

Disaster Recovery and Build Back Better
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Lecture – 32
Self-Help Housing in Turkey

Welcome to the course; disaster recovery and build back better, my name is Ram Sateesh, I am an Assistant Professor in Department of Architecture and Planning, Indian Institute of Technology, Roorkee. Today, I am going to talk about self-help housing in Turkey in fact, this particular lecture has been composed based on the understanding from one of the chapter which is composed by Hassan and Cassidy Johnson inbuilt back better, which was edited by Michael Leone and Theo Schilderman and Camillo Boano.

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So, this is a focus on a particular geographical aspect in the Turkey and as many of you know that Turkey is prone to earthquake; frequent earthquakes and certain part of Turkey is lying on the fault line, so that is wherein we are going to discuss about how the reconstruction mechanisms have worked out especially, in the self-help housing aspect. So, the authors brought the 1999 Marmara earthquake Turkey.

And follow opponent which have been affected in consequences as an after effects and what you can see here is a huge devastation of this 7.4 Richter scale earthquake which has killed almost 17,480 people. So, when an earthquake hits, loss of property damage and you know huge infrastructure damage that is what one can witness.

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Table 11.1 Major earthquakes in Turkey since 1970

Date	Place	Magnitude	Killed	Affected	Homeless	Heavily damaged houses
May 1, 2003	Bingöl	M 6.4	177	290,520	45,000	9,452
Feb 3, 2002	Sultandagi/ Afyon	M 6.2	42	252,237	30,000	4,401
Nov 12, 1999	Düzce	M 7.2	845	224,948	15,389*	15,389
Aug 17, 1999	Kocaeli	M 7.6	17,127	1,358,953	655,000*	50,000
Jun 27, 1998	Adana	M 6.2	145	1,589,600	88,100	4,000
Jan 10, 1995	Dinar	M 6.1	94	160,240	40,000	4,909
Oct 1, 1992	Erzincan	M 6.9	653	348,850	95,000	6,702
Oct 30, 1983	Erzurum-Kars	M 6.8	1346	834,137	33,000	3,241
Nov 24, 1976	Muradiye	M 7.2	3840	216,000	51,000	9,552
Sep 6, 1975	Lice	M 6.8	2385	53,372	No data	8,149
May 22, 1971	Bingöl/ Erzincan	M 6.7	878	88,665	27,465	5,617
Mar 28, 1970	Gediz	M 7.2	1086	83,448	No data	9,452

*Affected refers to those seeking immediate shelter assistance. Number of homeless calculated as total number of people made homeless by earthquakes for the given year (not only for the earthquake indicated).

Source: EM-DAT and Bağcı et al., 2009

If you look at the chronological aspects of the major earthquakes in the Turkey since 1970, starting from Gediz which is about 7.2 Richter scales and then we are again getting in 1992; 1999 in about 7.2 Richter scale and you can see the damage of heavily damaged houses are about 15,000 and in Kocaeli earthquake, same August 17 and November say that from here in the same 1998, 1999 is a continuously, this Adana region and as Kocaeli and Düzce provinces have been affected.

And a huge damage you can see that 50,000 houses were damaged and 15,000 and almost 655,000 became homeless so, this is the kind of data which we get.

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Disasters Law No. 7,269. This law states that the central government is responsible for the management of post-disaster activities and usually this means that the central government delegates its authority to the kaymakam (provincial governors) in the affected region. Under the law, post-disaster government works are divided into two categories:

1. Emergency aid: short-term recovery and relief activities, provision of temporary shelters and temporary housing, etc.
2. Building construction: long-term housing reconstruction, strengthening of the buildings, and decisions for relocation, etc.

In Turkey, we have; they also have a disaster law; law number 7 states that the central government, it should be responsible for the management of post-disaster activities and basically, they have to delegates this particular authority with, they call it as kaymakam in the provincial governors in the affected region. So and under this law, there are 2 categories which they looked.

