AN EVALUATION OF ROLES, COORDINATION AND COOPERATION OF LOCAL GOVERNMENTS IN DISASTER RISK MANAGEMENT POLICY IN TURKEY

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ABSTRACT

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This study examines the authority of local administrations in need of local-level preparedness, community participation and training to have efficient and sustainable disaster risk reduction (DRR) and disaster risk management (DRM) in Turkey. The enduring debates between the local authorities and central government in Turkey, history of regulations for disasters and local governments involving the discussion regarding the recently published local government law; national and international DRM improvements are thoroughly discussed. This thesis provides the DRM and DRR in both national and global level. It also seeks to answer questions such as how reduction and management of disaster risk is perceived at the local level in Turkey, where Turkey is considering the adaptations of international disaster policies in national mitigation strategies regarding urban risks and vulnerabilities. Within the framework of recently developing and evolving UN policies of disaster risk reduction which are focused on urban resilience and accordingly local participation, Kocaeli and Yalova as highly seismic provinces with past disaster experiences are selected as case studies to research and learn from the past experiences and current implementations of DRR/DRM strategies at the local level. Their historical natural hazard impact experiences and how it affected their mitigation behaviors and affords through local level are elaborated through local administrative authorities and agents.

Key words: Coordination, disaster risk management, disaster regulations, local authorities, mitigation, resilience, coordination

ÖZ

TÜRKİYE AFET RİSK YÖNETİM POLİTİKALARINDA YEREL YÖNETİMLERİN ROLÜ, KOORDİNASYONU VE İŞBİRLİĞİNİN BİR DEĞERLENDİRMESİ

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Bu çalışma yerel yönetimlerin afet risk yönetimi ve afet risklerini azaltmadaki yetkilerini; yerel düzeyde hazırlanma, toplum katılımı ve eğitim gereksinimini bilgi altyapısı doğrultusunda incelemektedir. Türkiye'deki yerel ve merkezi yönetimler arasında süregelen iletişim kopukluğu, yönetmeliklerin ve kanunların afetler ve yerel yönetimler açısından değerlendirilen tarihçesi, yeni yayımlanan yerel yönetim yasası, ulusal ve uluslararası düzeydeki gelişmeler ayrıntılı olarak tartışılacaktır. Bu çalışma afet risk yönetimi ve afet risk azaltma konularını ulusal ve küresel düzeyde tespit etmektedir. Bu tez, Türkiye'de afet risk yönetimi ve risk azaltma çalışmalarının yerel düzeyde nasıl ele alındığına ve Türkiye'nin uluslararası afet politikalarına ne aşamada uyum sağladığına, kentsel riskleri ve zayıflıkları azaltmada ne seviyede bir strateji izlediğine dair sorulara yanıt aramaktadır. Yakın geçmişte gelişen ve değişen, kentsel dirençliliğe ve buna bağlı olarak yerel katılıma odaklanmış Birleşmiş Milletler afet risk azaltma politikaları çerçevesinde, afet deneyimi olan yüksek kentsel sismik risk altındaki şehirlerinden Kocaeli ve Yalova illeri incelenmek üzere seçilmiştir. Bu kentlerin tarihsel doğal tehlikelerden etkilenme deneyimleri ve bu deneyimlerin yerel düzeydeki sakınım ve hazırlık davranışlarını ve çabalarını yerel yönetim otoriteleri ve kuruluşları açısından nasıl etkilediği anlaşılmaya ve detaylandırılmaya çalışılmıştır.

Anahtar kelimeler: Afet risk yönetimi, afet mevzuatı, dirençlilik, koordinasyon, risk azaltma (sakınım), yerel yönetimler

To my parents

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INTRODUCTION

"Without a plan there is disorder and arbitrariness."

Le Corbusier

Turkey is fundamentally vulnerable to earthquakes due to its geographical location. The country is located between three huge tectonic plates, Eurasia, Africa and Arabia, which are inevitably grinding into one another, from north to south (Figure 1.1). The Anatolian plate, on which most of the Turkish landmass lies, is being squeezed westwards towards the Aegean Sea. Periodic movements happen along two main faults, the North Anatolian fault (NAF) and the East Anatolian fault (EAF) (Şengör, 1996). Turkey is not only exposed to earthquakes but also to different disasters such as flood, avalanches; and landslide. It is common among people to suffer from inundations every year. Forest fires are frequently observed during summer season as well.

The more time one spends in an urban area under risk; would one become more sensible or more indifferent? It is common that in every different community, one would be exposed to different memories of disasters, especially to 'disasters themselves' in Turkey. Then, what about the perception of risk the authorities, institutions or decision makers? How it is shaped within the concept of disaster risk management? What is the mission of local authorities regarding urban risk and disaster risk reduction? Can local institutions fulfill their requirements?

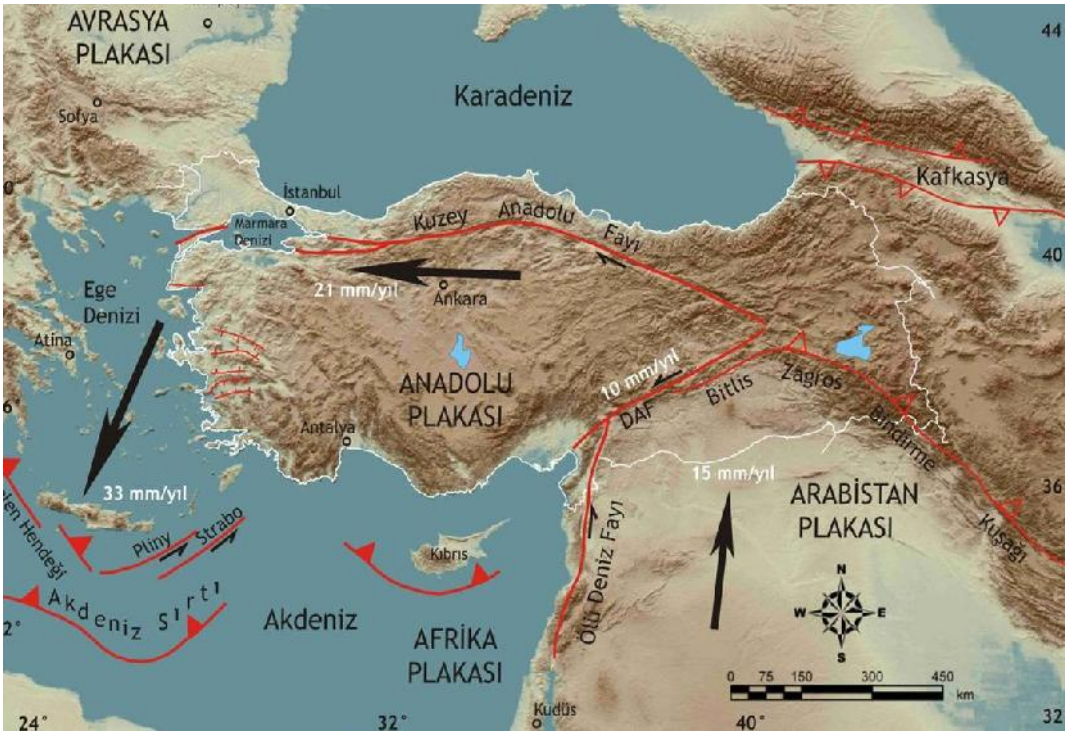

Figure 1.1 Grinding Plates of Eurasia, Anatolia, Africa/Arabia; North Anatolian Fault and East Anatolian Fault.
(Source:**http://www.mta.gov.tr/v2.0/duyuru/duyurular/yenilenmis_fay_haritalari/Turkiye_diri_fay%20_haritasi_basin_bildirisi_sunusu.ppt**)

This thesis is trying to analyze how local governments handle disaster risk management principles in Turkey within the framework of legislations regarding local governments. A modest comparison to the international disasters policies is presented. It is also stressed to understand the risk perception amongst authorities and how this perceived risk is affecting the disaster risk management and mitigation after all.

This study is mainly about disaster related regulations in Turkey and their implementation by the public institutions. In order to achieve this survey a detailed literature review had been done and to elaborate the practice of the regulations in disaster risk management, in-depth interviews were carried out with the employees of the local governments and institutions. It is aimed to establish a critical point of

view for Turkish disaster risk management system while determining the major problems and critical gaps within the regulations and implementations, and make recommendations for disaster risk management relations of local governments with each other and with the central government.

Chapter 1 is the introductory part defining disaster management, risk, risk reduction, urban risks, risk culture and risk perception.

Chapter 2 describes disaster risk management and reduction regulations in the international scale and national level of Turkey.

Chapter 3 is covering the evaluation of the disaster risk management regulations in Turkey, local administrative contribution and authorization of disaster risk management via the fields of Kocaeli and Yalova.

Chapter 4 is the conclusion which comprises the summary of the previous evaluations and determines the problems and presents recomendation.

1.1. WHAT IS DISASTER RISK MANAGEMENT

1.1.1. Natural Hazard or Disaster

An alarming range of natural and man-made hazards are threatening the built and natural environment and resulting in devastating disasters. Although the fundamental principles of UNISDR cover a general view, on the first step, it is vital to identify and profile the hazards in order to apply efficient disaster management. So that communities or nations could prepare their contingency plans according to the most likely hazards turning into undesirable consequences (Coppola, 2007). According to the works of Coppola (2007), Smith and Petley (2009) and Little (2010) there can be an elaborated and combined classification of hazards which could be also determined “environmental” according to Smith and Petley (2009) and Burton, Kates and White

(1993) since the consequences of those hazards are environmentally challenged and environment itself is very likely to be considered as a hazard. In the natural realm hazards being separated into several different fields: namely geologic such as earthquakes, volcanic activity, landslides, avalanches; atmospheric such as tropical cyclones, tornadoes, hail, ice and snow; hydraulic such as river floods, coastal floods, drought; biologic such as epidemic diseases, wildfires; or context hazards causing global environmental change such as climate change, sea level rise, deforestation, or catastrophic earth changes all pose some degree of risk to the livelihood. To this list of natural hazards, man-made hazards could be added namely technological hazards such as industrial failures or hazardous material (Table 1.1) (Smith & Petley, 2009). In addition, malevolent acts such as sabotage or terrorism in terms of infrastructure failures in the urban areas are listed as urban risks by Little (2010).

The aim of understanding the vitality of disaster risk management would bring questions including what is disaster risk management. First of all, *disaster risk management* is defined as "the systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to ***lessen the adverse impacts of hazards and the possibility of disaster***" (UNISDR, 2009) or, reduce the underlying factors of risk and to prepare for an immediate response when disaster hits. "Disaster risk management aims to avoid, lessen or transfer the adverse effects of hazards through activities and measures for prevention, mitigation and preparedness." (UNISDR, 2009). On the other hand "*disaster risk reduction*" (hereafter DRR) focuses on "minimiz[ing] vulnerabilities and disaster risks throughout a society, to avoid or to limit the adverse impacts of hazards, within the broad context of sustainable development" (Baas et al., 2008). However in order to understand these systems, some terminology should be introduced thoroughly namely *hazard, disaster, risk, vulnerability* and *resilience*. UNISDR warns that there is **"no such thing as natural disaster, only natural hazards"**. Although, one of the early definitions of disaster risk management cycle was called as "Natural Disaster Management" (Figure 1.2),

the definition of *hazard* stands as “a potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation” (UNISDR, 2004) which could be summarized as a ‘latent cause’. On the other hand a *disaster* is “a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources”. In other words disaster is “the exact consequence of hazards when we do not have the coping capability with the hazards”. As a result, the phenomenon or process resulted from a natural hazard would be called a natural phenomenon, not a natural disaster. On the other hand, *risk* is “the probability of harmful consequences, or expected losses (deaths, injuries, property, livelihoods, economic activity disrupted or environmental damaged) resulting from interactions between natural or human-induced hazards and vulnerable conditions” (Baas et al., 2008), in short, it is a likely consequence. As a matter of fact risk consists of two components: likelihood and consequence (Ansell & Wharton 1992).

Conventionally risk is expressed by the relation:
Risk = Hazards x Vulnerability (UNISDR, 2004)

In this case, according to the UN based definitions of Baas et al.(2008), what *vulnerability* could be defined as “the conditions determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards.” On the other hand, *resilience* means the capacity of a system, community or society potentially exposed to hazards to adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning and structure (Baas et al., 2008). And what is needed to achieve resilience is mitigation. Mitigation is the “cornerstone of disaster management” (FEMA, 2010 as cited in Coppola, 2011). “Mitigation measures seek to reduce the likelihood or consequences of hazard and risk before a disaster ever occurs.”

(Coppola, 2011). “Mitigation seeks either to make a hazard less likely to occur or to reduce the negative effects if it were to occur” and it aims to achieve to *lessen the possibility of disaster*. It involves both prevention and risk reduction. Mitigation could be both structural and non-structural (Coppola, 2011); structural, such as resistant construction, relocation, structural modification, construction of shelters, barriers, deflection/ retention systems. On the other hand, non-structural mitigation measures could be classified as regulatory measures, community awareness/education programs, or behavioral modification such as building a risk culture.

Table 1.1 Environmental Hazards adapted from (Smith & Petley, 2009).

HAZARDS				
NATURAL HAZARDS		TECHNOLOGICAL HAZARDS	CONTEXT HAZARDS	
GEOLOGICAL	Earthquakes Volcanic Eruptions Landslides Avalanches	Transport Accidents	INTERNATIONAL AIR POLLUTION	Climate Change Sea-Level Rise
ATMOSPHERICAL	Tropical Cyclones, Tornados Hail Ice and Snow	Industrial Failures	ENVIRONMENTAL DEGRADARTION	Desertification Deforestation Loss of Natural Resources
HYDROLOGICAL	River Floods, Coastal Floods Drought	Unsafe Public Buildings		Land Pressure
BIOLOGICAL	Epidemic Diseases Wildfires	Hazardous Material	SUPER HAZARDS	Catastrophic Earth Changes Impact from Near Earth Objects

1.1.2. Disaster Risk Management Framework

According to Baas et al. (2008) extracting from basic UN definitions disaster risk reduction (hereafter DRR) is "the conceptual framework of elements considered with the possibilities to minimize vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development". On the other hand, disaster risk management (herafter DRM) "includes but goes beyond DRR by adding a management perspective that combines prevention, mitigation and preparedness with response". Thus, DRM which is a comprehensive term used in the guide of Baas et al.(2008), referring to "legal, institutional and policy frameworks and administrative mechanisms and procedures related to the *management* of *both* risk (*ex ante*) and disasters (*ex post*), therefore including also the *emergency management* elements". *Emergency management* is on the other hand, "the organization and management of resources and responsibilities for addressing all aspects of emergencies, in particular preparedness, response and initial recovery steps" (UNISDR, 2008). Furthermore, UNISDR (2008) terminology stresses that *disaster management* is another expression which is used instead of *emergency management* from time to time (See Glossary). Although -as it was for "Natural Disaster Management"- *disaster management* was also used in replacement of explaining DRM cycle in some sources; this thesis only referenced them in order to illustrate disaster cycles in order to clarify the steps and different approaches of DRM.

Although AFAD (2013) indicates the importance of distinction and determination of disaster terms, AFAD explains that "Disaster Management" is the combination of Risk Management and Crisis Management which is different from the UNISDR (2009) definitions. Although AFAD defines Disaster Risk Management separately, it provides a combination of Risk Management and Crisis Management in the cycle of "Disaster Risk Management" under the name of Contemporary Disaster Management System. These depict some confusion in disaster terminology. It clearly differentiates

the approach of Crisis Management and Risk Management (Table 1.2). However, AFAD states that the Disaster Management system involves mitigation, preparedness, response and recovery activities. As a result, AFAD does not use "Disaster Management" term instead of "Emergency Management" term, as it was explained in UNISDR terminology (2009) or Baas et al. (2008). On the contrary, it was used alternatively instead of Disaster Risk Management term defined by UNISDR (2009) and Baas et al. (2008). AFAD (2012a, 2012b) explains the Comprehensive Disaster Management Cycle covering the steps of mitigation, preparedness, response and recovery in Strategic Plan of 2013-2017. In addition, there is still confliction of the translation for mitigation since it is translated as both "loss reduction" and "risk reduction" alternatively in the AFAD Strategy Plan for the term risk reduction.

Table 1.2 Crisis Management vs. Risk Management
(Source: https://www.afad.gov.tr/Dokuman/TR/24092012162638.pdf)

CRISIS MANAGEMENT	RISK MANAGEMENT
Disaster and Event Oriented	Vulnerability and Risk Oriented
Single Event Based Scenarios	Dynamic, Multiple Risk Approach and Improved Scenarios
Response	Assessment, Monitoring and Development
Single Authority	Regional Approach
Central Control	Local Governments and Stakeholders
Central Instruction	Event Specified Approach, Flexible Approach
Hierarchical Relations	Collective Approach with Different Units

The conventional disaster risk management framework consists of a cycle involving **‘mitigation, preparation, response, and recovery’** activities. This disaster risk management approach basically has a Four-Phase Cyclical Modal. "Figure 1.2" is a wide generalization of this approach. The conventional view of disaster risk management depicts social action and organization as a set of cyclical activities with reference to the periodical occurrence of disasters. This model is based on the

assumption that some “empowered and capable agent could conduct all such activities in sequential order” (Balamir, 2006). Balamir, states that the most important step of DRM is mitigation and needs a more wide perspective in action. Elements of a "Disaster Preparedness Plan” are identified as, hazard identification (micro zoning), assessment of critical assets, fragilities and activities at risk (infrastructure and lifelines, critical facilities, industries), loss estimation (economic modeling), cost benefit analysis for optimal mitigation strategy, risk reduction (zoning, early hazard warning, improve codes, give incentives, reduce fragilities, increase resilience), training response teams, and communication and education. (Columbia University, 2001; as cited in Balamir, 2004).

As it is explained, the cyclical model of natural hazards (Figure 1.3) (Severn, 1995), could be classified within the scope of 3 phases namely pre-disaster (mitigation and preparedness), response (emergency) and post-disaster (recovery: rehabilitation and reconstruction). Firstly, pre-disaster phase is aimed at strengthening the capacities and resilience of households and communities to protect their lives and livelihoods through measures to avoid (prevention) or limit (mitigation) adverse effects of hazards and to provide timely and reliable hazard early warning systems. Secondly, response phase: saving lives and property as well as providing relief. Thirdly, post-disaster covers recovery and rehabilitation. In addition, four steps of disaster risk management cycle is determined as mitigation, preparedness, response and recovery. Mitigation phase covers prevention and risk reduction and could be defined as structural or non-structural measures undertaken to limit the adverse impacts. Prevention is the activities to avoid the adverse impacts of hazards. Preparedness is the measures taken in advance to ensure effective response. Thus, preparedness involves planning and training in order to get ready. Response period is another naming for emergency management, which basically focuses on relief, rescue or evacuation. Response is followed by recovery that is rehabilitation and reconstruction in general. Recovery is the last phase the disaster management cycle starts all over again just before mitigation for a disaster exposed area.

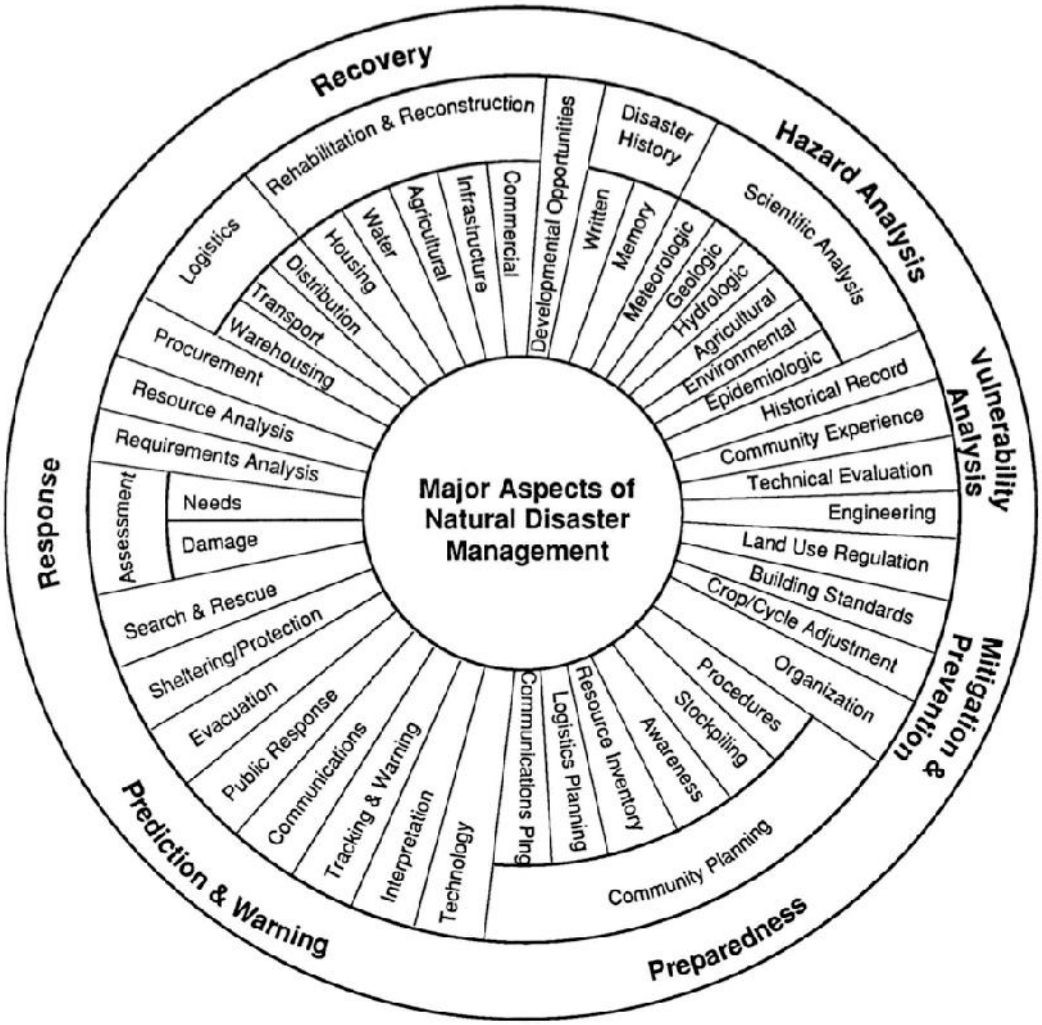

Figure 1.2 Major Aspects of Natural Disaster Management.
(Source: University of Wisconsin Disaster Management Center, 1991)

AFAD (2013) also adopts this sort of an approach in Turkey by defining Contemporary Disaster Management as the combination of Disaster Risk Management and Crisis Management in one cycle. However, Balamir (2010) mentions an alternative approach with a slightly different alternative model which is predicting that "mitigation" is an overall phase performed during each step of the cycle, i.e. the whole "cycle". Balamir (2003, 2006) criticizes that the conventional view assumes a singular and central authority which is capable of all the actions and also ignores the need to differentiate risk management from emergency management.

The two have “distinct technical and administrative tasks, variable in nature and emphasis, at different levels of administration” (Balamir, 2006). The alternative approach, on the other hand, “takes into consideration the functional differences of the various levels of administration: “central, regional, local and community”; their mode of interaction; and recognition that dealing with risk demands a separate set of expertise, concepts and tools of action” (Balamir, 2006). In addition, the alternative contemporary approach for a comprehensive disaster management, Balamir (2006) views disaster policy in separate terms of ‘emergency management’ or ‘risk management’ activities, and relates these two components to different levels of administration. In other words, he predicts that, risk, which is leading us to mitigation and risk reduction, should have been a separate field of disaster management, since while focusing on emergency management mitigation is losing its priority and falls back of emergency management and response actions.[1] This comprehensive approach considers that mitigation is not a single phase but a component of both risk and emergency management.

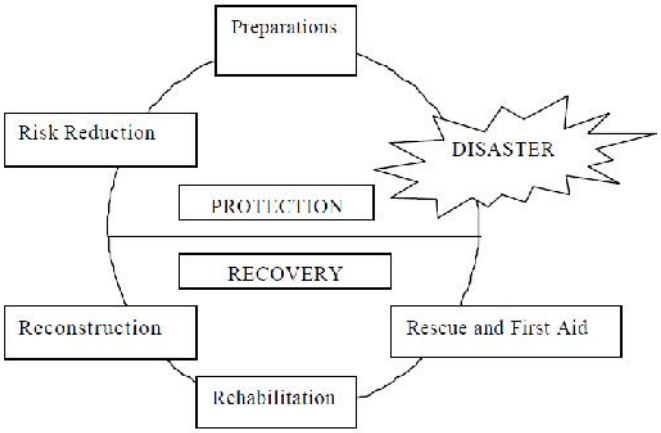

Figure 1.3 Conventional Cycle
(Source: Severn, 1995)

[1] When we were talking to the administrators in the disaster exposed field of Simav, Van and Ercis; they respond to our field of profession as “Disaster Management” depicted that what they understand from “Disaster Management” was basically “Emergency Management” since most of them claimed that they have “managed the disaster” (Field Notes from Simav, 2011; Field Notes from Van, 2011).

There are also two different approaches in terms of administration level of disaster risk management. The difference between the "top-down" and "bottom-up" is that, top down application system is based on central command and control however bottom up is structured more via local level and claimed that it is more effective that the top down method in terms of mitigation and preparedness. "In the first model, power and responsibility are concentrated at the center and diminish rapidly as one move to the outer peripheries of administrative organization. The common structure of disaster management in Turkey has been a classical example of this model since the declaration of a disaster concentrates all power and resources under the central government, and municipalities are deprived of independent action." (Balamir, 2010).[2]

[2] As Simav and Van Earthquakes are observed, local governments were not one of the common parties. For instance on October 23, 2011 and then on November 9, 2011 two earthquakes struck the province of Van in eastern Turkey and "first observation of our reconnaissance team was the deficiencies in collaboration and communication in the region." (Basbug et. al., 2012). Due to the fact that in Turkish political system, governors are assigned and mayors are elected; thus political separations would exist (Basbug et. al., 2012). In addition there "was the multi-headed approach to manage the disaster, which consumed more time, energy and resources. The responsible institutions to response to the needs of the community and help during rehabilitation process in Van are: Van Governorate Crisis Management Centre: deputy governors; Ercis District Governorate Crisis Management Centre: district governor and assigned public staff; the Disaster and Emergency Management Presidency (AFAD); the Turkish Red Crescent Society; White Table: application point for the needs of the survivors, who did not live in the tent camps; Temporary Settlement Coordinators: responsible in tent camps; the Community Centre and the Ministry of Family and Social Policies: to coordinate activities for temporary relocation of survivors to other parts of the country; the Psycho-social Services Association in Disasters (APHB): composed of volunteers to help to organize daily life activities in temporary shelters. These actors, most of the time, stepped into each other's authorized duties. However, in Turkish disaster management system, it is clear by the Law 5902 that the main institution responsible for every stage of disaster management is AFAD. Van earthquakes became the first major earthquake to manage since the establishment of AFAD in December 2009." (Basbug et. al., 2012; Field Notes from Simav, 2011).

