and investment in the local economy and rebuilding the most crucial infrastructure are best. This period may last as long as five years or so. The Second Phase will still continue with investment in industry to maximise employment but with a greater emphasis on public services and housing. By then the prosperous economy can start to fund the restoration of monuments and the provision of consumer-goods. In other words, we can assume that the housing solution will take at least a decade to match up to pre-war situation.

City or village? It is necessary in the immediate phase of reconstruction, to decide which is the higher priority; the reconstruction of cities or rural areas? The emphasis of reconstruction policy in war-time was basically towards the rural areas. After the cease-fire the reasons for this are mostly still valid. **First,** the reconstruction of the rural areas must be the priority because of the importance of agricultural production. It is also quicker and in a year or two food production can be restored to its previous levels, even without the total reconstruction of the settlements themselves.

Second, rural people have some building skills which can be used to provide their emergency shelter with only minor help from outside, while the urban population are to a much greater extent[14] dependent on the State, even for their emergency shelter.

Third, rural areas can be rehabilitated with less investment, houses and their services can usually be provided more cheaply than in urban areas. A village, with a few hundred thousands rials, can replace a water pump and in a few weeks the canals and land can be restored and the farmers start working again. On the other hand the urban sector is much more dependent on industry and commerce, the revival of which is greatly dependent on limited foreign currency and will in any event, take a long time to restore. The speedy return of rural people makes them independent of public resources and the pressure on the government could quickly reduced.

Fourth, concerning the urban areas, there is the uncertainty that all the evacuees will return. Although this might be also the case with

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14. In damaged cities there might be a greater chance to repair the damaged buildings and to use them temporarily.

rural migrants, it seems more likely that villagers will return to their homeland, since they have their roots and livelihood from their land. The urban refugees, on the other hand, especially those with some wealth, have often already established themselves in their new life and businesses in the towns they migrated to. The eight or so years has been long enough for them to put down new roots.

Fifth, it must also be added that, in terms of reconstruction of industries, some strategic decisions will affect the life of the cities. The economy of Khoramshahr was highly dependent on the port. If for military or economic reasons[15] this port is not going to be reconstructed on the same scale as before the war, many jobs will be lost. Concerning the rural areas, in essence it can be assumed that no big change in the production system will take place and that the farmers will more or less start again using their familiar practices. All in all we suggest that there is less risk of loss of investment and things going wrong in the agricultural sector.

Sixth, the problem of land in urban areas is significant. There are housing deficits, and land-less families will expect a plot. In villages plenty of land is usually available for housing. Experience has shown that the village committees are well able to resolve these kinds of problems.

Seventh, the availability of indigenous materials in rural areas and the modest requirement of rural people also makes the reconstruction of settlements easier than in urban centres. Rural people from old men to children can take part in construction, while often in urban areas most

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15.During the war the Government developed new substitute ports further east Khuzestan near the Gulf.

of them can not do so much to help themselves.

Eighth, an additional point is that there is a risk of competition between urban and rural centres. This may lead to a bias against rural reconstruction resulting in a shift of resources to urban areas. On the whole urban people are wealthier and often politically more powerful and since the housing of a single urban family require the materials and work of several rural houses, they may be able to influence the distribution of resources in their favour. Thus the Government should be clear about this point.

There is however, also one major difficulty, that is the linking of rural life to urban centres, both in terms of the economy and of services. As far as Khuzestan Province is concerned, fortunately the number of cities totally destroyed is low, in fact Susangerd and Hoveize as well as the small city of Hamidie, are already thriving again and are capable of supplying services to a hundred villages around them should they be reconstructed. The city of Bostan was once restored, but much work must still be done there and it will remain the only city to be reconstructed in Dashte Azadegan District. Ahwaz, Dezful and other cities are gradually being restored to normal and are able to supply the needs of their rural hinterland. The main problem is with larger cities of Khoramshahr and Abadan, whose reconstruction will take some years. With the priority of restoring infrastructure and public services, part of the functions of these cities will be restored and rural people can again use them.

Guidelines for reconstruction of war damaged rural areas of Khuzestan- Based on the arguments made so far and lessons learned through this study the following guidelines and policies are suggested for the reconstruction of war damaged rural areas of Khuzestan Province. The application of these guidelines to the rural areas of other Provinces damaged during the war, requires extra work to harmonise and adapt them to their particular social, political and environmental circumstances.

We are going to suggest that if rural refugees return to their homelands, even without much preparation, their life on their own land cannot be worse than living in camps. In fact, we suggest that new temporary accommodation be established in damaged villages and a process of slow recovery be started; but started straight away.

It must be remembered that restoration of the pre-war norms in the damaged villages, as the first phase of rehabilitation, with minor improvements is not wrong, since they are only a few hundred out of the 55,000 villages all over the country. Even on humanitarian grounds there are several thousand villagers in other regions of the country, whose normal standard of living is far worse than that of the Khuzestan villages, even though they are stricken by war.

Action plan- The recovery of rural communities under the present study can incorporate three stages. The first, to bring the villagers back to their sites and to support them to re-establish a minimum life. This stage may last for a few months. Secondly, a planed intervention with a high degree of control by the villagers should be conducted. Priorities must be identified. These may differ for each village.

Also government support must be channelled through local organisations, such as Jahade Sazandegi. This stage aims at the re-establishment of near pre-war norms and may take two or three years. Finally, these villages by then will be ready to participate in any new development plans as other villages.

First stage: (few months)

1- The local organisations dealing with war refugees know the people of each village and where are they living. The villagers must state that they are willing to return to their land.

2- The army must first clear the land of mines[16]. The security consideration of the area must be checked with the army before any decision is made to return the people.

3- A date can be fixed with the villagers for their return.

4- Transportation and assistance must be supplied for them to move back to the village.

5- Currently the war-refugees are supplied with food, clothing and other basic needs in the camps. This support must continue till the villagers are able to stand on their own feet. There should be no extra cost to the villagers and the Government has to give this support to those still in the refugee camps.

6- The return of villagers must follow the provision of some minimum requirements. Drinking water if necessary must be supplied by tankers. The 'harvesting' of local building materials such as bamboo must be assisted where necessary by help with transport.

16.Some forty years after the Second WW in Britain unexploded bombs are still being discovered and made safe.

7- Apart from that mentioned in item 6 above little external effort is required. Experience has indicated that villagers are almost totally self sufficient for their temporary shelter needs.

8- Temporary shelter can be provided by; repairs to the original homes, constructing new rooms using mud[17], erecting cloth and bamboo tents and constructing shacks from salvaged materials, such as galvanised iron sheets, wooden beams and even ammunition boxes.

9- It is better to settle the villagers near or even inside the ruins of their original settlement. This has several benefits; first, villagers feel 'psychologically at home again'. Secondly, they can rebuild their houses by recycling some of the original or local materials. Finally, productive work on the land can start even before the houses are rebuilt.

10- Restoring the land and canals can be started with the help of Jahade Sazandegi.

11- At the same time the Village Islamic Committee (VIC) must be elected and organised to handle village affairs, planning and training needs for the future.

12- The new VIC will help to identify priorities for restoration and government investment, such as veterany services, or the replacement electrical pumps etc.

By these means the first steps can be taken to re-establish life in the village.

17.Many references discuss the concept of strengthening earth structures. While the application of earth as an alternative building material in the Third World remains a matter of speculation, the possibility of still using it still as a material for secondary uses such as stables and non load bearing walls is worth considering. (see, for example: Germen, 1979; Eaton, 1981; Middleton, 1982; Meade and Garcias, 1985)

Second Stage: (Transitional Phase, two or three years)

1- The aim of this stage is to restore agriculture to its pre-war level of production.

2- The second priority is to restore public services such as water, education, health etc.

3- The third priority is the construction of new houses.

4- The VIC and Jahade Sazandegi will decide on the site of the new village taking regard to sanitation and car access. Only minimum changes should be incorporated if any at all, at this stage.

5- The VIC will agree with each family on the list of families and their population and what they are legible to receive as material. Also a list of priority will be prepared showing which family needs quicker help for housing. (elders, family of war martyrs,..)

6- Villagers should be absolutely free to decide about their house layout and design with the benefit of advice. Previous extended families will be encouraged to continue living together.

7- With the help of local builders, the construction of houses will start, two or three houses each time. This will allow a planned organised quality to be established over two or three years.

8- If possible burnt bricks should be produced on site. Government support for this purpose may be necessary.

By the end of this stage we should expect the village to return to 'normal' and be ready to be included in any development plan with other villages.

Summary and Conclusion- In the **First Chapter** we set up the context of the study. The recent history of Iran and its Islamic Revolution, the Iraqi invasion of 1980 and its human and material repercussions were briefly discussed. The reconstruction issues and policies, particularly for rural areas were also reviewed and that chapter ended with a summary of observations from reconstructed villages in Iran. Further study, however, revealed that many of those issues were found elsewhere.

Starting a literature review on natural disaster studies, in the **Second Chapter,** it was noticed that these are relatively new. (see Davis, 1981a) Particularly there are few detailed studies of reconstruction practice. It was also noticed that no convenient conceptual framework is currently available to group and establish a hierarchy for the issues relevant to disasters. However, the common classification of time, or phases was selected and used. (see UNDRO, 1982)

In the study of mitigation or pre-disaster planning it was found that the fundamental issue is distinguishing between vulnerability and disaster. Earthquake and flood are nothing but features of nature, it is the vulnerability of the human communities that inflicts damage in the face of these agents. (see Cuny 1983) The geographical dispersion of disasters is evidence that there is an uneven pattern throughout the world. Those countries which are most stricken by losses from disasters are the so called developing countries or Third World. (see, Shah, 1983 and Cuny, 1983)

Not only do certain countries lose more but at the same time, these are those less capable or unable to rebuild and recover.

