

TURKISH DISASTER TIME LINE: IS THE PAST PROLOGUE?

Irmak Renda-Tanali, D.Sc.

University of Maryland University College, U.S.A. ¹

Dilek Özceylan

The George Washington University, U.S.A. & Sakarya University, Turkey ²

Keywords:

Turkish disaster time line; Turkish emergency management history; policy analysis; Turkish disaster management; Turkey

Abstract

This paper discusses a recent study about the Turkish Emergency Management System. The study is based on a visual framework that was developed earlier by the lead author and colleagues. The framework was developed in order to examine focusing disaster events and their effects on shaping the emergency management policies in the United States. The framework described in this paper consists of a visual outline that maps important disaster events occurred in the country and shaped the essential national emergency management structure – including laws, decrees, regulations, and organizational changes in modern Turkey. This paper will also demonstrate the key causal relationships between some of the major focusing events and their outcomes. The study described in the paper intends to accomplish the following: (1) systematically identify and analyze major defining events since the founding of modern Turkey in 1923 and document them in a narrative chronology, (2) identify and describe major outcomes from each focusing event, and (3) describe the “causal” relationships between the events and their major outcomes based on a literature survey consisting of scholarly published articles and government documents. The findings from the comprehensive study are expected to help other researchers, students, policy makers, and practitioners of emergency management to understand the historical background of the legislations, decrees and organizational structures, why they are designed the way they are, and what the possible weaknesses are. The analysis will also be helpful in understanding future directions. This systematic examination of major disaster events in Turkey and their outcomes, although still a work in progress, provides an explanatory factual foundation for the above audience. The framework consists of two components: 1) the visual disaster time line chart, and 2) a critical analysis that systematically examines the events and their links to the legislative, organizational and other policy changes.

¹ Collegiate Assistant Professor and Program Director, Graduate School of Management and Technology, Dept. of Information and Technology Systems, 3501 University Boulevard East, Adelphi, Maryland U.S.A. 20783. E-mail: irenda-tanali@umuc.edu, Phone: +1-301-985-7417

² Visiting Research Scholar, The George Washington University, Engineering Management and Systems Engineering Department, Institute for Crisis, Disaster, and Risk Management. 1776 G St, NW, Suite 101, Washington D.C. U.S.A. 20052 E-mail: ozceylan@gwu.edu, Phone: +1-202-994-7830 -- Research Assistant, Sakarya University, Distance Learning Center, Esentepe Kampusu 54187 Sakarya, TURKEY E-mail: ozceylan@sakarya.edu.tr

Introduction

Throughout the world, emergency management planners and practitioners have been busy putting the pieces together in terms of identifying what went wrong after major disasters that devastate their economy and the society as a whole. Not only emergency response, but all phases of emergency management –mitigation, preparedness, response, and recovery- are put under test in such significant events. Over the last several decades, Turkey witnessed a significant number of natural and man made disaster events that posed major challenges to the government, nongovernmental organizations (NGOs) and the society as a whole in terms of loss of life, property, and economic distress. This paper discusses a systematic methodology that would help identify focusing events that shaped Turkish emergency management history, and understand their policy ramifications. The method was developed in an earlier study conducted by Claire Rubin, William Cumming, and Irmak Renda-Tanali. The earlier study was first conceived in year 2000 and was later developed, maintained and has been made available for researchers and practitioners via a website and hard copy charts since then with updates (see (The Disaster Time Line) www.disaster-timeline.com). Over the years, with much input from practitioners and policy makers in the field, these “*Disaster Time Line charts*” were refined and updated. The focus of these *charts* is the history of major disasters in the United States. The time line charts offer a multi-decade history of disasters and their outcomes in terms of legislation, regulations, organizational changes, and policy and program changes. Over 20,000 copies of the charts have been distributed in various conferences and other gatherings about emergency management, and countless number of copies of these charts has been downloaded from the website by various researchers, students, policy makers, practitioners and other people. The charts have proven to be useful to those who wish to understand the policy implications of events that shaped the U.S. emergency management system. Same method was used to depict the history of Canadian emergency management also. These authors’ intention is that Turkey’s Emergency Management System can be studied using the time line chart methodology.