One is the emergency aid, immediately after the effect of disaster like, it could involve short-term recovery, the relief activities and the provision of temporary shelters which is a part of the rehabilitation and also some kind of temporary housing, these are the activities which looked into under this category. The second aspect is the building construction; in the building construction which looks at the permanent or the long-term housing reconstruction and the strengthening and retrofitting of the damaged buildings.

And also some key decisions of whether to relocate whether in situ process so, this is how these are the two categories which the central government looks at.

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The criteria to qualify for a new house are:

- 1) being a home owner (both legal and illegal constructions can qualify);
- 2) houses should be badly damaged or collapsed; and
- 3) the owner is capable of meeting the repayment terms over 20 years.

And then based upon the damage assessment, who will be eligible to get a new house. So, this law states that they have established a criteria, one is being a homeowner both legal and illegal constructions can qualify, let's say when informal settlements have been destroyed then obviously if it is a tenured or a non-tenured so, they were still be eligible for it. Houses should be badly damaged or collapse.

So, the intensity of the damage is also considered, the owner is capable of meeting the repayment terms over 20 years for instance, if he is going for a permanent reconstruction and if it is through a kind of public-private partnerships or to a loan or credit facilities so, how you can also establish certain housing schemes, so that he can pay instalments and 20 years or so that they will also see that capability.

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Following the 1999 earthquakes this law has been amended (27 September, 2000) so that only homeowners in rural areas (outside municipal boundaries) would still qualify for state assistance, as above, while houses in urban areas – where municipal building construction supervisions exists – need to be insured by the newly created Turkish Catastrophic Insurance Pool to receive compensation.

And especially, due to this major devastation in 1999, this particular law has been amended, somewhere around 2000 and this is where that only homeowners in rural areas who live in outside the municipal boundaries would still qualify for state assistance, so which means, so on a central level in collaboration with the state how they actually also considered the homeowners living in the rural areas.

So, here where the municipal and building construction supervision exists need to be insured, so, whatever the houses in the urban areas and which are under the perusal of the municipal supervision need to be insured so, the insurance policies also have started drafted and then this is under the Turkish catastrophic insurance pool, so that they can receive the compensation.

So, in that way the insurance; idea of insurance so, one can invest from the housing insurance especially, for the disaster act and so that they can receive some compensation to build a new one or to retrofit that building, so that is how this particular policy have thought about.

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Relocation of damaged villages is quite common in Turkey. The decision to relocate is usually based on three factors:

- 1) when the old location is at risk of future disasters;
- 2) when the old location is completely destroyed and therefore to remove the debris and rebuild on the same site will take too much time; and/or
- 3) when there is a chance to relocate to land owned by the government, since it is generally preferred not to have to pay for the land.



And most common aspect in Turkey, what we see is the relocation and that how one can take a decision on this relocation, one of the important three criteria they looked at one is; when the old location is at risk for the future disaster imagine, if that particular old location is prone or it is located on exactly on the fault line or is it in a vulnerable place, so that is where we located.

And then when the old location is completely destroyed, if it is already and therefore to remove the debris and rebuild on the same site will take too much of time, imagine it is a huge property and you destroyed, it obviously may take 6, 7 months to take the whole debris so, in that case, that is where they can look for a relocation, so that they can temporarily be located.

Or, when there is a chance to relocate to land owned by the government and this is very common and because this is mostly preferred, so that the government need not pay for the buying the land so, this is what they look for the existing government lands, so that if there is a land available for the relocation purpose, if it is a government land they are obviously prefer for that.

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Methods of procurement

mass housing

- Government acquires land
- MPWS(MEUP) provides design specifications and cost estimations
- Locations are determined by availability of land, and safety in terms of earthquake risk.

self-help housing

- where families are reconstructing on their own land, or in relocated villages.
- 'EYY' loan facility
- families use government credits to buy a finished house.
- house designs, as well as technical and management assistance are usually available from the government and money is dispersed to the families upon completion of stages of construction on a percentage basis.
- a building contractor hired by the MPWS manages the construction on behalf of the owner.

In turkey, there are 2 different methods of procurement; one is mass housing and the self-help housing, let's discuss about what a mass housing talks about. In this process, the government acquires land and here it is Ministry of Public Works and Services also, the minister now, it has been renamed; Minister of Environment and Urban Planning also provides design specifications and also the cost estimations.