Recovery requires 'surplus' resources, those most stricken by catastrophes become susceptible to them because of not having that surplus. (Lewis, 1988)

Loss due to natural disasters is but one facet of our unbalanced world. Those vulnerable to it are in fact often struggling with many other forms of vulnerability and shortages. Homelessness, unemployment, poor health and malnutrition are among many. In such a situation disaster mitigation can easily take second priority for those whose 'life is a constant disaster'.

What a disaster does is to 'bring to the surface' the social economic and political constraints which altogether have held the communities in a vulnerable situation. Thus instead of blaming the earthquake, one should put the blame on the governments and their associated authorities. (see for example, Nez 1975 quoted in Davis 1988, p. 17)

In thinking of what can be done to eliminate loss from disasters, the previous comment indicates that if the roots of vulnerability are addressed the communities' resistance will be enhanced. Developing countries can alleviate the losses, when they are in a condition that no longer deserve the present title, 'developing world'. The strongest evidence is the concrete statistics of disaster damage in our present era. In the common trend of disaster studies, however, as with many other disciplines such as shelter, hoping for such a great change is unrealistic and perhaps non-scientific. On the other hand, we would like to argue that no other policy will take us to our utopia; a world with little or no loss from disaster. In any case the procedures of pre-disaster planning

were explored.

The study of Emergency Shelter and Temporary Accommodation, **Chapter Three,** revealed that in this respect there are significant differences between the two blocks of 'North' and 'South'. In the first, prefabricated units or caravans are used, in the latter often the survivors have to shelter themselves in shacks they build from salvaged materials. Generally it was found that evacuation from the scene of disaster must not be practised unless a high degree of risk is predicted. It was also noticed that rural survivors are more able to shelter themselves using local materials and their own building skills, than urban survivors.

If the catastrophe is on a grand scale people might be evacuated to camps or other types of temporary accommodation. The preference was to stay with friends and relatives. In the camps, however, survivors have to struggle to adapt their family to a regimented life. The camps may last longer than intended sometimes for decades and even become permanent. In the design and management of camps direct involvement of refugees was recommended and one should remember that the camp is not their home.

In **Chapter Four,** we reviewed reconstruction of permanent settlements after disasters. It appeared that despite some similarities the concepts of reconstruction of urban settlements was different from rural areas. In urban areas, issues such as housing deficits, land and legislation appear most important. In villages it is more a case of improving the existing structures in an attempt to mitigate the damage of the next hazard, to initiate development programmes immediately after the disaster and to deal with cross

cultural problems.

Where the disaster response is native and no foreign agency involved, several common symptoms still exist in the reconstruction period. One is that 'urban based and biased' professionals have little or no insight into the local cultures, designs, needs and technologies. The disaster scene can then become a 'laboratory' for professionals and a platform for politicians to hamper local initiatives and make 'big promises'. (see Leslie, 1988 Yemen)

Disasters create an atmosphere that can be associated with a lack of accountability. Many things must be done and much built in a short time. Governments temporarily become more generous, as do donators to voluntary organisations. After all if something is provided as a gift why should there be questions about it? Governments and architects looking for houses seek cheapness and quality but disaster victims want space to shelter their families and to keep their herds safe. (Oliver and Aysan 1988) The two views often conflict with each other, but one side has control of the resources and makes the decisions, while the other side are merely the recipients. This relationship can rarely be otherwise. (UNDRO, 1977?)

To mitigate the *next* hazard, changing traditional construction methods becomes inevitable. The new materials and techniques are often expensive, the construction often invested and the local people unused to maintaining them. (See Razani, 1984; Parsa, 1986; UNDRO, 1982; Davis from 1978 on) The survivors' expectations rise, the free, cheap and affordable indigenous materials are rejected because they represent backwardness, on the other hand new technology and materials are often too expensive. A new struggle starts between expectations and actual

resources. (Author Field Survey)

In **Chapter Five,** we reviewed the relationships between development and disasters. The disaster intervenor may want to go further than just recovery, to address the more fundamental 'developmental issues'. A simplified definition of development is necessary in this case, since if it is a 'fundamental change' in relationships, it may be out of the control of the intervenor. For instance the question of land ownership must be set aside, also cultural forces. A practical development approach can be more useful. Something like digging a well or providing drinking water which will be welcomed as a step towards development and can not be misinterpreted by the villagers.

The consequence may be that the disaster stricken communities return to the pre-disaster *situation with no significant improvement.* (Drabek, 1986). Sometimes the existing situation becomes even worse, with the rich becoming richer and the poor poorer. (Snarr and Brown 1982 & 1984, and D'Souza Gediz 1986) Of course the *agencies and* governments do not like this conclusion. that is why Cuny warns 'Let us not fool ourselves'. (see also McKay 1981)

Vulnerability to disaster is one of many aspects of underdevelopment and it is hard to dispute that if the community's general economic and social situation improve, naturally the risk of hazards will be reduced. That disaster destroys some of the resources necessary for development, by any definition is simple to understand. In addition to this it was found that disaster responses can have a negative impact on long-term development of the stricken community. People may become more dependent on external aid, local institutions

and leaderships may weaken. It was all these factors that motivated Cuny to write 'Disasters and Development, 1983'.

In reconstruction three modes of development were recognised; first to ignore it and perceive recovery as the re-establishment of status quo. We make no argument on this option. Secondly, to strengthen buildings to withstand future hazards, this is one step towards development. We brought evidence that our definition of development must be re-examined. Construction of strong houses often goes downwards on the list of priorities in development programmes, after land and employment, food, clothing and security... In brief, it is true that in developed countries houses are stronger against hazard but strengthening them in developing countries is not necessarily a tangible step towards development.

The third option was to believe, that there is a greater opportunity to initiate development programmes after disasters. This was based on two assumptions; first, that after disasters there is a unique opportunity to introduce change and secondly, more resources are available and the survivors are ready to accept change: it is the time 'to put right all wrongs'. As far as the availability of financial resources is concerned, we argued that there is evidence that foreign aid constitutes a minor percentage of all recovery costs and in addition that money is not the only necessity for development. The evidence is, that some of the richest countries, (i.e. oil-exporters) are still underdeveloped. We explored these two issues and eventually came to the conclusion that both assumptions are seriously suspect.

In **Chapter Six,** the theme of change after disaster was explored. In the literature, that was found to be a matter of controversy. (see

UNDRO 1977?) Most often disaster stricken communities virtually return to pre-disaster norms. (Drabek, 1986) We opened the subject by looking at the disaster scene and recovery, from the view point of the different parties involved. It was found that, in addition to humanitarian individuals who bequeath money, there are voluntary agencies, both international and national, who for the sake of their reputation, along with government planners for political reasons using the atmosphere of non-accountability, expect change. (see also, UNDRO, 1977?)

As far as survivors are concerned we investigated some psychological theories to see whether disaster can have a decisive impact on them, preparing them for big changes. The conclusion was negative; that the observation of a catastrophe will not necessarily result in changing people's attitude to change and that stress effects may make the survivors modest or indifferent for only a short period. The most common tendency among the survivors is to return to 'normal' as soon as possible and what is normal for them means, 'whatever existed before the disaster'. (see Koenigsberger, 1982)

In **Chapter Seven,** the notion of people's participation and their relationships in the event of a disaster was examined. Disaster literature almost unanimously recommends the necessity of survivors' participation in relief and reconstruction. (UNHCR, 1982; UNDRO, 1977?; Davis 1978, UNDRO, 1982) There are two main reasons for this; first survivors are good 'resources' and secondly their participation can help to ensure an appropriate product and an intelligent recovery.

Both assumptions are in our view valid, but we can not overlook other critical observations; first, 'people participation' as such is a

Western notion often with little relevance to the realities of local co-operation and the participation of indigenous organisations. These imported notions are all too open imposed from the 'top-down'. Secondly, locally initiated organisations are most effective at the small, local scale. Third, harmonising and managing a group of local initiatives is often necessary but may will reduce the effectiveness of their actions. Generally, two groups of theoretical and operational constraints were discussed. In brief, we concluded that people's participation is more of an empty slogan than a magic discovery for solving Third World problems, be they, shelter or post-disaster reconstruction.

Chapter Eight, was about the relationships between physical reconstruction and psychological recovery. First we found that the psychological impact of catastrophes, unlike material losses is 'invisible' and can easily be overlooked. We seldom hear of 'psychological reconstruction', but that is exactly what is necessary. From the physical point of view we argued that several architectural decisions can influence psychological recovery; matters such as village location and relocation, the combining of settlements, design and fabric of houses, etc. In summary, we concluded that the more the new settlement retain the pre-disaster features and characteristics and the more the survivors can control their new environment, the greater will be the chance of mental rehabilitation. It was also argued that the direct involvement of survivors in all aspects of their reconstruction including physical work, may be therapeutic for the survivors.

In the study of War as a Disaster, **Chapter Nine**, the first thing is, that it is the most powerful and destructive type of disaster but

still the one most often ignored. If ground tremors, high winds and rain fall can be blamed for natural disasters, that is not so for war. There is also the irony that human technology is attempting to reduce the effects of natural disasters, so it is not consistent that technology, in the form of the armaments industries, should also be seeking to increase the effects of another type of disaster namely war. The sophistication of the means whereby man himself is constantly progressing towards damaging his fellow man outstrips the political will needed to take mitigation measures. To that end we increasingly ensure death and damage can be created on an ever going scale.