Table 1.3 Top-down vs. Bottom-up approach. Source: Central Provisions for all vs. Cascading Thresholds (Balamir, 2006)

Top-Down	Bottom-Up
• Formal channels of command and control • Central administration exercise power • Reactive • Central	• Priorities are identified • Initiatives are taken by local communities, groups of individuals and NGOs. • Role of local administrations is of greater significance • Local participatory from "right to know" to "right to implement" • Proactive • Relies on local administrators • Mitigation efforts • Cascading

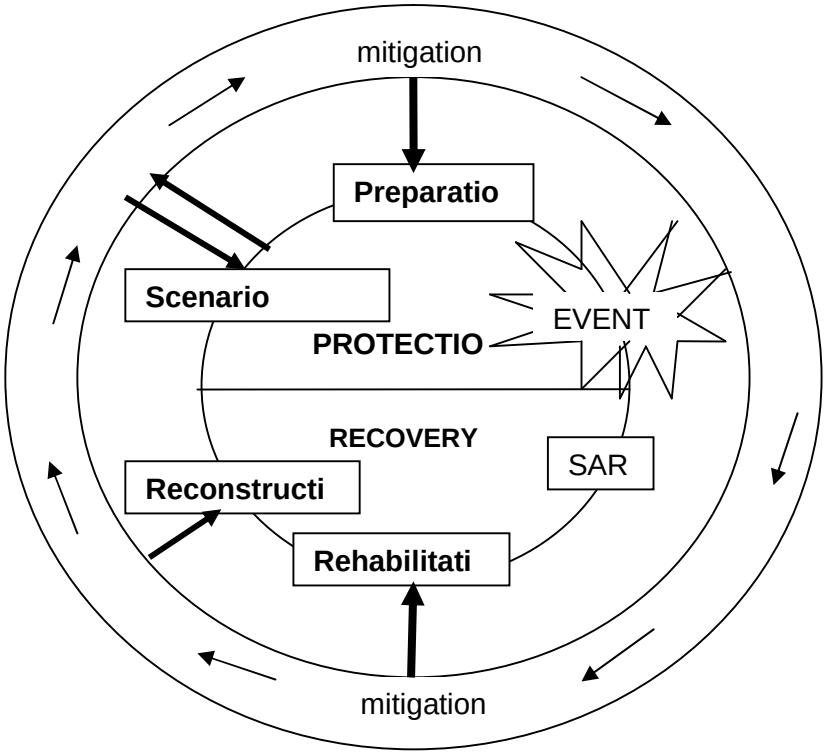

Figure 1.4 Comprehensive Disaster Management Approach, (Source: Balamir, 2007)

Balamir (2001) states that balanced policy between mitigation and relief is the preferred rational approach in the distribution of financial resources and it is more likely to taking into consideration reserving funds for mitigation projects to be prepared by local authorities and communities.

1.1.3. Risk Society and Risk Perception

10% of the world's population lived in the cities in 1900
50% live in cities today
75% is an estimate for the year 2050 [3]

Industrial and technological developments resulted in rapid informal urbanization and abrupt population growth which cause natural hazards turn into severe disasters, due to the vulnerable environment created by today's society. Due to modernization of the society after industrial and technological developments, environmental risks grew the predominant product of the society which is leading to the term of risk society (Beck, 1996). Beck states that, the scientific and industrial developments created the new "global society" and institutions and instruments of modernization failed to handle the global effects and hazards. Thus natural hazards becoming manufactured risks since the devastating disasters emerge due to mass urbanization resulted from modernization. 19th century post-industrial society is transformed into new "global society" which is described as "risk society" by Beck (1996). The hazards caused by the modernization of the society are the pollution, global warming, nuclear power plants, environmental degradation, ozone layer depletion, natural hazards. Industrial society has created many new dangers of risks unknown in previous age such as global warming. That the new kind of modernization, called "reflexive modernization", according to Beck get the world in need of new institutions to deal with the concept of risk. Thus it is needed new approaches and systematic ways to withstand hazards within the scope of understanding the concept of risk. He argues that public sector should take the control of a new scientific approach, promote knowledge based understanding of the concept of risk, and generate a renewable capacity with respect to learning from the experiences of newly emerging risks.

[3] (Burdett & Deyan, 2008)

Beck (1996) defines risks “as a systematic way of dealing with hazards and insecurities induced and introduced by modernization itself” and risk society as a community “characterized essentially by a lack: the impossibility of an external attribution of hazards”. On the other hand, Balamir (2005) argues that Beck did not discuss natural hazards particularly but the notion he discussed was relevant to the concepts of DRM in terms of "organized irresponsibility" or "manufactured indeterminacies". Balamir (2005) sets a way to analyze the society in terms of the definition of today’s risk society by fatalist society vs. resilient society. He discusses that a community with no mitigation policy could be identified as "fatalist" and merely takes into consideration emergency actions. "Resilient" community is in need of a culture of prevention first of all. On the other hand he defines a "resilient" community which takes action in terms of mitigation and focused on risk reduction. Balamir points out that the fatalistic society would focus on saving strategy, healing discourse and crisis planning whereas the resilient society would have a protection strategy, preparedness discourse and mitigation planning. A resilient society within the existence of risk society would have an information system, pre-disaster conduct, technical issue, routine procedures, specialized funds, risk avoidance and cascading thresholds (Figure 1.5). In addition, Balamir indicates that type of discretion in a resilient society, diffused and local management according to the regulations would be effective in order to built disaster resilient communities and incentives of mitigation in terms of DRM, instead of central authorithy supervision of fatalist society (2001).

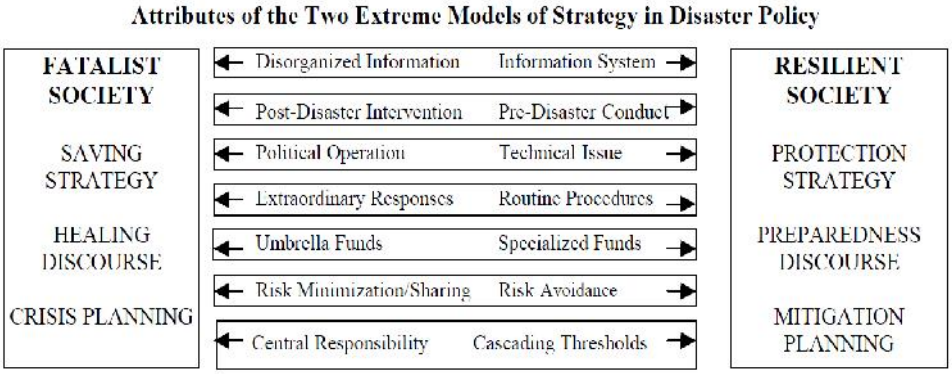

Figure 1.5 Resilient Society vs. Fatalist Society. (Source: Balamir, 2005)

According to Beck, "risk depends on decisions" which are industrially produced and in this sense "politically reflexive". What Beck points out could be put as that human being is still "subject to hazards originating in nature". He simply predicts risk management and concept of risk would be an important issue for the survival of human race. "The talk of the 'knowledge society' is an euphemism of the first modernity. World risk society is a 'non-knowing society' in very precise sense. In contrast to the pre-modern era, it cannot overcome by more and better knowledge, more and better science; rather precisely the opposite holds: it is the product of more and better science. Because of sciences' as and technology's victory not-knowing becomes more and more important in world risk society.

In global risk there is hidden a very specific kind of not-knowing; therefore we have to distinguish between not-knowing as

(1) not-yet-knowing,
(2) willful ignorance,
(3) reflected not-knowing,
(4) zones of conscious inability-to-know, by contrast,
(5) unconscious not-knowing (that is knowledge that does not reflect on its own limits: one does not know what one does not know),

(6) the figure of unknown inability-to-know, that are those ‘unknowns’ in which there lurks the ineradicable element of surprise” (Beck, 2012)

Although Beck relates rising risk to the individualism and individual’s poor relation to society, there is a field for “perception of risk” in the society. People living in areas prone to natural hazards often fail to act, or do very little, to lessen their risks of death, injury, or property damage (Peek & Mileti, 2002). As Solberg (2010) has reviewed, psychology is related to the seismic adjustment in terms of risk perception. In addition, social norms affecting such as trust and responsibility are related to seismic adjustment behaviors. Risk perception is one the most important aspects supposed to be considered in order to be able to understand preparedness behaviors (Karancı, 2009).

Since the risk is in search of an interdisciplinary approach to be analyzed, an integrative model of risk perception should be mentioned here as well. It consists of four basic components: heuristics of information processing, cognitive affective factors, socio-political intuitions and cultural background. This integrative risk perception model suggests that in order “[t]o understand risk perception it is necessary to study psychological, social and cultural components and (…) their mutual interactions” (Renn, 2008). There are several qualitative characteristics of risk namely, personal control, institutional control, voluntariness, familiarity and dread (Renn, 2008). Beck’s point states that (1992) “due to the loss of confidence in private and public institutions, people have become skeptical about the promises of modernity and evaluate the acceptability of risks according to the perceived interest and hidden agenda of those who want society to take risks” which could also be mentioned as “trust” (Solberg, 2010; Renn, 2008). Psychological factors determining risk perception (Solberg, 2010) could be classified in seven perspectives. (1) Social: is the threat directed at oneself, loved ones or strangers? (2)Temporal: will an earthquake happen soon? (3) Probability: is an earthquake likely or unlikely? (4) Spatial: is earthquake going to occur here? (5) Consequence: damage small or great

(6) Control: does risk exceed your capacity? (7) Emotional: does the threat evoke strong emotional responses?

Although it is stated that people are more sensitive due to their level of information regarding hazards (Young, 1998; Richter et al. 2010) another research explains that it is not related to the individual's level of information yet results of many studies of risk-taking behavior, including smoking and other health-related behavior, where the simple provision of information does not result in changes in behavior (Palm and Hodgson, 1992). On the other hand, more vulnerable groups have correspondingly higher seismic risk perception (Cutter et al., 2003 as cited in Solberg, 2010) and education and risk perception are closely related to each other in moderately developed countries (Rüstemli and Karanci, 1999). Furthermore hand low educated people who are more fatalistic than the other groups, but, being as much as willing to participate trainings (Kundak, et al, 2010).

"In making risk decisions, people (you, management, everyone) tend to underweight probable outcomes compared to outcomes that have an element of certainty. It leads to management reluctance to fund mitigation against unlikely events, like earthquakes." ("Illusion of Risk Perception", 2011). Experience and proximity could be considered as affecting factors of risk perception for hazard response. "For individuals to respond to a hazard, they must be aware of its existence". Perceived risk by an individual or community has been thought to be a major component of decision-making.[4]

[4] In Simav, the inhabitants were using their homes during the day for basic daily needs such as showering, cooking, laundry; however they were moving to their tents in the neighborhood close to their buildings in the evening and sleep there since they needed to feel safe during the night. When I asked them whether an earthquake could hit during the day as well, they said that they had the belief that they would be able to escape if they are not asleep. The inhabitants of Simav tent camps were either at work during day or in their houses. However at night, the tent camp and tent clusters in the town centre were full of people (Field Notes from Simav, 2011).

1.2. CONCLUSION OF THE CHAPTER

In this chapter disaster risk management, risk, disaster risk reduction, risk society and risk perception have been defined. Definition and critics of conventional cyclic model adopted in disaster risk management have been reviewed. According to that, the conventional view assumes a singular and central authority which is capable of all the actions and adopts the top-bottom approach, and it also ignores the need to differentiate risk management from emergency management. The two have distinct technical and administrative tasks at different levels of administration and expertise. Balamir's alternative disaster risk management approach, on the other hand, takes into consideration the functional differences of the various levels of administration: central, regional, local and community; their mode of interaction; and recognition that dealing with risk demands a separate set of expertise, administration, concepts and tools of action and it adapts the bottom-up approach instead of top-down regarding the administrative understanding.

As Beck (1996) states that, the scientific and industrial developments created the new "global society" and institutions and instruments of modernization failed to handle the global effects and hazards. Thus natural hazards have become manufactured risks since the devastating disasters emerge due to abrupt urbanization and population growth resulted from modernization. 19th century post-industrial society is transformed into a new "global society" which is described as "risk society" by Beck (1996). The hazards caused by the modernization of the society are the pollution, global warming, nuclear power plants, environmental degradation, ozone layer depletion, natural hazards. Industrial society has created many new dangers of risks unknown in previous age such as global warming. According to Beck the world is in need of new institutions to deal with the concept of risk globally. Thus, it is needed new approaches and systematic ways to withstand hazards within the scope of understanding the concept of risk. According to Beck, "risk depends on decisions" which are industrially produced and in this sense "politically reflexive". Social

norms affecting such as trust and responsibility are related to seismic adjustment behaviors. Risk perception is one of the most important aspects supposed to be considered in order to be able to understand preparedness behaviors (Karancı, 2009). It is important to see the relation between the individual's risk perceptions, risk society and resilient society; and the effect of risk perception of the authority in risk adaptation. In order to understand risk adaptation of the legislations in Turkey, legislations covering urban development plans, urban risks resulting from urban vulnerabilities which are the focus of risk reduction activities of international disaster policies, DRM related legislations, the approach of local governments regarding DRM in Turkey are covered in the following chapter.

CHAPTER 2

DISASTER REGULATIONS

2.1. INTERNATIONAL DISASTERS POLICY

Regarding disasters, international policies had already indicated a point which was the major issue of reducing the disastrous consequences of natural or man-made hazards. New policy was focused on pre-disaster measures predicting the possible effects of disasters rather than aftermath response and relief. So that, the main idea was that the cost of response activities would decrease since the resilience would increase by the investment on pre-disaster mitigation and preparedness. Therefore, United Nations initiated an understanding of making the investment before the disaster happens. So that, the international disaster management concept expanded its conventional strategy towards a new era within the scope of mitigation.

Since 1990, international policies regarding natural and technological hazards have been radically changed. The focus of policies has been altered from post-disaster recovery and reconstruction towards reducing the risks prior to any hazard. With the UN General Assembly Resolutions since 1976, the genuine shift of focus has slightly begun. “According to this new policy, proactive works that consist of several measures foreseeing possible effects of disasters should require greater attention than disaster of response activities. Therefore, it is claimed that the burden of response activities are to be relatively decreased, because built environment and society will become more resilient to possible disasters by the help of proactive activities in the mitigation and preparedness before the disasters actually occur. United Nations has launched some actions for the adaptation of this new policy throughout the world with the slogan of ‘Think Global Act Local’. From the international point of view, mitigation strategies started to be the focus of disaster management in 1990. UN

‘International Decade for Natural Disaster Reduction’ (IDNDR, 1990-2000); ‘Yokohama Strategy and Action Plan for a Safer World’ (1994); Millennium Declaration (2000); The Establishment of UNISDR (International Strategy for Disaster Reduction) (2000); OECD Report (2003); UNDP Report (2004); ‘Kobe Conference (2005) and Declaration of Hyogo Framework for Action (2005-2015); EU EPSON Research and Propositions (2005); UNISDR Living With Risk Report (2005); Establishment of Global Platform for Disasters (2007); The Incheon Declaration: "Campaign on Building Resilient Cities" (2009); Making Cities Resilient: World Disaster Reduction Campaign (2010-2011); Shanghai Expo (2010) and Chengdu Declaration (2011) could be counted as the certain steps of the evolution of international disaster policy (Balamir, 2007; UNISDR, 2011). Since many countries have explored new ways of mitigating the global impacts of climate change and natural disasters, ‘Climate Change Adaptation’ is commonly embraced as an opportunity for DRR by UNISDR as Albrito emphasizes (2008). "Broad consensus also reached on the need to engage local and regional authorities in DRR processes because there is growing evidence that DRR is a local issue and that more needs to be done at local and sub-national levels.” (Albrito, 2008).

Table 2.1 International Developments of Disaster Risk Reduction Adapted from UNISDR

Year	International Developments of Disaster Risk Reduction
1990	UN ‘International Decade for Natural Disaster Reduction’ (1990-2000)
1994	‘Yokohama Strategy and Action Plan for a Safer World’
2000	Millennium Declaration ‘Development’
2000	UNISDR (International Strategy for Disaster Reduction)
2003	OECD Report
2005	UNISDR Living With Risk Report
2005	Declaration of ‘Hyogo Framework for Action’ (2005-2015)
2007	Establishment of Global Platform for Disasters
2009	The Incheon Declaration: “Campaign on Building Resilient Cities, Addressing Urban Risk”
2010	Making Cities Resilient: World Disaster Reduction Campaign (2010-2011)
2010	Shanghai Expo: "Better City, Better Life"
2011	Chengdu Declaration

Planning efforts particularly related to the pre-disaster period may be grouped in several subsets. One basic approach seems to concentrate on the macro assessments of loss and means and justifications of DRR. These usually focus at national level policies (Godschalk *et. al*., 1999). The main purpose in this approach is to indicate the rationale of pre-disaster expenditures for sensible mitigation, and to provide reasons and evidence for the justification of mitigation efforts in economic terms. UN organizations were also champions of this argument, that unit expenditures made for mitigation proved to avoid losses of assets of several times larger in value, and that such expenditures are not 'costs' but 'investments' for the survival of these assets and lives (Balamir, 2012). Major steps of this move can be outlined as:

- *Declaration and running of the IDNDR (1990-2000)*

IDNDR (International Decade of Natural Disaster Reduction) as declared by UN, international efforts were mobilized for identifying ten most vulnerable cities in the world and means of reducing risks.

- *Yokohama Conference (1994)*

Yokohama Conference was organized by UN to evaluate the progress in IDNDR efforts and specify a set of principles and a strategy.

- *Millennium Declaration for Sustainable Development (2000)*

Millennium Declaration of UN convened in South Africa emphasized the policies of poverty eradication and sustainable development.

- *Establishment of UN ISDR (2000)*

ISDR (International Strategy for Disaster Reduction) established as a separate unit of the UN in year 2000 with its head office in Geneve is responsible for monitoring the new global disasters policy of risk reduction programs.

-*OECD Report (2003)*

Insurance risk management covers natural hazard and environmental risks (OECD).

-*UNDP Report (2004)*

"Reducing Disaster Risk: A Challange for Development" which chronicles the poorly planned development caused disasters

- *Kobe Conference (2005)*

Kobe Conference organized by UNISDR, requested response reports from all countries to a set of pre-conference questions on risk reduction performance, maintained commitments of countries on the issue, and declared another decade of DRR (2005-2015), the Hyogo Action Plan.

- *Hyogo Framework of Action HFA (2005-2015)*

Program of action to reduce risks at regional and national levels to be monitored by ISDR, as agreed unanimously in the Kobe Conference.

- *Establishment of the 'Global Platform' for Disasters (2007)*

Global Platform organized by ISDR convenes every two years since 2007 in Geneve with the representatives of every country; encourages the establishment and running of national and lower levels of platforms.

- *The Incheon Declaration: "Campaign on Building Resilient Cities, Addressing Urban Risk"(2009)*

Incheon Conference declared a Campaign on Resilient Cities, to bring forward best practices in DRR and encourage local administrations act as global actor (UNISDR, 2009)

-*Shanghai Expo (2010)*

The theme of the Shanghai Expo 2010 is "Better City, Better Life" - the wish for a better living in present and future urban environments. This theme represents a central concern of the international community for future policy making relative to urban strategies and sustainable development. The Forum was focused on DRR agenda of local authorities in China, meanwhile supported by the network of cooperation of international organizations and selected cities. (UNISDR, 2010)

-*Chengdu Declaration (2011)*

Importance of city cooperation was emphasized, incorporation of disaster resilience criteria for urban development planning, organization of public awareness events, international mechanisms for political commitment such as sustainability and climate change mitigation adaptations (UNISDR, 2011).

In terms of economy, besides “Invest today for a safer tomorrow” motto of UNISDR Global Platform which also indicates to invest before disasters should not be considered as a cost, CARE statement summarizes the economic interpretation of disasters. It declares that “Poverty causes disasters and disasters cause poverty” (CARE International, 2011). In addition, “The UNHSP [*United Nations Human Settlement Program]* points out that urban authorities in developing countries are usually ill-equipped to provide sufficient infrastructure services. As a result, most of the world’s poor live in densely populated squatter settlements, on the periphery cities, which lack the basics of life, making them increasingly vulnerable. Demand for commercial and residential land in cities has led to the use of unsuitable areas, such as floodplains, unstable slopes or reclaimed land. Moreover these cities are often unable to manage rapid population growth; poorly planned urbanization with increasing numbers of inadequately constructed and badly maintained buildings, further increases the vulnerabilities.” (as cited in Ofori, 2008, p.41). As concrete statistics while Hurricane Mitch, Honduras, 1998 affected 75% of its GDP and Marmara Earthquake Turkey, 1999 had the impact on 7-9% of the GDP. However, Hurricane Andrew, USA, 1992, had an impact on less than 1% of USA GDP (Schneid & Collins, 2000).

2.1.1. Role of Local Governments

International organizations gathered under the existence of United Nations roof. The United Nations took a giant leap while establishing the International Strategy for Disaster Reduction (ISDR) in 2000. For 40 years, the policy of UN was focused on providing relief to disaster survivors. Although the organization capabilities increased gradually, the emergency management issue was trapped in a traditional concept which is limited to recover the post-disaster damages. However in time, “disaster ‘risk’ reduction” (DRR) appears as a subject to the new policy in the need of mitigating the severe effects of hazards. As cited in Balamir (2009) Kofi Annan states, in 1999, that “Building a culture of prevention is not easy. While costs of prevention have to be paid in the present, its benefits lie in a distant future.

Moreover, the benefits are not tangible; they are the disasters that did not happen." Thus it is accepted that investment in mitigation is often considered a "waste" by individuals and administrations. Future disasters are classified as "fictitious events" so that spending money on those unrealized events considered as jeopardy to their political eligibility due to a "disaster-monger" image. In other words, administrations are not fond of spending money on mitigation in the first place. However global affords laid the foundations of mitigation plans. In addition, "The relevance of mitigation in disaster policies has become a central area of concern in the international community and in many of the national and regional administrations. The traditional discourse and practice that solely emphasized and articulated emergency management activities are challenged today more often than ever before. Approaches to the assessment of risks caused by natural and technological hazards at every level and context, and the need to devise methods of coping with them are currently imposing new tasks to the scientific and administrative structures in every society and institution." (Balamir, 2009). In brief, "mitigation of the impact of hazards, risk assessments, proactive, integrated, multi-sectoral approaches and concrete actions are necessary." (Balamir , 2009). The most important steps could be distinguished as Yokohama, Kobe and Incheon conferences.

Yokohama Strategy and Action Plan for a Safer World (1994)

Risk represents the probability of losing a value. On the other hand, if there is no probability of losing a value there can be mentioned only a danger (Balamir, 2007). That is why the international policies were strictly focused on risk reduction. Where the foundations of disaster reduction and mitigation were basically laid was Yokohama Strategy, in 1994. Principles of Yokohama Strategy were concentrated on pre-disaster conditions, preparations, and mitigation. According to that, mitigation efforts are inseparable activities of development policies and they will prove successful if participation maintained. Furthermore, organizational, legal and policy frameworks; risk identification, risk assessment, risk monitoring and early warning; knowledge management and education; reducing underlying risk factors;

preparedness for effective response and recovery were also listed as identified gaps in disaster management system. Yokohama lead to take actions to explore new methods for risk mitigation, observe the low-income groups and high risks prevail in larger statements. For instance, the 7th principle of Yokohama Strategy and Plan of Action for a Safer World says: "Vulnerability can be reduced by the application of proper design and patterns of development focused on target groups by appropriate education and training of the whole community." (UNISDR, 1994). Yokohama strategy fundamentally emphasizes that mitigation affords would succeed if only participation is achieved by the local community and it is the component of development policies. In addition, new methods should be searched for risk prevention and low income groups should be protected. The last aspect was that large settlements should be especially considered thoroughly since they are in danger.

Kobe Conference (2005), Hyogo Declaration and Framework for Action (2005-15)

Prior to the Kobe conference some fundamental questions were asked to the member countries -including Turkey- by UN. Those bunches of detailed questions were anticipated to be responded and submitted under the name of National Report for the World Conference on Disaster Reduction in order to determine the current disaster policies of the nations individually. The questions asked before Kobe Conference [Pre-Kobe Questions] were fundamentally aimed to establish the outline of the national reports. Through these questions, in order to be able to make comparative analysis of the main target policy was briefly explained to the countries in the meantime (Table 2.2). The major concerns of that query were risk identification, knowledge management, risk management applications/instruments and preparedness and contingency planning (UNISDR, 2005).

It is vital to give priority to mitigation; integrate multi-sector, concrete actions; integrate mitigation investments with development programs; institutionalize

mitigation planning; allocate of resources for mitigation regularly; generate synergies with the participation of stake-holders in all implementations are the aims of Kobe Declaration and Hyogo Framework for Action.

Hyogo Framework for Action (HFA) 2005-2015 was focused on political and organizational commitment, recognition of risks, management of information concerning risks, tools of risk management. In terms of political and organizational commitment a policy or strategy addressing risk reduction is in need. Furthermore a body to coordinate mitigation efforts is considered as a must. Hazard and risk maps should be available for an effective vulnerability analysis and to be able to recognize any kind of risk. On the other hand as it has been just mentioned knowledge management, i.e. management of information, demands for a national information system. This is very likely to be in coordination with risk recognition. Furthermore education-training programs, research programs and university guidance are determined as risk reduction contributors. Additional tools for risk reduction could be named as environmental management, financial methods or awarded good practices.

In brief, Yokohama Strategy (1994) and the Kobe Conference (2005) were under-signed by almost all countries and they point out the requirement of establishing the types of risks, priority of risk reduction efforts, the necessity of incorporation of risk reduction in all national and sectoral plans, relevance of participatory methods in risk reduction, education programs and capacity increase of actors, developing new methods for risk reduction (Balamir, 2009). In addition “the Framework aims to promote the resilience of nations communities and provides not only a basic road map to be followed near future but also a forum which could be shaped and substantiated by contributions in the development of risk management, the introduction of new regulatory devices, and successful cases of implementation at different levels.” (Balamir , 2009).

