

C.2 Algeria - 1980 - Earthquake

Case study: Emergency shelter

Case study credit:
UNDRO 1982

Disaster:

Earthquake (Richter 7.3) El
Asnam Algeria

Disaster date:

10th October 1980

Number of houses damaged:

60,000

Number of people displaced:

400,000

Number of dwellings damaged or destroyed:

140,000

Value of assistance:

50 million USD for relief in
December 1980



Project timeline



Emergency

One day after the earthquake, the Algerian President formed an Inter-Ministerial Reconstruction Commission. It was charged with three tasks (in order of priority):

1. save lives, prevent epidemic diseases, establish tent campsites
2. evaluate losses, protect property
3. prepare for reconstruction, noting the experiences of other earthquake-prone areas

Urgent attention was given to provide tents and shelter materials and campsites due to impending winter conditions. The affected population was asked by the government to occupy campsites for one year pending provision of temporary prefabricated housing. This promise was kept (El Asnam town).

Reconstruction

After some debate, the decision was made to retain existing site of El Asnam, but reconstruction was only allowed after a microzoning study.

Prefabricated “temporary” housing (pending reconstruction) was to be built in El Asnam town. The plan was for 20,000 units with expected 20-years occupancy.

Conventional, reinforced concrete housing was to be reconstructed to earthquake-resistant standards. Traditional housing would be reconstructed in rural areas.

Strengths and weaknesses

✓ Tents and plastic sheeting served a useful function, particularly when freely adapted or located by the surviving families.

- As a consequence of recent rapid urbanisation, many unsafe modern, reinforced concrete structures had collapsed in the earthquake.
- The collapse of 85 schools indicated the priority

need for seismic design and construction of public buildings.

- ✗ Overestimates of casualties and relief needs gave rise to some waste, with excessive provision of medical aid.
- ✗ Officials under-estimated the self-help capacity of survivors.



Top: a tent camp. Below: self built shelters in El Asnam. Tents and shelter material were distributed, and people were asked to live in camp sites for one year whilst prefabricated houses were built. Photos: Giles Whitcombe