It is known that war has killed and kills more than natural disasters (40 million in WW II), and can also create other disasters in its wake (famine). Relief operation are often risky for aid volunteers and even refugee camps can be raided (Lebanon). The results of war may remain for generations (Vietnam) and its psychological impact is even more long-lasting (half a million Americans veterans with psychological problems, 60,000 committed suicide). Wars may last for years (15 years in Lebanon. 8 years in the Gulf) but still the study of reconstruction of war damage is a taboo subject and largely ignored. (UNDRO NEWS 1988)

The relief and rehabilitation of war-refugees was found to be different for refugees from natural disasters. First war is essentially a political act, secondly the work of envoys and aid personnel are not necessarily treated as neutral. Concerning the refugee camps, war-refugees are at risk from bombardment and massacre and they may remain in the camps for decades. Other major differences between war and natural disasters were also sketched out.

Chapter Ten, the first in Volume Two, was concerned with Reconstruction after war. In the case of remote civil wars rehabilitation seems unlikely. After wars between nations, the damage is often so great that it needs decades to rebuild (Warsaw). Unlike many natural disasters not only are buildings destroyed but the economies are bankrupt, industries vanished and institutions demolished (Kreimer 1988). Industries and infrastructure must be rebuilt first to provide employment and food, therefore housing becomes a lower priority.

It was observed that 'settlement reconstruction after war' often starts later and lasts longer than envisaged, sometimes one or two decades (Warsaw, Molde). Three phases of activity were recognised, first Phase of Restoration or (non-planned reconstruction), with an emphasis on the economy and repair of the infrastructure and at this stage little concern with housing needs (German Cities, Present-day Iran). The Second Phase is of Planned Reconstruction for a few years (Germany, Poland), with more emphasis on housing production but still with the priority of economic revival. The Third Phase may come as long as ten or fifteen years, after the cessation of hostilities when priorities will be more or less those of the normal development plans perhaps with an emphasis on housing and consumer goods.

Some of the recurring issues in reconstruction after war were outlined. Generally urban areas were the major concern. One important task was planning decisions about the new city design and to what extent changes should be introduced. Compulsory land acquisition was invariably practised in almost every case. There was also propaganda put about with great hopes for a better future during the war, this

was intended as a means to keep morale high. Often people 'returned to their city' before it was reconstructed. There was also a tendency to rebuild the historical monuments as a way of restoring national continuity of life and culture.

The Field Study report started with **Chapter Eleven,** where the methodology of the Survey and the constraints of field work were explained. Language problems and interviewer training and the efficiency of questionnaires were discussed.

In **Chapter Twelve,** An introduction was given to the eleven villages selected as the sample to provide the readers with a background and context to the Field Survey. There it seemed that the two cases of the villages of Sarie and Choulane were promising examples to elaborate on.

The Data Analysis reports were started in **Chapter Thirteen**. We found that the villagers were generally illiterate. (75%) and often lived in extended families. After reconstruction their incomes had generally improved and the level of hygiene in villages increased. For instance toilets became common, while they were not common before the war.

Chapter Fourteen contained the rest of the field survey analysis. we found that most villagers built their previous houses themselves and few learned any building skill during reconstruction. In the examination of the villagers' satisfaction with their settlement, it was found that generally they were happy with the location, in our view because their representatives were consulted for this task. Concerning the design of the houses and village layout it was found that they were highly in favour of the old building norms and

site situation. Generally, but not always, when the people had a choice to make for themselves, a higher degree of satisfaction resulted. In brief, we concluded that architectural designs can do little if anything for the improvement of villagers' life in damaged areas.

Finally in **Chapter Fifteen,** we pulled together the conclusions of the previous studies, to draw up some Guidelines for Reconstruction of the war-damaged villages of Khuzestan. With a review of some of the economic and administrative constraints of present-day Iran and based on the conclusions of previous chapters. We argued that for a few years house reconstruction will not have a high priority. Listing the policies and priorities announced by the government quite recently, we suggested that " A quick recovery for rural areas would be possible with only a little investment by the State and an increased role for the rural people and with little change in the pre-war norms". The Guidelines that were proposed reflected these and our other main conclusions.

APPENDICE I.

QUESTIONNAIRES.

RECONSTRUCTION EFFICIENCY

A-General description of responder Code:

Name:	Surname:	Interviewer:
Age:	Sex:	Date:
Tribe:	Clan:	Time start:
		Time end:
Name of the village:		Place of interview:

==========

1-What is your job?

a-farmer.....1
b-shepherd.....2
c-wage earner.....3
d-others.....4

2-Educational status.

a-illiterate.....1
b-reading and writing.....2
c-primary school.....3
d-secondary school.....4

3-Kind of family.

a-nuclear.....1
b-extended.....2

4-Size of family.

a-between two and five.....1
b-between six and ten.....2
c-more than ten.....3

5-Vehical owned

a-motor cycle.....1
b-car or van.....2
c-lory.....3
d-others.....4

6-Have you become refugees because of the war?

a-yes.....1
b-no.....2

If yes ,for how long?

a- X months

7-Where have you been living Since you first moved?

a-in refugee camps.....1
b-in town with relatives.....2
c-in town but not with relatives.....3
d-in other villages.....4
e-others.....5

9-How serious was the damage to your house?

a-no damage 0%.....1
b-low.....(0 - 25%).....2
c-moderate...(25- 50%).....3
d-high.....(50- 75%).....4
e-destroyed..(75-100%).....5

10-How do you rate your econmic losses, other than the house?

a-nothing.....1
b-something.....2
c-manythings.....3
d-too many things.....4

e-every thing.....5

11-How many members of your household have voluntreed for the army fighting ?

a-no body.....1
b-one person.....2
c-more than one.....3

12-Have you lost any member of your family during the war in fronts?

a-no body.....1
b-one person.....2
c-more than one.....3

13-Have you lost any member of your family because of the war and out of the fronts?

a-no body.....1
b-one person.....2
c-more than one.....3

Code:

B-Development

14-What do you feel about reconstruction of your village?
a-not satisfied at all.....1
b-not really satisfied.....2
c-indifferent.....3
d-satisfied.....4
e-very satisfied.....5

15-Have any changes occured in your income since resettlement?
a-sharply decreased.....1
b-relatively decreased.....2
c-almost the same as before.....3
d-relatively increased.....4
e-sharply increased.....5

In case of farmer responders,

16-How do you compare the land you posses now with what you owned before the resettlement?
a-much less.....1
b-a bit less.....2
c-the same as before.....3
d-a bit more.....4
e-much more.....5

17-Compared with your old village,has water supply for farming changed since resettlement?
a-much less than before.....1
b-slightly less than before.....2
c-no obvious change.....3
d-slightly more than before.....4
e-much more than before.....5

18-Has any change occured in terms of seeds and fertilizer supplies since resettlement?
a-much less than before.....1
b-slightly less than before.....2
c-no visible change.....3
d-slightly more than before.....4
e-much more than before.....5

19-Has any change in marketing your production occured since resettlement?
a-much difficult than before.....1
b-slightly more difficult than before.....2
c-almost the same.....3
d-slightly easier.....4
e-much easier.....5

20-Has any change in your access to farming machinery happend since your resettlement?
a-much less than before.....1
b-less than before.....2
c-the same.....3
d-better than before.....4
e-much more than before.....5

In case of animal husbanders,

21-Compared with before the war,has the number of animals you keep on the whole changed since resettlement?

a-I keep much less.....1
b-I keep less.....2
c-almost the same number.....3
d-I keep more animals.....4
e-I keep much more than before.....5

22-Has any change happened,compared to before,in food supply for your animals?

a-Much more difficult.....1
b-more difficult.....2
c-almost the same as before.....3
d-more easier.....4
e-much more easier.....5

23-Comparing the situation before the war with after resettlement,do you see any change in availability of public medical and health care of your animals?

a-much less than before.....1
b-less than before.....2
c-almost the same.....3
d-more than before.....4
e-much more than before.....5

In case of wage earners,

23-Compared with before the war ,what are the job prospects?

a-much more rare.....1
b-more rare.....2
c-almost no change.....3
d-more easy to get.....4
e-much more easier to get one.....5

24-Has any member of your household used to go to the Gulfe countries for work?

a-no.....1
b-yes.....2

25-Comparing the situation of pre and after resettlement, has any change occured for working in the Gulfe countries?

a-it is not possible, now, at all.....1
b-more difficult than before.....2
c-no change.....3
d- now easier.....4
e- now much easier.....5

For all types of jobs :

26-Do you think the rate of unemployment,comparing the situation before the war and after resettlemnt has changed?

a-sharply decreased.....1
b-decreased.....2
c-almost the same.....3
d-increased.....4

e-sharply increased.....5

27-Do you think any change in the life of poor,comparing the pre-war and after resettlement happend in your village?

a-they became much more poorer.....1
b-they became poorer.....2
c-I do not see any tangible change.....3
d-They are better off.....4
e-They are much better off than before.....5

28-How do you see the change in the life of rich people for in the same comparison?

a-they became much more rich.....1
b-they became richer.....2
c-I do not see any tangible chage.....3
d-They became less rich.....4
e-they became poor.....5

29-What do you think about resistance of your new village against the natural hazards,earthquake and floods for example?

a-not resistant at all.....1
b-not resistant.....2
c-I do not know.....3
d-resistant.....4
e-completely resistant.....5

