

DISASTER GOVERNANCE IN WEST ASIA: COMPARATIVE PERSPECTIVES ON INSTITUTIONAL FRAMEWORKS AND RISK MANAGEMENT

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I. INTRODUCTION

Disasters – both natural and human-made – have historically wrought the politico, socio-economic landscapes across the regions. In the recent times, disaster has emerged as one of the most formidable challenges affecting states and societies across the globe. It is no gainsaying that the disaster disrupts developmental gains. It upends fragile political system and disproportionately affects vulnerable populations. Disaster in its wake exposes the fragile governance, infrastructure, and community resilience. The rapid acceleration of disaster episodes demands coordinated responses from the governments and its associated agencies, civil society etc. Disaster management has become one of the pivotal concerns for the governance. Comprehensive understanding of risk governance, resilience building, build back better is the new '*mool-mantra*' and the prerequisites for the sustainable development and growth. In this aforesaid context, it must be stated that the West Asian region occupies a distinctive place in the disaster management paradigm. This region is vulnerable to various kinds of disaster along with some of the endemic issues such as persistent conflict, sectarian divide, authoritarian regimes and fragile economies. This region is also marred by chronic weak institutions. Earthquakes, drought, dust storms, floods and extreme temperatures are some of the recurrent features of West Asian region. Countries like Turkey and Iran are located at regions which are susceptible to earthquake. Saudi Arabia and Iraq confront regularly episodes of drought, floods, dust storms which is further exacerbated by climate change. Iran-Iraq war in the past, Gulf wars, Syrian war, and many similar protracted conflicts in the region has created an unparalleled crisis affecting millions of people of the region.¹ It must be stated here that natural disasters hardly hit the region in the form of only hazards per se; rather due to continuous fragile political situations and institutional fragility - it creates undue human sufferings and complicates the recovery processes.

To understand the disaster management in the western region of Asia is to appreciate the asymmetry of risk and capacity across the countries. West Asia is a uniquely placed when compared with other regions of Asia. This region encompassing "large portion of the Asian

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¹ See generally, Meena Singh Roy, "Conflicts and Instability in the West Asian Region: Multiple Narratives" in Meena Singh Roy and Md. Muddassir Quamar (eds.), *Changing Security Paradigm in West Asia: Regional and International Responses* 1 – 18 (KW Publishers Pvt. Ltd., Manohar Parrikar Institute for Defence Studies and Analyses, New Delhi, 2020) available at: https://idsa.in/system/files/book/book_change-sec-paradigm-west-asia.pdf (last visited on July 19, 2025); See also Ranjit Gupta "Current Geopolitical Scenario in West Asia: Implications for India" 12 (4) *Indian Foreign Affairs Journal* 288 – 294 (2017) available at: [http://www.associationdiplomats.org/publications/ifaj/Vol12/12.4/IFAJ%20-%2012.4%20-%20DEBATE\(F\).pdf](http://www.associationdiplomats.org/publications/ifaj/Vol12/12.4/IFAJ%20-%2012.4%20-%20DEBATE(F).pdf). (last visited on July 19, 2025).

continent”² is divided into various sub-regions.³ This region as pointed out earlier is marred by various longstanding issues. Centre for International and Regional Studies in its report on West Asia states:

*“Contemporary West Asia is typically portrayed as a region of fragility, plagued by lingering interstate conflict, ridden with the fallout from unresolved territorial disputes, and unsettled by the persistence of ethnic and religious identities that do not easily align with the creation of strong nation-states. In addition, persistent and debilitating authoritarian rule, the lack of political participation, and slow economic growth all cast their shadows on these states.”*⁴

This region is also marked by under-developed state institutions, pervasive social unrest, corruption⁵, economic inequality⁶, and continuous destabilization caused by protracted proxy wars.⁷ These issues for long continues to impinge adversely on the lives of the people in the region. The aforesaid man-made incidences quintessentially define the geopolitical and socio-economic landscape of West Asia. It is with this context that the researcher wants to draw up the ‘natural-disaster-risk-profile’ in West Asia. It is pertinent to point out that the impact of ‘natural-hazards’⁸ causing disaster is unevenly present in this region. Some of the more frequent natural hazards causing disaster in West Asia are earthquake, drought, floods, and extreme temperature. Disaster risk for each country in the region is very different. World Risk Report in its report enunciates disaster risk classification from ‘very high’ to ‘very low’ risk countries.⁹ Most of the countries of West Asia does not fall under high-risk categories as

² Syed Mehtab Ali Shah, “West Asia: Its Problems and Emerging Patterns” 41 (1) *Pakistan Institute of International Affairs* 86 (1988).

³ Major sub-regions are: a) the fertile crescent which includes Israel, Jordan, Syria, Lebanon; and b) South West Asia consist of Saudi Arabia, Oman, The Gulf States, Iran. See Syed Mehtab Ali Shah, “West Asia: Its Problems and Emerging Patterns” 41 (1) *Pakistan Institute of International Affairs* 86 (1988).