This paper introduces a systematic overview of the Turkish Emergency Management System beginning from the early decades of the modern Republic until present. This paper will first discuss the methodology used in creating the Turkish Disaster Time Line chart and then discuss the logical relationships identified between focusing disaster events and their causal relationships to policy outcomes. The authors relied primarily on government sources and scholarly articles to construct the cause and effect relationships and documented each. The study can be useful to practitioners, researchers and students of emergency management in understanding the historical and policy background of the current systems in place in terms of managing large scale national disasters.

Theory and Method

Major Disasters as Focusing Events

The graphic displays of boxes and arrows allow reader to see patterns and gaps in terms of major focusing events and policies over time. As indicated above, the chart intends to provide a factual, neutral, and sequential set of facts that may facilitate analyses and understanding of emergency management of a specific nation. According to (Rubin, 2006) and Rubin, Cumming, Renda-Tanali and Birkland (2003) focusing events have some, but not necessarily all, of the following characteristics:

- *Large Magnitude.* Natural disasters, such as catastrophic earthquakes, hurricanes and tsunamis, are likely to affect a broader area than is true of industrial/technological disasters or terrorist events. For example, the Marmara Earthquake accounted for nearly 90% of the death toll and more than 95% of the financial toll that was created within the past 15 years by earthquake disasters.
- *High Visibility.* Again, the 1999 Marmara Earthquake struck the major industrial hub of Turkey which is also one of the most populous areas with higher income and education level and this feature instantly captured media attention. Another obvious example

of high visibility from international experience is the 9/11 targeting of the Pentagon near Washington, D.C., and the World Trade Center in the heart of New York City's financial district.

- *Location of Incidents.* Some locations are less prepared for high-impact events, with a greater likelihood of poorly managed, ad hoc response and recovery. In the past, with a few exceptions such as the 1934 and 1992 Erzincan Earthquakes, earthquakes occurred in rural communities composed of mortar and brick homes resulting with fewer casualties rather than in densely populated regions where multi-storey buildings are common and collapse of reinforced concrete buildings are potentially more hazardous.

- *High Impact.* If the duration and impacts of the event are widespread and damaging to physical, economic, environmental, social, and political structures, the disaster is more likely to become a focusing event. Besides the Marmara Earthquake, Hurricane Katrina of the U.S. is an example of a high impact event, particularly for the city of New Orleans.

- *Surprise.* When no warning is received, like a sudden jolt of an earthquake in the middle of the night or a sudden onset of a flood, people are caught by surprise. Surprise was a major factor for both the Marmara Earthquake which occurred around 3 a.m. in the morning when most people were in bed and asleep; and the 2001 World Trade Center and Pentagon attacks, in which terrorists used commercial airliners as weapons of mass destruction.

- *Received a National Disaster Declaration (or likely to be eligible for one).* In constructing the disaster time line chart for the U.S. events, this process was used as a measure of the magnitude and impacts of a disaster event, using the federal government's threshold for determining which events warrant federal assistance. In Turkish experience, the involvement of the central government is far more due to the non-federalist government. Federalism is different in that state and local governments have far more autonomy than the federal government in countries like the U.S. and Germany unlike countries like Turkey where central government bears far more legislative authority and response capability.

Event-Driven Outcomes

Certain focusing events drive changes in laws, regulations, systems and practices. This was typically observed while constructing and studying the disaster time lines developed for the U.S.

A group of categories of outcomes was used in order to systematically analyze the Turkish disaster events and their ramifications in the national emergency management system. It should be noted though, that these authors are at the preliminary stages of a much comprehensive systematic study about the Turkish Emergency Management System. The focusing events are analyzed in terms of the following outcomes: Statutes, Governmental Decrees, Bylaws, Cabinet Decisions (i.e. Cabinet Decrees or Law Amending Ordinances), Regulations, Circulars/ Communiqués, Major Plans, Major Reports/Documents

The study described here begins the documentation and analysis of major defining disaster events and their policy outcomes in terms of essential emergency management infrastructure. The outcome of this study will enable researchers and policy makers to compare and contrast the authorities, programs, plans and systems used for the three categories of disasters in Turkey: natural, industrial/technological, and human induced. Like the disaster time line studies conducted earlier (Rubin, Cumming, Renda-Tanali, & Birkland, 2003), the objectives of the Turkish Disaster Time Line study are to: (a) stimulate thinking by researchers and practitioners, (b) identify gaps in legislation and other essential emergency management infrastructure, and (c) identify long-term research needs concerning the Turkish emergency management infrastructure. The systematic and visual nature of this study also enables comparative studies across nations and jurisdictions.