30-Have you had any experience of flood or earhtquake in new village?

a-no.....1
b-yes.....2

31-Was your old village bombarded or shelled,while you have been living there ?

a-no.....1
b-yes.....2

32-Have you had any experience of bombing or shelling in the new village?

a-no.....1
b-yes.....2

33-What do you think about the resistance of the new village against the bombing and shelling?

a-no resistance at all.....1
b-not resistant.....2
c-it may resist.....3
d-it will resist.....4
e-it is completely resistant.....5

34-What is your opinion of duration of reconstruction of your village?

a-very long.....1
b-long.....2
c-moderate.....3
d-short.....4
e-very short.....5

35-What do you think about level of hygiene of the new village?

a-very poor.....1
b-low.....2
c-acceptable.....3
d-high.....4
e-very high.....5

36-what is your feeling about having the present public services in your village,(such as school,mosque,clinic,.).?

a-I am not happy at all.....1
b-not happy.....2
c-indifferent.....3
d-I am happy.....4
e-I am very happy about them.....5

37-What do you think about the amount of the work that has been done for reconstruction of your village?

a-much more should have been done.....1
b-more should have be done.....2
c-it is enough.....3
d-less was enugh.....4
e-much less was enough.....5

38-In the case of further damage or destruction,to the village,who do you think should reconstruct it?

a-entirely by ourselves.....1
b-villagers with help of outsiders.....2
c-I do not know.....3
d-outsiders with our help.....4
e-outsiders without our help.....5

39-If you were asked about the priority for reconstruction of your village,which of the following would you choose;

a-houses
b-school
c-land for farming
d-water supply for farming
e-road
f-mosque

C-Location Code:

40-Have you had any relocation before the present war ?
a-no.....1
b-one time.....2
c-more than one time.....3

41-Do you think the relocation of your village has had any positive or negative effects on your life?
a-very negative 1
b-negative 2
c-no clear effect.....3
d-positive 4
e-very positive 5

42-Do you think the location of your reconstructed village is suitable?
a-not at all.....1
b-it could be better.....2
c-it is correct.....3
d-it is good.....4
e-it is the best location.....5

Comparing the two locations before and after reconstruction, what do you think about the following issues?

43-Access to the daily work place .
a-it became more difficult.....1
b-it became difficult.....2
c-has not changed.....3
d-it became easier.....4
e-it became much easier.....5

44-How about access to the source of drinking water?
a-it became more difficult.....1
b-it became difficult.....2
c-has not changed.....3
d-it became easier.....4
e-it became much easier.....5

45-How about access to the main roads?
a-it became more difficult.....1
b-it became difficult.....2
c-has not changed.....3
d-it became easier.....4
e-it became much easier.....5

46-How about the provision of water supply for farming ?
a-it became more difficult.....1
b-it became difficult.....2
c-no change.....3
d-it became easier.....4
e-it became much easier.....5

47-How about the access to grassland ?
a-it became more difficult.....1
b-it became difficult.....2
c-no visible change.....3
d-it became easier.....4
e-it became much easier.....5

48-How about access to fire wood?

a-it became more difficult.....1
b-it became difficult.....2
c-no visible chang.....3
d-it became easier.....4
e-it became much easier.....5

49-How about the access to building materials?

a-it became more difficult.....1
b-it became difficult.....2
c-no changes 3
d-it became easier.....4
e-it became much easier.....5

50-How about your access to public services within the village,such as school,clinic,mosque,...etc?

a-it became more difficult.....1
b-it became difficult.....2
c-no change.....3
d-it became easier.....4
e-it became much easier.....5

51-How about the suitability of the land used for building of the new village?

a-it is not suitable at all.....1
b-it is not suitable.....2
c-I do not know.....3
d-it is suitable.....4
e-it is excelent.....5

52-Concerning the environmental aspects,how is the performance of the settlement?

a-very poor.....1
b-poor.....2
c-acceptable.....3
d-good.....4
e-excelent.....5

53-Have you, participated in choosing the location of the new village?

a-not at all.....1
b-a little.....2
c-to some extend.....3
d-much.....4
e-very much.....5

Site Code:

54-What do you think about the size of your new village?

a-it is very small.....1
b-rather small 2
c-fair enough.....3
d-a bit large.....4
e-very large.....5

55-What do you think about the density of the new village?

a-it is very dense.....1
b-it is slightly dense.....2
c-fair enough.....3
d-slightly low dense.....4
e-very low dense.....5

56-What do you think about the orientation of the new village?

a-entirely wrong.....1
b-it could have been better.....2
c-it is correct.....3
d-it good.....4
e-very good.....5

57-What do you think about the size of the most of the streets and alleys?

a-they are incorrect.....1
b-they could be better.....2
c-fair enough.....3
d-good.....4
e-very good.....5

58-What do you think about the size of the plots of land for houses?

a-they are very small.....1
b-they are a bit small.....2
c-fair enough.....3
d-they are a bit large.....4
e-they are very large.....5

59-How do you see the performance of new village in relation with climate, (wind, sun shine, rain, ..)?

a-it is very poor.....1
b-not good realy.....2
c-acceptable.....3
d-it is good.....4
e-it is very good.....5

60-How satisfied are you about your neighbourhood in the new village?

a-not satisfied at all.....1
b-it could be better.....2
c-it is acceptable.....3
d-it is good.....4
e-it is very good.....5

Concerning the public buildings, what do you think about location of ;

61-School?

a-is entirely wrong.....1
b-it could be better located.....2
c-fair enough.....3
d-it is in a good location.....4

e-its location is very good.....5

62-Mosque?

a-is entirely in a wrong location.....1
b-it could be better located.....2
c-fair enough.....3
d-it is in a good location.....4
e-its location is ideal.....5

63-Co-operative centre?

a-is very wrong.....1
b-it could be better.....2
c-fair enough.....3
d-it is good located.....4
e-its location is ideal.....5

64-others/

a- 1
b- 2
c- 3
d- 4
e- 5

65-Where do you usually hold the religious ceremonies in the village?

a-in the mousqe.....1
b-in hosseinieh.....2
c-in houses.....3
d-others.....4

66-Have you participated in any of the followings activities realated to the site of new village?(in case of positive response)

a-in design.....1
b-in decision-making.....2
c-in management of construction.....3
d-in building the public buildings.....4

67-What do you think about the value(price) of houses in different parts of the village?

a-very different from each other.....1
b-slightly different.....2
c-almost the same.....3

68-How satisfied are you about location of your house in the village?

a-not satisfied at all.....1
b-not realy satisfied.....2
c-I have no objection.....3
d-I am happy about that.....4
e-it is ideal for me.....5

69-To what extent did you decide about your house location?

a-it was imposed to me.....1
b-I almost decided my self.....2
c-this was my desired option.....3

70-What do you think about your present neighbours?

a-I am not happy with them at all.....1
b-not really happy.....2
c-no objection.....3
d-I am happy with them.....4
e-they are my ideal neighbours.....5

71-Do you think any of your traditional family relations are changed in new settelment?

a-they are seriously affected.....1
b-they are affected a bit.....2
c-no changes I see.....3
d-they are improved.....4
e-they are much more than the past.....5

(بسمه تعالی)

کد:

(پرسشنامهٔ کارایی بازسازی) شماره:

نام روستا: - - - - - -

مشخصات پاسخگو: نام: نام خانوادگی:

سن: .... سال، جنس: مرد ☐ زن ☐

نام عشیره: طایفه:

مشخصات پرسشگر: _____

نام و نام خانوادگی: _____

تاریخ مصاحبه: _____

محل مصاحبه: _____

زمان شروع مصاحبه: _____ زمان ختم مصاحبه: _____

سؤالات:

۱- شغل اصلی شما چیست؟

۱- کشاورز صاحب زمین
۲- دامدار
۳- کشاورز فاقد زمین
۴- کارگر
۵- سایر (محصل - کارمند - کوچک ...)

۲- شما چند کلاس سواد دارید؟

۱- بی سواد
۲- خواندن و نوشتن
۳- ابتدایی (دبستان)
۴- راهنمایی
۵- دبیرستان

۳- تعداد افراد خانه شما چند نفرند؟

۱- ۱ تا ۵ نفر
۲- ۵ تا ۱۰ نفر
۳- ۱۰ نفر و بیشتر

۴- در خانهٔ شما چند خانواده با هم زندگی میکنند؟

۱- یک خانواده
۲- دو خانواده
۳- سه خانواده
۴- چهار خانواده
۵- پنج خانواده و بیشتر

۵- در مورد بازسازی روستای خودتان عدالت رعایت شده است یا نه؟

۱ - کاملاً بیعدالتی شده
۲ - بیعدالتی شده
۳ - تا حدّ قبول بود.
۴ - عدالت رعایت شده
۵ - عدالت کاملاً رعایت شده

۶- اگر عدالت رعایت نشده چرا؟ علّت چیه؟

۷- بازسازی روستای شما زیاد طول کشید یا کم؟

۱ - خیلی طولانی بود
۲ - نسبتاً طولانی بود
۳ - متوسط بود.
۴ - سریع و کوتاه بود
۵ - خیلی سریع بود.

