

Observations on the Social and Psychological Aspects of the 1 May 2003 Bingöl Earthquake

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This report will focus on the search and rescue activities, health services, post-earthquake living conditions, and finally social and psychological support services following the Bingöl, Turkey earthquake, which occurred on the 1st of Mayis, 2003, at 03:27 a.m. The report is based on our observations in the region and our in-depth and focus group interviews with relevant authorities, emergency workers and survivors. We have visited Bingöl and some of its surrounding villages. Since our team stayed in Elazig, a province nearby Bingöl, we used this as an opportunity to interview Elazig civil defense search and rescue team members and Elazig State and Psychiatry Hospital staff who served the survivors of the Bingöl earthquake.

Information about Bingöl population statistics and the characteristics of the earthquake are provided in the engineering report (Gülkan, Akkar and Yazgan,2003 ; <http://www.metu.edu.tr/homre/wwwdmc>) and thus will not be given here.

Introduction

Although it is not possible to abolish fault lines and to prevent earthquakes altogether, it is indeed possible to mitigate earthquake damage and to be prepared for future quakes. Building earthquake resistant buildings and cities, implementing local community networks and awareness can best minimize earthquake damage. Bingöl experienced a relatively recent earthquake, in 1971. We noticed the traces of the 1971 Bingöl earthquake both in the “un-damaged, still erect, disaster houses” and in “the collective memories” of Bingöl residents. Survivors we spoke to both in the villages and in the city center started by mentioning the 1971 quake and stated something like

“ I was about ... years old” at that time, indicating a trace of personal memory for the quake. Despite this collective memory, from the damage that occurred, it seems that buildings not resistant against earthquakes have been built both in central Bingöl and its villages. Therefore, it can be said that necessary lessons from the 1971 quake were not adequately derived and whatever was learned was not implemented with consistent sustainability, and mechanisms for ensuring sustainability were not successfully developed. The May 2003 quake and lessons learned from it should not remain just in the memories of the survivors with decaying traces over time. All of the lessons from this quake need to be transformed into sustainable social, technological and spatial structures and practices.

In 1971, the majority of the population was living in the villages. However, in 2000 the urban population exceeded the rural population, and this trend will continue in the future. It is crucial to increase the awareness of municipalities and local communities in earthquake hazard mitigation and preparedness. Specifically, in eastern Anatolia, there are political-cultural fault lines alongside the physical fault lines. The demonstrations that took place on the second day after the quake should not be viewed just as consequences of simple provocations. The existing situation needs to be examined thoroughly; rational and democratic solutions need to be developed. This cultural-political fault seems to have developed between the Office of the Governor, Defense forces, Municipalities and segments of the local community. This view needs to be taken as a hypothesis and tested within a social sciences framework. In the morning after the earthquake, an authority from the region stated that everything is adequate and under control and that nothing is needed in the region, in response to a question in a national TV programme. However, following this declaration, friction and conflict arose in the region due to dissatisfactions with inadequate aid. One reason for the relative scarcity of non-governmental organizations in Bingöl as compared to post-Marmara quake, may be related to this conflict and tension. It must be stressed that all these views need to be taken as hypothesis that need further careful investigation.

Search and Rescue Phase

Since our team visited the region ten days after the quake we did not have a chance to observe this phase directly. Thus, our evaluations are based on reports from emergency workers, authorities and community members. The general impression we have formed about search and rescue is quite positive. Compared to previous earthquakes, there were adequate personnel, coordination and efficiency in this phase. In fact, some expressed the view that ambulances and teams were more than necessary. The Bingöl Crisis Center informed and guided the NGO- Search and Rescue teams (e.g.; Disaster Search and Rescue -AKA , AKUT, etc) to areas in need. The head of the crisis center, Deputy Governor told us that they have worked in collaboration with the non-governmental organizations. In the report of AKA, it is expressed that they reached Diyarbakir, a province near Bingöl at 15.45 and then they were sent to Bingöl with a bus provided by the Governor of Diyarbakir. Upon reaching Bingöl at 18.45 they were briefed and sent to a rescue site by the Bingöl crisis center. In their report, AKA stressed the abundance of teams working in Çeltiksuyu Regional Boarding School and pointed out to the need for better coordination. In sum, it seems that due to the magnitude of damage and the area affected, search and rescue was well organized and adequate in Bingöl. In search and rescue Civil Defense Teams, Military staff, Gendarmerie, Non-governmental organizations and community members worked together. The director of the Elazig State Hospital stated that there were plenty of doctors and ambulances available in Çeltiksuyu dormitory.