Table 2.2 Some Questions Asked to the Nations Prior to the Kobe Conference. (Source: UNISDR)

Some Questions Asked to the Nations Prior to the Kobe Conference
Is there a national body for multi-sectoral coordination and collaboration in disaster risk reduction, which includes ministries in charge of water resource management, agriculture/ land use and planning, health, environment, education, development planning and finance? (1.2)
Do you have an annual budget for disaster risk reduction? (1.6)
Are the private sector, civil society, NGOs, academia and media participating in disaster risk reduction efforts? (1.7)
Has your country carried out vulnerability and capacity assessments? (2.2)
Are there early warning systems in place? (2.5)
Does your country have disaster risk information management systems (governmental and/or non-governmental)? (3.1)
Are the academic and research communities in the country linked to national or local institutions dealing with disaster reduction? (3.2)
Are there educational programs related to disaster risk reduction in your public school system? (3.3)
Are there any training programs available? 3.5 What kind of traditional indigenous knowledge and wisdom is used in disaster related practices or training programs on disaster risk reduction in your country? (3.4)
Do you have any national public awareness programs or campaigns on disaster risk reduction? (3.6)
Do you have disaster contingency plans in place? Are they prepared for both national and community levels? (5.1)

Incheon Declaration (2009)

Incheon Declaration was enduring the DRR sensibility in general. Increasing impact of disasters in Asia and the Pacific alarmed the UN and Incheon Declaration is certainly a "call" for participation. It was mainly regarding Asia and Pacific though. Yet, the content covers and meets the certain needs of a proper disaster risk reduction. According to the recent disastrous events in Asia and Pacific the declaration pointed out that the "climate change is already dramatically magnifying the disaster risks threatening many developing nations and especially the very existence of certain small island developing States, and which recognized that addressing the underlying causes of disaster risk therefore offers the potential for a 'triple win': for disaster risk reduction (DRR), climate change adaptation (CCA), and poverty reduction. " (UNISDR, 2009). What Incheon targets on is that:

1. Local Governments should be identified as Global Actors
2. A Global “Local Government Association” should be established.
3. A campaign, to address and reduce Urban Risks.
4. To promote successful applications.

Incheon, impose the significance of urban settlements in terms of Risk Reduction and promotes local governments to establish international relations independently (Balamir, 2010). A two year-length urban risk reduction campaign was proposed by Incheon (UNISDR, 2009).

Balamir (2010) presents the UN disaster policy at AESOP as ‘pre-emptive risk reduction is the key’ and points out the fundamental principles as:

1. Common to these efforts are a set of principles that provides the key to the conduct of new disasters management at all levels (international, national, regional, settlements, local).
2. UN documents fundamentally draw attention to that ’response mechanisms for disasters are never enough, **pre-emptive risk reduction** is the key’ to disaster management and preparations;
3. Pre-disaster risk reduction would reduce the disaster loss;
4. For sustainable development, the priority should have been given to risk identification and risk reduction in every level;
5. The genuine targets in Risk Reduction are large cities and local governments.
6. For responsibility share, participatory organs should be formed.
7. The most fragile urban poor is likely to be targeted by most of the risks in a multi risk environment.
8. Urban and local governance is a contemporary challenge and should be improved.

Table 2.3 highlights the significant notes from Yokohama Strategy, Hyogo Framework for Action and Incheon Declaration.

Table 2.3 Yokohama, Kobe and Incheon Conferences

	YOKOHAMA	HYOGO	INCHEON
RISK	Risk assessment disaster reduction and mitigation Cities with high population and infrastructure density are especially under great risk	Risk identification, knowledge management, risk management applications/instruments and preparedness and contingency planning National information system	Disaster risk reduction
MITIGATION	Mitigation is a whole with development policies Proper preparedness and risk reduction is necessary Mitigation needs participation	Mitigation integrated development programs Institutionalized mitigation planning Regular resourcing for mitigation	Importance of local units
PUBLIC	Participation and education and training Low-income groups should be protected	Resilience culture in every level	
LOCAL	Community participation	Training and learning programs	Local governments are global actors A global local governments organization A campaign to reduce urban risks

Response to the Change in the International Disaster Policy

"Recently more and more communities seem to be convinced that mitigation efforts represent a more efficient use of resources in comparison to the total costs of recovery activities likely to occur without such investments The international community also considers that risk management in all sectors of the economy is a pre-condition for sustainable social and economic development" (Balamir, 2009). Yet it is considerable that "methods to overcome unwillingness in terms of assessment of risks and use of resources; and promote mitigation activities at the international, national or local levels are inconceivable". How the nations response to the shift of international disaster policy? Nations Complying with new policy of Risk Mitigation are USA (the Disaster Mitigation Act of 2000 and Public Law 106-390); New Zealand (2002); Australia (2002); Greece (2003); Canada (2004); UK (2004). In order to set an exemplification of modals of disaster management systems, Gulkan (2009) suggests some countries such as Germany, Austria, Australia, Belgium, Denmark, France, Finland, South Korea, Hong Kong, Holland, United Kingdom,

Ireland, Canada, Luxemburg, Portugal, and Greece. On the other hand there is a tendency towards simplification of administrative structures in terms of administration and in order to coordinate easily and effectively. For example after the 1995 Kobe Earthquake, Japan reduced to half the number of 22 institutions related to disaster management. The disaster management system of Japan, the national priority is “to protect national land as well as citizens’ lives, livelihoods and property from disasters”; there are clear roles of both national and local governments, public stakeholders and private sector, and a community-based organization is promoted (Balaban, 2012). There are three levels of Disaster Management Planning and the promotion of set of plans including mitigation, preventing measures, post-disaster response and recovery. Three plans are namely Basic Disaster Management Plan (first level plan) addressing each disaster phase, Disaster Management Operation Plan (second level plan) and local disaster plans (third level plans) by local authorities based on the Basic Disaster Management Plan and local circumstances. Local governments could carry out projects for mitigation, specific preparedness for local citizens for the first 72 hours via self-help, mutual help and public help efforts. Local residents can participate in town-watching and hazard mapping as well. Disaster knowledge is being built since childhood via disaster education at schools by curriculums. Another issue is that Japan’s 5% of annual budget share is used for risk reduction investments (Balamir, 2010) and 0.6% budget share belongs to scientific technology research in disaster reduction and the highest share in it belongs to national land conservation. Implementation of urgent earthquake-resistant construction measures, community reinforcement against disasters, improving earthquake-resistant construction by local governments and financial assistance such as tax reduction, no interest for retrofitting loans contribute urban resilience. Community volunteers are supported by the government not only in terms of SAR but also reconstruction and restoration and disaster reduction activities (Balaban, 2012).

In USA, these organizations were gathered into FEMA after 1970 and after 2001 World Trade Center attacks all the units were transferred to the Department of Homeland Security. In that model, natural and man-made disasters were handled together under the same configuration. Similarly South Korea has almost the same policy. Gulkan (2009), in his paper, elaborately observed some different governmental structures. Government is the major element in disaster management in order to supply advanced technology, necessary resources and coordination via a higher authority. That board has different forms in several countries; Supra-ministry Independent Board (USA and Australia), Board Within the Cabinet of Prime Ministry (Japan), Board Within National Defense Ministry (Canada), Board Within Ministry of Internal Affairs (Belgium and South Korea). On the other hand, in some countries such as Sweden for example, there are regional boards in coordination with municipalities and responsible to a higher board. Provincial structure is, on the contrary, either the mayor (e.g. Holland) or the governor (e.g. Japan) is individually in charge or both the governor and the mayor, such as Italy and Portugal.

In terms of insurance policy, New Zealand has a model implementation regarding disaster management. Turkish Catastrophe Insurance Pool was created by the effect of New Zealand disaster insurance scheme as well (Basbug Erkan, 2009). The Earthquake Commission (EQC) of New Zealand provides seismic disaster insurance for natural disaster damage to residential property subject to the Commission's terms and conditions. The types of natural disasters covered include earthquakes, natural landslips, volcanic eruptions, hydrothermal activity, tsunamis, storms or floods, and fires caused by any of these natural disasters. People who purchase home and/or contents insurance are covered by the EQC.

An example of disaster risk management platform is PLANAT that is National Platform for Natural Hazards of Switzerland. PLANAT works at strategic level to improve preparedness for natural hazards. It was "created in 1997 by the Swiss Federal Council and made responsible for coordinating concepts in the field of

prevention against natural hazards. The main objective of the extra-parliamentary commission is a paradigm change from pure protection against hazards to the management of risk." PLANAT's mission is described as; "to develop strategies for the protection of the Swiss population against natural hazards, to raise and maintain the population's awareness of natural hazards, to coordinate protection against natural hazards." That platform consists of twenty specialists coming from all regions of Switzerland. The Federal Council appoints them for periods of four years. The Confederation, the cantons, research, professional associations, the economy and insurances are all represented in PLANAT. The commission wants to avoid a duplication of efforts in the area of protection against natural hazards and make better use of existing synergies. PLANAT's opinion is that protection against natural hazards may not be limited any longer to the protection of individual values within some limited scopes of responsibility against certain kinds of hazards. Attributing to the situation, what PLANAT says is desired globally today: "a paradigm change from the protection against hazards to a new risk culture is needed." (PLANAT, 2010; Balamir, 2010).

2.1.2. Resilient Cities Campaign

The term resilience is derived from the Latin word "resilio" which means to "jump back". In the engineering discourse it refers to "the ability of a material to return to its former shape after a deformation", in other words "the bounce-back" effect. So that, it has been considered as the synonymous of adaptability or flexibility. However, in terms of social sciences, such as societies or organizations, resilience stands for "the ability to resist the disorder", "to continue its existence or to remain more or less stable, in the face of surprise, either a deprivation of resources or a physical threat" and "to deal with uncertainty and change" (Bruijne et al., 2010).

On the other hand, since the case of this study tries to stress namely “disasters”, resilience is considered as “the flip side of vulnerability” since it is defined as the ability of systems or persons to cope with hazards and provide insights on what makes a system more or less vulnerable. Furthermore, it is “the measure of a system’s, capacity to absorb and recover from the occurrence of a hazardous event”, i.e. it is the ability of a system to absorb or bounce back if the protective shield fails.

There are three levels of resilience in an urban community namely, individual level, group level and the organizational or community level. On the other hand, there are several disciplines to be able to study resilience such as psychology, ecology, organization and management sciences, the safety sciences, and disaster and crisis management (Bruijne et al., 2010).

Table 2.4 Resilience concept (Source: Folke, 2006; Brand and Jax, 2007)

Resilience concept	Characteristic	Focus	Context
Engineering resilience	Return time, efficiency	Recovery, constancy	Vicinity of a stable equilibrium
Ecological/ecosystem resilience	Ability to buffer capacity, withstand shock, maintain function	Persistence, Robustness	Multiple equilibria, stability landscapes
Social-ecological resilience	Interplay disturbance and reorganization, sustaining and developing	Adaptive capacity, transformability, learning, innovation	Integrated system feedback, cross-scale dynamic interactions

Resilience deriving from engineering term grows ecological and social resilience. According to Folke (2006) and Brand and Jax (2007), the main characteristics of ecological resilience are ability to buffer capacity, withstand shock and maintain function which focuses on persistence leading to stability of landscapes (Table 2.4). In addition, social-ecological resilience focuses on adaptive capacity, transformability and innovation. Therefore, it turns into sustaining and developing. “Think global act local” was the slogan of United Nations which was aimed to trigger the new paradigm in disasters policy and planning via actions.

In order to build a resilient city and community against disasters, mayors and local governments are to be considered as key points. For the well-being of their constituencies Mayors provide leadership whereas local governments supply social and infrastructural services such as health, education, transport and water. Since they control urban development, the necessary construction permits are issued and public works are managed by them. As a result, local governments supply the opportunities to ensure safer development which could reduce a community's vulnerability to disasters.

Mayors and local governments can play a role in helping cities to get ready to meet future risks. They devise and create developments that affect millions of people in cities everywhere. National governments, local community and professional associations, international, regional and civil society organizations, donors, the private sector, academia and all citizens must also be engaged. All of these stakeholders need to play their respective roles in building disaster resilient cities, and local government is critical in order to achieve success.

One important factor for successful urban disaster risk reduction is the relationship between the city government and those within its jurisdiction who are most at risk. Mayors and local governments should work with their constituencies, and include risk-reducing initiatives in their strategic planning processes, as a way to get ready for future natural hazards with confidence and resilience (UNISDR, 2010b).

Making Cities Resilient: 'My City is getting ready!' campaign, launched in May 2010, addressing issues of local governance and urban risk. With the support and recommendation of many partners and participants, and a Mayors Statement made during the 2011 Global Platform for Disaster Risk Reduction, the Making Cities Resilient campaign was carried on beyond 2015. The Campaign has entered its second phase: 2012-2015. Based on the success and stock-taking by partners and

participating cities in the first phase (2010-2011) the campaign will continue and shift its focus to more implementation support, city-to-city learning and cooperation, local action planning and monitoring of progress in cities. In addition, the campaign will continue to advocate widespread commitment by local governments to build resilience to disasters and increased support by national governments to cities for the purpose of strengthening local capacities. Develop global goals and targets that are applicable for all cities. Private sector partners will be targeted to support development of 'industry standards' and innovative urban risk reduction solutions. UN Secretary Ban Ki-Moon (2009) stated "I call for the need of world leaders to address climate change and reduce the increasing risk of disasters- and world leaders must include mayors, townships and community leaders". Since it is considered mayors and local governments are both the key targets and drivers for the campaign. Local authorities were defined as global actors separately from the central governments and mitigation is identified as "an investment not a cost". Incheon declaration initiated a "Resilient Cities Campaign". This Campaign indicates what local governments could do on the global basis in order to reduce risk. ISDR supported the local governments to act in solidarity, express their experiences, and create a network to promote good examples regarding disaster risk reduction affords (Balamir, 2011).

Campaign focus areas 2012-2015:

"1. Know More and Commit: sign up more local governments and national government support for resilient cities

2. Invest Wiser, Build Safer: Implementation – city-to-city learning and capacity building,

3. Handbooks and guidelines

4. Benchmarking and reporting: Local Government Self Assessment Tool and Resilient Cities Report.

5.Emphasis on partnerships and UNISDR capacity as a platform and knowledge management hub (UNISDR, 2012)."

Local government officials are faced with the threat of disasters on a daily basis and need better access to policies and tools to effectively deal with them. The Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters offers solutions for local governments and actors to manage and reduce urban risk. Urban risk reduction provides opportunities for capital investments through infrastructure upgrades and improvements, building retrofits for energy efficiency and safety, urban renovation and renewal, cleaner energies, and slum upgrading. Local governments are the closest level of government to citizens and their communities. They play the first role in responding to crises and emergencies. They deliver essential services to their citizens, such as health, education, transport and water services, which need to be made resilient to disasters. Based on the five priorities of the Hyogo framework for Action (HFA), a ten-point checklist for making cities resilient was developed that local governments sign up to. By doing so, local governments commit to implement disaster risk reduction activities along these Ten Essentials.

10 Point Check List- Essentials for Making Cities Resilient

- **Essential 1:** Put in place organization and coordination to understand and reduce disaster risk, based on participation of citizen groups and civil society. Build local alliances. Ensure that all departments understand their role to disaster risk reduction and preparedness.
- **Essential 2:** Assign a budget for disaster risk reduction and provide incentives for homeowners, low-income families, communities, businesses and public sector to invest in reducing the risks they face.
- **Essential 3:** Maintain up-to-date data on hazards and vulnerabilities, prepare risk assessments and use these as the basis for urban development plans and decisions. Ensure that this information and the plans for your city's resilience are readily available to the public and fully discussed with them.
- **Essential 4:** Invest in and maintain critical infrastructure that reduces risk, such as flood drainage, adjusted where needed to cope with climate change.

- **Essential 5:** Assess the safety of all schools and health facilities and upgrade these as necessary.
- **Essential 6:** Apply and enforce realistic, risk compliant building regulations and land use planning principles. Identify safe land for low-income citizens and develop upgrading of informal settlements, wherever feasible.
- **Essential 7:** Ensure education programmes and training on disaster risk reduction are in place in schools and local communities.
- **Essential 8:** Protect ecosystems and natural buffers to mitigate floods, storm surges and other hazards to which your city may be vulnerable. Adapt to climate change by building on good risk reduction practices.
- **Essential 9:** Install early warning systems and emergency management capacities in your city and hold regular public preparedness drills.
- **Essential 10:** After any disaster, ensure that the needs of the survivors are placed at the centre of reconstruction with support for them and their community organizations to design and help implement responses, including rebuilding homes and livelihoods

  (UNISDR).

Sasakawa Award

Making cities resilient campaign has an award called Sasakawa Award which has been given biannually. In 2011, the award was shared by three towns Santa Fe (Argentina), North Vancouver (Canada) and San Francisco (Cebu, Philippines) (UNISDR, 2011). The significance of these local units was to have organized local governments and well-planned cities (Balamir, 2012). Firstly, Santa Fe has flood risk which caused many life and home losses due to inundations in 2003 and 2007. The town developed a risk management program, the city divided into risk zones and a very comprehensive and multi approached plan was developed via public participated meetings and workshops. The plan was based on both town administration's and local citizens' own attempt and has an approach and practice to withstand the hazard. The neighborhoods of the streams are encouraged to mutual

projects, and take the whole basin into consideration with national institutions. For post-disaster SAR and relief, municipality, all NGOs and other institutions with universities act together via a special unit. Physical and social measurements were planned through coordination. Legal, physical, financial measures were taken to make the households under risk to move; instead of illegal housing cluster housing is promoted. Trainings for public institutions and municipality employees, cooperation of public and private sectors were carried out. Publicly-open information system, education at schools, campaigns, drills, the use of media and internet is effective. Participatory planning and transparent use of resources is another common component of Santa Fe (Balamir, 2012; UNISDR, 2011).

Secondly North Vancouver, Canada, has the risk of earthquake, cyclone, inundation, and landslide. In Vancouver, every department of local government developed mitigation affords. Local community determined the tolerance levels for different risks. In the use of science and technology, universities and central government cooperation led to inventory example implementations. With the use of science and technology, they exemplified success. Vancouver metropolitan city and universities have cooperation for risk reduction. Regarding hazard priorities and mitigation measures, there is cooperation with other institutions, universities, and business sector. In climate change and risk mitigation, they pay attention to the wild life and ecology. Spatial policies determine peculiar risk zone. In mitigation plans, they give a place to policy and legislations, measures and emergency plans (Balamir, 2012; UNISDR, 2011).

Thirdly, San Francisco, formed a resource for emergency relief and established the system called “Purok” which is a cooperation and solidarity method specific to San Francisco to handle the nature. Purok coordinators are the carriers of information communication in the absence of phone, radio, and internet. What was significant about San Francisco Philippines was a societal solidarity which was established in order to participate in mitigation works. In spite of financial, educational,

technological, infrastructural difficulties, they stand as an example of society base risk reduction, and the local government protected the campaign. On the other hand, school teachers participate in risk reduction seminars and children are being educated for risk reduction about their future and they are encouraged to protect the environment. Therefore, risk reduction was developed as a community culture, i.e. risk culture (Balamir, 2012; UNISDR, 2011).

UNISDR indicates that making cities safe from disaster is everybody's business. National governments, local government associations, international, regional and civil society organizations, donors, the private sector, academia and professional associations as well as every citizen needs to be engaged in reducing their risk to disasters. All these stakeholders must play their part in contributing to building disaster resilient cities. DRR is also part of sustainable development. In order to make development activities sustainable they must also reduce disaster risk. On the other hand, weak development policies will increase disaster risk and disaster losses as well. Thus, DRR involves every part of society, every part of government, and every part of the professional and private sector. As a result, disaster risk reduction is everyone's business (UNISDR, 2011) and the role of public participation and awareness is significant, since through education it is possible to invest to prevent disaster. Yokohama Strategy (1994) states that: We cannot stop natural calamities, but we can and must better equip individuals and communities to withstand them.

> "A disaster is widely perceived as an event that is beyond human control. (…) In an era when most relief agencies stop short of examining the policies and practices that contribute to disaster, we call for an explicit analysis of the circumstances that make human communities vulnerable to unforeseen natural and technological events. Disasters have become a policy problem of global scope precisely because what humans do, both in the normal course of their lives and in response to disasters, frequently magnifies the vulnerability of communities. There is a widespread failure to recognize and address connections between changes in land use, settlement policies, population distributions and the

accompanying degradation of habitats on the one hand and dramatically increased levels of hazard exposure and vulnerability on the other. This argument is based on four premises:

- The increasing number and costs of disasters demonstrate a rate of social and environmental change that exceeds the management capacity of existing organizations
- Overtaxed management systems are exacerbated by inadequate understanding of the components and consequences of change, including impacts on affected communities
- Individuals, organizations and governments that interact in an uninformed manner create a cumulative pattern of interdependent practices that leads to massive failures of environmental, technical and organizational systems (i.e. disasters) under conditions of stress.
- Disasters serve as evidence of the need for changes in public policy and practice and they create opportunities to redesign, revise or rebuild damaged human environments. Without such actions the vulnerability of built and natural environments in risk-prone regions continues to increase as a result of recurring damage."

(Comfort, et al. 1999)

Consequently, it is vital to make individuals more environmentally aware and more receptive to adopt against hazards and environmental degradation.

To sum up, whereas international DRM policies and UN documents are mainly focused on mitigation, disaster risk reduction, and large urban cities and urban poor which are under greater disaster risk, local governments and local mitigation affords to be able to built resilient cities. In order to understand the adaptation to international DRM and DRR policies in Turkey, it is important to understand the disaster related legislations and urban development policies of local governments. The following section covers the disaster related legislations of Turkey within the scope of the history of urban planning and local government legislations focus.

2.2. DRM PERSPECTIVE OF LEGISLATIONS IN TURKEY

2.2.1 Improvements of Urban Planning Legislations

Pre-Republic Era

The inception of spatial planning during the Ottoman Empire begins with Tanzimat[5]. Besides the urban plan prepared for Istanbul by Germen General Moltke between the years 1836-1837 and an official certificate about buildings inspired by it in 1839; the very first published document for planning was Buildings Regulation ("Ebniye Nizamnamesi") which was published in 1848 (Ersoy, 2011; Ozden, 2013). 1864 dated Buildings and Roads Regulation ("Ebniye ve Turuk Nizamnamesi") and eventually 1882 dated Building Code ("Ebniye Kanunu") follows these regulations, mainly focused on a major problem back those days: fires (Ersoy, 2011). Such regulations had the point of encouraging to build masonry housings and building wide roads to make it easier to extinguish fires and prevent the fire to spread from one building to another (Ergin,1995; Selman, 1982; Tekeli, 2010 as cited in Ersoy, 2011). The only responsible authority for these regulations was local governments (Ersoy, 2011).

Early Republic Era (1923-1957)

During the first 10 years, the planning was conducted within the framework of Ottoman legislations. The 1933 dated Law. No 2290 "Construction and Roads Law" is the first law of the Republic. It was rather a document restricting some details regarding buildings and roads than a development law. However, this law was the first law which was ordering the planning should be at both local level and covering the whole urban area. With this law, urban development plans started to evolve and cover different scales. The more important part is that merely local governments

[5] "Tanzimat Reforms: The political reformation movements and enacted laws which developed in 1839 and influenced the Ottoman State's political and military power, as well as society's daily routines." (Ozden, 2013)

were in charge of spatial planning and central government would only get involved during the approval phase (Ersoy, 2011).

Republican Era (1957-1985)

1957 dated Development Law No.6785 is the most comprehensive legal document of the spatial planning history of Turkey. This Law improved planning and defined different scales of plans indicating that planning is not just roads and buildings (Ersoy, 2011).

Republican Era (1985-2011)

No.3194 Development Law is still in charge since 1985 and it is a more comprehensive law compared to 6785. It has filled certain gaps regarding planning hierarchy by presenting two upper scale plans (Regional Plans and Environment Plans). On the other hand, 4 different institutions namely, State Planning Organization, Forestry Ministry, Tourism Ministry and Building and Development Ministry used to have the authority to prepare urban plans (Ersoy, 2011). On the other hand, while the international disaster policy documents and declarations had been published by the United Nations focusing on mitigation, disaster risk reduction, participation and development since 1990; Turkey's disaster related legislation was basically concerned about recovery. However after the 1999 earthquakes a shift of focus did started. "Most of the improvements and innovative approaches to the legal and institutional system predominantly focused on post-disaster efforts and organizations" (Ozden, 2013).

2011-Today

The Ministry of Environment and Urbanization (old Building and Development Ministry) has the authority to prepare certain Environment Plans. In addition, the Ministry is in charge of preparation and approval of every scale planning of areas regarding buildings, shelter zones, special safety zones, explosive production sites

and storage, gas station areas resulted from Law No. 7269. Ersoy (2011) indicates that, the authority of the ministry limits the local governments' authority in terms of urban planning and this is the most centralized era of urban planning history of Turkey.

Table 2.5 Improvements of urban planning authorities in Turkey Redrawn by the author source: Ersoy, 2011

Period	Plan	Authority	Number of Authorities		
1848-1933	Local/ Underground	Municipalities	1	Settlement Plans	Building Code, Building Regulation,
1933-1957	Urban/Local	Municipalities	1	Future Town Plan	Construction and Roads Law No.3290
1957-1985	Metropolitan/Local	Municipalities Development Ministry Forest Ministry Tourism Ministry	4	Master and Implementation Plans	Development Law (No. 6485, 1605)
1985	Regional/ Above Local	Local Governments (Municipalities, Special Provincial Administrations) Development Ministry Forest Ministry Tourism Ministry State Planning Organization	7	Regional Plan Environment Plan Master and Implementation Plan	Development Law No.3194
2011	National-Regional	Local Governments and Central Government	19	National Regional Strategy Plan-Implementation Plan (6 Levels)	Development Law No.3194 (KHK No.648 and 644)

2.2.1. Local Authorities in Turkey

The Turkish state is a democratic secular and social state governed by the rule of law whose foundations are laid by the constitution. "The Turkish State is an indivisible whole with a territory and nation." (Keles, 2006).

Turkish public administration is consisted of two main systems: central administrative system is formed of “central agencies and departments with their geographically functionally decentralized agencies” (Keles, 2006). In terms of disaster management, “both [central and local government] have extensive powers” (Keles, 2006).