۸- اگر شما جای مسئولین بازسازی بودید برای بازسازی روستای خودتان اوّل چیها رسیدگی میکردید؟

۹- برای شروع بازسازی روستای شما کدام یک از اینها مهمتر بود؟

۱ - خانه ☐
۲ - تسطیح زمینهای کشاورزی و آب زراعی ☐
۳ - مدرسه آب آشامیدنی ☐

۱۰ - بنظر شما مقدار کارهای ساختمانی که برای بازسازی روستای شما انجام شده است کافی است یا نه ؟

۱ - خیلی کم کار شده است .
۲ - کم کار شده است .
۳ - تقریباً کافی کار انجام شده است
۴ - بیشتر از حد لازم کار شده است
۵ - خیلی بیشتر از حد لازم کار شده است .

۱۱ - بنظر شما در صورتیکه خرابی ناگهانی روستای شما مجدداً توسط حملات دشمن تخریب شود چه کسی باید آنرا بازسازی کند ؟

۱ - اهالی روستا باید آنرا بازسازی کنند .
۲ - اهالی روستا با همکاری دولت .
۳ - دولت با کمک اهالی روستا .
۴ - دولت موظف است روستا را بازسازی کند .
۵ - نمیدانم .

۱۲ - سطح نظافت روستا در مقایسه با قبل از جنگ آیا فرقی کرده است ؟

۱ - خیلی پائین تر آمده است .
۲ - پائین تر آمده است .
۳ - فرقی نکرده است .
۴ - بالاتر آمده است
۵ - خیلی بالاتر آمده است .

۱۳ - زمینی که الان ساختمانهای روستا در آن قرار گرفته جایش مناسب است ؟

۱ - مطلقاً مناسب نیست
۲ - مناسب نیست
۳ - بد نیست
۴ - مناسب است
۵ - خیلی مناسب است .

۱۴ - اگر مناسب نیست چرا ؟

۱۵- در مورد تقسیم زمین برای بازسازی روستا شما هم نظر دادید؟
۱- خیر
۲- بله

۱۶- آیا شورای ده یا ریش سفیدان ده برای تقسیم زمین برای بازسازی خانه ها نظر دادند؟
۱- خیر
۲- بله

۱۷- اندازه و شکل خیابانهای روستا بنظر شما چطور است؟
۱- خیلی بد است.
۲- بد است.
۳- قابل قبول است
۴- خوبست.
۵- خیلی خوبست.

۱۸- دهیار میخواست موقع بازسازی روستای شما با یکی از روستاهای اطراف ادغام شود؟
۱- مطلقاً خیر
۲- خیر
۳- اصلاً میدانم
۴- بله
۵- بله کاملاً.

۱۹- اندازه زمینی که خانه شما در آن قرار گرفته کوچک است یا بزرگ؟
۱- خیلی کوچک است.
۲- کوچک است.
۳- مناسب است
۴- بزرگ است
۵- خیلی بزرگ است.

۲۰- از شما موقع بازسازی در مورد نقشه روستا کسی نظر خواست؟
۱- خیر
۲- بله

۲۱- الان از محل خانه اتان رضایت دارید یا نه؟
۱- خیر مطلقاً راضی نیستم
۲- خیر
۳- اصلاً میدانم
۴- بله
۵- بله کاملاً راضی هستم.

۲۲ - قیمت خانه‌ها در جاهای مختلف روستا با هم فرق میکند؟
۱ - خیلی متفاوت است.
۲ - متفاوت است.
۳ - تقریباً متشابه است.

۲۳ - همسایه‌هایتان چطور رفتار آنها را می‌پسندید؟
۱ - مطلقاً راضی نیستم
۲ - رضایت ندارم
۳ - نظری ندارم
۴ - از آنها راضی هستم
۵ - خیلی از آنها راضی هستم.

۲۴ - الان روستای شما سیل‌گیر است؟
۱ - خیر
۲ - نمیدانم
۳ - بله

۲۵ - شما خودتان این خانه را انتخاب کردید؟
۱ - خیر من هیچ دخالتی نداشتم.
۲ - منهم نظر دادم.
۳ - این انتخاب خودمن بود.

۲۶ - وضع مالی شما قبل از جنگ تحمیلی بهتر بود یا الان؟
۱ - الان بدتر شده
۲ - فرقی نکرده
۳ - الان بهتر شده

۲۷ - شما میدانید طرحهای بازسازی روستای شما چطور تأمین شده است؟
۱ - بودجه دولت.
۲ - مردم جاهای دیگر.
۳ - نمیدانم.
۴ - سایر.

۲۸- خانهٔ شما قبل از بازسازی چطور بود از آن راضی بودید یا نه؟

۱ - خیلی بد بود
۲ - بد بود
۳ - بد نبود
۴ - خوب بود
۵ - خیلی خوب بود

۲۹- سطح زیربنای بازسازی شدهٔ خانهٔ شما کافی بود؟

۱ - خیلی کم بود
۲ - کم بود
۳ - قابل قبول بود
۴ - زیاد بود
۵ - خیلی زیاد بود.

۳۰- وسعت حیاط های خانه تان شما چطور است؟

۱ - خیلی کوچک است
۲ - کوچک است
۳ - تا حدی قابل است - کافی است
۴ - بزرگ است.
۵ - خیلی بزرگ است.

۳۱- اندازه اطاق های بازسازی شده چطور است؟

۱ - خیلی کوچک هستند
۲ - کوچک هستند
۳ - مناسب هستند
۴ - بزرگ هستند
۵ - خیلی بزرگ هستند

۳۲- نقشهٔ خانه بازسازی شده چطور است؟

۱ - خیلی بد است
۲ - خوب نیست
۳ - قابل قبول است
۴ - خوب است
۵ - خیلی خوب است.

۶

۳۳ - تعداد اطاقهای بازسازی شده چطور است؟

۱- خیلی کم است
۲ - کم است
۳ - کافی است
۴ - زیاد است
۵ - خیلی زیاد است .

۳۴ - مصالحی که در دیوارسازی بکار رفته خوب بنظر می‌آید؟

۱ - خیلی بد است .
۲ - بد است
۳ - بد نیست
۴ - خوب است
۵ - خیلی خوب است .

۳۵ - درمورد مصالح بکاررفته در سقف سازی چه؟

۱- اصلاً خوب نیست ،
۲ - خوب نیست
۳ - بد نیست ،
۴ - خوب است
۵ - خیلی خوب است ،

۳۶ - مصالح دیوار سازی

آجر ☐ کرسی چینی با بلوک ☐ کرسی چینی با آجر ☐
بلوک ☐ شناژ بتنی ☐ [illegible] ☐
پلاستر سیمان ☐

۳۷ - مصالح سقف سازی

تیرچوبی [illegible] ☐ طاق ضربی و تیرآهن ☐ طاق بتنی (سیپوراکس) ☐
تیر چهارتراش ☐ تیرچه بلوک ☐ غیره .... ☐
اندود کاهگل ☐ موزائیک فرش ☐ اسفالت ☐

۳۸ - مصالح در و پنجره

پنجره چوبی ☐ پنجره پروفیل فلزی ☐ در فلزی ☐
در چوبی ☐

۳۹- اندازهٔ پنجره ها چطورند؟
۱- خیلی کوچک اند
۲- کوچک اند
۳- مناسبند
۴- بزرگ اند.
۵- خیلی بزرگ اند.

۴۰- خانهٔ قبلی شما را چه کسی ساخته بود؟
۱- اعضاء خانواده
۲- قسمتی را بنا وقسمتی را اعضاء خانواده
۳- تمام آنرا بنا ساخته بود.

۴۱- در طول مدت بازسازی هیچ کار ساختمانی مشکل بنایی یاد گرفتید؟
۱- خیر
۲- بله خیلی کم
۳- بله

۴۲- درصورت بله چه کاری؟

۴۳- استحکام قسمت های بازسازی شده تان بنظرشما چطور است؟
۱- مطلقاً مستحکم نیست
۲- استحکام ندارند.
۳- قابل قبول است.
۴- مستحکم است.
۵- خیلی استحکام دارد.

۴۴- اگر دراین خانه چیزی یا جایی از ساختمان خراب شود چه چیزهایی را میتوانید خودتان تعمیر کنید و چه چیزهایی را نمیتوانید؟

۴۵- تطابق خانه شما بعد از بازسازی نسبت به قبل از جنگ زدگی چگونه است؟

۱- بعد از بازسازی خیلی بهتر شده است.
۲- بعد از بازسازی کمی بهتر آمده است.
۳- فرقی نکرده است.
۴- بعد از بازسازی بدتر آمده است
۵- بعد از بازسازی خیلی بدتر آمده است

۴۶- اگر شما بخواهید یک اطاق به خانه‌تان اضافه کنید از چه مصالحی استفاده می‌کنید؟

۴۷- اگر بخواهید برای گاو و گوسفند آغل درست کنید از چه مصالحی استفاده می‌کنید؟

۴۸- در خانه شما قبل از جنگ در تابستان از چه وسیله‌ای برای خنک کردن استفاده می‌کردید؟

۱- روزنه یا دریچه
۲- بلکه
۳- کولر سمازی

۴۹- در خانهٔ فعلی چه؟

۱- دریچه و روزنه
۲- بلکه
۳- کولر سمازی

۵۰- دلتان می‌خواهد چه چیزهای دیگری در خانه‌تان باشد؟

۵۱- اگر شما پول کافی برای بازسازی داشتید در خانه تان چه چیزهایی اضافه می‌ساختید؟

۵۲- به نظر شما مهمترین نیازهای روستای شما چه هستند؟

۱- اولی چی؟
۲- دومی چی؟
۳- سومی چی؟

۵۳- در خانه تان قبل از بازسازی آیا مستراح و حمام داشتید؟

۱- مستراح بله □
۲- حمام بله □
۳- مستراح نه □
۴- حمام نه □

۵۴- در خانه فعلی چه؟

۱- مستراح بله □
۲- حمام بله □
۳- مستراح نه □
۴- حمام نه □

۵۵- جای مستراح خانه به نظر شما مناسب است؟

۱- خیر
۲- قابل قبول است
۳- بله

۵۶- در صورتیکه مناسب نیست چرا؟

۵۷- شما تا حالا دیدی که خانه‌ها با سیل ویران بشود؟
۱- خیر
۲- بله

۵۸- تا حالا خانه شما چه قبل و چه بعد از بازسازی با سیل خراب شده؟
۱- خیر
۲- بله

۵۹- رفت و آمد شما به سر کار بعد از بازسازی فرقی کرده؟
۱- خیلی مشکل‌تر شده است.
۲- مشکل‌تر شده است
۳- فرقی نکرده است
۴- راحت‌تر شده است
۵- خیلی راحت‌تر شده است.