In rural areas due to problems of accessibility, in contrast to central Bingöl, mainly local people using their own resources carried out search and rescue. For example, in Sancak, Çimenli District/Village¹, that we have visited, six people were trapped under the rubbles of a stone building and died. It was stated by the crisis center that “ that family did not have relatives or close friends in the village, therefore rescue went to

¹ Çimenli District was previously named as Lek. Currently it is a district of Sancak. However, previously it was a village, and the new identity seems to require some time to unfold. It is located on the fault line, and some expressed the desire to change its place. It will be very fruitful to conduct research from a social science perspective in this district.

them quite late”. This situation seems to point out that local community networks for mitigation and preparedness are very crucial for rural areas to which external aid may not be delivered in time. Thus, skills of search and rescue need to be developed in local community members in rural areas.



Figure 1. Çeltiksuyu Regional Boarding School Dormitory Building : Search and Rescue

Temporary Settlement and Living Conditions following the Earthquake

In central Bingöl, the most striking sight were the tents scattered all over the town, situated between and adjacent to buildings that were not yet clearly assessed for damage conditions. The majority of these tents were Kizilay (Turkish Red Crescent) tents. We were told that the survivors in Bingöl refer to these tents as “Fear Tents”. This meant that rather than staying in the tent for protection against aftershocks, people were using their tents due to a strong fear of staying , especially sleeping in their homes. Therefore, tents were used in the evenings for sleeping. The earthquake occurred at 03.27 a.m. This, seemed to have created a fear conditioning to darkness. Therefore, it was observed that survivors, especially women and their children were using their homes for cooking and washing during the day. They said that they were afraid but felt that they can run away if another quake or an aftershock occurred during the day. However, their fear conditioning was too strong for nights, and they will not enter the buildings at night.

This conditioned “earthquake fear in darkness” is not rational, it almost denies the possibility of quakes during the day. This situation does not keep the survivors away

from the damaged buildings and poses a threat to their security. This threat seemed especially pronounced for women and for children. We did not observe any system or institution that systematically warns the community members against such hazards. It will be very useful to create a consciousness in survivors about the risks of getting into buildings, which are not yet assessed by the authorities. Thus, this education needs to be given in Bingöl and in other provinces under the risk of earthquakes.

The haphazard settlement of tents in areas close to the damaged buildings also poses challenges for the maintenance of healthy environments and creates risks for contagious diseases. Furthermore, it creates difficulties for providing material and social support to the survivors, which creates dissatisfaction. Our interviews with these tent residents showed that the main reason for their reluctance to leave their neighborhoods was due to a fear of theft and the insecurity of their belongings in their homes. Therefore, it seems important to implement security measures and to inform the community members of such measures so that they are persuaded of the safety of their belongings in their homes and agree to go to tent cities if necessary. If they are not convinced then we will see the continuation of the situation depicted in the photo that follows, people will continue to live in tents or in their homes situated adjacent to damaged buildings without an awareness of the dangers inherent in such a situation.



Figure 2. In Central Bingöl, life in a one story house adjacent to a heavily damaged high rise building (Photo: A. Nuray Karanci)

Life in Tent Cities

On the 11th of May our team visited the Mehmetçik II, Tent City, situated in central Bingöl. We took part in the Mothers' Day celebrations ceremony, organized by the Social Services Department (SHÇEK) for the mothers residing in the tent city. We observed the ceremony and talked to the administrators of the camp, the social workers from Samsun SHÇEK working in this camp, members of an NGO (Egitim Gönüllüleri Vakfı) , doctors and camp residents. We learned from the administrators who are from the army , that 720 residents live in 113 tents in this camp.