⁴ Center for International and Regional Studies, Georgetown University in Qatar, “The Great Game in West Asia: Working Group Summary Report” (Summary Report No. 17, 2017) available at: <https://repository.library.georgetown.edu/bitstream/handle/10822/1043056/CIRSSummaryReport17TheGreatGame2017.pdf?sequence=1> (last visited on July 19, 2025).

⁵ Robert Rydberg, “The Causes of the Social Unrest in Western Asia and North Africa” in David Mulrooney (ed.) *The Situation in West Asia and North Africa and its Impact on the International Strategic Configuration* 35 – 44 (Institute for Security & Development Policy, Conference Report, August 2012) available at: https://isdpr.eu/content/uploads/publications/2012_mulrooney-ed_the-situation-in-west-asia-and-north-africa.pdf (last visited on July 19, 2025).

⁶ See generally, Timothy C. Niblock “The Future of Political Transformation in West Asia and North Africa” in Meena Singh Roy (ed.) *Emerging Trends in West Asia* 30 – 41 (Pentagon Press, Institute for Defence Studies & Analysis, New Delhi, 2014) available at: https://idsa.in/system/files/book/book_TrendsInWestAsia_0.pdf (last visited on July 19, 2025).

⁷ Anil Trigunayat, “India’s outreach to the Middle East and West Asia” (Distinguished Lectures, Ministry of External Affairs, Government of India, 2018) available at: <https://www.mea.gov.in/distinguished-lectures-detail.htm?739> (last visited on July 19, 2025).

⁸ Natural hazards can be of different types, viz., geophysical (example: earthquake, tsunami, volcanic activity), hydrological (example: flood), climatological (example: extreme temperature), meteorological (example: cyclones) and biological (example: pandemic, epidemic). See IFRC “Types of disasters: Definition of hazard” available at: <https://www.ifrc.org/en/what-we-do/disaster-management/about-disasters/definition-of-hazard/> (last visited on July 19, 2025); See also, EM-DAT The International Disaster Database “General Classification” available at: <https://www.emdat.be/classification> (last visited on July 19, 2025).

⁹ Bündnis Entwicklung Hilft and – Institute for International Law of Peace and Armed Conflict, “World Risk Report 2020” 58 – 61 (2020) available at: <https://reliefweb.int/sites/reliefweb.int/files/resources/WorldRiskReport-2020.pdf> (last visited on July 19, 2025).

they are comparatively less exposed to the risk of natural hazards. Despite low risk profile of the region various parts of West Asia have in the past witnessed intense hazard events such as earthquake, droughts, flood, etc. Earthquake particularly have been very devastating in certain region. It is worthwhile to note the considerable increase in the incidences which can be attributed to the climate change. Vulnerability and exposure to extreme events spurred by climate poses a grave challenge and increasingly is becoming a matter of concern in West Asia.¹⁰ Globally, the year 2020 was dominated by the climate related disasters affecting 98.4 million people and causing economic losses of US\$ 171.3 billion.¹¹ West Asia is no exception as it increasingly facing the scourge of climate emergency. As a matter of fact, everywhere extreme weather is becoming a ‘new normal’!¹² The disaster whether man-made or caused by natural hazards poses a humongous challenge to deal with. Especially for the government of the developing and under-developed countries it is far more threatening and grave.¹³ West Asian region which is plagued by various intractable issues is precariously positioned to deal with the events of natural disaster. United Nations Environment Program expounding on the ground-realities states:

*“Security, conflict and natural disasters are all issues facing the West Asia region. In addition to their tragic human toll, disasters and conflicts can destroy infrastructure, undermine human security and tear apart the fabric of sustainable development. Their impact is disproportionately borne by the most vulnerable sectors of society, affecting livelihoods and compounding poverty.”*¹⁴

Different countries constituting West Asia has responded differently to countervail natural disaster. Conventionally response to disaster has been to search and rescue lives. This set-up has drastically changed over the period of time. The new paradigm has been in the form of comprehensive disaster management plan (entailing phases such as response, rehabilitation, recovery).¹⁵ And from there it has metamorphosed into a newer paradigm which is constructed on deeper understanding of ‘disaster-risk’¹⁶ so as to constitute disaster risk management (entailing concepts such as Hazards, Vulnerability and Exposure).¹⁷ Robust disaster risk

¹⁰ See generally David Eckstein *et.al.*, *Global Climate Risk Index 2021* (German Watch, January, 2021) available at: https://germanwatch.org/sites/default/files/Global%20Climate%20Risk%20Index%202021_2.pdf (last visited on July 19, 2025).