The causal relationships are inserted on the chart based on supporting literature identified in scholarly journal articles, governmental documents regarding laws, decrees, cabinet decisions, regulations, circulars, communiqués, and reports.

Results: A look back on Turkey's Focusing Events and Their Outcomes

The Turkish Disaster Management policy framework has evolved as a reaction to frequent occurrence and losses by natural disasters, particularly devastating earthquakes over in the modern history of Turkey (Mancebo & Renda-Tanali, 2009). At the national level, frameworks for dealing with natural hazards and those that involve civil conflicts and terrorist attacks have been separate. Active military presence in the Turkish government system provides the Staff special powers to deal with the latter. However, declaration of statewide disasters is provided in the same law.

There are governmental studies and a number of recent journal articles and reports about the history of Turkish Emergency Management framework. One detailed chronological history that examines the Turkish Disaster Management System as related to earthquakes was conducted by a parliamentary investigation commission that was formed immediately after the Marmara Earthquake in 1999 (TBMM, 1999) -- note that although the two terms differ slightly, for purposes of this study disaster management and emergency management are used synonymously-- a similar effort to the congressional hearing reports prepared after a major incident in the U.S. The TBMM report outlines the Turkish Disaster Management history in 3 distinct phases: (1) before the year 1944; (2) between the years 1944 and 1958; and (3) the year 1958 and beyond. This approach has been adopted along with the inclusion of a fourth period, by other researchers as well (See for example Yılmaz (2000), Göktürk & Yılmaz (2001), Çorbacıoğlu & Kapucu (2006)), since as will be discussed later, the years 1944, 1958, and 1999 mark major policy changes in the emergency management structure of Turkey. While time and space limitations prohibit the provision of an in-depth analysis regarding a comprehensive history of emergency management in Turkey, in this paper, some of the highlights of focusing events and their policy ramifications about each period that link disaster events and their ramifications, are discussed below and identified causal links are marked using arrows and boxes on the visual time line. Reference is provided in separate figures for each period:

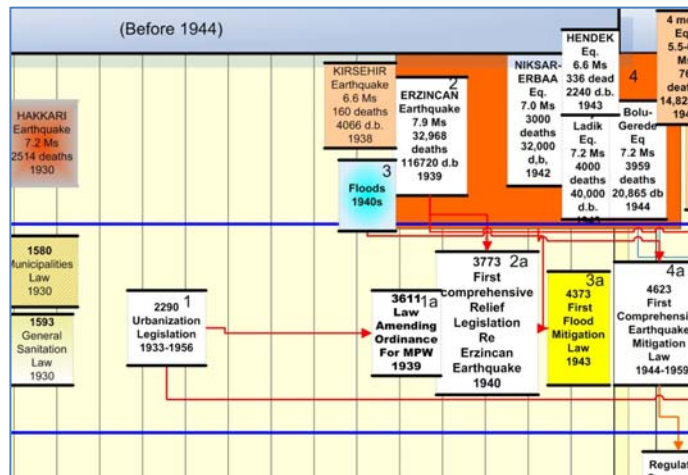
1923-1944 period

This period encompasses the formation years of the Turkish Republic, where departmental level organizations were first created, such as the *Ministry of Construction and Settlement*, later *Ministry of Public Works* that was tasked with developing and controlling urban development policies. This period also marks the formation of urbanization legislation (Law No. 2290: enacted 1933) (See Figure 1, box #1) that required more modern practices of the formation of urban areas rather than haphazard practices observed in the past (TBMM, 1999), (Yılmaz, 2000). This legislation formed a basis for the *Development Law* (See Figure 3, Box #11) that was introduced later, which concerns settlement practices that affect disaster mitigation. As a result of recurring earthquakes and losses of lives and property, recognizing the need for technical specialization for pre-disaster mitigation, another major legislation was issued by the parliament that concerned the formation of a departmental unit within the Ministry of Public Works that was tasked with aiding with the technical aspects of disaster mitigation to the Turkish Red Cross and the Ministry of the Interior (Law No. 3611:1939) (See Figure 1, Box#1a) (TBMM, 1999).