2.2.2.1. Provincial and Local Government System of Turkey

In Turkey, local administration could be evaluated in three different sub units namely municipalities, metropolitan municipalities and special provincial administrations (hereafter SPA). The authority and function of those institutions are determined by the Law of Municipalities No 5393, Law of Metropolitan Municipality 5216 and the Law of Special Provincial Administration No. 5302.

1982 dated constitution of Turkey retains centralized administrative system involving provincial and local governments. Turkey is divided into 81 provinces and provinces are subdivided into administrative districts. Each province would have either a metropolitan municipality or provincial municipality and are further divided into districts (counties) and sub districts.

The Governor pointed by the Council of Ministers is the head of the province and the Governor has the authority to make certain decisions independently from the central authority. Each provincial capital, each district and town of more than 2000 people is organized as a municipality headed by an elected Mayor. Each province is administered by a governor appointed (assigned) by the council of ministers with the approval of the president of the republic. The smallest unit of local government in Turkey is the village and the principal authority is the headman.

In Turkey, Law No.5393 makes the municipalities, special provincial administrations and villages in charge in terms of disaster preparedness and emergency management.

This makes the local authorities holistic and unified. Law No.5216 transfers physical planning, transportation, infrastructure and waste management to metropolitan municipalities, which simply cover the most risky fields of an urban environment. On the other hand, decentralized administration provides local and common public services to the inhabitants of an area. “Provincial local administrations, municipalities and village administrations are the three basic types of local authorities” (Keles, 2006). They are elected every five years. Their functions are regulated by law according to decentralization principles (Keles, 2006).

Physical planning, intra-city transportation, large-scale infrastructure, investment planning, water supply and solid waste disposal projects are within metropolitan municipality’s duties.

2.2.2.2. Disaster Management Content of Local Government Regulations

While the international disaster policies had been published by the United Nations since 1990 they were focused on mitigation, disaster reduction, participation and development; Turkey’s legislation laws were basically concerned about recovery, i.e. post-disaster period and a major idea of “fix it when disaster strikes” was taken up seriously. However after the 1999 earthquakes a shift of focus had appeared.

The fundamental milestones of the improvements can be ordered as: 1945- first Earthquake Maps- Building Code; 1959- The Disasters Law (No. 7269) (The provisions have mainly focused on the post-disaster period); 1985- The Development Law (No. 3194) (No Standards for mitigation); 1992- Erzincan Earthquake- World Bank Loan. In 1999, Research Study to Revise Urban Planning and Building Code (3194) (Submitted in 10th August 1999) and after that, on 17th August 1999, Turkey was hit by a major earthquake, namely Gölcük (magnitude of 7.4) and by another one on 12th November 1999, Düzce (magnitude of 7.2). Unprepared Turkey was in devastation and authorities decided to review the disaster management system of the country. After the Marmara earthquake, in 2000 TCIP (Turkish Catastrophe

Insurance Pool) and National Earthquake Council were established. However the Council was abolished in 2007. In 2002 Istanbul Earthquake Master Plan (IEMP) was prepared as an effort of academics and the Government. Another effort is Istanbul Seismic Risk Mitigation and Emergency Preparedness Project (ISMEP) was started in 2004 Within the scope of Law No.5902 the Prime Ministry established The Presidency of Disaster and Emergency Management in 2009. So that, General Directorate of Turkey Emergency Management under Prime Ministry, General Directorate of Civil Defense under Ministry of Internal Affairs, General Directorate of Disaster Affairs under Ministry of Public Works and Settlement were abolished and unified into one single independent authority with the act adopted by the parliament and launched its mission in June, 2009. The name of the new institution is Prime Ministry Disaster and Emergency Management Presidency (AFAD) which is dependent to the Governor at local level as the Provincial Directorate of Disasters and Emergency. Its fundamental mission is to provide administration and coordination during different disaster phases namely preparation, mitigation, response and recover (Law No: 5902) (Gulkan, 2008; Ozden, 2013) (Table 2.6).

According to Balamir's report, there are two types of approaches due to the lack of integrated disaster policy in Turkey (2011). Firstly, the funds provided by institutions such as World Bank cause the debt of the country to grow and the foreign professionals' isolated understanding excludes the Turkish professionals. It is also mentioned from a different perspective in Hyogo Implementation Report of Turkey. The report says, there took place a number of international cooperation and thus there are several duplications causing unproductive use of limited resources. The second approach is briefly mentioned as the manipulation of some strong professional lobbies. The insufficiency of interdisciplinary and multidisciplinary problem solving approaches and collaboration of different professions are still forming one of the main gaps in Turkish disaster risk management system. For example, the confined belief in retrofitting individual structures in micro scale instead of focusing from an urban point of view is not only leading to a narrow

vision in terms of financial scope but also ignoring the urban risks, vulnerabilities and public awareness. Accordingly, lack of public awareness triggers the public ignorance. Turkey is also falling behind the international policy in terms of participation. The public trainings could not reach the country wide national level. The education programs of Turkey are more likely to determine the aware ones instead of create a public awareness (Balamir, 2011).

Earthquake Department published a strategy report in this respect. Main topics of 2011-2014 Earthquake Strategy Report are to improve seismic observation network in the national scale; to improve the earthquake risk management and increase public awareness; to focus on earthquake resilient building and settling; to develop the assessment and early warning system (Earthquake Department, 2010). In 2013, the National Earthquake Strategy and Action Plan (hereafter UDSEP) was published by Earthquake Department with the contribution of several academics. UDSEP has a focus on mitigation and promotes the responsibilities of local governments and cooperation with universities in terms of seismic risk reduction and mitigation planning.

Table 2.6 Fundamental milestones of the improvements in Disaster Management System of Turkey (Source: Gulkan, 2008; Ozden, 2013)

	Fundamental milestones of the improvements in Disaster Management System of Turkey
1945	first Earthquake Maps- Building Code
1959	The Disasters Law (No. 7269) (The provisions have mainly focused on the post-disaster period);
1985	The Development Law (No. 3194) (No Standards for mitigation)
1992	Erzincan Earthquake- World Bank Loan
1999	Research Study to Revise Urban Planning and Building Code (3194) (Submitted in 10th August 1999)
2000	TCIP (Turkish Catastrophe Insurance Pool)
2000	National Earthquake Council (Abolished in 2007)
2002	Istanbul Earthquake Master Plan (IEMP)
2004	ISMEP (Istanbul Seismic Risk Mitigation and Emergency Preparedness Project SPA ISTANBUL)
2009	Three different institutions namely, Disaster Management Directorate, Directorate of Civil Defense and Emergency Management Directorate united under the name of Prime Ministry Disaster and Emergency Management Presidency (AFAD) (Law No: 5902)
2013	National Earthquake Strategy and Action Plan (2012-2023) (UDSEP)

What UDSEP (2013) generally says regarding local governments is that they are responsible for determining the urban earthquake risks, preparing earthquake risk maps, mitigating earthquakes, retrofitting public buildings. As UDSEP (2013) predicts an action for local risk reduction strategies and mitigation plans in order to reduce the seismic risk, it referres to the recent laws regarding local governments both Special Provincial Administration Law (Law No. 5302) and Municipality Law (Law No.5393). It is stated that, although the the both laws stated that SPA and Municipality is in charge of preparing disaster and emergency plans in order to prevent and mitigate disasters, there are no provincial or municipal mitigation plans prepared. Only emergency plans are prepared within the scope of the related article of law (UDSEP, 2013).

2.2.2.2.1. Obsolete Laws and '99 Changes

26th March 1913 dated Special Provincial Administration law was edited after 17th August 1999 earthquake. It says "Special Provincial Administrations could charge first aid and rescue teams in order to eliminate the disaster loss, could settle tent camps or temporary shelters, and purchase engineering or consultation services" (Official Gazette, 1999).

After the 17th August 1999 Earthquake, on 8th November 1999, a new article was added to the 3rd April 1930 dated No. 1580 Municipality Law. According to this article, by the civilian administration order, municipalities are assigned to provide rescue and relief services, help the disaster survivors either within their jurisdiction or in other provinces, districts or villages. It is stated that, this duty would be carried out by the metropolitan municipalities in metropolitan cities.

(See Appendix B for Disaster Related Decree Laws published in 1999-2000)

2.2.2.2.2. Recent Changes

In 2009, within the scope of Law No.5902 the Prime Ministry established the Presidency of Disaster and Emergency Management. So that, General Directorate of Turkey Emergency Management under Prime Ministry, General Directorate of Civil Defense under Ministry of Internal Affairs, General Directorate of Disaster Affairs under Ministry of Public Works and Settlement were abolished and unified into one single independent authority with the act adopted by the parliament and launched its mission in June, 2009. The name of the new institution is Prime Ministry Disaster and Emergency Management Presidency (hereafter AFAD) which is dependent to the Governor at local level as the Provincial Directorate of Disasters and Emergency. Its fundamental mission is to provide administration and coordination during different phases namely preparation, mitigation, response and recovery. Governor is

the utmost responsible official in charge of the conduct of Provincial Directorate of Disasters and Emergency.
Besides the Provincial Directorates of Disaster and Emergency, there are Civil Defense Search and Rescue Unions in some provinces and they work under the command of Provincial Directorate of Disasters and Emergency. The Governor has the authority regarding the expenses and assignations (including the Provincial Director).

The most recent changes regarding the Local Government regulations were done by the No.5215 Municipality Law and No.5216 Metropolitan Municipality Law. Although No.5216 Metropolitan Municipality Law went into operation on 23rd July 2004 (Official Gazette, 2004); the President of the Republic used a veto against No.5215 Municipality Law (Akyazan, 2005), and the Law No.5272 prepared in replacement was cancelled by the Constitution Court (Anayasa Mahkemesi Kararlar Dergisi, 2005; MİGM, 2012). After all, Law No.5393 was approved by the President of the Republic, published on Official Gazette on 13th July 2005, went into operation and No.1580 Municipality Law was obsolete. On the other hand 26t^{h} March 1913 dated Special Municipality Law was replaced with No. 5302 Special Provincial Administration Law.

In 2012, No.6360 Law "Establishment of Thirteen Metropolitan Municipalities and Twenty Six Districts" was accepted. According to this law, many cities were announced as Metropolitan Municipalities, and Municipality jurisdiction was extended to the city borders and Special Provincial Administrations were not in charge anymore (6360/1). This caused some alterations in local government administrative schema of Turkey. These alterations would be thoroughly discussed in the following chapters and its relation with the disaster risk management.

2.2.2.2.3. Laws in Operation

(See Appendix A for original articles)

Law No. 5302/ Special Provincial Administration Law

Law No.5302 Special Provincial Administration Law was put into effect in 2005 and the article about disasters added to the old law in 1999 was conserved and developed. 6th article of this law declares that, Special Provincial Administration in charge of emergency relief and rescue (5302/6).

Additionally, same law article 69 [1] says that Special Provincial Administrations should make "disaster and emergency plans" in order to prevent disasters and reduce the damage. It is predicted that, such a plan should be prepared with the help of the opinions of related ministries, institutions, chambers, universities and other local authorities, and should be coordinated with the other emergency management plans if existed (5302/69).

Law No. 5393/ Municipality Law

Within the content of Law No. 5393 article 53, municipalities are in charge of "disaster and emergency planning". This article predicts somehow coordination which covers the exact same duty of the Special Provincial Administration [2]. This article has the exact same sentences with Law No. 5302, Article 6 [1] [2].

As Ulutürk (2006) stated that, neither the two different laws mentions risk reduction plans. They emphasize the sort of planning for emergency and loss reduction.

Meanwhile, Municipalities get the authority for urban transformation against earthquake risk via article 73 (5393/73). Article [3] says that Municipality could apply urban transformation and development projects in order to take measures for earthquake risk. In order to announce an area as urban transformation area, demand of the related municipality, Environment and Urbanization Ministry and Ministry Council approval it is necessary. Although it was mentioned under the name of "urban transformation", according to "Article 76" transformation and renewal zones should provide physical renewal and resilient construction.

This article had been expanded and No.6306 Urban Transformation Law was established. The author states that it is needed further research to elaborate article 73 and Urban Transformation Law beyond this thesis since it covers the jurisdiction of local governments and their interrelations network. However the author believes a thoroughly research about urban transformation implementations in Turkey is necessary and she is willing to pursue such opportunities for elaboration.

Law No. 5216/ Metropolitan Municipality Law

Metropolitan Municipalities are in charge of doing disaster related planning and other preparations for the metropolitan scale; sending relief in need, proceeding fire fighting and emergency services; determining explosive and inflammable material storage; controlling the buildings in terms of fire and disaster prevention. They are responsible for evacuate and demolish disaster risky buildings. [4]

Law No. 6360/ Establishment of Thirteen Metropolitan Municipalities and Twenty Six Districts

According to the Law No. 6360 published on the No.28489 Official Gazette on 6th December 2012 in the provinces of Aydın, Balıkesir, Denizli, Hatay, Malatya, Manisa, Kahramanmaraş, Mardin, Muğla, Ordu (Law No. 6447, 22nd March 2013),

Tekirdağ, Trabzon, Şanlıurfa and Van, Metropolitan Municipalities are established as the municipal borders extended to the city territorial borders and the city municipalities transformed to Metropolitan Municipalities. The metropolitan city borders of Adana, Ankara, Antalya, Bursa, Diyarbakır, Eskişehir, Erzurum, Gaziantep, İzmir, Kayseri, Konya, Mersin, Sakarya and Samsun are extended to territorial city borders. In other words, the metropolitan municipalities are in charge within the boundaries of the whole city. Within the boundaries of the provinces mentioned in Articles 1 and 2 the villages and small town municipalities would not exist as communities anymore but will be dependent as districts and small towns to the county municipalities whom they are bounded previously. Within the territorial boundaries of İstanbul and Kocaeli, the villages are not communities anymore and they are altered to “districts” of the bounded county.

According to this law, Metropolitan Municipalities would not have Special Provincial Administrations anymore (6360/1) and a new institution called "Directorate of Investment Monitoring and Coordination" was established under the authority of the Governor. This directorate has the authority of monitoring and coordination investment services of public offices in Metropolitan Municipalities. The duty involves "the maintenance and coordination of emergency calls, disaster and emergency relief services (...)" as well (6360/34).[5]

The head of Directorate of Monitoring and Coordination of Investment is a Deputy Governor assigned by the Governor. The directorate could create minor directorates responsible for amongst other disaster relief, emergency call. The mission of the directorate will be determined through a code released by the Ministry of Internal Affairs. It has been indicated in the Law of Ministry of Internal Affairs (6581/ 28). Although this unit was established in replacement of Special Provincial Administration, it is slightly different since it is run by the central government, i.e. there is no elected board supervision as it was with the Special Provincial Administrations.

Table 2.7 Turkey Local Public Institutions Responsible for Disaster Management

City	Metropolis
• Special Provincial Administration • Municipality • Provincial Disaster Emergency and Management Directorate	• Metropolitan Municipality • Provincial Disaster Emergency and Management Directorate • Directorate of Investment Monitoring and Coordination

Law No. 5902/ Organization and Mission of the Presidency of Disaster and Emergency Management

Within the scope of Law No.5902 the Prime Ministry established the Presidency of Disaster and Emergency Management in 2009. The name of the new institution is Prime Ministry Disaster and Emergency Management Presidency (AFAD) which is dependent to the Governor at local level as the Provincial Directorate of Disasters and Emergency. Its fundamental mission is to provide administration and coordination during different disaster phases namely preparation, mitigation, response and recovery.

Besides unifying different institutions, this law is a pioneer for mentioning risk and risk management definition in regulations as a separate subject from emergency/crisis management. Law No.5902 defines "risk reduction" and "loss reduction" in separate terms. [6]

Within the scope of Law No. 5902 the missions of the Presidency of AFAD and Provincial Directorate of AFAD have been defined separately. In short, the Presidency of Disaster and Emergency consists of Committees (Disaster and Emergency High Committee, Disaster and Emergency Coordination Committee,

Earthquake Counseling Committee), Presidency Organization, Provincial Disaster and Emergency Directorates and Civil Defense Team Directorates. Presidency Organization has different directorates such as Planning and Mitigation, Response, Recovery, Civil Defense, Earthquake, Administrative Services, Strategy Development, Information Technologies and Communication.

AFAD Administrative Services Directorate has the mission to “supply logistic services in the national level and support local governments, other public institutions and non-governmental organizations.” [7] However, the relation between Disasters and Emergency Coordination Committee and local governments is not clearly identified. [8]

Provincial AFAD organization is consisted of the Provincial Directorate of Disasters and Emergency. Civil Defense teams joined to Provincial Directorate. “To prepare and apply disaster and emergency prevention and action plans for the city, in coordination with local governments and related institutions.” is amongst the duties of Provincial Directorate of Disaster and Emergency. The expenses of Provincial Directorate are provided by The Special Provincial Administration budget. However the authority to use these expenses does not belong to the town council or the town congress it belongs to the Governor. Personnel expenses are covered by the Presidency (AFAD). [9]

[ARTICLE (18)
a) Determine the hazards and risks of disasters and emergency
b) Create and apply disaster and emergency prevention and action plans for the city, in coordination with local governments and related institutions.
c) Run the city disaster and emergency management center.
d) Assess the loss and damage in any disaster and emergency cases.
e) Set up education activities regarding disaster and emergency.
f) Accredit and certificate NGOs and volunteers.

g) Prepare and apply civil defense plans for both province and county level.
h) Build and manage storage for food and equipment relief, in order to meet the needs of the community for sheltering, nourishing, health and search and rescue.
i) Fulfill the missions determined by the related regulations regarding mobilization, war preparation and civil defense services.
j) Prepare the annual budget proposals.
k) Serve as a secretary of rescue and relief committee of the province.
l) Run the services for detection, identification and disinfection of chemical, biological, radiological and nuclear materials and provide cooperation and coordination amongst the related institutions and organizations.
m) Perform the duties assigned by the mayor or the governor.]
AFAD is responsible from cooperation and coordination of public institutions, universities, local governments, the Turkish Red Crescent, related NGOs, private sector and international organizations. However coordination in disaster management which is a very high key point, the interrelations of the institutions are not very clear. [10]

Law No. 7269/ Disasters Law

According to this law, "If a disaster happens, it is the governor of that area who is responsible for acceptance of necessary emergency measures". The mission of local governments is, by the demand of Ministry of Environment and Urban Planning, to appoint civil engineers or architects for damage assessment as institutions, organizations, universities, chambers. [11]

The Law No. 7269 is "especially organizes the post-disaster process." (Balamir, 2010). Balamir (2010) also states that this law which organizes damage assessment, entitlement, indemnity and emergency planning methods should be re-evaluated within the cover of Law No. 5902 (AFAD Law). This law does not have update statements according to Law No.5902.

Law No. 3194/ Development Law

According to Balamir (2010) Development Law is the genuine tool for application of recent risk reduction policy. Because, while preparing urban development plans considering risk reduction principles and being supervised by local governments makes it possible to apply disaster risk management. However, the law in charge is only limited by stating the proper drawing methods of geological hazards (Balamir, 2010) and Turkish Building Code (No. 3194) does not consider disaster mitigation properly (Balamir, 2001). A local government of a resilient city would understand its dangers, and would develop a strong, local information base on hazards and risks, on who is exposed and vulnerable.

Turkey Disaster Risk Reduction Platform

Via the No.2011/1320 cabinet decision, Turkey Disaster Risk Reduction Platform has been established (Official Gazette, 2011). The aim of the platform is to act as cooperation and counseling board in order to raise public awareness towards disasters and to establish persistence on risk reduction studies, to determine risk reduction needs, follow the practice in every level plans, policy and programs. It was led by the AFAD President. The Department of Chief of Staff, ministries, other public institutions, universities, local governments, press, professional associations, non-governmental organizations and private sector representatives are the members of the platform. Although, it never has a meeting since it was constituted; in UDSEP it is stated that the platform and subcomissions will be established by AFAD. The significant duties of the platform are as followed:

-Determining the needs and make proposals for reducing the disaster risks in every field and promote internationally

-Integrating disaster risk reduction vision to the development policies and programs

-Supporting disaster risk reduction policies and strategies

-Watching the compatibility of risk reduction affords to Hyogo Framework for Action and reporting the results

-Supporting public disaster awareness programs

-Documenting and sharing the results of disaster risk reduction process on the national and international level

-Pioneering a system which is for institutions and organizations to share the information and experience gained via national and international contact regarding disaster risk reduction

-Supporting central and local governments to establish identical or similar structures regarding disaster risk reduction. (Official Gazette, 2011)

Law No. 6306/ The Law regarding Transformation of Areas under Disaster Risk

This law (31st May 2012, 28309 Official Gazette) determines the method and principals while recovering, renovating, refining the areas under disaster risk and risky buildings out risky fields in order to provide healthy and safe living spaces.

The Ministry of Environment and Urban Planning, Local Governments and TOKİ is in charge of this law. According to that, Local Governments are responsible for determination of risky buildings. For other issues, Ministry and TOKİ are in charge. When determining the risky areas, Ministry or the Government asks for the opinion of AFAD Presidency. And the determined field would be decreed by the Cabinet.

Decree Law No. 644/ Governance and Mission of the Ministry of Environment and Urban Planning

According to this regulation, Ministry is in charge of "preparing, approving and monitoring risk management and mitigation plans and preparing and approving geological surveys accordingly."

In addition, on the fields determined by Law No. 7269 such as buildings, general shelters, special security zones, explosive production facilities, gas stations; the ministry is responsible for mapping, surveying and planning and establish a coordination between ministries, local governments and chambers regarding planning.
The ministry is generally in charge of preparing and approving in every type and scale of transformation plans regarding areas under risk, reserved building areas and areas with buildings under risk as explained in Law. No 6306.

The author states that it is needed further research to elaborate article 73 and Urban Transformation Law beyond this thesis since it covers the jurisdiction of local governments and their interrelations network. However the author believes a thoroughly research about urban transformation implementations in Turkey is necessary and she is willing to pursue such opportunities for elaboration.

Law No. 4708/ The Building Inspection Law

The Building Inspection Law, made the geological surveys and detailed studies mandatory according to the urban development plans in every city. According to this law, before starting a construction in the urban field geological and geotechnical survey reports must be carried out in order to determine the risks and take measures.

According to this law, the Ministry of Environment and Urban Planning, Building Inspection Firms, Municipalities, Metropolitan Municipalities, Governorships,

Chambers share the responsibility and there is a hierarachy for auditing. The building inspection firms check the project and each document and the related institutions controls the firm.

The Code of Disaster and Emergency Response

Right before the submission of this thesis, "The Code of Disaster and Emergency Response" was published on 18th December 2013 (Official Gazette, 28855). It needs further research in order to understand and evaluate the practice rightfully keeping in mind that a code cannot ignore any law. However general points regarding the code are as followed: first of all, the decree has a name covering response. Thus it cannot be evaluated in terms of risk reduction or mitigation. However it can be criticized for not having risk content. According to this decree, "Disaster and Emergency Plans" are separated in terms of content; however it has been centralized in terms of authority (ministries are in charge mostly). Disaster and emergency plan is not defined. It mentions a "pre-disaster response plan", it is not clear whether it is intended to mention preparedness plans. A Turkey disaster response plan is mentioned. It predicts a centralized attitude. However it may be considered positive to have standard countrywide.

Tablo 2.8 Summary of Local Government and Disaster Management Relations via Regulations in Turkey

		Special Provincial Administrations	Municipality	Metropolitan Municipality	Provincial Disaster Emergency and Management Directorate	Presidency of Disaster Emergency and Management	Directorate of Investment Monitoring and Coordination	Turkey Disaster Risk Reduction Platform
PRE-DISASTER		-Disaster and emergency planning (5302/69) -Preparing equipments (5302/69)	-Disaster and emergency planning (5393/53) -Preparing equipments (5393/53) -Evacuate and demolish risky buildings (6360/7) -Make Inspections According to the Building Inspection Law (4708)	Prepare metropolitan scale disaster plans adapted from provincial level (5216/7; 6360/7) -Make Inspections According to the Building Inspection Law (4708)	Preparing and practicing disaster and emergency plans in coordination with local governments and other public institutions(5902/18) Determining the hazards and risks(5902/18) Trainings for society(5902/18)	Unify the institutions regarding disaster and emergency management	A directorate of disaster relief and emergency call can be established(6360/34)	Raise public disaster awareness Disaster risk reduction affords Establish a disaster experience sharing system between institutions Provide a similar platform for local governments
RELATION WITH OTHER INSTITUTIONS		-Disaster and emergency plans should be prepared with the help of the opinions of related ministries, institutions, chambers, universities and other local authorities and should be coordinated with the other emergency management plans if existed (5302/69).	-Disaster and emergency plans should be prepared with the help of the opinions of related ministries, institutions, chambers, universities and other local authorities and should be coordinated with the other emergency management plans if existed (5393/53) -Urban Transformation Site: Related municipality's demand, Environment and Urban Planning Ministry's offer, Cabinet decision(5393/73) -Common education programs with other institutions(5393/53) -Make Inspections According to the Building Inspection Law (4708)	-Control residential, commercial, industrial buildings and public institutions in terms of disaster precautions and give permission according to regulations. -Support district municipalities for risky building demolitions(6360/7) -Make Inspections According to the Building Inspection Law (4708)	Expenses are covered by Special Provincial Administrations' budget via the authority of the Governor. Personnel expenses are covered by the Presidency (AFAD)(5902/18) Accredit NGO's regarding disaster ad emergency management Prepare and practice disaster and emergency prevention and response plans in coordination with local governments and public institutions. Determine, identify and cleanse of CBRN material in coordination with related institutions.	Coordination and cooperation with other public institutions, universities, local governments, Turkish Red Crescent, related NGOs, private sector, international institutions.	Under the command of Ministry of Internal Affairs.	Led by the AFAD President. The Department of Chief of Staff, ministries, other public institutions, universities, local governments, press, professional associations, non-governmental organizations and private sector representatives are the members of the platform.
RESPONSE AND POST-DISASTER		Emergency relief and rescue(5302/6) Relief and support in case of an emergency in another town(5302/69)	Relief and support in and out of municipality borders in case of a fire or disaster.	Equipment supply to disaster field and carry out firefighting and emergency relief services.	Run provincial disaster and emergency management center Loss and damage assessment		To coordinate, carry out and control emergency calls, disaster and emergency relief services(6360/34)	-
RELATION WITH OTHER INSTITUTIONS					Coordination and cooperation with other public institutions, universities, local governments, Turkish Red Crescent, related NGOs, private sector, international institutions.			-

2.4. CONCLUSION OF THE CHAPTER

Yokohama Strategy and Plan of Action for a Safer World, Principle 7:
"Vulnerability can be reduced by the application of proper design and patterns of development focused on target groups by appropriate education and training of the whole community."
(UNISDR, 1994)

United Nations Secretary-General, Ban Ki-moon, states that "The more governments, UN agencies, organizations, businesses and civil society understand risk and vulnerability, the better equipped they will be to mitigate disasters when they strike and save more lives" (UNISDR). Thus, it is acknowledged that not only community participation and culture of prevention "transform vulnerable groups into disaster-resilient communities" and it is the key in DRR, but also sustainable resource use. Community participation builds capacity, trust at the local level, and reduces political manipulation by special interest groups. Culture of prevention dictates how people perceive risk and their motivation to enhance resilience or aggravate vulnerability. Knowledge and confidence are the keys to cope with the impacts of hazards (Bendimerad, 2006). As cited in The Financial (2011), Margareta Wahlstrom, Special Representative of the Secretary-General for Disaster Risk Reduction as UNISDR, stated that, "While it may be hard to draw solace from the current state of affairs, perhaps we can take some measure of comfort in knowing that even more lives would have been lost, and damage been more widespread, had the Japanese Government not made disaster reduction a high priority over a long period of time.".