The most striking observation we had was that there was a significantly large participation in the Mothers' Day celebration. The mothers were invited by an announcement from loud speakers and they came and sat down on the stairs in front of the SHÇEK tent. They listened to speeches delivered and received a present parcel and some fruit juice and cookies. According to our observations this might have been the first Mothers' Day celebration for the majority of the mothers who attended the ceremony.



Figure 2. 11 May, Mothers' Day Celebrations in Mehmetçik II Tent City (Photo: A. Nuray Karanci)

This celebration seemed to have given the tent city moms a short respite from their troubles and worries. They looked happy and they freely communicated with us. This ceremony seemed to have offered them a short period of normalization following the trauma they went through with the quake. It seemed to have given them the feeling that they are valued, that something is planned specifically for them. All of these elements render this event a very valuable implementation.



Figure 3. Mehmetçik II Tent City: 11 May, 2003, Mothers' Day Celebration (Photo: A. Nuray Karanci)



Figure 4. SHÇEK Bingöl Province Director delivering her Mothers' Day Speech
(Photo: A. Nuray Karanci)

In the tent city, the educational and social activities planned and implemented by SHÇEK and an NGO (Eğitim Gönüllüleri Vakfı) attracted lots of attention. These activities seemed to have provided an important source of psychological and social support for women and especially for children.

The tent city was situated on grounds, which had a clay type of characteristic. This seemed to have caused problems with dust. A thin layer of clay covered all the tents. Thus, they appeared dirty. In order to prevent this, the tent city administration brought some pebbles to lay on the clay ground. However, they stated that the tent city dwellers themselves were not interested in helping the administration out with this task and hence there seemed to be a delay in finishing this job. The tent city administrators stated that the residents expected everything to be done for them. We also observed that the tent city dwellers were passive, sitting around , not doing much. From a psychological perspective, research has shown that, taking on the role of the helpless disaster survivor, without much control leads to feelings of hopelessness and psychological distress. For this reason, it is important to develop a mechanism that will trigger the active participation of tent city residents.

The doctors serving in the tent city stated that they were met with a huge demand, 75-100 patients in the first days, and then the number gradually declined, dropping significantly on the tenth day. This number is really large, when we consider that there are a total of 720 residents in the tent city. However, the doctors stated that most of the presenting complaints were not due to the quake , but were complaints the residents had prior to the earthquake. They stated that this high demand may be reflecting the scarcity of medical staff and the general need for medical services in the region.



Figure 5. A view from the Mehmetçik II Tent City showing the layer of clay on the tents and the pebbles waiting to be laid on the grounds (Photo: A. Nuray Karanci)

Crisis Center in Çimenli Neighborhood/Village, Sancak Municipality and Some Observations on the Rural Context of the Earthquake

As mentioned in Search and Rescue section Çimenli is a village integrated to a nearby larger village, Sancak, thereby the two together forming a rural municipality. As mentioned earlier 13 people died and 10 people were injured in this village as a result of the collapse of stone houses that were shaken by the earthquake. It should be noted that the fault line was very close to the village. When we arrived at Çimenli, the members of the crisis center welcomed us. Arrival of two social scientists, two professors from a prestigious university in Ankara and an assistant professor from a local university, Fırat in Elazığ, made the members of the crisis center very happy. A team of gendarmes, rural military security, also arrived, right after our arrival, and met us and inquired about the purpose of our trip. When we informed them about social science investigation purposes of our trip, they reported that from their point of view most of the needs of the earthquake survivors were met. They asked for confirmation of this from the crisis center members who were rather silent at that time. After a short while, they left for visits to other villages.

Although we do not have information about all members, one member of the crisis center was a person from this village, who was settled in Istanbul. He temporarily

came from Istanbul upon hearing about the earthquake in order to help his relatives and villagers. The second one was a guest worker in Germany, who returned to the village because of the earthquake. The third one was the village Imam (religious prayer leader), who was born in a nearby village, graduated from a theology faculty in Istanbul, and was appointed to Cimenli as a state employed imam by Presidency of Religious Affairs. During the earthquake village Imam was in Germany visiting his relatives, but he returned to the village when news about the earthquake reached him. Our discussions with the above mentioned members of the crisis center took place in their tent, provided by Red Crescent, to which we moved in to avoid rain.