The 1939 Erzincan earthquake that resulted in more than 30,000 deaths pressed the parliament to issue its first comprehensive relief legislation (Law No. 3773: 1940) that specified the financial, housing, and family aid for victims of the disaster (Simsek, 1998), p.51 as cited in (Yılmaz, 2000) (See Figure 1, Box#2 & 2a). This legislation prompted the later politically-engrained and socially expected prolonged practice of the issuance of comprehensive relief legislation as a reaction to large scale devastating disaster occurrences in the Turkish Emergency Management arena (Mancebo & Renda-Tanali, 2009). As a separate matter, continuous floods in the early 1940s led the legislative branch to introduce the first flood mitigation legislation (Law no. 4373) in 1943 (Çorbacıoğlu & Kapucu, 2006) (See Figure 1, box#3 & 3a).

The main characteristics of this pre-1944 period are: (a) the disaster mitigation policies developed in this period were not harmonious with the nation's settlement, urbanization, and industrialization policies (Türkiye'de Deprem Tehlikesi ve Zararları Azaltmaya Yönelik Çalışmalar ve Alınması Gereken Önlemler Hakkında Rapor, 1980) (p.4), (b) during this period, no actions were taken to mitigate disaster hazards (TBMM, 1999, p.2), and (c) no effective policies were developed that were geared towards hazard risk mitigation, preparedness, rescue and reconstruction activities (Ergünay, 1999, p.96) as cited in (Yılmaz, 2000).

Figure 1- Disaster Time Line Between Years 1923 and 1944 (partial view)



1944-1958 period

Five destructive earthquakes that started with 1939 Erzincan Earthquake (see Figure 2, box #2) and continued until 1944 with Niksar-Erbaa, Adapazarı-Hendek, Tosya-Ladik, and Bolu-Gerede earthquakes (see Figure 2, box#4) cost more than 40,000 lives, injuring 75,000 people, and demolishing 200,000 homes and businesses in about 5 years. Thus, the year of 1944 marked among legislators the first awakening that mere relief legislation did not help prevent or lessen disaster losses but rather provided further incentives to build new settlements on top of ruined ones (TBMM, 1999).

Thus, Law No. 4623 (1944) (see Figure 2, box #4a) the first comprehensive mitigation law, titled “*Measures to be taken before and after ground shaking*” mandated three important provisions: (a) identification of seismic risks in Turkey; (b) a nationwide study that determined the geophysical formation of new settlement zones and hazardous zones through a collaborative effort with various engineering schools of Turkish universities; and (c) preparation of response and relief programs in advance (TBMM, 1944), p.1213-1221), (TBMM, 1999, p.13).

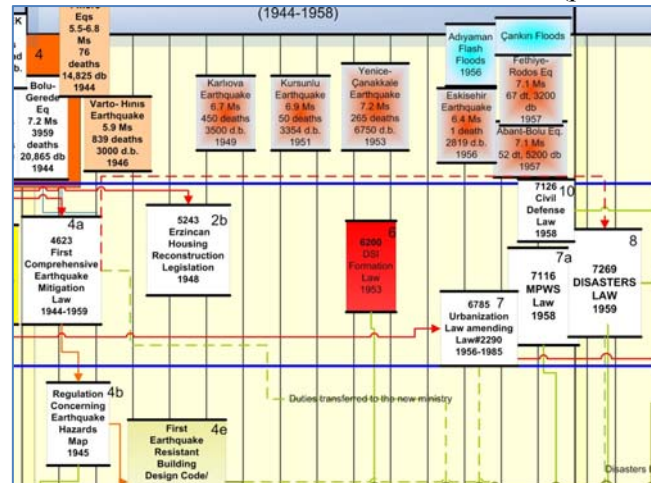
Law No. 4623, with its provisions, was comparable to the then-laws of Japan (1924), US (1933), and Italy (1940) which elevated Turkey to the 4th nation that had legislation in place dealing with disaster loss mitigation based on scientific studies (TBMM, 1999). Through this effort, the first national earthquake zoning map was produced in 1945 (See Figure 2, box#4d), along with the first earthquake resistant design code (see Figure 2, box 4e) for buildings, which was modified numerous times since then (TBMM, 1999).

With the Law No. 4623, the central government was tasked the first time before an earthquake occurred, such as identifying public structures that needed retrofitting (TBMM, 1999) (Yılmaz, 2000). However, according to (Ergünay, 1999) Law 4623 was deficient mainly because it did not cover all hazards and did not necessarily address permanent settlement practices. This deficiency was later fulfilled by the issuance of Law No 7269 (See Figure 2, Box#8).