The role of public participation and awareness is significant, since through education it is possible to invest to prevent disaster. Yokohama Strategy (1994) states that: We cannot stop natural calamities, but we can and must better equip individuals and communities to withstand them. Thus, it is vital to make individuals more environmentally aware and more receptive to adopt against hazards and environmental degradation. As Balamir stated at AESOP (2010), UN efforts are a set

of principles that provides the key to the conduct of new disasters management at all levels (international, national, regional, settlements, local). “UN documents fundamentally draw attention to that ’response mechanisms for disasters are never enough, pre-emptive risk reduction is the key’ to disaster management and preparations, pre-disaster risk reduction would reduce the disaster loss, for sustainable development, the priority should have been given to risk identification and risk reduction in every level, the genuine targets in risk reduction are large cities and local governments, for responsibility share, participatory organs should be formed, the most fragile urban poor is likely to be targeted by most of the risks in a multi risk environment, urban and local governance is a contemporary challenge and should be improved.”

While the international disaster policies had been published by the United Nations since 1990 they were focused on mitigation, disaster reduction, participation and development; Turkey’s legislation laws were basically concerned about recovery, i.e. post-disaster period and a major idea of “fix it when disaster strikes” was taken up seriously. However after the 1999 earthquakes a shift of focus had appeared such as Turkish Catastrophe Insurance Pool (2000), National Earthquake Council (2000-2007), Istanbul Earthquake Master Plan (2002); ISMEP (2004); Establishment of AFAD (2009), Earthquake Strategy Report (2011), or UDSEP (2013). However DRR and mitigation planning are basically ignored in Turkish legislations. Turkey is not focused on mitigation strategies neither in DRM policies nor urban development planning. It is needed for not only the emergency exercises but also mitigation practice. Turkey is still working on a risk reduction strategy. Earthquake Department published a strategy report in this respect. Main topics of 2011-2014 Earthquake Strategy Report are to improve seismic observation network in the national scale; to improve the earthquake risk management and increase public awareness; to focus on earthquake resilient building and settling; to develop the assessment and early warning system (Earthquake Department, 2010). In 2013 UDSEP was published by Earthquake Department of AFAD. UDSEP has a focus of mitigation and risk reduction with the responsibility definition of local governments. UDSEP indicates

that the local governments are responsible for determining the urban earthquake risks, preparing earthquake risk maps, mitigating earthquakes, retrofitting public buildings. As UDSEP (2013) predicts an action for local risk reduction strategies and mitigation plans in order to reduce the seismic risk, it referred to the recent laws regarding local governments both Special Provincial Administration (Law No. 5302) and Municipality Law (5393). It is stated that, although both laws stated that SPA and Municipality is in charge of preparing disaster and emergency plans in order to prevent and mitigate disasters, there are no provincial or municipal mitigation plans. Only emergency plans are prepared within the scope of the related article of law (UDSEP, 2013). On the other hand, AFAD (2013) strategy plan 2013-2017 has a chapter risk focused combined disaster management system. It determines disaster management in four phases, namely loss reduction, preparedness, response and recovery. As mentioned before, loss reduction is not risk reduction. Although the plan mentions risk reduction and a transition from crises management to risk management, it is not elaborated and it involves terminology conflicts.

In the local level, with the recent legislations and political structure, Turkey is far behind the international schedule. Both administration and public should adopt the mitigation efforts (Balamir, 2007). As it is previously mentioned and strongly suggested by Balamir, compared to the recent international policy, Turkey was in need of a National Platform which should be over politics. Turkey, now, has a risk reduction platform which responsible for practicing and adapting Hyogo Framework on paper however it is not visible yet. In the local government regulations, it is undetermined the interrelations of the institutions. It has not been clarified how the cooperation, coordination and organization would be.

Throughout the regulations regarding local governments, the interrelations of the institutions are vague. The cooperation is not clearly explained. Special Provincial Administration and the Municipality are responsible of making disaster plans via defined by the exact same sentences. Provincial Directorate of AFAD is in charge of making and implementing these plans in cooperation with local governments. The

coordination of the institutions with each other, the coherence process and level of the one plan with another are vague. The cooperation with Provincial AFAD is vague. They work under the Special Provincial Administrations which is a local government, and bounded to the Governor which represents the central government. In addition there is the Presidency of AFAD bound to the prime ministry. How this system is going to work after the abolition of Special Provincial Administrations with the Law No.6360 is not yet elaborated. The authority of the Directorate of Investment Monitoring and Coordination replacing Provincial Special Administration is vague and it strengthens the central authority. Whether there will be an elected supervision mechanism or not is not mentioned. There is no declaration for mitigation plans or post disaster plans. In Local Government legislations, there is no terminology covering any “risk” notion (risk reduction, mitigation, disaster risk management, urban risk, and disaster risk). It is vague how Turkey Disaster Risk Reduction Platform will be established in practice and there is no action for the formations under local governments yet.

There is duplication of authority regarding disaster plans. There is no definition and scope of disaster plan or method of preparing it. Different jurisdictions of authority in disaster risk management are causing obscure to form a holistic system. If it is an emergency response plan why it is mentioned as "disaster and emergency plan"? If it is a response and recovery plan why does not it say so? There is conflict in terminology, and duplications and ambiguity in authority since the legislations are lacking in referencing each other and lacking to form a well-defined network between different institutions. Thus, in order to understand these gaps and the practice of the disaster related legislations on site, field studies have been carried out at local level. The following chapter covers the field studies.

CHAPTER 3

FIELD STUDIES

"I wanted to return here, because wherever we go, they didn't understand us."[6]
In 17th August 1999, Marmara was hit by an earthquake with the magnitude of 7.4.

3.1. METHODOLOGY

In order to understand the implementation of regulations and to be able to answer the questions asked in the previous chapter regarding interviews conducted amongst the employees of local governments of two different towns in Marmara region one municipality and one metropolitan municipality. Structured interviews were carried out (See Appendix C) in Yalova and Kocaeli.

3.1.1. Research Aims

The main concern of this study was to understand the coordination of the different local authorities which were appointed to have duties considering disaster management and to be able to understand their approach towards disaster management. It was thought to have an opinion regarding pre-disaster preparations, mitigation to understand the risk perception, preparedness level, and response level of the local governments.

3.1.2. Research Method

Throughout the research study of this thesis, many reviews had been made in order to examine the responsibilities of local governments in disaster risk management in

[6] "Buraya dönmek istedim çünkü, gittiğimiz yerlerde bizi anlamadılar."

Müge İplikçi, Yıkık Kentli Kadınlar, s.85

Turkey and understand the practice of the disaster regulations. First of all, a wide review of literature has been carried out in order to combine the relations of disaster risk management, role of local governments and international disaster policies regarding the role of local governments. When it came to Turkey, it was vital to understand the legislative system of local authorities and their role in disaster risk management system. Therefore, the laws had been examined in order to understand how the disaster risk management works in local level and how the coordination and cooperation works through different institutions. However, as it could be found in the previous chapter, there are some ambiguity and conflicts in legislations. Moreover, there are vague parts and gaps regarding coordination and cooperation. So that, it was decided to visit some certain local sites in order to collect more information and run in-depth interviews in order to understand the local government practice in disaster risk management system of Turkey. As a result, to collect qualitative data was aimed in order to understand the human practice of regulations and elaborate the gap in system with the help of interviewees' experiences and knowledge. The interview questions were structured, open ended questions to be able to allow the participants to talk freely about their experiences and opinions. The participants were selected from the certain local institutions that showed interest in our study. The interview analysis was made by key themes. The consensual qualitative research method (hereafter CQR) had been used as a tool while analyzing the interviews (Hill et al., 2005). CQR is a method to make qualitative research analyses. In this analyses, a two-member analyze team developed a list of themes from the transcribed interviews independently and coded the transcripts for categories via cross-analyses which was revised and modified until a consensus was reached by the team. And the auditor checked and revised the cross analysis and tallying in order to confirm whether the categories and coding reflected the raw data as closely as possible. The auditor was member of the cross analysis team, yet it is not recommended in the updated CQR article by Hills et al.(2005), anymore. However, due to the limited time, this is the main shortcoming of the qualitative analysis of the data.

3.1.3 Research Locations

Yalova and Kocaeli are not selected to be investigated peculiarly, yet they were selected to be good sampling since they have had passed through severe disasters 15 years ago and they both would be above the average in terms of their local disaster management system, preparedness, mitigation, response level and for a future recovery. Two cities are located on high seismic zone (Figure 3.1) and have other risks as well such as flood, avalanche, land slide, fire, forest fire, industrial fire. In addition, they would be good examples of for both metropolitan municipality and a municipality.

Table 3.1 Yalova and Kocaeli
(Source: yalova.gov.tr; kocaeli.gov.tr)

	Yalova	**Kocaeli**
Region	Marmara	Marmara
Nearest Cities	Kocaeli, Bursa	Bursa, İstanbul, Sakarya, Yalova
Population	211 799	1 552 408
Population Density	250	445
Area	847 km^2	3 418 km^2
Counties	Yalova, Çiftlikköy, Çınarcık, Altınova, Armutlu, Termal	Başiskele, Çayırova , Derince, Darıca, Gebze, Dilovası, Gölcük, İzmit, Kandıra, Karamürsel, Kartepe, Körfez
Municipalities	15 Municipalities	13 Municipalities
Villages	42 Villages	243 Villages
Growth Rate	13th (out of 81 Provinces)	4th (out of 81 Provinces)
Education Level	96.9 %	96.2 %
Universities	1	2
Responsible Local Government	Yalova Municipality Special Provincial Administration	Kocaeli Metropolitan Municipality Special Provincial Administration (Until 2014 Local Elections)
Disaster Responsible Institute	Yalova Provincial Directorate of Disaster and Emergency Management	Kocaeli Provincial Directorate of Disaster and Emergency Management
Relevant Legislation	Law No: 5302, 5393, 5902	Law No: 5302, 5216, 6360, 5902
Hazard Type	Earthquake, Inundations, Land Slides, Industrial Accidents	Earthquake, Inundations, Land Slides, Industrial Accidents

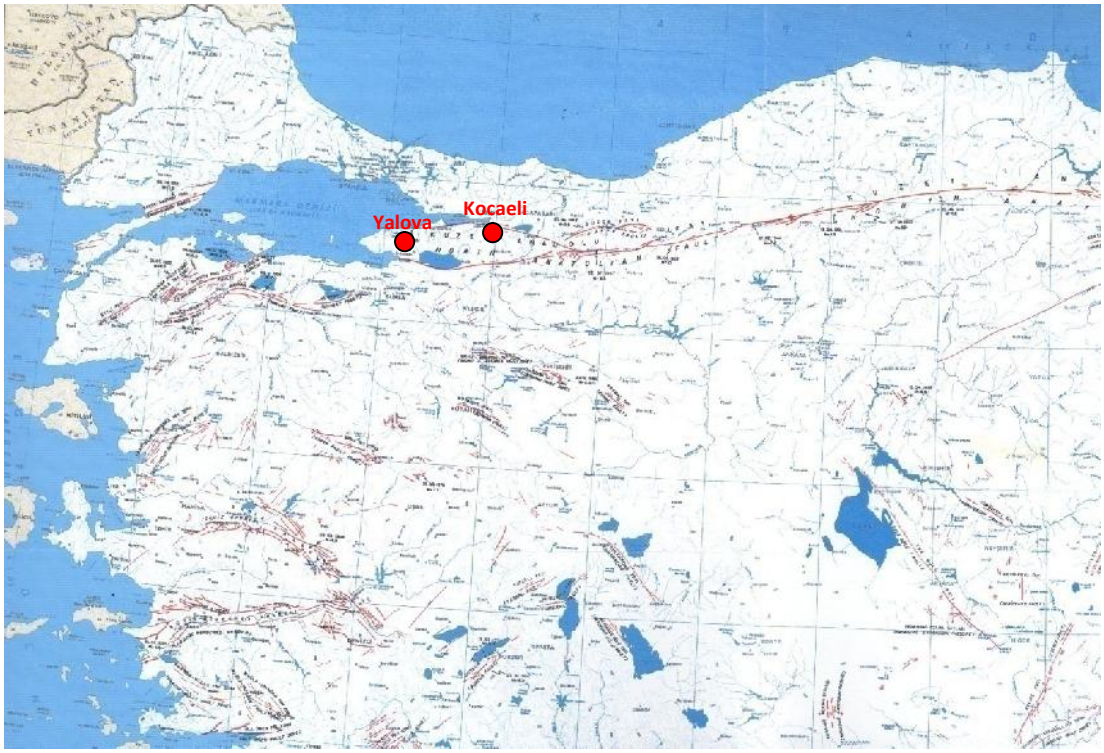

Figure 3.1 Case Study Locations on Active Fault Line of Turkey 2012: North-West of Turkey (MTA: General Directorate of Mineral Research and Exploration)

3.1.4 Interview Details

This study has subjected the local authorities. Thus within the cover of the study, a total of 15 interviews were undertaken with the government employees in Yalova and Kocaeli. The aim of the study has been informed the interviewees before the study although some additional participants were involved to answer some specific questions.

At first, the interviews were undertaken with 10 participants face to face in Yalova and Kocaeli. However since there was not sufficient information regarding mitigation planning, it was considered to have some information from development and zoning departments of the municipalities. Eventually 4 more interviews were undertaken on the phone, regarding urban development plans and building inspection. Those participants are not analyzed through CQR method, however their

informative explanations via specific questions are evaluated as the practice of legislations (See the Appendix C). They were asked exactly the same open ended questions and their answers are evaluated in the section of '99 Earthquakes. Interviewees remain anonymous due to the legal restrictions.

Table 3.2 Interviewees

	Institution	Field of Profession	Gender
1	Yalova ProvincialAFAD	Public Administration	Male
2	Yalova Provincial AFAD	Search and Rescue	Male
3	Yalova Provincial AFAD	Finance	Female
4	Yalova Municipality	Fire Station	Male
5	Kocaeli Metropolitan Municipality	Civil Engineer/Urban Transformation[7]	Female
6	Kocaeli Metropolitan Municipality	Civil Defense Specialist	Male
7	Kocaeli Metropolitan Municipality	Fire Station	Male
8	Kocaeli SPA	Support Services	Female
9	Kocaeli Provincial AFAD	Civil Defense	Male
10	Kocaeli Provincial AFAD	Disaster Risk Reduction	Female
11	Kocaeli Metropolitan Municipality	Urban Planning[8]	Female
12	Kocaeli Metropolitan Municipality	Urban Planning[9]	Female
13	Yalova Municipality	Urban Planning[10]	Female
14	Yalova Municipality	Urban Planning/ Civil Engineer[11]	Male

[7] Explained Kocaeli Urban Transformation and Renovation Master Plan and refused to answer other questions
[8] Four seperate questions asked regarding urban planning and building inspection
[9] Four seperate questions asked regarding urban planning and building inspection
[10] Four seperate questions asked regarding urban planning and building inspection
[11] Four seperate questions asked regarding urban planning and building inspection

3.1.5 Interview Results

Table 3.3. Themes and Categories from the Cross Analysis of the ten officials from local governments and institutions of Yalova and Kocaeli

Themes and Categories	Frequency Type
I. Disaster Plan	
Present planning studies are emergency response plans and/or covers the post-disaster phase	**Typical**
A disaster plan should be prepared locally (but) there is an unevenness of disaster planning and preparedness of different local units	**Typical**
Disaster plans should have sanction	**Variant**
We have a disaster scenario	**Typical**
Disaster management is perceived as covering the post-disaster period	**Typical**
II. The Responsible Actors	
Urban risks should be determined by local governments/ commissions formed by local governments and/or universities and earthquakes and industrial accidents are the main two disaster risks in the area	**Typical**
AFAD marks the disaster-exposed fields to the urban plans as risky fields; the authority regarding urban risks and urban transformation belong to the Ministry of Environment and Urban Planning	**General (All AFAD officials agree)**
Engineers, architects, planners are not directly involved in disaster management however they have the responsibility in disaster risks	**Typical**
AFAD is/should be the most authorized institute in disaster (risk) management system of Turkey	**Typical**
Politics should not be involved in disaster (risk) management	**Variant**
III. '99 Earthquakes	
The major problems were lack of coordination/ organization/ break of communication AND unpreparedness/ lack of education/ unawareness/ lack of building inspection	**General**
There should have been disaster preparedness plans and people should have been educated or participated	**Typical**
99 earthquake experience caused changes for our institution	**General**
IV. Platform	
It would be a positive input	**Typical**
V. Coordination and cooperation of the institutions	
Interrelations of the institutions are weak and/or there is conflict/vagueness in authority caused by legislations	**General**
The duty of AFAD is basically coordination	**Typical**

Note. general (n=9-10); typical (n=5-8); variant (n=2-4) (Hill et al.1997; 2005)

Table 3.3 contains 5 themes and 16 categories that emerged from the transcribed interviews. The themes are determined form the general topics that the participants were asked and openly talked about: (i) disaster plan, (ii) responsible actors, (iii) '99 earthquakes, (iv) platform, and (v) coordination and cooperation of the institutions. For frequency description (Hill et al., 1997), a category is identified as general when it included almost all cases (n =9–10), as typical when it applied to half of the cases (n =5–8), as variant when it applied to a few cases (n =2–4).

Disaster Plan

Table 3.4 Disaster Plan Themes

I. Disaster Plan	
Present planning studies are emergency response plans and/or covers the post-disaster phase	**Typical**
A disaster plan should be prepared locally (but) there is an unevenness of disaster planning and preparedness of different local units	**Typical**
We have a disaster scenario	**Typical**
Disaster plans should have sanction	**Variant**
Disaster management covers the post-disaster period	**Typical**

Note. general (n=9-10); typical (n=5-8); variant (n=2-4) (Hill et al.1997; 2005)

Present planning studies are emergency response plans and/or covers the post-disaster phase

Most of the interviewed officials perceived disaster plans as response or emergency plans since they expressed that, present disaster planning works are emergency response plans and/or they cover the post-disaster phase (Table 3.4). Yalova AFAD officials confirmed that pre-disaster studies such as deciding firm ground were the duty of the Ministry (Environment and Urban Planning) but what they do regarding pre-disaster period is preparedness which is explained as “to be prepared for disaster response period in advance by proper planning”.

On the other hand, one of the Kocaeli Metropolitan Municipality officials confirmed that, in 2009 TÜBİTAK MAM, Development and Urban Planning Directorate, Earthquake and Ground Directorate studied a ground classification, a macro zoning that dividing Kocaeli into eight regions. However he adds, “Generally we, in Turkey, are fond of the response section. I believe, this is since we are Mediterranean, we like the rush and friendliness. (…)There is no planning for either pre or post-disaster social and psychological solidarity.” He furthermore expressed that, Turkey was ready in Van regarding response, search and rescue. “110 people were saved under the rubbles. It actually is a record. (…) However, although we effectively did the first response, we did not focus on the social and psychological issues.” Another participant also pointed out that lack of communication between different units caused a Minister to tell people go back their houses and when a second earthquake hit, more people died because they were actually in damaged buildings. As the result of cascading events (Table 3.5) involving lack of social support providing basic needs, there were life losses due to the second earthquake in Van (Basbug, et al., 2013). [12]

[12] "The interviews and observations on the initial damage assessment after the October 23, 2011 earthquake showed that the assessment seems to be inadequate. This might be the main reason why life losses occurred in the November 9, 2011 earthquake. The collapse of Bayram Hotel in Van city center is an outcome of the lack in initial damage assessment. Some homeowners were advised to return their homes without having time for accurate initial damage assessment due to the large need for tents and also severe weather conditions in the region." (Basbug et al., 2013).

Figure 3.2 Yalova Alternative Evacuation and Relief Roads Map. (Source: Yalova AFAD)

A Kocaeli AFAD official stated that, present disaster plans do not cover pre-disaster period. Disaster plans basically determines the action plan after a disaster hits. He affirmed that they had response plans but not risk reduction plans. “How are we going to solve the victimization in the shortest period of time and in easiest way? That is the fundamental purpose of our disaster plans.”

A disaster plan should be prepared locally (but) there is an unevenness of disaster planning and preparedness of different local units

Another issue participants mentioned was that a disaster plan should have been prepared locally, however there is unevenness between different local units and there is no standard. For instance an official from Yalova AFAD stated that the Municipality and SPA Laws express the disaster plan quite well. The features of the province should be taken into consideration while preparing a disaster plan instead of a plan *deus ex machina.* Another participant from Kocaeli Metropolitan Municipality expressed that a disaster plan should be prepared locally. “If you do not

start this at house level, the government cannot do it. (…) You are on your own during the very first seventy-two hours. You are in charge; you will decide what to do." He adds it is a good way of localizing disaster plans by strengthening NGOs such as Neighborhood Disaster Volunteer Foundation (hereafter MAG). He and an official from Yalova Municipality complain about the unevenness of different provinces, different districts, and different local units. On the other hand, although Kocaeli AFAD confirms that they have a good cooperation with the Kocaeli Metropolitan Municipality he adds that it could not be concluded as it works that way in every town. "Another city might not even have a plan, or maybe it is not pursued, or may be not updated." he said. They all suggested that it is important to make these units even to a standard form and set up a balance in terms of standards, equipments, vehicles and personnel.

Table 3.5 Cascading Events of Casualties in Van Earthquake (Prepared by author according to Basbug et al., 2013)

1	2	3	4	5	6	7	8	9	10
Inadequate geological	**Flawed zoning**	**Inadequate building inspection**	**Low risk awareness**	**Earthquake, Van October 23, 2011 (M=7.2)**	**Collapsed buildings and casualties**	**Lack of social organization for basic needs and severe weather conditions**	**Lack of damage assessment**	**Earthquake, Van November 9, 2011 (M=5.6)**	**Collapsed buildings and more casualties**

Figure 3.3 An example of temporary sheltering zone from Gölcük, Kocaeli. (Source: Kocaeli Metropolitan Municipality)

We have a disaster scenario; however disaster plans should have sanction

Most of the participants affirmed that they had a disaster scenario. Although the level or the method has not been examined, Figure 3.2 and Figure 3.3 illustrate some examples from local disaster preparedness plans. However some officials additionally expressed that disaster plans should have sanctions since it remains on paper and not being practiced (Table 3.4). An official from Kocaeli Metropolitan Municipality stated “Legally, governors would have disaster plans prepared. However who does the auditing, how does the system work? There is no layout for these. Who bring the governors or mayors to book?”

Disaster management covers the post-disaster period

It is important to clarify that, in Turkey, institutions attained to have a role in DRM have the term "Disaster Management" in their title such as Disaster and Emergency Management Presidency. However as it was explained in the previous chapters Disaster Management has the same meaning with Emergency Management. If it is meant only Emergency Management there is a conflict about the reason it is called "Disaster and Emergency Management". Although it should have been used as Disaster Risk Management, it can be assumed Disaster Management -as a term- is used instead of Disaster Risk Management in Turkey. However whether it is used as the term or not it is mostly perceived as Emergency Management.

The Responsible Actors

Table 3.6 Responsible Actors Themes

II. The Responsible Actors	
Urban risks should be determined by local governments/ commissions formed by local governments and/or universities and earthquakes and industrial accidents are the main two disaster risks in the area	**Typical**
AFAD marks the disaster-exposed fields to the urban plans as risky fields; the authority regarding urban risks and urban transformation belong to the Ministry of Environment and Urban Planning	**General (All AFAD officials agree)**
Engineers, architects, planners are not directly involved in disaster management however they have the responsibility in disaster risks	**Typical**
AFAD is/should be the most authorized institute in disaster risk management system of Turkey	**Typical**
Politics should not be involved in disaster management	**Variant**

Note. general (n=9-10); typical (n=5-8); variant (n=2-4) (Hill et al.1997; 2005)

Urban risks should be determined by local governments/ commissions formed by local governments and/or universities and earthquakes and industrial accidents are the main two disaster risks in the area

There was limited expression regarding urban risks. In addition regarding both Yalova and Kocaeli; earthquakes and industrial accidents are considered two main disaster risks in the area by the participants, since they both are settlings on the fault line (Figure 3.4) (See Appendix E) and industrial areas. However inundations, avalanches, landslides were also mentioned as disaster risks and building quality and still standing damaged buildings since 1999 are also mentioned as urban risks in both cities.

Most of the interviewees stated that urban risks should be determined by local governments or commissions formed by local governments and/or universities (Table 3.6). An official from Yalova AFAD put this in a clear statement by saying “Urban risks should be determined by who is going to do the zoning. It should have been analyzed scientifically and decided by both the local government councils.”

AFAD marks the disaster-exposed fields to the urban plans as risky fields; the authority regarding urban risks and urban transformation belong to the Ministry of Environment and Urban Planning

All AFAD officials stated that AFAD marked the disaster-exposed fields regarding landslides to the urban plans as risky fields however the general authority regarding disaster risks belongs to the Ministry of Environment and Urbanization. An official from Kocaeli Provincial stated that they would enter the related works to the GIS system of the Metropolitan Municipality and they prepare rainfall reports and check river rehabilitations. She stated "We check the landslide zones and if there is a building in the area we communicate with the district municipality and the building

would be evacuated. Municipality shows the dwellers another location to settle and financially helps some. We provide the communication between."