¹¹ Centre for Research on the Epidemiology of Disasters and UN Office for Disaster Risk Reduction, “2020 The Non-Covid year in disasters: Global trends and perspectives” (2021) available at: <https://www.cred.be/publications> (last visited on July 19, 2025).

¹² UN ESCAP, “The Disaster Riskscape Across Asia-Pacific: Pathways for Resilience, Inclusion and Empowerment” 10 (Asia-Pacific Disaster Report 2019) also available at: https://www.unescap.org/sites/default/d8files/knowledge-products/Asia-Pacific%20Disaster%20Report%202019_full%20version.pdf (last visited on July 21, 2025).

¹³ Tolgahan Aydinler and Dr. Hüseyin Özgür, “Natural Disaster Governance: Barriers for Turkey” Special Edition, *European Scientific Journal* 47 (2016), available at: <https://core.ac.uk/download/pdf/236412695.pdf> (last visited on July 21, 2025).

¹⁴ UNEP, “Building resilience to disasters and conflicts”, available at: <https://www.unep.org/regions/west-asia/regional-initiatives/building-resilience-disasters-and-conflicts> (last visited on July 21, 2025).

¹⁵ UN-SPIDER, “Emergency and Disaster Management”, available at: <https://un-spider.org/risks-and-disasters/emergency-and-disaster-management> (last visited on July 21, 2025).

¹⁶ See UNDRR, “Disaster Risk”, available at: <https://www.preventionweb.net/disaster-risk/risk/disaster-risk/> (last visited on July 21, 2025).

¹⁷ See UN-SPIDER, “Disaster Risk Management”, available at: <https://un-spider.org/risks-and-disasters/disaster-risk-management> (last visited on July 23, 2025).

management entrench disaster risk reduction efforts by preventing new disaster risk.¹⁸ The new model as adopted by various countries prescribes focusing on risk and underlying risk drivers rather than focusing on disaster. Countries of West Asian region have also taken series of measures to deal with disaster. They have also adopted various institutions and took the route of legislation to address burgeoning threat of disaster. The following is a brief analysis of (few) countries and their institutions and legal set-up in West Asia.

This research paper argues that the disaster management in West Asia is fundamentally unique due to fragility of the region stemming from political instability and frequent wars. The development of disaster management framework as seen across the world could not be replicated in this region due to some of the persistent constraints. Traditional model, *i.e.*, a reactive model based on search, rescue and relief is - by and large - has remained the significant portion of government response to any given disaster. However, some significant efforts can be seen in the country such as Turkey in constituting disaster specific framework. Specialized agencies such as AFAD, NDMO etc. is going to be detailed out in this paper.

II. TURKEY

Turkey is country which lies between Mediterranean and Black Sea. It has a unique geo-political status mainly because of location which act as a natural bridge between Asia and Europe.¹⁹ It is prone to various kinds of natural disaster such as earthquake, floods, avalanches, landslides, etc. Earthquake accounts for the majority of death and injuries.²⁰ In fact the country “ranks third in the world in terms of earthquake-related casualties and eighth with regard to the total number of people affected”²¹ and “experiences at least one 5 magnitude earthquake.”²² The report prepared by AFAD (Ministry of Interior, Disaster and Emergency Management Presidency, Turkey) poignantly highlights the threat of earthquake in Turkey. The report states:

*“In Turkey, earthquakes are the most destructive of all disaster types in terms of losses of both lives and property. Approximately 60 percent of the loss of life related to disasters is due to earthquakes. Turkey is located on the Mediterranean-Alpine-Himalayan belt, which is one of the most active seismic belts in the world. This is an active belt that is responsible for almost 20 percent of the earthquakes occurring around the world, generating a destructive earthquake in Turkey in every five years, on average.”*²³

¹⁸ UNDRR, “Disaster risk reduction & disaster risk management”, available at: <https://www.preventionweb.net/disaster-risk/concepts/drr-drm/> (last visited on July 23, 2025).

¹⁹ M. E. Baris, “Effectiveness of Turkish Disaster Management System and Recommendation” 23(3) *Biotechnology & Biotechnological Equipment* 1391 (2009), available at: <https://www.tandfonline.com/doi/pdf/10.1080/13102818.2009.10817677> (last visited on July 21, 2025).

²⁰ *Ibid.*

²¹ AFAD, Ministry of Interior, Disaster and Emergency Management Presidency, “About Us” available at: <https://en.afad.gov.tr/about-us> (last visited on July 23, 2025).

²² *Ibid.*

²³ AFAD, “2019 Overview of Disaster Management and Natural Disaster Statistics” 84 (Republic of Turkey, Ministry of Interior, 2020), available at: https://en.afad.gov.tr/kurumlar/en.afad/Afet_Istatistikleri_2020_eng_1.pdf (last visited on July 23, 2025).