And these locations are determined by availability of land and safety, in terms of earthquake risk, it is a terrain area, is a what kind of geological conditions to exist so, basically the surveyors provide the information and that is how they decide on these mass development projects, so that is where a contract I mean, if contractors in this, they directly deliver the housing.

In self-help housing, where families are involved in the reconstruction on their own land that is one way or in a relocated villages, so there are different facilities like one is they call EYY and it's about kind of loan facility also, the families use the government credits to buy a furnished house so, they take a loan and they purchase and similarly, the house designs, as well as the technical and management assistants, are usually available from the government.

Because the government provides them how to build and what kind of structural guidelines they have to follow and they disperse, they set up different stages of construction and they say at this plinth level, this is what we deliver you the money and this is a sill level this is what we deliver you, this part of the amount and this is the completion of the slab, this is the amount, so then that way they distributed by the stages and in the percentage basis.

And also, a building contractor would may be hired by the Ministry of Public Works and services who manages the construction on behalf of the owner, so that is process.

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In terms of project planning, and the design of the houses and the sites, there are several issues that have been raised about the mass housing approach:

- Projects are prepared with very general data and have little regard to the local situation and environment (with exception of geology).
- Houses are distributed by lottery, which breaks up the social groupings that existed in the old settlement, in which families lived among people originating from the same village. This leads to friction among the new neighbours, who often have different living styles.
- It disregards the preferences, needs and priorities of the affected communities as they are not consulted in the project planning.
- The design of the houses and the settlement do not facilitate socializing outside, which leads people to feel more isolated.
- The payments for the houses are too high for the poor to afford, which worsens the conditions of poverty for the most poor.
- Although housing units cost the same amount, they have different values depending on their proximity to transport links, markets, etc.

Whereas, in mass housing approach, there are many issues; one is these projects are mainly developed with a general data and because they only talk about yes, this many houses have been collapse and this many some households has to be relocated, they don't give much regard to the local situation, what kind of environment it is, what kind of the you know the situation of the community, what kind of livelihood they are related to, is it going to affect something of their livelihood, it is going to affect the children's school environment?

So that is one aspect, the second aspect is allocation process so, the houses are distributed by lottery method like number 56, this is your house, number 52 this is; so despite of what kind of settlement it was existed, what kind of neighbourhood fabric it was existed, it is all completely taken out due to the lottery approach. So, here, which actually breaks the social bondages because who was living in the old settlement and now, they may live with some other group, they may end up with completely different community.

And that also have a little adjustment process you know, that takes some friction between different strangers and for some people it is good but for some people it takes a long time and who have a different religious and lifestyles, it also disregards the preferences and needs and priorities of the affected communities because they are not consulted in the project planning process.

Just imagine some woman have died or I mean, some woman is left alone with her children and if a husband was died in an earthquake, if he was a businessman and his business was lost so, what happens to the woman so, which means a situation have changed from before disaster to the post-disaster, so they will not take an account what kind of support she needs, she needs an external family support in the nearby vicinity areas or she needs a good safe neighbourhood.

She need how to run her livelihood so, all these aspects are not given priority because they never consulted, the design of the houses does not facilitate socialize outside which leads you know because most of these either go for an apartment models which is three to four levels, which they have to go with the staircases, so earlier, they might have lived in a different setup, so that socialization process also gradually weakens.

And the payments for these houses often they are too high and especially, for the people you know, they are not able to afford, so that is where it was since the conditions of the poverty because they have to end up paying some extra instalments and they also have to pay it from maintenance bills, individual maintenance bills so, they all add up to a big sum of money.

Though the housing units cause the same amount but the value differs depending on the proximity of transport links imagine, if we are developing 2, 3 different clusters let's say one cluster is very close to the highway, the road network and the other two are much interior depending on the land availability so obviously, it value differs so, the person who got a benefit of getting near the road network or the transport facility or a railway station or a metro corridor, so it will be his value; his property value is more higher than the one who was staying in the interiors.

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