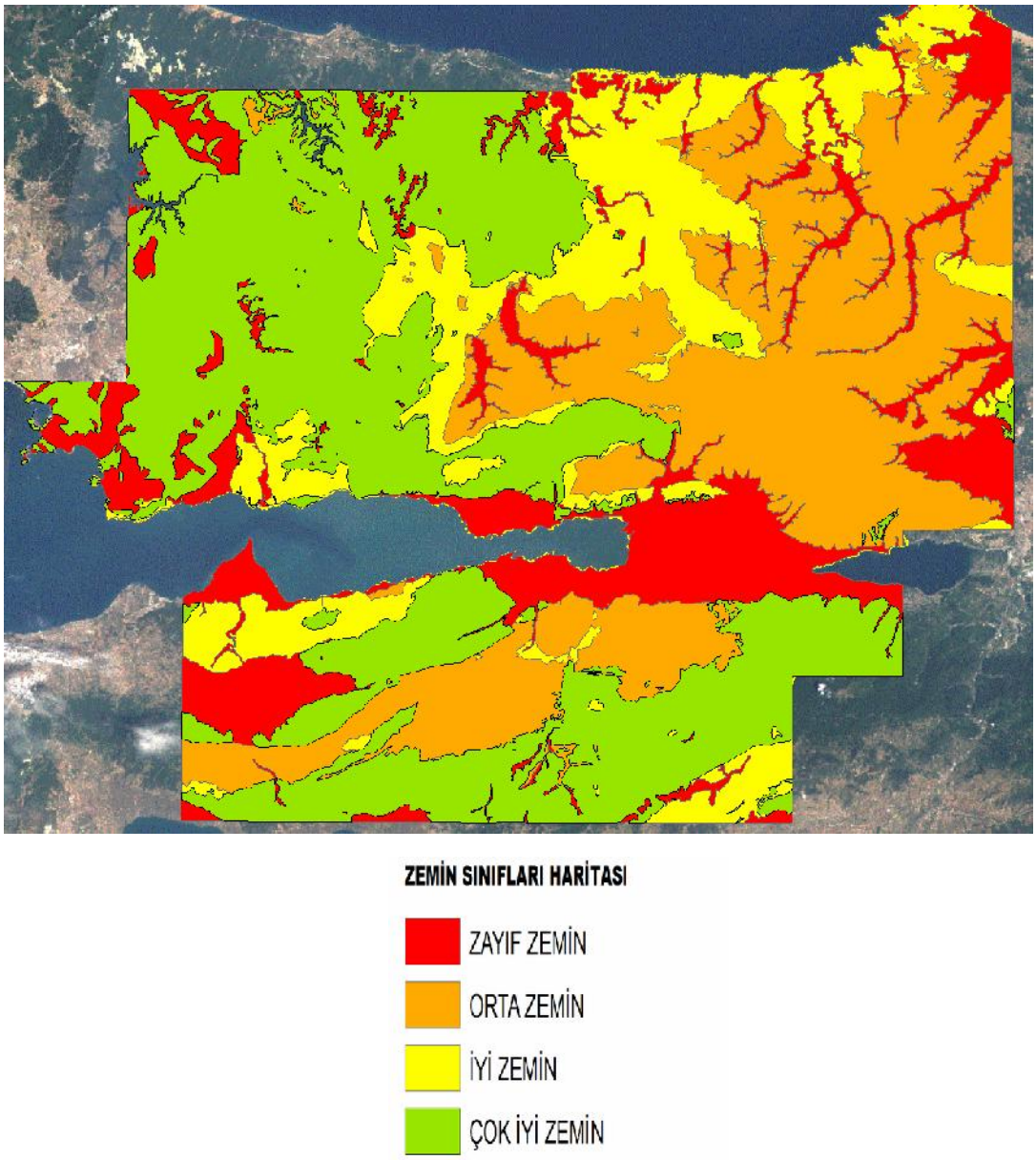

Figure: 3.4 Kocaeli Ground Zoning Map

(Source: kocaeli.bel.tr)

Engineers, architects, planners are not directly involved in disaster management however they have the responsibility in disaster risks

According to the most of the participants; engineers, architects, planners are not directly involved in disaster management however they have the responsibility in disaster risks in terms of zoning and building inspection, mostly. The reason why mentioned professions would not count in disaster management is that the disaster management is mostly perceived as emergency management and defined that way somehow. A SAR specialist expressed his concerns. "Engineer would not go under the rubble. Just knows the calculation. (...) However everything would be different if he ever calls a SAR team member and listens to." Another one said: "An engineer should know emergency response as good as a SAR employee. (...) He should also invite people to awareness and sensibility."

AFAD is/should be the most authorized institute in disaster (risk) management system of Turkey and politics should not be involved in disaster (risk) management

On the other hand AFAD is considered as or to be the most authorized institution in disaster (risk) management by most of the interviewees. However there are conflicts regarding to which authority AFAD should be bound. Both regarding local governments and central governments, some participants expressed that politics should not be involved in disaster (risk) management.

'99 Earthquakes

Table 3.7 '99 Earthquakes Themes

III. '99 Earthquakes	
The major problems were lack of coordination/ organization/ break of communication AND unpreparedness/ lack of education/ unawareness/ lack of building inspection	**General**
There should have been disaster preparedness plans and people should have been educated or participated	**Typical**
99 earthquake experience caused changes for our institution	**General**

Note. general (n=9-10); typical (n=5-8); variant (n=2-4) (Hill et al.1997; 2005)

The major problems were lack of coordination/ organization/ break of communication AND unpreparedness/ lack of education/ unawareness/ lack of building inspection

Most officials agreed that major problems of 1999 earthquakes were lack of coordination/organization/break of communication networks and unpreparedness/lack of education/ unawareness/ lack of building inspection (Table 3.6). According to some AFAD and municipality officials, lack of building inspection was the main reason why 1999 earthquakes turned into devastating disasters. On the other hand, during the response period and aftermath, break of communication networks was one of the major drawbacks. It is recorded that, for 24 hours the radio signals were off. The inadequate number of the personnel and equipment (especially regarding SAR teams) were two of the others. Another issue was lack of organization and coordination due to lack of preparedness. It caused a chaos for temporary sheltering since there was either no disaster plans prepared or they were not practical.

There should have been disaster preparedness plans and people should have been educated or participated

Most participants agreed that when the earthquake stroke Marmara in 1999, there should have been disaster preparedness plans and people should have been educated regarding disasters. One of the Kocaeli AFAD officials expressed that awareness should have been imposed to people by informing with the help of either local or central government. He indicated that, disaster awareness spots on TV are never on prime time even nowadays and additionally said "They fulfill their social responsibility when no one is watching. This requires individual sensibility and it comes via education."

99 earthquake experience caused changes for our institution

Most of the interviewees expressed that 1999 Earthquake experiences caused some changes for their institution. The most fundamental and recent change according to AFAD officials is expressed as the formation of AFAD. Additionally there is more SAR teams and SAR equipments now compared to 1999 and it made that possible to assign different SAR teams from different regions now. It has started to be concern public awareness of disasters. Both Provincial Directorates of AFAD tend to make an effort for public disaster education. This unification led to different academic professions, such as survey engineers, geologic engineers, civil engineers, architects work in the field of disaster management under AFAD.

Yalova Municipality Fire Department declared that in 2009 the Building Code for Fire Protection of s was published and it now helps the buildings to be controlled in terms of fire protection at design level. However he pointed out that it is not handled as professionally as it is in the Metropolitan Municipalities since they do not have

architects or civil engineers in Yalova Fire Department so they need to cooperate with other departments. However Metropolitan Municipalities generally would have special units for this control.

Kocaeli Metropolitan Municipality separately stated that they now have earthquake risk maps and illegal housing is impossible since 2009 in Kocaeli and there are strict building foundation rules for high earthquake risk zones.

An official from Kocaeli Metropolitan Municipality Urban Transformation Department stated that Kocaeli had an Urban Transformation, Development and Renovation Master Plan work going on at that moment started in January 2013. The plan with the data of soil type, liquefaction, disaster risk and fault line were prepared. Determination of moderate and heavy damaged buildings and the zones with high density of damaged buildings were completed. She said that they decided whether the transformation was going to be projected according to Law No.5393 or Law No.6306. However this plan is not only for disaster risks, it also takes into consideration of social aspects such as education levels, crime levels, unemployment etc. The official also stated that, the plan was both technical and social. And it is not only about demolishing and constructing new buildings but also developing new zones and projects. She also stated that information of damaged buildings is obtained from AFAD and Ministry of Environment and Urbanization. Provincial Directorate of Health, Provincial Directorate of National Education, Police Department, district municipalities and district headmen (muhtar) are also other parties in the process.

Other officials from Kocaeli Metropolitan Municipality Urban Planning Department stated that in 2001, a decision arrived regarding reviewing the geological surveys and they were revised. Due to the change in the municipal organization of Kocaeli, urban development plans had been changing and revising based on the earthquake experience. Risky areas are not opening for development and there is a building height limit of three-story in risk zones. She stated that people had bias and did not

want to live in high-rise buildings in Kocaeli. The both interviewees stated that there is no peculiar shift of focus after 99 earthquakes beyond the legislations but legislations are in practice.

An official from Yalova Municipality Urban Planning Department stated that, since 99 earthquakes, it taken into account that evacuation roads, wider openings, focus point squares green areas while preparing new development plans.

The Platform

Table 3.8 Platform

IV. Platform	
It would be a positive input	**Typical**

Note. general (n=9-10); typical (n=5-8); variant (n=2-4) (Hill et al.1997; 2005)

Most of the participants supported the idea of a platform and some additionally affirmed that, the problems in the disaster management system would be solved with the corporation with the universities. One official from Kocaeli Metropolitan Municipality pointed out regarding cooperation that "it is actually written in the law! There should be NGOs, universities...". Another official from Yalova AFAD expressed that if they would have not worked together before the disasters they could not work at disasters together either.

Coordination and Cooperation of Institutions

Table 3.9 Coordination and Cooperation of the Institutions Themes

V. Coordination and cooperation of the institutions	
Interrelations of the institutions are weak and/or there is conflict/vagueness in authority caused by legislations	**General**
The duty of AFAD is basically coordination	**Typical**

Note. general (n=9-10); typical (n=5-8); variant (n=2-4) (Hill et al.1997; 2005)

Interrelations of the institutions are weak and/or there is conflict/vagueness in authority caused by legislations

Most of the interviewees noted that interrelations of the institutions are weak or there is conflict/vagueness in authority that caused by legislations. All Yalova Provincial AFAD officials acknowledged that "AFAD [Presidency] says that we were the employees of SPA; SPA says that we were the employees of AFAD."

An official from Yalova AFAD states that "Since Law No. 5902 is a follow up law, it should have been referencing to the Laws of Municipality and Special Provincial Administration, and however there is no such thing. Since there is no reference, there is a conflict of authority. (...) We work under the Governor and affiliated to the SPA. Due to that, SPA Law, Article No.69; disaster planning is our responsibility. Then why there is no referencing? How the Municipality would establish a plan without us." He additionally mentioned the ambiguity caused by recently established Directorate of Investment Monitoring and Coordination. He stated "The budget is being prepared by Special Provincial Administrations. Those 33 cities are asking now: Who is going to prepare my budget?"

Regarding the unification of three different institutions and forming AFAD, he discussed that they were unified only in theory, but not in practice. He commented "Civil Defense perception is common. The ones came from Development [Directorate] are not familiar with the disaster management. They work regarding the recovery. These should have been combined but there is disconnection." On the other hand he commented on the conflict of the duty of 112 Emergency and AFAD and stated that there was a duplication regarding the emergency management. He also expressed "There is no cooperation actually. It works by personal connections (...). Special Provincial Administration is not accepting us (...). We are in a vague position. The Governorate cannot solve this either. It is different than the usual

governance principle. The salaries are sent from AFAD Presidency (...) [however] we should carry out projects as well but Presidency is not supporting our projects."

Another official from Yalova AFAD says: "[SAR] teams are not clearly determined. When AFAD was initially established, there used to be Team Directorates under the Governorate. Now, they are under AFAD Directorate." and adds that they practiced a transceiver check through their special radio frequency everyday with other local institutions and organizations in Yalova and organized disaster drills with fire department of Municipality twice a year and he specified that those were the all cooperation they had with other local institutions. Additionally he pointed out that the province is responsible for the districts none of the districts had SAR teams there are only NGOs such as MAG.

Yet another Yalova AFAD official expressed "[In terms of interrelations of institutions] personal connections are necessary." and added that AFAD Presidency does not have a connection with provinces and does not have a rural organization. She expressed "(...) So there is no ministry, no Ministry of Internal Affairs, no presidency, no governorate... We are not affiliated to anywhere, then."

On the other hand a Yalova Municipality official although he approved that they have cooperation with Provincial AFAD regarding technological accidents and they sometimes join industrial fire drills that AFAD arranged. He also stated "The relation between central and local governments is weak. There is no strong communication between AFAD and Fire Department. This relation may have been provided in Yalova somewhat however there is no standard or regulation determining these relations, although AFAD claims that there is." He also expressed "Even head of the finance office is in the Provincial Committee of Rescue and First Aid but the fire department is not. There is only the Mayor representing the Municipality."

"An earthquake hit Van. Search and rescue teams from Istanbul went there via special permission. But there is a Van fire department there, Kars fire department there... No one is working on reinforcing them or sending them there in case of a disaster."

Regarding another conflict he mentioned that there should have been one emergency call number and he additionally stated: "We have 110 for fires and there is another one for forest fires as well." An official from Kocaeli Metropolitan Municipality Fire Department also expressed "Regarding fires, there are three different authorities. It is us, organized industrial zones and forests. Legally we have no right to intervene those areas we can only go for support (...). Law says that organized industrial zones establish their own fire departments and extinguish the fire. It is the same for forest fires as well. We can only go for support." He stated that there was no work for about who would establish the crisis centers in the districts. The official commented that it would have been almost impossible to run a crisis just by the Governor when it comes to the districts. He elaborated by explaining that in Kocaeli, districts were close to the center and asked "How is it going to happen in Erzurum? There are districts 290km far from the city center. The government would not be able to reach there (...) You need to have adequate technology." As expressing the conflict ambiguity in disaster management system of Turkey causing multi-authority he discussed "In Turkey, everyone wants themselves to have the authority. No one tends to share the authority."

On the other hand officials form Kocaeli SPA and Kocaeli Provincial AFAD expressed that SPA would not have separate works regarding disasters, AFAD is responsible. In SPA, there is a Directorate of Disasters under Kocaeli SPA however its legal responsibility is vague. Kocaeli Provincial AFAD declares that, they do not have an organic connection with SPA although their registrations were in SPA. He informed that Provincial AFAD is under the Governor, their salary is paid by the AFAD Presidency, and equipments are supplied by the budget transferred from SPA.

According to the SPA official, it is vague again how the Directorate of Investment Monitoring and Coordination will run. There will be one council. In the present situation, schools are a part of SPA's business. "It is probably going to be the job of Directorate of Investment Monitoring and Coordination", expressed the SPA official. One of Kocaeli AFAD officials explained that since Kocaeli has the experience of 1999 earthquakes it gained experience although it was very painful, noting that it might not be the same in other cities but in Kocaeli, AFAD and the Municipality are working to establish cooperation. He also stated that it is not clear how DIMC is going to work. Regarding the draft regulation of the law, he expressed that disaster unit of DIMC has the exact duties with Provincial AFAD; however there is no reference to Law No. 5902.

The duty of AFAD is basically coordination

Most of the participants stated that AFAD is the unit for coordination and especially in Yalova, if a disaster hits, AFAD will not go for search and rescue but going to organize and direct the teams and relief coming from other institutes and towns. However, for example, the official from Yalova Fire Station stated "AFAD is responsible for coordination but it cannot be achieved successfully. For example, there is an organization called UMKE (National Medical Rescue Organization) formed by volunteered or assigned paramedics of Ministry of Health. (...) How is AFAD going to be organizing them?"

3.2. CONCLUSION OF THE CHAPTER

As undertaking the interviews, it was observed that "disaster management" is mostly perceived as "emergency management".[13] It is not only the case for SAR officials but

[13] When we were talking to the administrators in the disaster-prone fields of Simav, Van and Ercis; they respond to our field of profession as "Disaster Management" depicted that what they understand from "Disaster

also for other professions, such as planners, engineers, architects as well. So that it needs further research to understand the perception of different disciplines on disaster risk management and maybe it should have been a new emphasize on the terminology of DRM. Engineers, architects, planners are not considered being directly involved in disaster management, i.e. response; however they are figured to have the responsibility in disaster risks, e.g. risk maps, urban development plans, building inspection. Although there are efforts in urban development planning regarding disaster risks, there is no specific mitigation planning presented for cities and individual efforts of different departments and institutions are not forming a holistic approach. In other words, the definition of a disaster plan is not clear in both legislations and according to local authorities; and although disaster management is used instead of DRM, it generally is perceived as emergency or crisis management. There is ambiguity in disaster risk management terminology. As a result, present disaster planning studies are emergency response plans and covers the post-disaster phase. There should be sanction for disaster plans; that is the possible reason of why it is vague in definition and would not have a clear statement to be controlled.

There are different responsible actors for disasters according to the participants. Although in legislations, local governments are not in charge of determining risks but Provincial Directorates of AFAD are in charge; there is a common opinion of urban risks should have been determined by local governments or commissions formed by local governments with universities. Earthquakes and industrial accidents are perceived as two common disaster risks in both cities. AFAD marks the disaster-prone fields to the urban plans as risky fields; the authority regarding most of the urban risks and urban transformation belong to the Ministry of Environment and Urbanization. AFAD is/should be the most authorized institute in disaster risk management system of Turkey engineers, architects, planners are not directly

Management" was basically "Emergency Management" since most of them claimed that they have "managed the disaster". (Field observations, Van, Simav 2011)

involved in disaster risk management since the common term disaster management - which is used instead of disaster risk management- is perceived as emergency management; however they have the responsibility in disaster risks.

The major drawbacks of '99 earthquakes were lack of coordination or organization or break of communication and unpreparedness or lack of education or unawareness or lack of building inspection. There should have been disaster preparedness plans and people should have been participated. '99 earthquake experience caused some changes for most of the institutions.

There is no mechanism which would prevent the local coordination relying on personal relationships. Disaster related institutions' point of view regarding "risk" should be considered carefully. Thus, risk perception studies and trainings must be done for such institutions.

There are different opinions regarding Directorate of Investment Monitoring and Coordination, yet the fundamental view is that its organization is vague and this new establishment is causing conflicts in the governance and accordingly in disaster management system of Turkey.

In Turkey, disaster management system is mostly central and the central authority is responsible for disaster management not the local governments (Peynircioğlu, 2006). The governor is appointed by the Ministry of Interior Affairs and although he doesn't have the authority for operation he is responsible for coordination. He can ask for relief from other towns, since the relief budget is directly provided by the central government. As Erkan (2009) states that municipalities are not only responsible for duties related to emergency cases but also urban risk management. For the last 20 years, disasters severely affected urban areas and the major reasons could be count as that the municipalities could not control and prevent illegal housing, inspect the building constructions according to the regulations due to inadequacy of technical

staff, financial difficulties, populist approach during decision making process, and ignorance of hazards and risk while planning (Erkan, 2009).

CHAPTER 4

CONCLUSION, DISCUSSION AND RECOMENDATIONS

The main concern this thesis trying to draw attention is that the International Disaster Policies are mainly focused on local governments and DRR. In order to understand this concept in practice literature legislations in Turkey have been reviewed widely and field studies in local institutions were carried out to be able to understand the place of local governments in the DRM policies in Turkey.

In this chapter an overall conclusion will be stated covering the previous chapters' conclusions. Chapter 1 is the introductory part defining disaster risk management, mitigation, disaster risk reduction, risk society, and risk perception. Beck's "risk society" is the result of modernization causing abrupt urbanization and population growth which led natural hazards became manufactured risks in the modern global society. In this case, urban poor and large cities are under the greatest risk and the concept of risk needs specific attention and global world needs new institutions.

Definition and critics of cyclic model of disaster risk management have been reviewed. According to that, the conventional view assumes a singular and central authority which is capable of all the actions and also ignores the need to differentiate risk management from emergency management. The two have distinct technical and administrative tasks at different levels of administration and expertise. Balamir's alternative disaster management approach, on the other hand, takes into consideration the functional differences of the various levels of administration: central, regional, local and community; their mode of interaction; and recognition that dealing with risk demands a separate set of expertise, concepts and tools of action.

According to Incheon Declaration there are several size and level of local governments for the urban and the rural communities: regional, provincial, metropolitan, cities, municipalities, townships and villages. It was agreed to target local governments and agreed to focus on reaching the poor and the high risk communities to reduce risk and build resilient communities. Risk reduction at the local level depends on good local governance via land-use planning, regulatory controls, zoning and construction standards. As retrieving from regulations, it is a wide topic to understand the government system, urban planning principles, local authorities, and to find a place for urban risks and disaster risks within the concept of disaster risk management. In order to understand the international risk reduction policy adaptations in Turkey, local government and disaster risk management legislations of Turkey and its practice should be studied. Hence, Chapter 2 describes disaster risk management and risk reduction regulations at the international scale and national level of Turkey. It is covering the evaluation of the disaster policies in both nationally and internationally, and local administrative contribution and authorization of disaster risk management and risk reduction. UN efforts are a set of principles that provides the key to the conduct of new disaster risk management at all levels (international, national, regional, settlements, local). UN declarations generally draw attention to pre-emptive risk reduction since response mechanisms would never be enough for mitigation and large cities are under great risk and so that local governments are the actual targets of disaster risk reduction. In addition, disaster risk reduction should be taken into consideration by every level for responsibility share. The most fragile urban poor is the target by most of the risks in a multi risk environment; urban and local governance is a contemporary challenge and should be improved. Incheon Declaration was a milestone focusing on local governments for disaster risk reduction. It declares that local governments should be identified as global actors and that is why and how the campaign, Making Cities Resilient got in action to address and reduce urban risks within the scope of local actions.

While the international disaster policies had been publishing by the United Nations since 1990 they were focused on mitigation, disaster risk reduction, participation and development; Turkey's legislation laws were basically concerned about response recovery, i.e. post-disaster period and a major idea of "fix it when disaster strikes" was taken up seriously. However after the 1999 earthquakes a shift of focus had appeared. Certain steps have been taken both internationally and nationally; and improvements are somehow visible to the audience. The possibility of a major earthquake in Marmara region and especially the fact that Istanbul, one of the biggest metropolitans in the world, and its surroundings are under risk led to the necessity of a culture of disaster prevention and resilience. Turkey should be focused on mitigation strategies. It is needed for not only the emergency exercises but also mitigation practice. Turkey is still working on a risk reduction strategy.

However, in the local level, with the recent legislations and political structure, Turkey is far behind the international schedule. Although some pilot projects and naïve approaches exist, the general policy should be organized in order to be able to make proper assessments. In Turkey, urban development plans are not only the job of local governments. There are nineteen different local and central institutions responsible for urban development plans in Turkey in 2013. Although it needs in-depth research, urban transformation is mostly the responsibility of central government. In addition both administration and public should adopt the mitigation efforts. As it is previously mentioned and strongly suggested by Balamir, compared to the recent international policy, Turkey was in need of a National Platform which should be over politics. The administrative institutions, NGOs, universities and research institutions should form the platform within the expansion of disaster management related with a national defense policy. Turkey, today, has a positive improvement of establishing a disaster risk reduction platform which is responsible for practicing and adapting Hyogo Framework by cooperation of local governments, universities; however it is not visible yet. It has not been clarified how the

cooperation, coordination and organization would be through this platform. It is vague how Turkey Disaster Risk Reduction Platform will be established in practice and there is no specific action for the formations under local governments yet.

In the local government regulations of Turkey, it is undetermined the interrelations of the institutions. In other words, throughout the regulations regarding local governments, the cooperation and coordination of the institutions in terms of disaster risk management are vague and not clearly explained. Special Provincial Administration and the Municipality are responsible of making disaster plans via defined by the exact same sentences. However, neither the coordination nor the explanation of the Provincial Disaster Plan is clear. Provincial Directorate of AFAD is in charge of making and implementing these plans in cooperation with local governments. The coordination of the institutions with each other, the coherence process and level of the one plan with another are vague. The cooperation with Provincial AFAD is vague. They work under the Special Provincial Administrations which is a local government, and bounded to the Governor which represents the central government. In addition there is the Presidency of AFAD bound to the prime ministry. How this system works and is going to work after the abolition of Special Provincial Administrations with the Law No.6360 is not yet elaborated. The authority of the Directorate of Investment Monitoring and Coordination replacing Provincial Special Administration is vague. Whether there will be an elected supervision mechanism or not is not mentioned. There is no declaration of the distinction for mitigation plans or emergency response plans. A “disaster and emergency plan” is mentioned for several times in different laws however it is not defined. The Articles stressing those local governments should prepare disaster plans mentions loss reduction but no risk reduction or mitigation. In other words, in Local Government legislations, there is no terminology covering any “risk” notion (risk reduction, mitigation, disaster risk management, urban risk, or disaster risk). On the other hand, there is duplication and conflict of authority regarding disaster plans. There is no definition and scope of disaster plan or method of preparing it. Different

jurisdictions of authority in disaster management are causing obscure to form a holistic system. If it is an emergency response plan why it is mentioned as "disaster and emergency plan"? If it is a response and recovery plan why does not it say so? There is conflict in terminology, and duplications and ambiguity in authority since the legislations are lacking in referencing each other and lacking to form a well-defined network between different institutions, which is causing an authority conflict. Thus, in order to understand these gaps and the practice of the disaster policies, field studies were carried out and Chapter 3 explains the methodology of the field studies of Kocaeli and Yalova which is aimed to understand the local government practice in disaster risk management system of Turkey. In chapter 3, as undertaking the interviews, it was observed that there are also confusion for the DRM terminology and tasks. Engineers, architects, planners are not considered being directly involved in DRM system however they are figured to have the responsibility in disaster risks, e.g. risk identification, urban development plans, building inspection. Although there are limited efforts in urban development planning regarding disaster risks, there is no specific mitigation plan presented for cities, and individual efforts of different departments and institutions are not forming a holistic approach. As a result, present disaster planning studies are emergency response plans and covers the post-disaster phase. In addition, there is no clear sanction for disaster plans. That is possible why it is vague in definition and would not have a clear statement to be controlled.

On the other hand, there are different responsible actors for disasters according to the participants. Most of the officials confirmed that, AFAD marks the disaster-prone fields to the urban plans as risky fields; the authority regarding urban risks and urban transformation belong to the Ministry of Environment and Urban Planning. However, it is a general opinion that urban risks should be determined by local governments or commissions formed by local governments with universities and AFAD is, or should be the most authorized institute in DRM system of Turkey. In Turkey, disaster risk management system is mostly central.