۶۰- مقاومت خانه شما بعد از بازسازی در مقابل حملات دشمن مثلاً بمباران فرقی کرده؟
۱- خانه جدید خیلی کمتر مقاومت دارد.
۲- خانه جدید کمتر مقاومت دارد.
۳- فرقی نکرده است.
۴- خانه جدید مقاوم‌تر است
۵- خانه جدید خیلی مقاوم‌تر است.

۶۱- در طول مدتی که بازسازی روستای شما انجام می‌شد شما در چه سرپناهی مسکن داشتید؟

۶۲- دلتان می‌خواست خانه شما کجای روستا بود؟
۱- همین جا که هست.
۲- جای دیگر

(بسمہ تعالیٰ)

(سوالات النتایج الباسازی)

۱- شنهو شغلکا الاصلی ؟

۲- چم کلاس عندک ؟

۳- چم نفر ساکنین به هذا البیت ؟

۴- بیتکم چم عائله ایسکنون ؟

۵- ابنیان قریتکم انجرت المداله یولا ؟

۶- شنهی العله ؟

۷- بنیان قریتکم طول چیر تو قلیل ؟

۸- اذا انت جنت بمجان المنزل البنیان اول شه سوی القریتکم ؟

۹- ابنظرک ابنیان قریتکم یاهن من هذی الثلاثه اهم ؟

۱- بنیان البیوت

۲- تسطح الاراضی وماء الزراعیه

۳- بنیان المدرسه یومای الشرب

۱۰- ابنظرک بنیان الصار بالقریه یلفی یولا ؟

۱۱- ابنظرک اذا قریتکم ، لاسامح الله ، تهدمت بید العداء یاهو ینبنیه ؟

۱۲- بطاقة القریه قبل الحرب وی هسهم فرقت یولا ؟

۱۳- الگاع الذی باینکلم بیه القریه زرینه یولا ؟

۱۴- شنهو العله ؟

۱۵- بالیوم عینو مکان بنیان القریه هم طلبو نظرک یولا ؟

۱۶- بالیوم عینو مکان بنیان القریه هم لطبو نظر الشوری والشباب ؟

١٧- ابنظرك خيانونات قريتكم إشلونهن ؟

١٨- باليوم راد و يبنون الكم هم ودكم تنطبجون ويّ دير ثانيه ؟

١٩- الگاع الي بيتك مبني بيه جبيرة كو زغيرة ؟

٢٠- باليوم رادو يبنون القرية هم طبق تطرك على النقشة يو لا ؟

٢١- هسه راضي من مكان بيتكم يو لا ؟

٢٢- الحواش ابقريتكم قيمتهن هم تفرق يو لا ؟

٢٣- جيرانكم راضي منهم يو لا ؟

٢٤- هذا مكان قريتكم هم يقرك يو لا ؟

٢٥- هذا بيتك انت انتخبت ؟

٢٦- وضع معيشتك هسه احسن يو قبل الحرب ؟

٢٧- انت هم تدري مخارج بنيان قريتكم اشلون اتامن ؟

٢٨- بيتك قبل الحرب اشلون جان راضي من عنده يو لا ؟

٢٩- ونعتا الگاع الذي احيرتك والوازم بيه كافي ؟

٣٠- ساحت حوشك اشلونه ؟

٣١- الجير المبنيات ونعتهن اشلونه ؟

٣٢- نقشة بيتك المبنية اشلونه ؟

٣٣- عدد الجير الذي بنوهن الك كافي يو لا ؟

٣٤- مصالح طيقان بيانك اشلونه ؟

٣٥- تعرف بالنسبة مصالح السگف بنيانك شنهو ؟

٣٦- مصالح طيقان شنهي ؟

٣٧- مصالح سگف بنيانك شنهو ؟

٣٨- جنس البيبان والدرايش شنهو ؟

٣٩- كبر الدار بس اشلونه ؟

٤٠- بيتك الاولى ياهو جان بانيه ؟

٤١- ابمدت الباسازى هم اتعلمت شي من البنيان ؟

٤٢- شنهي اتعلمت ؟

٤٣- وقت بنيان البناء الباسازى اشلونه ؟

٤٤- اذا خرب قسم من بنياناتك لو بنيانك احتاج تعمير، شنهي من تعمير تكدر عليه انته اتعمر بيدك، واشنهو ماتكدر عليه ؟

٤٥- تظافت بيتك قبل الحرب وى هسه من بعد الباسازى هم تفرق ؟

٤٦- اذا هسه اتريد تبنيلك حجره بيدك من ياصالح تستفاد ؟

٤٧- اذا اتريد تبنيلك بارگه لل هواليش لو للغنم بيش تبنيه ؟

٤٨- قبل الحرب بالكيف ابياونسيه اتبردون الحيره ؟

٤٩- هسه اشلون ؟

٥٠- لو بيدك بعد اتبنى من بنيان ابيتك ؟

٥١- اذا انته ابجان سؤلين الباسازى جا اشروحت على هذا بنيانك ؟

٥٢- اتنطنك اهم احتياجات ترتيبكم شنهي ؟

٥٣- قبل الباسازى هم جان عندك مرحال (مستراح) او حمام ؟

٥٤- هسه اشعندك

٥٥- جان رضائكم بابيت زين يولا ؟

٥٦- ليش ماهو زين ؟

٥٧- الحذ هسه هم جنت انكان او جريب الك صار بجباران ؟

٥٨- بيتك قبل الباسازى لو بعد الباسازى هم فرك ؟

٥٩- زَوْجَتَك أو بيتَك لِتشْغَل مِن بعِد الباسانزية هَم تفرق عَن گبُل؟

٦٠- بيتَك بالنِسبة لِل بيبارات هَسة أقوى لو گبُل؟

٦١- أبزمان الى الباسانزية چان ينبني أبنيتك بيش چنت تسكن؟

٦٣- لو بيتك بيتك ابيا بكان من القرية مبني؟

APPENDICE II.

DISASTERS ARE ACTS OF GOD

(A SPIRITUAL VIEW)

Disasters are Acts of God

(A spiritual view)

Introduction: Are disasters really 'acts of God' or not? It seems that the search for an answer to this question is in the domain of theologians and philosophers. But nevertheless this notion has found its way into disaster literature. Behind the implication of this question, there are at least two other more practical questions: first, who was in fact in charge of the causes of the losses and secondly, what can humanly be done to mitigate losses from the next possible disaster, based on our perception of the source of these losses. Since, blaming God tends to absolve man and leads to a passive reaction, some commentators are putting the responsibility for so called acts of God on the shoulders of the people involved. The suggestion is, that the charge should be 'human negligence'. However, there is no more evidence that blame can be attached here, than it could be to the Almighty.

Human negligence is responsible- Ian Davis (1988), after the 1988 Armenia earthquake in Russia, wrote an article in The Guardian,[1] where he says; " While the Clapham Junction rail crash has been admitted as being man-made, what about Armenia? Is that still perceived as an 'Act of God'?"[2] He also continues with reference to a conference held after the Guatemala earthquake and writes;

> "Professor Nicholas Ambraseys...[said] how long would society tolerate the failure of buildings from destructive seismic forces while knowledge was clearly available to make them safe.

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1. The Guardian, December 30, 1988. Third World Report 7.
2. All quotes from Davis 1988 in this section are from the same page and reference

> His chairman's remarks ended with the words: 'Today's 'Act of God' is likely to become tomorrow's 'Act of criminal negligence''."

The content of the argument is very clear, that we have the technology to prevent the loss of lives and properties, so if we don't or we can not, we should blame ourselves or our governments. Davis in the same article then refers to a case in Colombia and writes;

> " In the spring of 1988 six enterprising Colombian lawyers embarked on what may be the first attempt in history to sue a government for the effects of a *natural* disaster. Such actions are of course very familiar in 'man-made disasters'."
> " The claim against the government hinges on their alleged negligence in failing to develop effective preparedness planning (including evacuation procedures), to enable the population to escape debris and mud slides which are known hazards that have occurred after numerous volcanic eruptions in the region."

The same author in relation to the Armenia earthquake of 1988 claims; "But unlike Guatemala, most were 'engineered structures' probably built, (at least in theory) to earthquake resistant standards."