According to the members of the crisis center that were present during our discussions, one of the urgent needs of the village was a mobile toilette. This was urgent, we were told, because women were waiting a very long time, nearly twenty-four hours, until dark to meet their toilette needs in the bush. They applied to the provincial crisis center in Bingol for mobile toilettes and reminded them of the need several times, but toilettes were not yet given to the village. The second urgent need was for clean drinking water. The third issue was about medicine. NGOs and other donors gave medicine to them, but due to the absence of a medical doctor in the village they were unable to use this medicine even for minor illnesses like headache.

Villagers themselves mainly carried out search and rescue, as it was already pointed out. It was reported that villagers were psychologically shocked, with high levels of fear, anxiety and depression. The village imam, who knew local languages, reported that he helped disturbed villagers by mentioning old tales, religious events, and the hardships the prophet endured during times of crisis. On the wall of the crisis center tent we observed a posted photocopy of a leaflet explaining psychological health needs of babies after earthquakes. The Medical Faculty of Ankara University prepared this leaflet. Apart from this two-page document, no other documents on psychological distress reactions and ways of coping with them seemed to be available. The members of the crisis center in the village reported that they have not been offered any psychological support. Thus, in the future it seems important to reach rural areas and to devise mechanisms of offering psychological support. One mechanism can be the training of the village imams and teachers on the principles and methods of offering psychological support to survivors in post-disaster environments.

In order to understand the situation after the earthquake better, let us dwell more on the spatial structure of Cimenli Village. The village houses were located on the two sides of a small valley. On the Western side of the valley, on which side the fault line seemed to be located, there were all of the stone houses and the mosque. Local stonemasons built these buildings as a display of their skill in shaping and polishing stones. Unfortunately, the skills were displayed with no due respect to earthquake resistant house construction principles. This was done in spite of the fact that on the eastern side of the valley there were “disaster housing” units built by the state after 1971 earthquake. Nothing happened to disaster housing units in the current quake, however all the stone houses built after 1971 collapsed, resulting in 13 deaths. Eleven deaths were in stone houses on the western side of the valley, while there were only 2 deaths from the eastern side. Interestingly, these 2 deaths were from a building that was annexed to state built disaster house. It seemed that the 1971 earthquake taught little to the local masons about the earthquake resistant construction principles.



Picture 6. Cimenli Neighborhood /Village, one of the collapsed stone buildings (Photo by A. Nuray Karanci)

As pointed out before, the crisis center in Çimenli mediated the relationships of the village community with Gendarmerie, other state agencies and NGOs from other parts of the country. As mentioned earlier, most active members of the center were those who were out migrants from the village to big cities in Turkey and abroad and

returned for post-earthquake help and solidarity. One of these returnees reported that he did not take a shower since he arrived in the village, during the past week or so. This has to be checked with further research, but it can be surmised that similar kin and community networks were active in other villages and even in the Bingol city center itself. This was also the case after the 1999 Marmara Earthquake, a region, in western Turkey, which has been the most urbanized and modernized part of Turkey. The strength of networks and solidarity seems to increase , while the degree of modernity decreases, as we travel from Western to Eastern Turkey.

In addition to Çimenli, we visited two other villages. In these two villages there was an interesting contrast. In one village, there were stone buildings with no damage to walls and to the solar collectors on the roofs of these buildings. Both newness and robustness of stone buildings with modern window frames and solar collectors on their roofs were happy surprises to us. We were told that more than sixty percent of the population of this village was guest workers in Europe. In the second village, there was a deserted-looking stone house, which belonged to an out-migrant to Istanbul. There were some old furniture and belongings in the building. Shakiness and oldness of stone building was a real contrast with the stone buildings in the other village. Research is needed to further analyze the roots of these contrasting pictures.