Adding to Balamir's (2010) and Balaban's (2012) recommendations, in order to improve the Disaster Risk Management System of Turkey and the role of local governments in it, this thesis' recommendations could be as followed:

Regulations

- Legislations regarding DRM should be clear; and interrelated articles in different documents should be referencing each other
- There should be strict building control rules regarding risks, strict mitigating urban planning, urban risk management
- The definition of authority of different institutions should be clearly explained

Terminology

- The term "disaster risk management" should be clearly explained and should be in common use
- "Risk reduction" should be differentiated from "Emergency management" in terms of administrative levels and expertise
- Risk reduction and emergency management should be defined clearly in terminology, distinguished in terms of professions and networks should be created for coordination and cooperation of different institutions and professions

Priorities

- The budget should be well-managed in terms of DRM; and DRM should be a priority in budget share

- Post-disaster psycho-social support should be a main concern
- Cities and especially dense cities under disaster risk should be a priority; and measures and mitigation actions should be taken urgently

Urban Local

- Urban risk information and maps should be created, kept in a central land registry and publicly announced for every local unit (Balamir, 2010)
- Urban vulnerabilities should be determined (Balamir, 2010)
- "Urban and local platforms, should be formed in such cities and those platforms should access the main development decisions and have the right to make objections and the ministries should revise the plans accordingly" (Balamir, 2010)
- Contingency plans and mass renewal projects should be local governments' agenda (Balamir, 2010)
- Every local government should prepare local disaster mitigation plans and the urban development plans and implementation projects must be in consistency with the mitigation plans
- Long term strategy plans in following most updated UNISDR documents should be prepared in a collaborating manner by ministries, local governments, AFAD and universities together
- Public open spaces should be preserved and increased (Balaban, 2012)
- Evacuation roads should be clearly determined
- Public facilities such as schools and hospitals should be reinforced primarily (Balaban, 2012)
- Emergency planning should be prepared in collaboration with local governments, AFAD, Red Crescent and related ministries (Balamir, 2010) such as Ministry of Environment and Urban Planning, Ministry of Family and Social Policies

- Emergency response plans should always be up to date, peculiar to the local unit, based on local disaster archives and opinions of disaster risk management professionals from different fields; should be supported by workshops, drills and public participation

Risk Reduction

- Contemporary disaster risk management system should be improved and mitigation should be every steps concern
- A well-defined disaster risk management network should be created in order to determine the coordination and cooperation strategies of different institutions both nationally and locally
- Mitigation and risk reduction should be in the regulations and articles related to disaster management in order to create a sanction
- Mitigation plans, preparedness plans and emergency plans should be prepared separately but in coordination with each other
- Mitigation should be the major priority of urban development plans in the areas under great disaster risk
- UN's disaster risk management policies should be in the agenda of every local government
- Local governments should have the greatest responsibility in risk reduction (municipalities are the most powerful actors regarding urban risks: infrastructure, urban planning, urban development plans)
- Local governments should be encouraged to improve local projects for
- Trainings should be carried out for high risk awareness for society, high risk perception for the authority, mitigation practice for local governments
- A platform over politics immediately should be in run and should be in coordination with locally established similar platforms
- Every city should have the list of goods and the personnel

- Public trainings should be a must and public participation in disaster drills should be mandatory
- Every local unit should be trained and equipped to survive on their own for the very first 72 hours
- Disaster risk management should be over politics in every term

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GLOSSARY

Common UNISDR Terminology on Disaster Risk Reduction (2009)

Contingency planning

A management process that analyses specific potential events or emerging situations that might threaten society or the environment and establishes arrangements in advance to enable timely, effective and appropriate responses to such events and situations.

Comment: Contingency planning results in organized and coordinated courses of action with clearly-identified institutional roles and resources, information processes, and operational arrangements for specific actors at times of need. Based on scenarios of possible emergency conditions or disaster events, it allows key actors to envision, anticipate and solve problems that can arise during crises. Contingency planning is an important part of overall preparedness. Contingency plans need to be regularly updated and exercised.

Disaster

A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.

Disaster risk

The potential disaster losses, in lives, health status, livelihoods, assets and services, which could occur to a particular community or a society over some specified future time period.

Comment: The definition of disaster risk reflects the concept of disasters as the outcome of continuously present conditions of risk. Disaster risk comprises different types of potential losses which are often difficult to quantify. Nevertheless, with knowledge of the prevailing hazards and the patterns of population and socio-economic development, disaster risks can be assessed and mapped, in broad terms at least.

Disaster risk management

The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.

Comment: This term is an extension of the more general term "risk management" to address the specific issue of disaster risks. Disaster risk management aims to avoid, lessen or transfer the adverse effects of hazards through activities and measures for prevention, mitigation and preparedness.

Disaster risk reduction

The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.

Comment: A comprehensive approach to reduce disaster risks is set out in the United Nations-endorsed Hyogo Framework for Action, adopted in 2005, whose expected outcome is "The substantial reduction of disaster losses, in lives and the social, economic and environmental assets of communities and countries." The International Strategy for Disaster Reduction (ISDR) system provides a vehicle for cooperation among Governments, organisations and civil society actors to assist in

the implementation of the Framework. Note that while the term "disaster reduction" is sometimes used, the term "disaster risk reduction" provides a better recognition of the ongoing nature of disaster risks and the ongoing potential to reduce these risks.

Emergency management

The organization and management of resources and responsibilities for addressing all aspects of emergencies, in particular preparedness, response and initial recovery steps.

Comment: A crisis or emergency is a threatening condition that requires urgent action. Effective emergency action can avoid the escalation of an event into a disaster. Emergency management involves plans and institutional arrangements to engage and guide the efforts of government, non-government, voluntary and private agencies in comprehensive and coordinated ways to respond to the entire spectrum of emergency needs. The expression "disaster management" is sometimes used instead of emergency management.

Hazard

A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Comment: The hazards of concern to disaster risk reduction as stated in footnote 3 of the Hyogo Framework are "… hazards of natural origin and related environmental and technological hazards and risks." Such hazards arise from a variety of geological, meteorological, hydrological, oceanic, biological, and technological sources, sometimes acting in combination. In technical settings, hazards are described quantitatively by the likely frequency of occurrence of different intensities for different areas, as determined from historical data or scientific analysis.

Mitigation

The lessening or limitation of the adverse impacts of hazards and related disasters.

Comment: The adverse impacts of hazards often cannot be prevented fully, but their scale or severity can be substantially lessened by various strategies and actions. Mitigation measures encompass engineering techniques and hazard-resistant construction as well as improved environmental policies and public awareness. It should be noted that in climate change policy, "mitigation" is defined differently, being the term used for the reduction of greenhouse gas emissions that are the source of climate change.

Natural hazard

Natural process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Comment: Natural hazards are a sub-set of all hazards. The term is used to describe actual hazard events as well as the latent hazard conditions that may give rise to future events. Natural hazard events can be characterized by their magnitude or intensity, speed of onset, duration, and area of extent. For example, earthquakes have short durations and usually affect a relatively small region, whereas droughts are slow to develop and fade away and often affect large regions. In some cases hazards may be coupled, as in the flood caused by a hurricane or the tsunami that is created by an earthquake.

Preparedness

The knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions.

Comment: Preparedness action is carried out within the context of disaster risk management and aims to build the capacities needed to efficiently manage all types

of emergencies and achieve orderly transitions from response through to sustained recovery. Preparedness is based on a sound analysis of disaster risks and good linkages with early warning systems, and includes such activities as contingency planning, stockpiling of equipment and supplies, the development of arrangements for coordination, evacuation and public information, and associated training and field exercises. These must be supported by formal institutional, legal and budgetary capacities. The related term "readiness" describes the ability to quickly and appropriately respond when required.

Prevention

The outright avoidance of adverse impacts of hazards and related disasters.

Comment: Prevention (i.e. disaster prevention) expresses the concept and intention to completely avoid potential adverse impacts through action taken in advance. Examples include dams or embankments that eliminate flood risks, land-use regulations that do not permit any settlement in high risk zones, and seismic engineering designs that ensure the survival and function of a critical building in any likely earthquake. Very often the complete avoidance of losses is not feasible and the task transforms to that of mitigation. Partly for this reason, the terms prevention and mitigation are sometimes used interchangeably in casual use.

APPENDIX A

LAWS IN OPERATION

[1] *(5032/ İl Özel İdaresi Kanunu)*

Acil durum plânlaması

Madde 69.- İl özel idaresi, yangın, sanayi kazaları, deprem ve diğer doğal afetlerden korunmak veya bunların zararlarını azaltmak amacıyla ilin özelliklerini de dikkate alarak gerekli afet ve acil durum plânlarını yapar, ekip ve donanımı hazırlar.

Acil durum plânlarının hazırlanmasında varsa il ölçeğindeki diğer acil durum plânlarıyla da koordinasyon sağlanır ve ilgili bakanlık, kamu kuruluşları, meslek teşekkülleriyle üniversitelerin ve diğer mahallî idarelerin görüşleri alınır.

Plânlar doğrultusunda halkın eğitimi için gerekli önlemler alınarak ikinci fıkrada sayılan idareler, kurumlar ve örgütlerle ortak programlar yapılabilir.

İl özel idaresi, il dışında yangın ve doğal afetler meydana gelmesi durumunda, bu bölgelere gerekli yardım ve destek sağlayabilir.

[2] *(5393/ Belediye Kanunu)*

Acil durum plânlaması

MADDE 53.- Belediye; yangın, sanayi kazaları, deprem ve diğer doğal afetlerden korunmak veya bunların zararlarını azaltmak amacıyla beldenin özelliklerini de dikkate alarak gerekli afet ve acil durum plânlarını yapar, ekip ve donanımı hazırlar.

Acil durum plânlarının hazırlanmasında varsa il ölçeğindeki diğer acil durum plânlarıyla da koordinasyon sağlanır ve ilgili bakanlık, kamu kuruluşları, meslek teşekkülleriyle üniversitelerin ve diğer mahallî idarelerin görüşleri alınır.

Plânlar doğrultusunda halkın eğitimi için gerekli önlemler alınarak ikinci fıkrada sayılan idareler, kurumlar ve örgütlerle ortak programlar yapılabilir.

Belediye, belediye sınırları dışında yangın ve doğal afetler meydana gelmesi durumunda, bu bölgelere gerekli yardım ve destek sağlayabilir.

[3] *(5393/ Belediye Kanunu)*

Kentsel dönüşüm ve gelişim alanı (1)
Madde 73- (Değişik: 17/6/2010-5998/1 md.)
Belediye, belediye meclisi kararıyla; konut alanları, sanayi alanları, ticaret alanları, teknoloji parkları, kamu hizmeti alanları, rekreasyon alanları ve her türlü sosyal donatı alanları oluşturmak, eskiyen kent kısımlarını yeniden inşa ve restore etmek, kentin tarihi ve kültürel dokusunu korumak veya deprem riskine karşı tedbirler almak amacıyla kentsel dönüşüm ve

gelişim projeleri uygulayabilir. Bir alanın kentsel dönüşüm ve gelişim alanı olarak ilan edilebilmesi için yukarıda sayılan hususlardan birinin veya bir kaçının gerçekleşmesi ve bu alanın belediye veya mücavir alan sınırları içerisinde bulunması şarttır. Ancak, kamunun mülkiyetinde veya kullanımında olan yerlerde kentsel dönüşüm ve gelişim proje alanı ilan edilebilmesi ve uygulama yapılabilmesi için ilgili belediyenin talebi ve Çevre ve Şehircilik Bakanlığının teklifi üzerine Bakanlar Kurulunca bu yönde karar alınması şarttır.
(…)
Büyükşehir belediye ve mücavir alan sınırları içinde kentsel dönüşüm ve gelişim projesi alanı ilan etmeye büyükşehir belediyeleri yetkilidir. Büyükşehir belediye meclisince uygun görülmesi halinde ilçe belediyeleri kendi sınırları içinde kentsel dönüşüm ve gelişim projeleri uygulayabilir. Büyükşehir belediyeleri tarafından yapılacak kentsel dönüşüm ve gelişim projelerine ilişkin her ölçekteki imar planı, parselasyon planı, bina inşaat ruhsatı, yapı kullanma izni ve benzeri tüm imar işlemleri ve 3/5/1985 tarihli ve 3194 sayılı İmar Kanununda belediyelere verilen yetkileri kullanmaya büyükşehir belediyeleri yetkilidir.
(…)

[4] *(5216/ Büyükşehir Belediye Kanunu)*
Madde 7:
Büyükşehir belediyesinin görev, yetki ve sorumlulukları şunlardır:
u) İl düzeyinde yapılan plânlara uygun olarak, doğal afetlerle ilgili plânlamaları ve diğer hazırlıkları büyükşehir ölçeğinde yapmak; gerektiğinde diğer afet bölgelerine araç, gereç ve malzeme desteği vermek; itfaiye ve acil yardım hizmetlerini yürütmek; patlayıcı ve yanıcı madde üretim ve depolama yerlerini tespit etmek, konut, işyeri, eğlence yeri, fabrika ve sanayi kuruluşları ile kamu kuruluşlarını yangına ve diğer afetlere karşı alınacak önlemler yönünden denetlemek, bu konuda mevzuatın gerektirdiği izin ve ruhsatları vermek.
z) **(Değişik: 12/11/2012-6360/7 md.)** Afet riski taşıyan veya can ve mal güvenliği açısından tehlike oluşturan binaları tahliye etme ve yıkım konusunda ilçe belediyelerinin talepleri hâlinde her türlü desteği sağlamak.
Büyükşehir belediyeleri birinci fıkranın (c) bendinde belirtilen yetkilerini, imar plânlarına uygun olarak kullanmak ve ilgili belediyeye bildirmek zorundadır. **(Değişik ikinci cümle: 12/11/2012-6360/7 md.)** Büyükşehir belediyeleri birinci fıkranın (l), (s), (t) bentlerindeki görevleri ile temizlik hizmetleri ve adres ve numaralandırmaya ilişkin görevlerini belediye meclisi kararı ile ilçe belediyelerine devredebilir, birlikte yapabilirler.

[5] *(6360/ On Üç İlde Büyükşehir Belediyesi ve Yirmi Altı İlçe Kurulması ile Bazı Kanun ve Kanun Hükmünde Kararnamelerde Değişiklik Yapılmasına Dair Kanun)*

MADDE 34- 3152 sayılı Kanuna 28 inci maddesinden sonra gelmek üzere aşağıdaki 28/A maddesi eklenmiştir.

"Yatırım İzleme ve Koordinasyon Başkanlığı

MADDE 28/A- Büyükşehir belediyelerinin bulunduğu illerde kamu kurum ve kuruluşlarının yatırım ve hizmetlerinin etkin olarak yapılması, izlenmesi ve koordinasyonu, acil çağrı, afet ve acil yardım hizmetlerinin koordinasyonu ve yürütülmesi, ilin tanıtımı, gerektiğinde merkezi idarenin taşrada yapacağı yatırımların yapılması ve koordine edilmesi, temsil, tören, ödüllendirme ve protokol hizmetlerinin yürütülmesi, ildeki kamu kurum ve kuruluşlarına rehberlik edilmesi ve bunların denetlenmesini gerçekleştirmek üzere valiye bağlı olarak

Yatırım İzleme ve Koordinasyon Başkanlığı kurulmuştur. Bakanlıklar ve diğer merkezi idare kuruluşları, kaynağını aktarmak şartıyla illerde yapacakları her türlü yatırım, yapım, bakım, onarım ve yardım işlerini bu başkanlık aracılığıyla yapabilirler. Bu işler karşılığı genel bütçe kapsamındaki kamu idarelerince yapılacak kaynak transferleri ödenek aktarması suretiyle, diğer kamu kurum ve kuruluşlarınca yapılacak kaynak transferleri ise tahakkuk işlemleri ile gerçekleştirilir. Genel bütçe kapsamındaki kamu idarelerince aktarılan tutarlardan yıl içerisinde harcanmayan kısımları ertesi yıl bütçesine devren ödenek kaydetmeye; diğer kamu kurum ve kuruluşlarınca aktarılan tutarları bir yandan genel bütçenin (B) işaretli cetveline gelir, diğer yandan Bakanlık bütçesinin ilgili tertiplerine ödenek kaydetmeye ve yıl içerisinde harcanmayan kısımlarını ertesi yıl bütçesine devren gelir ve ödenek kaydetmeye İçişleri Bakanlığı yetkilidir.

Yatırım izleme ve koordinasyon başkanlığı tarafından, merkezi idarenin adli ve askeri teşkilat dışında taşradaki tüm birimlerinin hizmet ve faaliyetlerinin etkinliği, verimliliği ve kurumların stratejik plan ve performans programlarına uygunluğu ile ilgili hazırlanacak rapor, valinin değerlendirmesiyle birlikte Başbakanlığa ve bu kurumların bağlı veya ilgili olduğu bakanlığa gönderilir. Bu raporlar yıllık olarak hazırlanır ve takip eden yılın şubat ayı sonuna kadar yukarıdaki mercilere gönderilir.

Yatırım izleme ve koordinasyon başkanlıkları, afet yardım, acil çağrı, yatırım izleme, rehberlik ve denetim, strateji ve koordinasyon ile idari müdürlükler kurabilir. Gerektiğinde geçici birimler kurulabilir. Yatırım izleme ve koordinasyon başkanlıklarının çalışma usul ve esasları İçişleri Bakanlığınca çıkarılacak yönetmelikle belirlenir.

Yatırım izleme ve koordinasyon başkanlığının sevk ve idaresi, vali veya vali tarafından görevlendirilecek bir vali yardımcısı tarafından yerine getirilir. Maliye Bakanlığınca, yatırım izleme ve koordinasyon başkanlıklarının görev ve sorumluluklarını yerine getirebilmesi için her yıl İçişleri Bakanlığı bütçesine yeterli ödenek konulur.

Gerektiğinde valilik, kadro, yer ve unvanlarına bakılmaksızın ihtiyaç durumuna göre uzman, sözleşmeli personel ve memurları bu başkanlıklarda görevlendirmeye yetkilidir.

Kamu kurum ve kuruluşlarının 5/1/1961 tarihli ve 237 sayılı Taşıt Kanunu kapsamındaki araçlarının alımı, işletilmesi, bakım ve onarımı ile bürolarının ihtiyaçları; valilik ve kaymakamlık konutlarının yapım, bakım, işletme ve onarımı ile emniyet hizmetlerinin gerektirdiği harcamalar yatırım izleme ve koordinasyon başkanlığınca karşılanabilir.

Merkezi idare tarafından yapılan her türlü yardım ve desteğin koordinasyonu, denetimi ve izlenmesi ve acil durumlarda bizzat yerine getirilmesi yatırım izleme ve koordinasyon başkanlığı tarafından sağlanır.

İldeki kamu kurum ve kuruluşlarınca yürütülmesi gereken yatırım ve hizmetlerin aksadığının ve bu durumun halkın sağlığı, huzur ve esenliği ile kamu düzeni ve güvenliğini olumsuz etkilediğinin vali veya ilgili bakanlığınca tespit edilmesi durumunda, vali uygun süre vererek hizmet ve yatırımın gerçekleştirilmesini ister. Hizmet ve yatırımın verilen sürede gerçekleşmemesi hâlinde, vali söz konusu yatırım ve hizmetin ildeki diğer kamu kurum ve kuruluşlarınca yerine getirilmesini isteyebileceği gibi yatırım izleme ve koordinasyon başkanlığı aracılığıyla da yerine getirebilir. Yapılan veya yapılacak harcamalar karşılığı tutarlar ilgili kurumun pay ve ödeneklerinden tahsis yapan kurum tarafından kesilerek İçişleri Bakanlığına veya hizmeti yerine getiren diğer kamu kurum ve kuruluşuna gönderilir. Bu fıkra kapsamında İçişleri Bakanlığına ve diğer genel bütçeli idarelere aktarılan tutarların bu kurumların bütçeleriyle ilişkilendirilmesi birinci fıkra hükümleri çerçevesinde, diğer kamu kurum ve kuruluşlarına aktarılan tutarların bütçeleriyle ilişkilendirilmesi bu

kurumların tabi olduğu mevzuat hükümleri çerçevesinde gerçekleştirilir. Diğer genel bütçeli idarelere ilişkin bütçe işlemlerini yapmaya bu kurumların üst yöneticileri yetkilidir."

22 Mart 2013 tarihinde Resmi Gazete'de yayımlanan 6447 sayılı kanun ile 6360 sayılı kanundaki "Yirmi Altı", "Yirmi Yedi" olarak değiştirilmiş ve 2014 yerel seçimlerinden sonra yürürlüğe girmek üzere, Ordu ili de Büyükşehir Belediyesi ilan edilmiştir.

[6] *(5902/ Afet ve Acil Durum Yönetimi Başkanlığının Teşkilat ve Görevleri Hakkında Kanun)*

Tanımlar

MADDE 2 – (1) Bu Kanunda yer alan;

a) Acil durum: Toplumun tamamının veya belli kesimlerinin normal hayat ve faaliyetlerini durduran veya kesintiye uğratan ve acil müdahaleyi gerektiren olayları ve bu olayların oluşturduğu kriz halini,

b) Afet: Toplumun tamamı veya belli kesimleri için fiziksel, ekonomik ve sosyal kayıplar doğuran, normal hayatı ve insan faaliyetlerini durduran veya kesintiye uğratan doğal, teknolojik veya insan kaynaklı olayları,

c) Afet ve Acil Durum Yönetim Merkezi: Afet ve acil durumlarda müdahalenin koordine edildiği, 24 saat esasına göre çalışan, kesintisiz ve güvenli bilgi –işlem ve haberleşme sistemleri ile donatılan merkezi,

ç) Akreditasyon: Başkanlığın koordinasyonunda çalışılabilmesi için özel kuruluşlar ile sivil toplum kuruluşlarına uygunluk belgesi verilmesini,

d) Başkan: Afet ve Acil Durum Yönetimi Başkanını,

e) Başkanlık: Afet ve Acil Durum Yönetimi Başkanlığını,

f) Hazırlık: Afet ve acil durumlara etkin bir müdahale amacıyla önceden yapılan her türlü faaliyetleri,

g) İyileştirme: Afet ve acil durum sebebiyle bozulan hayatın normalleştirilmesine yönelik faaliyetleri ve yeniden yapılanmayı,

ğ) Müdahale: Afetlerde ve acil durumlarda can ve mal kurtarma, sağlık, iaşe, ibate, güvenlik, mal ve çevre koruma, sosyal ve psikolojik destek hizmetlerinin verilmesine yönelik çalışmaları,

h) Risk: Belirli bir alandaki tehlike olasılığına göre kaybedilecek değerlerin ölçüsünü,

ı) Risk azaltma: Belirli bir kesim veya alanda geliştirilen afet senaryolarına göre, olası risklerin önlenmesi, kabul edilebilir ölçülere indirilmesi ya da paylaşımı amacıyla alınacak her türlü planlı müdahaleyi,

i) Risk yönetimi: Ülke, bölge, kent ölçeğinde ve yerel ölçekte risk türleri ve düzeylerini tespit etme, azaltma ve paylaşma çalışmaları ile bu alandaki planlama esaslarını,

j) Sivil savunma: Düşman saldırılarına karşı halkın can ve mal kaybının en az seviyeye indirilmesi, hayati önem taşıyan her türlü resmi ve özel tesis ve kuruluşların korunması ve faaliyetlerinin devamını sağlayacak iyileştirmenin yapılması, savunma gayretlerinin halk tarafından en yüksek seviyede desteklenmesi ve halkın moralini yüksek tutmak için alınacak her türlü silahsız koruyucu ve kurtarıcı tedbir ve faaliyetleri,

k) Zarar azaltma: Afetlerde ve acil durumlarda meydana gelmesi muhtemel zararların yok edilmesi veya azaltılmasına yönelik risk yönetimi ve önleme tedbirlerini,

ifade eder.

[7] *(5902/ Afet ve Acil Durum Yönetimi Başkanlığının Teşkilat ve Görevleri Hakkında Kanun)*

Yönetim Hizmetleri Dairesi Başkanlığı

MADDE 13 – (1) Yönetim Hizmetleri Dairesi Başkanlığının görevleri şunlardır:

a) Başkanlığın insan kaynakları politikasını ve performans ölçütlerini belirlemek.

b) Başkanlık personelinin özlük işlemlerini yürütmek.

c) Başkanlığın idari ve mali hizmetlerini yürütmek.

ç) Afet ve acil duruma ilişkin kaynakları yönetmek.

d) Ulusal seviyede lojistik hizmetlerini yapmak veya yaptırmak, yerel yönetimler, diğer kamu kurum ve kuruluşları ile sivil toplum kuruluşlarına destek sağlamak.

e) Başkanlık personelinin eğitim çalışmalarını yürütmek.

f) Acil durum ve afet yönetimine ilişkin yayınları ve bilimsel çalışmaları derlemek, tasnif etmek, kütüphane hizmetleri vermek ve bu konularla ilgili süreli ve süresiz yayınlar çıkarmak.

[8] *(5902/ Afet ve Acil Durum Yönetimi Başkanlığının Teşkilat ve Görevleri Hakkında Kanun)*

Afet ve Acil Durum Koordinasyon Kurulu

MADDE 4 – (1) Afet ve acil durum hallerinde bilgileri değerlendirmek, alınacak önlemleri belirlemek, uygulanmasını sağlamak ve denetlemek, kurum ve kuruluşlar ile sivil toplum kuruluşları arasındaki koordinasyonu sağlamak amacıyla, Başbakanlık Müsteşarının başkanlığında, Milli Savunma, İçişleri, Dışişleri, Maliye, Milli Eğitim, Bayındırlık ve İskân, Sağlık, Ulaştırma, Enerji ve Tabii Kaynaklar, Çevre ve Orman bakanlıkları ve Devlet Planlama Teşkilatı müsteşarları, Afet ve Acil Durum Yönetimi Başkanı, Türkiye Kızılay Derneği Genel Başkanı ile afet veya acil durumun türüne göre Kurul Başkanınca görevlendirilecek diğer bakanlık ve kuruluşların üst yöneticilerinden oluşan Afet ve Acil Durum Koordinasyon Kurulu kurulmuştur.

[9] *(5902/ Afet ve Acil Durum Yönetimi Başkanlığının Teşkilat ve Görevleri Hakkında Kanun)*

İl afet ve acil durum müdürlükleri

MADDE 18 – (1) İllerde, il özel idaresi bünyesinde, valiye bağlı il afet ve acil durum müdürlükleri kurulur. Müdürlüğün sevk ve idaresinden vali sorumludur.