Before this latest article by Davis, which presented the views of a professional disaster consultant to the public at large, there have been many others as well, even by Davis himself ten years ago, that have in one way or another pointed to this conundrum. Davis (1978), for example says;

> " When the drizzle becomes a cascade, or the breeze a hurricane, man is involved in his classic struggle with the elements, and he has viewed the process in various ways: as an act of judgement, an omen, or 'an act of God', to quote the Llyods underwriter." (p. 1)

In the same reference, Davis when visiting the site of Lice earthquake

in Turkey, writes about one of his observations;

> " ...a Kurdish man came up to me. Despite my language difficulty, his sentiment was very obvious: 'It *is the will of Allah', he declared,* with a soulful look in the vague direction of Mecca." (p. 9)

Davis, then attempts to argue for what could be wrong with disasters, perceived by the survivors, as acts of God and writes;

> " ..the obstacles that stand in the way of house builders responding to these risks ...and the difficulty of education when disaster victims may view these events as the will of Allah, with the reaction 'who are we to prevent such a judgement or omen?'" (p. 10)

This latter conclusion by Davis may be his own and not from one of those Turkish rural survivors but nevertheless in the same line of thinking, others have voiced similar incredulity. Cuny (1981), for example, ends his Keynote speech at the 1978 Oxford Conference by saying; " In short, it is time to take the 'naturalness' out of disaster." (p. 9)

The same notion has found its way, perhaps by the same authors discussed earlier, into the UNDRO (1982) document where, the introduction reads;

> " It is certain that disasters are not merely 'acts of God' but are aggravated by human error and lack of foresight; that disaster relief can be made ever more effective through systematised planning and management; and that pre-disaster planning does help, at least, to reduce some of the harshest *effects of disaster." (p. iii)*

To add to the strength of these claims let us bring some more evidence. Drabek (1986), quoting others claims; " Persons exhibiting

internal-oriented personalities and less fatalistic world views, will have greater levels of hazard awareness and more accurate hazard perceptions." (p. 330) The same reference quotes from Turner 1979, "...three out of five people are fatalistic about the general impact of an earthquake, but fewer are fatalistic when it comes to the possibility of taking steps to protect themselves." (p. 330).

The gist of the arguments so far, suggests that there are three responses to disasters. One, that they are not an act of God but rather occur because of human error or negligence; two that some people perceive the hazard and its consequences as their fate; and finally that, for a fatalist there is no point in attempting to prevent any possible loss in the future. It should also be added that Drabek (1986), referred to the individuals capacity to alter their view of fatalism according to their circumstances.

Disasters are acts of God- Let us make one point clear here. Any arguments in support of spiritual, non-material issues are based on a primary belief in metaphysics. In the materialistic way of thinking all our discussion will become irrelevant, since it is based on the presumption of the existence of a God anyway. In the profane view of our world, all its creatures and events must be discussed on a materialistic base. No value can be given to the religious books we refer to and of course we are not in a position and this is not the right place to open a discussion on such matters.

Against the conclusions of those quoted earlier, who were discarding an act of God as the source of disaster, there are evidences that disasters are essentially acts of God. Three ways of reasoning

seems conceivable; first a philosophical argument, second from the content of religious books and finally real observations in disaster the situation.

1- The first argument is that one who believes in God, also believes that all the world and its contents are created by God. Moreover, life on the earth and movement in the sky is not allowed, after its creation, to be as he or she wishes. The growth of plants, and the feeding of all creatures great and small are directed, planned and controlled. Our world is not just a glorious static painting, rather it is as a continuous drama in which each element has its role to play and it never stops. That is why when occasionally, in our limited view, too much rain falls or for example, the earth starts shaking, we call it a disaster, something unusual. In other words, disasters themselves are, in a sense the best sign of continuous (non-disastrous) movement in the world. Then the question may be asked, if the catastrophes and hazards, like the continuous harmony of life itself are not acts of God, who then has initiated them. Even if some people, who are against the conventional 'religious' Gods claim the intervention of another 'force', still the harmony and the disasters can be seen as examples of acts of God.

2- Despite the previous argument, the religious books clearly confirm that disasters are acts of God. There are several examples in each of the principal books and for the sake of convenience we bring examples of both Muslims and Christian books; the Quran and Bible.

In the Quran, the Muslims holy book one reads;

> " We shall test you with some fear and hunger, with loss of life and property and crops. Give good news to the patient, who in adversity say: "We

> belong to Allah, and to him we shall return.'" (Sura 2. 155-156)

In Genesis where the story of Noah is described it reads;

> " God said to Noah, 'The end has come for all things of flesh; I have decided this, because the earth is full of violence of man's making, and I will efface them from the earth. Make yourself an ark out of resinous wood." (6)

In Exodus 7 on the story of Moses, Pharaoh is told and the 'plague's sent to Egypt including locusts, hail, frogs and mosquitoes etc. One parts reads; " I will plague the whole of your country with frogs". (The second plague: the frogs)(7) and " Then Yahweh said to Moses, 'One disaster more I shall bring on Pharaoh and on Egypt, just one." (11) In both books such examples are so frequent that they can be traced easily.

3- How often is it in a disaster situation some unbelievable cases take place. What we call miracles. Although these cases are always by their very nature open to speculation, still they can not be overlooked. From the recent Armenian earthquake two cases captured the front page of the newspapers. One was from a mother injured and trapped under rubble with her baby for a week or more. Feeding the baby from her blood through a cut on her finger enabled them to survived.

The second case was the news that on 12th January, 35 days after the Armenian earthquake, six people were found still alive under the rubble. These are only examples of many extraordinary survival stories and should not be ignored. Then the question to ask is that even if the disastrous event itself was not the act of God, are these

survivors blessed with 'human science and awareness' or is it nothing more than their fate; Gods will or an act of God? Perhaps many survivors, when they remember the situation and the risks they faced, will not be impressed with the great extent of human knowledge, when they realise they were fated and could not to be helped by man. That is why the survivors after disaster turn to the religious centres for worshipping and thanking God.

Predestination or Freewill- So far it seems, not only have we not solved any problems, but perhaps we have added to the confusion. From a spiritual view disasters are acts of God. On the other hand scholars do not like this interpretation since it is equal to fatalism and discourages prevention and mitigation measures. In addition, we can see that in the real world, the loss from disasters is minimised by contingency measures taken by man. However, this has brought us to a new theological debate; 'predestination or freewill'. The core of the debate is whether we believe that our whole life and events happening around us are fixed in advance or that man has total control over everything.

In relation to this three options seem conceivable. Predestination which, is the equivalent of total fatalism, freewill suggestion total choice and control by man and thirdly, something in between. This latter option tends to be more complicated. The issue of Predestination or Freewill itself has been a matter of long debate. In Muslim ideology the belief is ; 'Not predestination nor freewill, but a position in between'. The Oxford Dictionary of the Christian Church edited by Cross (1957) summarises the history of debates on this

subject (Pp. 1098-1099). Part of it reads;

> " ...The controversy between Thomist and Jesuit theologians on these points still continues. The post-Tridentine RC theologians formulated their doctrine of predestination with particular emphasis on the freedom of the human will... The tendency of most modern theologians who have been bold enough to seek an answer to this and other such questions has been towards a more optimistic view" (p. 1099)

The position in between the two extremes of Predestination or Freewill can be illustrated in the following quote from the Quran. "...that no soul shall bear another's burden and that each man shall be judged by his own labours.." (Sura 53, 37) In other words every body is responsible for what he does. Or on a social scale "Allah does not change a people's lot unless they change what is in their hearts. If He seeks to afflict them with a misfortune, none can ward it off. Besides Him, they have no protector." (Sura 13, 10). The controversy can be felt in this last verse. The better translation of that verse, is that God will not change the situation of a community unless they change their own situation. At the same time God is in a position to do whatever he wishes. We should leave the theologians to discuss this matter, but it was crucial to bring it up, since in our view, the main mistake made by many disaster authors is that they could only conceive of either Fate or Freewill.

The implication of the in-between option in the disaster situation is that man is responsible, able and should do his best whatsoever to prevent and mitigate the loss from catastrophes. Nevertheless, man can never give a one hundred percent guarantee that there will be no damage in future. If man waits and does not take

appropriate action against hazards, his negligence will be the cause of disasters. But that does not mean that it would be the only reason for disasters. According to Muslim ideology taking care of the body is a religious order, thus suicide is as much a crime as murder. So taking precautionary measures against disaster becomes a religious responsibility, but after that, there is still less than a hundred percent security that the disaster will not happen.

A real example is the vulnerable situation of millions of rural people or squatter settlers in developing countries, where we know very well that heavy rain or an earth tremor can destroy and kill many thousands of people. We have the knowledge and ability to restore that situation and to save lives. But when the next heavy rains fall or the next earthquake occurs is a matter out of our control.

Thus we come to the conclusion that belief in disasters as Acts of God does not necessarily mean reluctance to take any preventive measure. On the contrary, as the story of Noah is evidence both the disaster, the flood, and the contingency measure, the construction of the Ark, are coming from and ordered by God. For instance, Davis (1978), refers to Genesis 6, where the story of Noah and the Flood and the Ark he made is told. (p. 69) He writes;

> " When Noah and his family climbed into the Ark, they were entering a disaster shelter of a rather special kind, built as a piece of meticulous pre-disaster planning. This must be one of the earliest recorded examples of shelter provision against disaster, in this case an 'act of God' in a very literal sense." (p. 69).

What Davis avoided quoting completely, is that the heavy rainfall and the destruction were all God's will and nothing else. The previous

section of the same story in Genesis reads;

> " God said to Noah, 'The end has come for all things of flesh; I have decided this, because the earth is full of violence of man's making, and I will efface them from the earth. Make yourself an ark out of resinous wood." (6)

Drabek (1986), in Chapter 8 of his book, studies 'Hazard Perception' and shows that the perception of hazard is not simple, rather that many factors can influence individuals', and communities' understanding of risk and hazards. (See especially p. 323 for factors affecting the perception). Thus the straightforward conclusions made by some authors to the effect that perception of disasters as acts of God, is equal to absolute fatalism and prohibits contingency measures, are proved to be wrong. At the same time we do not discard the possibility of some communities existing, who may believe in fate and predestination which consequently may make them reluctant to take any preventive action against the disasters.