Picture 7. A group of children with the imam and a member from our team standing in front of the imam's heavily damaged house annexed to the mosque. (Photo by A. Nuray Karanci)

General Assessment and Conclusions

1. It should be immediately noted that this report is based on our limited observations based on a three-day field trip to Bingol city center and some of its villages ten days after the 1st of May, Bingöl Earthquake. Our research on Erzincan 1992, Dinar 1995, and Marmara 1999 Earthquakes gave us a comparative perspective (Karanci, & Aksit, 2000; Karanci, Alkan, Aksit, Sucuoglu, & Balta, 1999; Karanci, & Aksit, 1999; Rustemli, & Karanci, 1999; Rustemli, & Karanci, 1996; Karanci, & Rustemli, 1995). Karanci, 1999; Karanci, 1999; Karanci, 1999). Since our observations are based on a limited period of fieldwork our conclusions should not be generalized beyond its context

2. One of most interesting observations in Bingöl villages and city center was that everybody above the age of 35 seemed to have a memory of the 1971 earthquake. There were visible signs of the 1971 earthquake in the form of “disaster housing” buildings. Yet, nobody seemed to have learned the lesson that the occurrence of another earthquake is highly likely in the region and hence they should build their new houses on the basis of earthquake resistant building codes and principles. One of the main lessons from this earthquake should be for everybody to draw these lessons, raising each other’s consciousness and developing citizens’ responsibilities and instituting civil society organizations. Deaths of so many students in the dormitory building of the Basic Education Regional Boarding School, and others in the city center and villages should contribute to drawing this lesson, learning every thing about mitigation and preparedness measures, strengthening already existing buildings and building new buildings according to Earthquake Code and so on.

3. The collapse of the public building of Basic Education Regional Boarding School, may also have very serious adverse implications for the future. Due to the loss of faith about the safety of public school buildings among the parents, they are likely to be reluctant in sending their children to schools. This will increase the illiteracy rate and by itself will be an additional disaster. Therefore, the “Campaign about Preventing the

Collapse of School Buildings” is crucial to rebuilt the trust of parents. This trust will create a change in their reluctance about sending their children to school. The future hopefulness and the happiness or in contrast hopelessness and despair of the children of the region, like the ones we see in the picture below taken in one of the Bingöl villages, depends on these kinds of campaigns and mobilizations to strengthen already existing buildings and building new disaster resistant buildings and local community networks.



Figure 8: Youth in Bingöl: Hopeful or Hopeless (Photo: A. Nuray Karanci)

4. Eastern Anatolia region is the least developed region of Turkey. This region’s per capita income was one fourth of Marmara Region in both in 1983 and 1997. In terms of public investment index, the region is second from the bottom (<http://www.dpt.gov.tr/bgyu/>). A Rural development project has been in operation in Bingöl and Mus provinces since 1991. A regional development plan (Eastern Anatolia Project Master Plan, 2000) was prepared by five regional universities in the region and submitted to State planning Office (<http://ekutup.dpt.gov.tr/bolgesel/dap/>). When the provinces within Malatya-Elazig sub-region of the Eastern Anatolia, to which Bingol belongs (Bingol, Elazig, Malatya and Tunceli) are examined it is observed that there are two sub-region centers: Malatya and Elazig, the former developing to be one of the Anatolian tigers (<http://ekutup.dpt.gov.tr/bolgesel/dap/>). Bingol and Tunceli are two of the underdeveloped provinces. Eastern Anatolia Project (EAP) Master Plan authors hoped that two more development centers will pull the two other agricultural provinces towards a more industrialized path. Bingol Earthquake

can be perceived as a threat to destroy development potential of Bingol as well as an opportunity to contribute to its fast social and economic development. Public as well private sector investments in post-disaster phase, especially during reconstruction, can contribute to the integration of Bingol to Malatya-Elazig development axis. This means that reconstruction activities should be planned in a regional development-planning context. Regional universities, which formed a consortium to develop EAP master plan, can cooperate with METU and other metropolitan universities to carry out Research and Development activities to facilitate regional development and to integrate the region to the national and global markets.

5. After 1995 Dinar Earthquake a great majority of the population left the city to find rented housing in neighboring and other cities with the rent money given by state. The rent was given to those whose buildings collapsed or were heavily damaged. The rent was given until the state provided housing for these people. We observed that this policy contributed to the collapse of economic and commercial life of the city. After the 1999 Marmara Earthquake prefabricated temporary housing was given to the survivors until permanent housing was given by the state and hence desertion of the cities did not take place as extensively as it did in Dinar (Karanci and Aksit, 1999, 2000). In Bingöl due to the smaller extent of damage people of Bingol remained in their province. It is hoped that after the panic and shock of the earthquake was left behind economic and social life in Bingol will gain a new dynamism, which will be channeled to social and economic development. Senior years of 8-year basic education and high school had already started to meet in classes within tents. Stores for basic necessities were open during our visit and it seemed that commercial life will gain its dynamism soon.