(2) İl afet ve acil durum müdürlüklerinin görevleri şunlardır:

a) İlin afet ve acil durum tehlike ve risklerini belirlemek.

b) Afet ve acil durum önleme ve müdahale il planlarını, mahalli idareler ile kamu kurum ve kuruşlarıyla işbirliği ve koordinasyon içinde yapmak ve uygulamak.

c) İl afet ve acil durum yönetimi merkezini yönetmek.

ç) Afet ve acil durumlarda meydana gelen kayıp ve hasarı tespit etmek.

d) Afet ve acil durumlara ilişkin eğitim faaliyetlerini yapmak veya yaptırmak.

e) Sivil toplum kuruluşları ile gönüllü kişilerin afet ve acil durum yönetimi ile ilgili akreditasyonunu yapmak ve belgelendirmek.

f) İl ve ilçe düzeyinde sivil savunma planlarını hazırlamak ve uygulamak.

g) Afet ve acil durumlarda, gerekli arama ve kurtarma malzemeleri ile halkın barınma, beslenme, sağlık ihtiyaçlarının karşılanmasında kullanılacak gıda, araç, gereç ve malzemeler için depolar kurmak ve yönetmek.
ğ) İlgili mevzuatta yer alan seferberlik ve savaş hazırlıkları ile sivil savunma hizmetlerine ilişkin görevleri ilde yerine getirmek.
h) Yıllık bütçe teklifini hazırlamak.
ı) İl kurtarma ve yardım komitesinin sekretaryasını yapmak.
i) Kimyasal, biyolojik, radyolojik ve nükleer maddelerin tespiti, teşhisi ve arındırması ile ilgili hizmetleri yürütmek, ilgili kurum ve kuruluşlar arasında işbirliği ve koordinasyonu sağlamak.
j) Başkanın ve valinin vereceği diğer görevleri yapmak.
(3) **(Değişik: 13/2/2011-6111/185 md.)** İl Afet ve Acil Durum Müdürlüklerinin harcamaları, il özel idarelerinin bütçelerine bu amaçla konulacak ödenekten yapılır. İl özel idareleri, bu harcamaları karşılayacak ödeneği ilgili yıl bütçesinden tefrik etmek zorundadır. Bu şekilde tefrik edilecek ödenek tutarı her halükarda il özel idaresinin ilgili yıl bütçesinin yüzde birinden az olamaz. Müdürlüklerin personel harcamaları ve personel ile ilgili diğer harcamaları Başkanlık bütçesinden karşılanır. İl özel idarelerinin afet ve acil durumlar ile sivil savunmaya ilişkin hizmetler kapsamındaki yatırım projelerinden Başkanlıkça uygun görülenlere Başkanlık bütçesinden belirlenen tutarda yardım yapılabilir. Harcamalarda, İl Özel İdaresi Kanununda il genel meclisi ve il encümenine verilen yetkiler vali tarafından kullanılır.
(4) İl afet ve acil durum müdürlükleri ile birlik müdürlüklerinin norm kadro ilke ve standartları, Maliye Bakanlığının görüşü üzerine Başkanlıkça belirlenir. Başkanlıkça belirlenecek norm kadro ilke ve standartlarına uygun olarak bu müdürlüklerin kadrolarının ihdası, iptali ve değişikliği ile geçici iş pozisyonu vizesine ilişkin işlemler, il özel idarelerinin tabi olduğu hükümler çerçevesinde yürütülür. Ancak, il özel idarelerinde kadrolarının ihdası, iptali ve değişikliği ile geçici iş pozisyonu vizesine ilişkin olarak İl Genel Meclisine verilmiş olan yetkiler,

[10] *(5902/ Afet ve Acil Durum Yönetimi Başkanlığının Teşkilat ve Görevleri Hakkında Kanun)*
Koordinasyon ve işbirliği
MADDE 16 – (1) Başkanlık, görevleriyle ilgili konularda kamu kurum ve kuruluşları, üniversiteler, yerel yönetimler, Türkiye Kızılay Derneği ve konu ile ilgili diğer sivil toplum kuruluşları, özel sektör ve uluslararası kuruluşlar ile işbirliği ve koordinasyonu sağlamakla yetkilidir.

[11] *(7269/ Umumi Hayata Müessir Afetler Dolayısiyle Alınacak Tedbirlerle Yapılacak Yardımlara Dair Kanun (Afetler Kanunu))*

(Değişik: 31/8/1999 - KHK - 574/1 md.) Gereken hallerde, yapılarda meydana gelen hasarı tespit etmek üzere Bayındırlık ve İskan Bakanlığının isteği üzerine diğer bakanlık, kurum ve kuruluşlar, mahalli idareler, üniversiteler ve meslek odaları, konusunda deneyimli yeteri kadar inşaat mühendisi ve/veya mimarı hasar tespiti çalışmalarında derhal görevlendirmekle yükümlüdürler.

[12] *(KHK/644/ Çevre ve Şehircilik Bakanlığının Teşkilat ve Görevleri Hakkında Kanun Hükmünde Kararname)*

Mekânsal Planlama Genel Müdürlüğü

MADDE 7 –

(…)

d) Risk yönetimi ve sakınım planlarının yapılmasına ve onaylanmasına ilişkin kuralları belirlemek ve izlemek, plana esas jeolojik ve jeoteknik etütleri yapmak, yaptırmak ve onaylamak.

(…)

j) Bakanlar kurulunca yetkilendirilen alanlar ile merkezi idarenin yetkisi içindeki kamu yatırımları, milli güvenliğe dair tesisler, askeri yasak bölgeler, 7269 sayılı umumi hayata müessir afetler dolayısiyle alınacak tedbirlerle yapılacak yardımlara dair kanun hükümleri çerçevesinde yapılacak binalar, genel sığınak alanları, özel güvenlik bölgeleri, enerji ve telekomünikasyon tesisleri ile ilgili altyapı, üstyapı ve iletim hatları, yanıcı, parlayıcı ve patlayıcı madde üretim tesisleri ve depoları, akaryakıt ve sıvılaştırılmış petrol gazı istasyonları gibi alanlar ile ilgili her tür ve ölçekteki planların yapılmasına ilişkin esasları belirlemek, bunlara ilişkin her tür ve ölçekteki harita, etüt, plan ve parselasyon planlarını gerektiğinde yapmak, yaptırmak ve resen onaylamak.

APPENDIX B

DISASTER RELATED DECREE LAWS (1999-2000)

Table B.1 1999-2000 yıllarında afetlerle ilgili çıkarıln KHK'lar

KHK No	Kararname Adı	RG Tarih	RG No
575	Doğal Afet Bölgelerinde Afetten Kaynaklanan Hukukî Uyuşmazlıkların Çözümüne ve Bazı İşlemlerin Kolaylaştırılmasına İlişkin Kanun Hükmünde Kararname (İronik olarak 17 Ağustos depreminden bir hafta önce Resmi Gazete'de yayımlanmıştır.)	11.08.1999	23813
574	Umumî Hayata Müessir Afetler Dolayısıyla Alınacak Tedbirlerle Yapılacak Yardımlara Dair Kanunda Değişiklik Yapılması Hakkında Kanun Hükmünde Kararname	01.09.1999	23803
576	Doğal Afetlerde Yapılacak Yardımların Düzenlenmesi ile Vergilerin Ödeme Sürelerinin Uzatılmasına ve Bazı Kanunlarda Değişiklik Yapılmasına Dair Kanun Hükmünde Kararname	23.09.1999	23825
577	Umumî Hayata Müessit Tabii Afetler Dolayiyle Alınacak Tedbirlerle Yapılacak Yardımlara Dair Kanuna Bir Geçici Madde Eklenmesi Hakkında Kanun Hükmünde Kararname	30.09.1999	23832
580	Umumî Hayata Müessir Afetler Dolayisiyle Alınacak Tedbirlerle Yapılacak Yardımlara Dair Kanuna Geçici Maddeler Eklenmesi Hakkında Kanun Hükmünde Kararname	13.10.1999	23845
581	Umumî Hayata Müessir Afetler Dolayısiyle Alınacak Tedbirlerle Yapılacak Yardımlara Dair 7269 Sayılı Kanun ile Mera Kanunu, Muhasebe-i Umumiye Kanunu, 2886Sayılı Kanun ile İçişleri Bakanlığı Teşkilât ve Görevleri Hakkında Kanunlarda Değişiklik Yapılması Hakkında Kanun Hükmünde Kararname	01.11.1999	23863
582	Afetten Doğan Zararların Giderilmesi Hakkında Kanun Hükmünde Kararname	22.11.1999	23884
584	Düzce Adı ile Bir İl ve Bu İl'e Bağlı olarak İki İlçe Kurulması ile 190 Sayılı KHK'nin Eki Cetvellerde Değişiklik Yapılması Hakkında Kanun Hükmünde Kararname	09.12.1999	23901
585	İl Özel İdaresi Kanununa Bir Madde Eklenmesi Hakkında Kanun Hükmünde Kararname	27.12.1999	23919
586	Sivil Müdafaa Kanunu ile Belediye Kanununda Değişiklik Yapılmasına Dair Kanun Hükmünde Kararname	27.12.1999	23919
587	Zorunlu Deprem Sigortasına Dair Kanun Hükmünde Kararname	27.12.1999	23919
588	Konut Edindirme Yardımı Hesalarının Tasviyesine Dair Kanun Hükmünde Kararname	29.12.1999	23921
589	Emekli Sandığı Kanunu ile Bazı Kanunların Doğal Afetlerle İlgili Maddelerinde Değişiklik Yapılmasına Dair Kanun Hükmünde Kararname	17.01.2000	23936

APPENDIX C

INTERVIEW QUESTIONS

1. Special Provincial Administrations (5302/69) and Municipalities are in charge of "Emergency Planning" under the name of "Disaster Plan". Provincial AFAD is responsible of making this plan and implement it in cooperation with local governments (5902/18).

a. How do you think a Disaster Plan should be? Is there a unit responsible of Disaster Plans within your institution?

b. Is there a concern for dinstinction of before/after disaster in these plans?

c. How is the communication of Municipality, SPA, Provincial AFAD and AFAD Presidency provided? How do you see the roles of other institutions?

2. SPA (5302/6), Municipality (5302/53; 5216/7) and Provincial AFAD (5902/18) are in charge of providing "emergency relief".

   In case of a disaster, do you think you have sufficient foundation for response?

3. How do you evaluate the concept of risk in terms of disasters?

   a. Who and how do you think should determine the disaster risks of a city?

   b. Do you have any study in order to reduce disaster risks?

4. Who/which institution do you think is/should be the most authorized regarding disster management in Turkey?

5. What was the most significant drawback in '99 earthquakes? What would have minimized such drawbacks?

   a. Since '99 there have been some changes in disaster regulations and policies. What are the alterations of your institute?

6. Is your technical staff sufficient in terms of disaster management?

7. How does the Urban Transformation for Areas under Disaster Risk work for your institution?

8. How could the abolishon of SPA in Metropols affect disaster management positively or negatively?

9. Via the No.2011/1320 cabinet decision, Turkey Disaster Risk Reduction Platform has been established in order to act as cooperation and counseling board in order to raise public awareness towards disasters and to establish persistence on risk reduction studies, to determine risk reduction needs, follow the practice in every level plans, policy and programs. One of the missions of the platform is to support identical or similar structures regarding disaster risk reduction in central and local governments.

   A platform with the participation of local governments, academics, private sector representatives, NGOs, chambers in the level of province and district, how do you think it would work?

10. Do you have a sugeestion for the solution of present drawbacks or to make the system work with fewer problems?

Questions asked to the Urban Planning Departments:

1. Is there an urban development plan prepared after 1999 earthquake?
2. Is there a new attitude with respect to earthquake experience?
3. Is there any mitigation plans regarding 644/648 Decree laws?
4. Is the building Isnpection Law in practice regarding new buildings?

1. İl Özel İdaresi(5302/69) ve Belediye (5393/53; 5216/7), "Acil Durum Planlaması" adı altında "Afet Planı" yapmakla yükümlüdür. İl AFAD da bu planları yerel yönetimlerle işbirliği içerisinde yapmak ve uygulamakla görevlendirilmiştir (5902/18).

   a. Sizce Afet Planı nasıl olmalı? Kurumunuzda Afet Planları yapmaktan sorumlu bir birim bulunuyor mu?

   b. Söz konusu planlarda "Afet Öncesi / Sonrası" ayrımı gözetilmekte midir?

   c. Belediye, İl Özel İdaresi, İl AFAD ve AFAD Başkanlık Teşkilatının iletişimi ve iş birliği nasıl sağlanıyor? Diğer kurumların rollerini nasıl görüyorsunuz?

2. İl Özel İdaresi(5302/6), Belediye (5393/53; 5216/7) ve İl AFAD (5902/18) "acil yardım" yapmakla görevlendirilmiştir.

   Şimdi bir afetle karşılaşsanız müdahale için yeterli altyapınız olduğunu düşünüyor musunuz? Afet senaryonuz var mı? Varsa kısaca açıklar mısınız.

3. "Risk" kavramını siz afetler açısından nasıl değerlendirirsiniz?

a. Sizce bir kentin afet riskleri nasıl ve kimler tarafından belirlenmelidir?

b. Sizin afet risklerini belirlemeye ya da azaltmaya yönelik çalışmalarınız bulunuyor mu?

4. Sizce Türkiye'de Afet Yönetimi ile ilgili olarak en yetkili kurum/kişi hangisidir/kimdir ya da hangisi/kim olmalıdır?

5. '99 depreminde yaşanan en önemli aksaklıklar nelerdi? Ne olsaydı bu aksaklıklar minimum olmazdı?

   a. '99'dan beri afet mevzuatında ve politikasında kimi değişiklikler oldu; siz kurum olarak ne tür değişikliklere gittiniz?

6. Teknik personel kadronuz afet yönetimi açısından düşünüldüğünde yeterli mi? Sayı ve donanım olarak değerlendirir misiniz?

7. Afet risklerine bağlı "Kentsel Dönüşüm" sizin kurumunuz açısından nasıl işliyor?

8. Büyükşehirlerde İl Özel İdarelerinin kaldırılıyor olmasının afet yönetimine olumlu/olumsuz nasıl bir etkisi olabilir?

9. 2011 yılında 2011/1320 sayılı Bakanlar Kurulu Kararıyla Türkiye'de toplumun afetlere duyarlılığını artırmak ve risk azaltma çalışmalarında sürekliliği sağlamak, risk azaltmanın her düzeyde plan, politika ve programlara uyumu amacıyla ihtiyaçların belirlenmesi, uygulamaların izlenmesi ve değerlendirilmesine katkıda bulunmak üzere bir işbirliği ve danışma kurulu olarak Türkiye Afet Risklerinin Azaltılması Platformu kuruldu. Bu kararda platformun görevlerinden biri de "**Afet risk azaltma konusunda merkezi ve yerel yönetimlerde eş veya benzer yapıların geliştirilmesine destek vermek.**" olarak belirlenmiştir.

   İl ve ilçe düzeyinde yerel yönetimlerin ortaklaşa çalışabileceği, meslek kuruluşları, akademisyenler, özel sektör temsilcileri ve sivil toplum kuruluşlarının da katıldığı bir platform oluşturulduğu takdirde sizce işleyiş nasıl olur?

10. Mevcut aksaklıkların giderilebilmesi ya da sistemin daha sorunsuz işleyebilmesi için bir çözüm öneriniz var mı?

İmar Müdürlüklerine sorulan diğer sorular:

1. 1999 depremi sonrasi yeni bir imar planı yapıldı mı?
2. Deprem deneyiminden faydalanarak yeni bir tutum oldu mu (Kıyılar, Yapılar vb)?
3. 644/648 sayılı KHK'larla ilgili sakınım çalışmaları yapılıyor mu?
4. Yeni yapılan binalarda yapı denetim kanununa uyuyluyor mu?

APPENDIX D

1999 NEWSPAPER SELECTION

Milliyet 26 Ekim 1999

Belediyeler çaresiz

Tanyel Keser Kocaeli, **Zafer Tokuş** Sakarya

Deprem bölgesindeki belediye başkanları, önerdikleri arazilere Bayındırlık ve İskan Bakanlığı'nın onay vermemesinden yakınarak, kendilerine prefabrike konut yapma başvurusunda bulunan işadamlarına yer gösteremediklerini söyledi.

Bakanlığı eleştirdiler

İzmit Büyükşehir Belediye Başkanı Sefa Sirmen, TOBB Başkanı Fuat Miras'ın, İTÜ Rektörü'nün, Uluslararası İnşaatçılar Birliği va Kayseri Valiliği'nin kendilerine prefabrike ev yapmak için başvurarak yer istediklerini belirti.

Sirmen, "Ancak bu talebi ilettiğimiz Bayındırlık ve İskan Bakanlığı'ndan önerdiğimiz yerlerle ilgili olarak iki aydır izin bekliyoruz. Yer gösterme hususunda yetkiyi bize versinler biz hemen yer verelim ve depremzeleri bir an önce prefabrike evlere kavuşturalım" dedi.

Adapazarı Belediye Başkanı Aziz Duran da aynı sıkıntıyı yaşadıklarını dile getirerek, "Yer gösterme yetkimiz olmadığı için gerçekten zor durumda kaldık" diye konuştu. Duran, "Yer gösterme yetkisi Bayındırlık Bakanlığı'nda. Yetki bize verilirse işadamlarına hemen yer gösteririz ve depremzedelerin kıştan önce çadırlardan kurtulmalarını sağlarız."

Gölcük Belediye Başkanı İsmail Barış ise depremden en fazla zararı Gölcük gördüğü halde işadamlarının prefabrike ev yapma konusunda kendilerine hiç başvuruda bulunmamalarından yakındı. İşadamları ve sanayicilerin Gölcük'ü düşünmediklerini iddia eden Barış, "Onların aklı fikri İzmit'te" dedi.

Figure D.1. Newspaper Clipping from 26th October 1999, Milliyet

Cumhuriyet 17.10.1999

Bursa Belediyesi

Üç imar planı, jeolojik çalışma yapılmadığı için iptal edildi

Yurt Haberleri Servisi - Çevre Bakanı **Fevzi Aytekin**, deprem bölgelerindeki hafriyatlarla ortaya çıkan molozların denize, akarsulara, yeşil alanlara dökülmesinin önlenmesi için bakanlık olarak bölgedeki vali ve diğer yetkililer ile ortak önlem aldıklarını söyledi. Bayındırlık ve İskân Bakanı **Koray Aydın**, Marmara depreminden etkilenen illerde durdurulan, imar planlarının yapımı, onayı ve inşaat ruhsatı düzenlenmesine ilişkin her türlü işlemi belediyelerin yapabileceğini belirtti. Bursa Büyükşehir Belediyesi, Osmangazi Belediyesi'nin üç imar planı değişikliğini, jeolojik araştırmalar yapılmadığı gerekçesiyle veto etti.

Çevre Bakanı Aytekin, Çorlu'da yaptığı açıklamada, deprem bölgesindeki çevre sorunlarıyla ilgili şunları söyledi:

"Deprem bölgelerindeki hafriyatlarla ortaya çıkan molozların ve inşaat kalıntılarının denize, akarsulara, yeşil alanlara dökülmesinin önlenmesi için Bakanlık olarak bölgedeki vali ve diğer yetkililer ile ortak tedbir aldık. Bunun takipçisiyiz. Hafriyat yapılırken çevreyi tahrip etmemek en büyük arzumuzdur."

Bayındırlık ve İskân Bakanı Koray Aydın düzenlediği basın toplantısında, depremin meydana geldiği Yalova, Kocaeli, Sakarya illeri ile İstanbul Avcılar, Bağcılar, Bayrampaşa, Büyükçekmece, Küçükçekmece, Tuzla ilçeleri ve Bolu ili Düzce, Gölyaka ilçelerinde, yürürlükte bulunan imar planlarının, deprem sonrasındaki duruma göre yeniden ele alınarak değerlendirildiğini bildirdi. Aydın, genelge ile belediyelerin her türlü işlemi yapabileceklerini belirterek, **"Belediyeler serbest, her türlü işlemi yapabilirler, ancak genelge ile bu işlemleri yaparken uyulması gereken kuralları kendilerine hatırlatıyoruz"** dedi.

Bursa Büyükşehir Belediyesi, Os-

Figure D.2 Newspaper Clipping from 17th October 1999, Cumhuriyet

Bölge halkı çadıra mahk

► Kocaeli ilinde 36 çadırkentteki 12 bin 979 çadırda 62 bin 300 kişi ikamet ediyor. Adapazarı'nda 55 çadırkentte 35 bin 653 kişi kalıyor. Havaların giderek soğumasıyla çadırda yaşayan yurttaşların koşullarının ağırlaşması prefabrike konut yapımını gündeme getirdi.

İstanbul Haber Servisi - Marmara Bölgesi'nde büyük yıkımı yol açan depremin ardından Bolu, Kocaeli, Yalova ve Adapazarı'nda evlerde yaşayanların sayısı yüzde 10'unun altına indi.

Afet Bölge Koordinatörlüğü'nün 13 Ekim 1999 itibariyle 14 bin 513 olarak verdiği - bu rakamın gerçek ölü sayısının çok altında olduğu biliniyor- toplam ölü sayısı deprem bölgesindeki nüfusa oranlandığında, Bolu ilinde yüzde 0.05, Kocaeli'nde yüzde 0.77, Sakarya'da yüzde 0.36, Yalova'da ise nüfusun yüzde 1.53'ü depreminde yaşamını yitirdi. Bir örnek olarak en fazla can ve mal kaybı ve hasarlı durumda olduğu gözlendi. Gölcük'te 752 enkazdan 589'u kaldırıldı. Yıkılacak 972 binadan 339'u çekerildi. Bolu'nun Düzce Gölyaka, Cumayeri, Çilimli ve Gümüşova ilçelerinde de büyük hasarlar meydana geldi. Bin 733 konutun ağır, 4 bin 406 konutun orta derecede hasarlı olduğu Bolu'da, toplam hasarlı konut ve işyeri sayısı 113 bin 714. Ancak hasar tespitine itirazlar oldu. Buna göre sadece Yalova ilinde 20 bin kişi hasar tespitine itiraz etti.

Marmara Bölgesi çadırda yaşıyor

Afet Bölge Koordinatör

Prefabrike evlerin yetersiz kaldığı deprem bölgesinde126 bin kişi çadırkentlerde yaşıyor.(H

Figure D.3 Newspaper Clipping, 1999, Cumhuriyet

Destekçi belediyeler araç ve personellerini çekince, Adapazarı ve İzmit'e su bile verilemez oldu

Belediyeler enkaz altında

Özbey MEN / ADAPAZARI / İZMİT

Depremin yıktığı Adapazarı ve İzmit belediyeleri çaresiz durumda. Çadırda hizmet veren Adapazarı Belediyesi, çevre illerden destek amacıyla gelen belediye ekiplerinin dönmesiyle kaderiyle baş başa kaldı. 17 Ağustos depreminden önce aylık 1 trilyon lira gelir bulunan Adapazarı Belediyesi ile aylık yaklaşık 4.5 trilyon gelir elde eden İzmit Büyükşehir Belediyesi şu anda borç içinde yüzüyor. Adapazarı Belediye Başkanı Aziz Duran, depremin yörede 121 trilyon liralık hasara yol açtığını, acil olarak 4.2 trilyon liraya ihtiyacları olduğunu belirtirken, İzmit Büyükşehir Belediye Başkanı Sefa Sirmen, "Hükümetin biz para diye konuşturmaması lazım, şoförüme maaş ödeyemiyoruz, esnaf tıkandı. İzmit Büyükşehir Belediyesi bugüne kadar devlete 12 verip sadece 1 aldı, şimdi biz istiyoruz" diyor.

ADAPAZARI

"Destek ekipleri dönünce çalışmalar durdu"

Belediye başkanlarının istekleri

- İller Bankası'ndaki paylarımız artırılsın ve hemen ödensin.
- Adapazarı büyükşehir belediyesi ilan edilsin.
- İmar yetkisi yeniden belediyelere verilsin.
- Adapazarı'nın yeni yerleşim planı acilen onaylansın.
- Kalıcı konut için Hazine garantili dış kaynak sağlansın.

İZMİT

"Devletten bir kuruş dahi gelmedi"

Figure D.4 Newspaper Clipping from 11th October 1999

APPENDIX E

ACTIVE FAULT LINES OF TURKEY

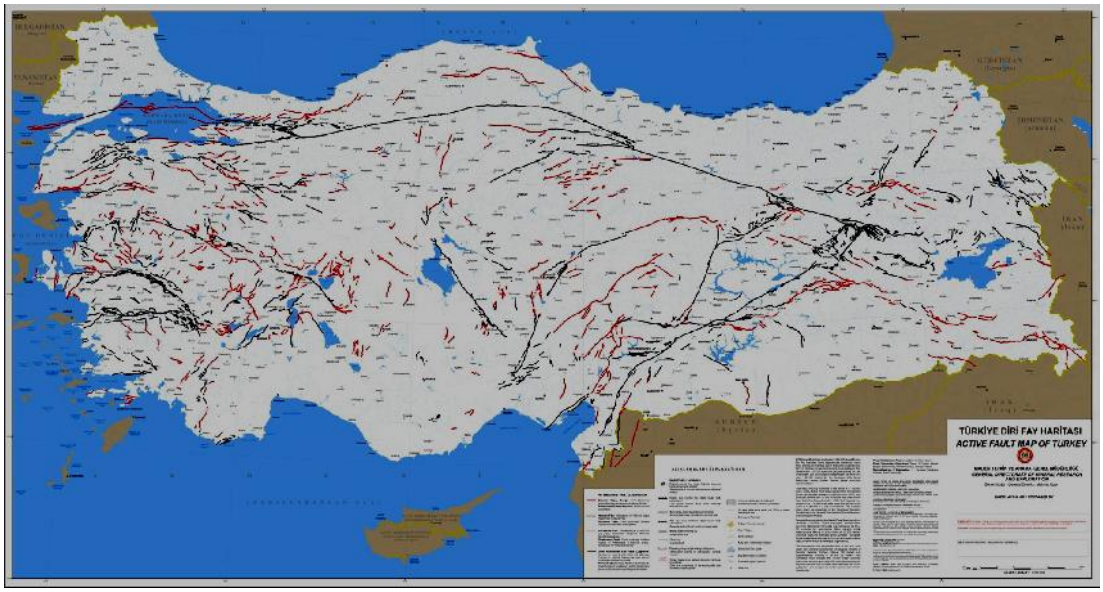

Figure E.1 Active fault lines of Turkey 2012. (Source: MTA: General Directorate of Mineral Research and Exploration)