The mid-1950s marked the mass urbanization as a result of massive industrialization of the country. With the shortcoming of existing legislation and lack of long-term strategic settlement policies, hastily built structures on hazardous zones spawned urban areas rapidly

with disasters waiting to happen. Realizing the threat, Law No. 6785 (1956) (See Figure 2, Box#7) was issued that dealt with urban development practices based on the principle of avoiding hazardous zones and tasking the Ministry of Public Works to carry out the mandate (TBMM, 1999) (Ministry of Public Works and Settlement). Law No.6785 supersedes Law No.2290 of 1933. (See the link between Box#1 and Box#7) A series of relief and reconstruction legislation to aid the victims of earthquakes were also issued within this period of time (TBMM, 1999).

Figure 2- Disaster Time Line Between Years 1944 and 1958 (partial view)



1958-1999

The year 1958 marked a major improvement with the assignment of a departmental level duty in developing disaster mitigation policies for urban planning. With the organic Law 7116, a separate ministry, Ministry of Public Works and Housing was created whose responsibilities included creating disaster mitigation policies along with developing long-term solutions to housing and settlement problems for regions, urban areas, towns, and villages (See Figure 2, Box#7a) (TBMM, 1999).

Another milestone was the issuance of Civil Defense Law (No. 7126, 1958) that included a mandate tasking Ministry of Civil Defense (later became General Directorate of Civil Defense under the Ministry of Interior) with response and rescue activities in the aftermath of disasters involving “enemy attacks”, natural disasters, and wide scale fires (See Figure 2, Box#10) (ITU, 2002).

The most major improvement in terms of disaster legislation was the issuance of the Disasters Law (No. 7269, 1959) (See Figure 2, Box#8) which is still in use with modifications today. This law has a cumbersome name as “*Law Concerning the Precautions and Help to be Maintained Against Disasters Effective on Public Life*” combines discrete laws under one law (Balamir, 2002). The detailed issues for emergency planning and organization were left out under Law 7269 (Çorbacıoğlu & Kapucu, 2006). Thus, this law later received several amendments seeking each time additional funding and remediation efforts due to frequent and destructive earthquakes and flooding events (1968/1051, 1981/2479, 1985/3177). Two important features of Law 7269 are that (a) it encompasses other types of hazards other than the earthquakes such as floods, landslides, rock falls, fires etc. and (b) the creation of a Disasters Fund outside the state budget that avoids the extraordinary appropriation that had been released separately after each and every major disaster (Yılmaz, 2000). MPWS became the major actor in the implementation of disaster law 7269 through its General Directorate of Disaster Affairs (GDDA). The GDDA and its Earthquake Research Department were founded under MPWS in 1964 and 1971 respectively. The GDDA was specifically concerned with nation-wide disaster management. The failure to coordinate organizations and resources in a bureaucratic structure driven by hierarchic coordination, the policy maker shifted the responsibility of post disaster operations from Ministry of Public Works and Settlement to the

Prime Ministry in 1996 (See Figure 3, Box#21) (Çorbacıoğlu & Kapucu, 2006). To this date, GDDA retains its function as the main reconstruction agency.

Concerning man-made hazards, in 1982, a law concerning nuclear energy production and distribution, control, and securing its use, protecting and ensuring the physical security of the nuclear production facilities, was passed and is executed through the Turkish Atomic Energy Council which is still in effect today (ITU, 2002) (See Figure 3, Box# 23).

The state declaration of a disaster, or “extraordinary situation” is tied to a law (Law No.2935) issued in 1983 (See Figure 3, Box#24). The authority vests with the Cabinet. The law concerns natural disasters, pandemic event, heavy economic depression, and use of violence threatening free democratic regime, and personal rights and freedoms (ITU, 2002). According to (Yılmaz, 2000), the legislation needs clarification in terms of how personal rights and freedoms will be curbed and the powers will be exercised in terms of extraordinary administration.

In 1985, the Development Law (Law No.3194) that superseded Law No. 6785, was issued of which the authority vests with the MPWS. See the discussion regarding this law below (TBMM, 1999) (See Figure 3, Box#11).