6. In order to transform the threat of the disaster/earthquake to an opportunity, public and private investments should be used as leverage for provincial and regional social and economic development. For economic development to be sustainable one of two things or both should be done. Either, state should make substantial amounts of public investment or opening the borders to neighboring countries to such a degree that closed economies of the region will be opened to national and global markets openly and legally rather than clandestinely through smuggling.

7. For social development to be sustainable cultural and political fault line between state bureaucracy and local organizations and people should be removed through conflict resolution methods and other methods of reconciliation and empowerment of people. For these processes to be effective different sides should first recognize each other as legitimate actors. Only after such a process of mutual recognition and cooperation protagonist actors turn into partners in social development.

8. It has to be pointed out that search and rescue was rather successful in Bingol. This might be due to tremendous experience gained during 1999 Marmara Earthquake. Or, it might be due to limited scale of collapsed buildings in Bingol and large numbers of search and rescue teams. Relief assistance was also very effective. However, establishment of tents next to damaged buildings at risk of collapsing remained one of the problems, as it was in previous earthquakes. Cultural and social aspects of this phenomena should be researched further.

9. A widespread media practice of inviting “earthquake experts” and discussing likelihood of future earthquakes with a high magnitude made people in Bingol very tense. It is a duty of experts to warn people about likely threats for their life, so that they will engage in mitigation and preparedness activities. However, raising fear and anxieties to an extremely high level prevents any such rational activity and encourages unproductive stress. Warning about likely future disasters should be kept a moderate and constructive level. This is an ethical requirement that accompanies being a responsible scientist/expert.

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References

- Karanci, N. A., & Aksit, B. (2000). Building disaster resistant communities: Lessons learned from past earthquakes in Turkey and suggestions for the future. *International Journal of Mass Emergencies and Disasters*, 18(3), 403-416.
- Karanci, N. A., Alkan, N., Aksit, B., Sucuoglu, H., & Balta, E. (1999). Gender differences in psychological distress, coping, social support and related variables following the 1995 Dinar (Turkey) earthquake. *North American Journal of Psychology*, 1(2), 189-204.
- Karanci, N. A., & Aksit, B. (1999). Strengthening community participation in disaster management by strengthening governmental and non-governmental organizations and networks: A case study from Dinar and Bursa (Turkey). *The Australian Journal of Emergency Management*, 13(4), 35-39.
- Rustemli, A., & Karanci, N. A. (1999). Correlates of earthquake cognitions and preparedness behaviour in victimized population. *The Journal of Social Psychology*, 139(1), 91-101.
- Rustemli, A., & Karanci, N. A. (1996). Distress reactions and earthquake -related cognitions of parents and their adolescent children in a victimized population. *Journal of Social Behaviour and Personality*, 11(4), 767-780.
- Karanci, N. A., & Rustemli, A. (1995). Psychological consequences of the 1992 Erzincan (Turkey) earthquake. *Disasters*, 19(1), 8-18.
- Karanci, N. A. (1999). 17 Augustos öncesi durum: Psikoloji ve depremler (The situation prior to the 17 August earthquake: Psychology and earthquakes). *Türk Psikoloji Bülteni*, 5(15), 41-46.
- Karanci, N. A. (1999). Afetlerin psiko-sosyal boyutlari (Psycho-social dimensions of disasters). *deprem güvenli konut sempozyumu kitabı*, 95-99. Ankara: Mesa Yayinlari.
- Karanci, N. A. (1999). Depremin Psiko-sosyal boyutlari: Erzincan, Dinar ve 17 Augustos 1999 Marmara depremleri (Psychosocial dimensions of the Erzincan, Dinar and the 17 August Marmara earthquakes). *Türk Psikoloji Bülteni, Deprem Özel Sayısı*, 5(14), 55-59.