What change does it make? - One important point that from our conclusions above man is still in charge. He is capable and even responsible for preventing, to the highest degree possible, the loss of life and limb and property from disasters. What difference does it make if disasters are perceived, as the result of human negligence or as acts of God? Or one may even question why disasters happen at all.

The first difference is that the belief in disasters as acts of God, changes them from accidents to meaningful events containing a message. The religious books in relation to this can help to identify some of these messages. Perhaps the main message of disaster is for

survivors to remember death as a reality and to remember that they are not going to live forever. The reminder of death can influence our life style and our moral position.

The second lesson is to remember God as the creator, initiator and owner of everything, to be thanked for all the benefits from non-disastrous days. If in ancient Egypt, Pharaoh was overwhelmed by power and ruled as god and plagues (disasters) were ordered to remind him of the real God; in our own era there are other 'pharaohs', who might also remember their weakness in disaster situations. The explosion of the American Shuttle besides the technical failure, could also be viewed as a message not to become too selfish with technology. The failure of earthquake resistant buildings at Spitak in Russia is another example. Risk is associated even where the highest security measures are taken. Disasters become events to remind mankind of God and the moral rules and values He wishes His people to base their lives on.

The third message which disasters bring is to examine our belief in God, this is one of God's laws. As was earlier quoted from the Quran;

> " We shall test you with some fear and hunger, with loss of life and property and crops. Give good news to the patient, who in adversity say: "We belong to Allah, and to him we shall return.'" (Sura 2. 155-156)

The fourth possible reason for disasters is to bring to the observation of survivors and non-affected communities the weakness, vulnerability and poverty of those who suffered damage or perished. In this sense, the community may feel responsible for the survival of

those vulnerable communities.

Remark- All in all, we concluded that disasters are acts of God but that the responsibility of man to eliminate potential losses to the best of his ability is not diminished. In a spiritual sense disasters are not accidents, rather they are 'significant events'. The main difficulty with shifting responsibility for disasters from act of God to human negligence, is that we may go so far that leads us to the state of neglecting God.

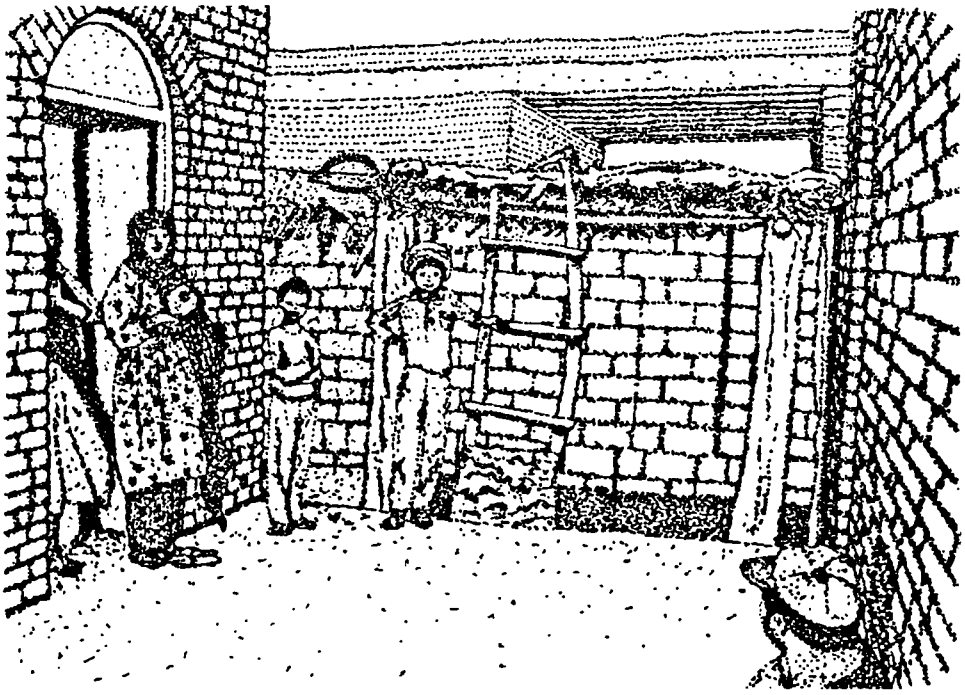
APPENDICE III.

A BIBLIOGRAPHY ON
SETTLEMENT RECONSTRUCTION AFTER WAR.

A BIBLIOGRAPHY ON SETTLEMENT RECONSTRUCTION AFTER WAR.

Prepared in connection with the Second York Workshop On Settlement Reconstruction After War

May 16-18 1989



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A BIBLIOGRAPHY ON SETTLEMENT RECONSTRUCTION AFTER WAR.

Introduction: Ian Davis started the introduction of his paper on *'Some observations on the comparison between reconstruction after wars and natural disasters'*, presented at a Symposium in Trondheim Norway with; " Whilst the literature on recovery from natural disasters is extensive, and writing in the science of warfare fills libraries, there remains the grossly neglected field that is the subject of this symposium." [Post-war Reconstruction] No doubt he was right.

In 1986, when we started searching for literature on reconstruction after war, it soon became apparent that the materials were scarce. Since then the search has been continuing with the facilities of the York University libraries. Although we made sure that nothing important was missed, the result was not very significant either.

The first useful step in establishing a bibliography on this topic was taken by James Lewis. In connection with the first 'York Workshop on Settlement Reconstruction Post-war, May 1988', of which he was the organiser, he produced a bibliography.[1] Although many of the entries of the present bibliography are shared with those in Lewis's, we have added some new items.

The present bibliography is compiled from several sources, through 'On Line Search' facilities, 'The Dissertation Abstract International' has been checked for the two main key words of 'War+Reconstruction'. Our last search, (May 1989) resulted in 252 items. The continuing desk work on the printed abstracts and follow up

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1. James Lewis, Datum International, 101 High Street, Marshfield SN 14 8LT, UK.

scans revealed that most of these items were irrelevant to our interests, the three relevant items are included here.

Through the computer the central libraries of many universities in UK were searched. (i.e. York, Hull, Edinburgh, Leeds, London, Cambridge..), they did not provide any tangible item. Furthermore the 'Avery Index' and 'RIBA Architectural Periodical Index' (until May 1989) were also manually searched. Many items were found from the Second World War period, mainly on shelter, air raids, camps... We felt that the inclusion of these items was not sufficiently relevant and too detailed to be repeated here. Readers are recommended to review the Avery Index for these items.

In addition some of the current International data bases were also consulted. Among them, ICONDA provided some 34 items, most of them in German which are not included here. Generally we found that the current databases available are poor for our key words. Last year UNDRO established its new database 'UNDRONET'. Unfortunately the bibliography option has been cancelled. We hope in the future they restore and develop it.

The emphasis of our search has been tracing items on settlement reconstruction after war, which constitutes the main part of the present bibliography. In addition some items are also presented and classified under the headings of; Civil Defence, Social and Psychological Aspects, Refugees, Camps and General. We also had access to a catalogue printed by INCHES, a York based book shop, that had a good list of books on Reconstruction after the Second World War. The related pages are included as an appendix with their permission[2].

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2. INCH'S Books, 3 St Paul's Square, York, YO2 4BD, England. Catalogue 41.

Preparation of this Bibliography was facilitated by the help of Keith Parker and Jan Powell from Kings Manor Library and Will Wakeling and Elizabeth Heaps from On Line Search Department, Morrell Library, York University. Their contribution is gratefully acknowledged.

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IoAAS, York
12 May 1989.

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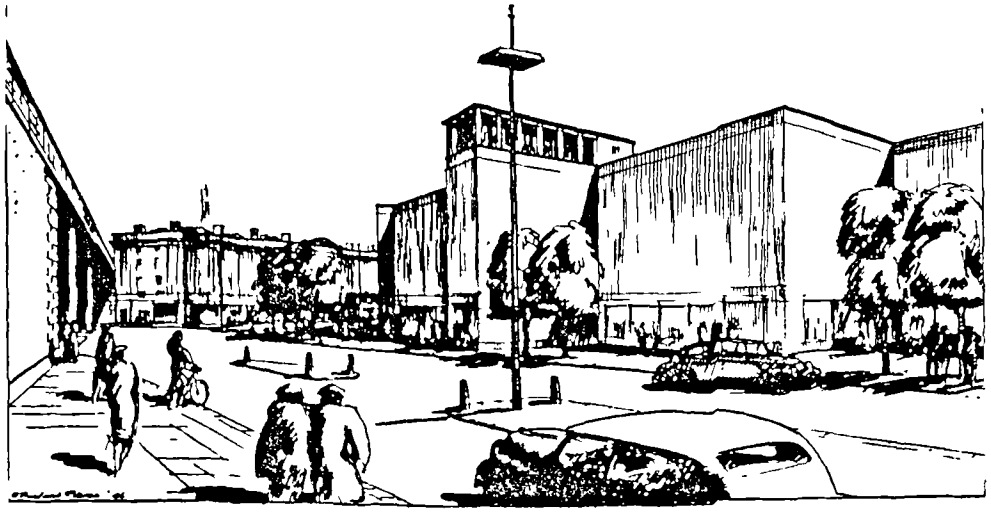

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