1999-Present

Adding to the momentum initiated by the 1999 Kocaeli (or the Marmara) and Düzce Earthquakes, dozens of laws, decrees, law-amending ordinances, and by laws have been issued that sought improvement to emergency management operations and organizations (See Figure 4). In 2000, the General Directorate of Civil Defense for Rescue and Emergency, within the Ministry of Interior was created (See Figure 4, Box#28). A major step in improving intergovernmental coordination and communications in disasters after the lessons learned from the Kocaeli earthquake was the establishment of the Turkey General Directorate of Emergency Management, (TEMAD) (law amending ordinance 583/1999 and 600/2000) (See Figure 4, Box #22) within the Prime Ministry. Modeled after the United States Federal Emergency Management Agency, TEMAD directly reports to the Prime Minister’s office. However, this organization has not been fully activated due to lack of resources and lack of requisite authority in order to act as a coordination agency.

The introduction of the Decree of *Compulsory Earthquake Insurance (CEI)* (No: 587, 1999) which authorized the formation of a *Natural Disasters Insurance Administration (DASK)* within the Treasury to administer the operation of the *Turkish Catastrophe Insurance Pool*, terminated the statutory authority determined by the Disaster Law for compensation of losses of disaster victims (See Figure 4, Box#17). This can be considered as a major ailment to the existing disaster assistance policy, since the unconditional commitment to help every disaster victim whose home suffered damages from a disaster apparently have been reduced to only those who had their property insured. It also leaves lesser room for political maneuverings (Balamir, 2002); (Gulkan, 2002).

At the state level, the main actors that are tasked with emergency management are the Turkish General Directorate of Disaster Affairs (GDDA) (an agency level directorate within the Ministry of Public Works and Settlement), Civil Defense General Directorate (CDGD) (within the Ministry of Interior), the Turkish Red Crescent (a semi-state humanitarian organization), and the General Directorate of Emergency Management (TEMAD). In addition, the organic laws of several ministries including those that deal with transportation; social welfare; interior; energy and natural resources; industry and trade; and forestry have responsibilities at various stages of disaster operations (Keles, 2003). Responding to major industrial accidents such as hazmat, oil spills, and explosions involve related ministries such as the ministry of transportation, and/or energy and natural resources, depending on the size and nature of the event. A multiplicity of responsible authorities and redundancy of their responsibilities adds too much complexity and chaos to the system. The current bureaucratic system in emergency response does not allow flexibility of response that would allow adaptation to the dynamic and changing nature of disasters (Keles, 2003) (Çorbacıoğlu & Kapucu, 2006) (Mancebo & Renda-Tanali, 2009). Lawmakers have proposed a draft legislation to the Head of the Grand National Assembly in June 2008 to target this obvious

relative ranking of events in terms of severity and outcome. The economic losses of the events are left out of the discussion in this paper due to the unavailability of reliable data except for the most recent events.

Table 1 – Summary of Milestone Events and their Outcomes

Year	Event	No. of Deaths	Outcomes or legislative changes	Source
1939	Erzincan Earthquake	30,000	First comprehensive relief legislation (no.3773, 1940)	Şimşek, 1998; Yılmaz, 2000
1940s	Flooding events		First flood mitigation legislation (no.4373, 1943)	TBMM, 1999; Çorbacioğlu and Kapucu, 2006
1940-1944	Niksar-Erbaa, Hendek, Ladik, Bolu-Gerede, and 5 more earthquakes*	11,000+	First comprehensive earthquake mitigation law (no.4623, 1944-1955); first earthquake zoning map; first earthquake code (1944)*	TBMM, 1944; TBMM 1999; Yılmaz, 2000; Ergünay 1999
1946-1959	Varto-Hınıs, Karlıova, Kurşunlu, Yenice, Eskişehir earthquakes, Adıyaman and Çankırı flash floods, Fethiye and Abant earthquakes **	880+	Urbanization Law (no. 6785, 1956); Law 7116 creating MPWH in 1958; Civil Defense Law (no.7126, 1958); Disasters Law (no.7269, 1959)**	TBMM, 1999; MPWS, 2009; ITÜ, 2002; Balamir, 2002; Çorbacioğlu & Kapucu, 2006
1959-1968	Varto, Mudurnu, Pülümür, Bartın earthquakes, Mersin floods**	2600+	Law No. 1051 amending Law no. 7269**	TBMM, 1999; Yılmaz, 2000; Çorbacioğlu & Kapucu, 2006,
1969-1971	Alaşehir, Gediz, Burdur, Bingöl	2000+	Earthquakes Fund (law no. 1571) created, GDDA Earthquake Research Directorate founded (1971)	TBMM, 1999; Çorbacioğlu & Kapucu, 2006
1983-1985	Erzurum-Kars earthquakes**	1155+	Extraordinary situation law (no.2935, 1983); Development Law (no.3194) supercedes no.6785	Yılmaz, 2000; ITÜ 2002; TBMM 1999
1999-2001	Kocaeli and Düzce earthquakes	18,200+	TEMAD (no.583, 1999, 600/2000), CEI and DASK (no.587,1999); NEC 8 major laws; 32 major decrees; 13 major cabinet decrees; numerous circulars	Gülkan, 2002; Balamir, 2002; Keleş, 2003, Mançebo & Renda-Tanalı; 2009; Çorbacioğlu & Kapucu, 2006; www.tumgazeteler.com

*Erzincan earthquake is also a main influence together with the earthquakes of 1940-1944 for the outcomes listed. ** No direct linkages were identified from literature between these disasters and the listed legislation outcomes. However, the disasters preceding the legislation outcomes imply indirect relationship at the very least. A more rigorous breakdown of the events and their linkages may be identified at later stages of the research.

Discussion

From research on historic events, a pattern emerges from those events that cause massive loss of life and property. Catastrophic events such as the Erzincan Earthquakes in 1992, or the Kocaeli Earthquake in 1999 that caused massive loss of life in urban areas, and outstanding property losses, dominate the Turkish Disaster and Emergency Management System and drive changes in laws, regulations, systems and practice. As Rubin (2006) notes, [as observed from U.S. practice] virtually all major laws, executive directives, programs, policies, organizational changes, and response systems result from major disaster events. She goes on to assert that sometimes changes occur in a month or less while other times change may take years or decades which seems to be true for the Turkish practice as well. For example, as discussed above, the Disasters Law (No. 7269) and the Development Law (No. 3194) have been amended many times after major disaster events. The positive changes since the catastrophic Marmara earthquake included those that aimed at greater attention to risk mitigation (e.g. legislations on the improvement of construction quality), risk transfer (e.g. introduction of compulsive earthquake insurance), and move from one-hazard approach to all-hazards approach, from separate functional approach to all-phases approach (e.g. draft legislation to combine several existing organizations into one ministerial level organization) and changes in response mechanisms. These efforts all are geared towards mitigating the risk of loss of life and property. Turkish government has come a long way from being the healer of a fatalist society. With the aid of positive science and technology as well as advances in organizational

management, Turkey is on a path for major improvement in terms of lessening losses of lives, property, and preventing the negative effects on Gross Domestic Product after disaster events, as was the case in past disasters. As we progress along the time line, we observe from the pieces of legislation and the formation and evolution of the government organizations that there is a positive change toward a more systematic approach for managing disasters and emergencies in Turkey.

Although the study outlined in this paper is far from being complete –see some of the events and actions do not have links and may later be eliminated from the chart-, the visual aid as shown here that is supported with factual evidence may help further in identifying the patterns as time progresses along, and aid in policy makers, researchers and the new generations in understanding the political and policy actions in terms of causes and effects and identifying the evolution patterns.

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Author Biographies

Irmak Renda-Tanalı, D.Sc.

Dr. Irmak Renda-Tanalı is an Assistant Professor and Programme Director at the Information and Technology Systems (ITS) Department of University of Maryland University College (UMUC) in the USA, where she manages the Master’s degree programme in Homeland Security Management. She formerly had a position as a Senior Research Scientist at the Institute for Crisis, Disaster, and Risk Management of the George Washington University, where she conducted research in the areas of risk, disaster and crisis management. She has designed numerous large/mid-scale sanitary water and wastewater infrastructure systems in cities, towns and dwellings in Turkey and also various residential and commercial buildings in Turkey, Turkic Republics and Russia. Her research interests include disaster risk management, emergency management policy analysis, public infrastructure (water and wastewater) design and maintenance policies, engineering economics and disaster loss estimation studies.

Dilek Özceylan

Dilek Özceylan is a visiting research scholar at the George Washington University, Institute for Crisis, Disaster, and Risk Management and a doctoral student at Sakarya University. Dilek’s research interests are crisis and emergency management, information and communication technology for emergency management, and emergency medical services.