It is pertinent to point out that about “sixty six percent (66%) of Turkey’s surface area lies on Zones 1 and 2 levels of seismic hazard.”²⁴ Moreover “between 1900 and 2012 there have been 287 damaging earthquakes, leading to 100,000 deaths while nearly 700,000 buildings were reported having major damages or totally destroyed.”²⁵ Earthquake has always been a major concern in Turkey and therefore there has been many laws and regulations made in response to the earthquake. The very first regulation was issued by Ottoman Sultan Bayezid II on September 14, 1509 in the aftermath of Istanbul Earthquake. The edict issued by the Sultan proscribed “construction of houses on land reclaimed from the sea, and promoted the construction of houses with wooden frames.”²⁶ It also called for “20 golds to be paid to each household”²⁷ which were destroyed. Various other measures were taken in the form Enbiye Ordinance (1848); Municipality Law No. 1580 (1930); Municipal Construction and Roads Law No. 2290 (1933) which *inter-alia* dealt with issues such as rules regarding construction, urbanization, responsibility for inspection settlement, development of zoning plan for cities, and “construction of buildings and roads in accordance with the urbanization approach of the time.”²⁸ Post World War I various other provisions were made to protect public from all kinds of dangers. Notables were: Defense and Protection of the Regions Behind the Fronts against Air Attacks and Passive Protection Law No. 3502. Erzincan Earthquake (1939) which was one of the biggest earthquakes faced by Turkey in twentieth century led to the enactment of Law No. 3773 (1940) and thereafter Law No. 4623 (1944).²⁹

Flood which caused devastation in various parts of Turkey during 1940s led to Law No. 4373 (1943) which were introduced to provide for measures which was to be taken before floods and it prescribed rescue operation during the flood.³⁰ Some other notable laws were Zoning Law (1956) which had the provision for the identification of disaster hazards; Law of 1958 which established Ministry of Development and Housing; Law No. 7269 which dealt with “Measures to be Taken and Aid to be Given Due to Disasters Affecting Public Life of May 15, 1959.” These efforts resulted in the establishment of General Directorate of Natural Disasters.³¹ The year 1959 also saw another law i.e., Civil Defense Law No. 7126 which provided the provisions for rescue and first aid operation along with the establishment of General Directorate of Civil Defense under the Ministry of Interior.”³² The year 1988 saw another piece of legislation, *i.e.*, Regulation on the Disaster Relief Organization and Planning Principles “which contained provisions regarding the planning and mobilization of public resources and the deployment of the state’s forces as quickly as possible to the scene of a disaster in order to provide the most effective emergency relief to the affected citizens.”³³ This legislation is regarded as a very important legislation for disaster management. Earthquake in

²⁴ F. Oktay, “The preparation and integration of Turkey’s National Disaster Response Plan” 150 *WIT Transactions on The Built Environment* 2 (2015), available at: <https://www.witpress.com/Secure/elibrary/papers/DMAN15/DMAN15001FU1.pdf> (last visited on July 23, 2025).

²⁵ *Ibid.*

²⁶ AFAD, “Strategic Plan 2019-2023” 22 (Republic of Turkey, Ministry of Interior, Disaster and Emergency Management Presidency, 2019), available at: https://en.afad.gov.tr/kurumlar/en.afad/e_Library/plans/AFAD_19_23-StrategicPlan_Eng.pdf (last visited on July 23, 2025).

²⁷ *Ibid.*

²⁸ *Ibid.*

²⁹ *Ibid.*

³⁰ *Id.* at 23.

³¹ *Ibid.*

³² *Ibid.*

³³ *Ibid.*

Erzincan (1992) was another major disaster which prompted Law No. 7269 and consequently Law No. 3838 and Law No. 4123 were enacted. These laws *inter-alia* covered the issues such as relief services during natural disaster.³⁴

The year 1999 witnessed most destructive earthquake in Marmara Region which affected large densely populated area consisting of various industrial establishments. This event is often referred as a wake-up call as it heralded considerable changes in Turkish disaster policies.³⁵ This destruction in its wake resulted in review of disaster management system and brought many changes. These changes were: a) The establishment of Turkish General Directorate of Emergency Management in the year 2000; b) building inspection system was revamped; c) insurance system was introduced.³⁶ Three major institutions which were tasked with disaster management in Turkey were:

- a) General Directorate of Emergency Management
- b) General Directorate of Natural Disasters
- c) General Directorate of Civil Defense

It is pertinent to point out here that these three institutions were “operating under three different ministries.”³⁷ In a bid to strengthen disaster management and usher in better coordination Law No. 5902 (2009) was enacted which *inter-alia* abolished the aforementioned three institutions and new entities were constituted, *i.e.*,

- a) Disaster and Emergency Management Presidency which was under the Prime Ministry, and
- b) Provincial Directorate of Disaster and Emergency Management overseen by provincial Governors.³⁸

Law No. 5902 constituted a new entity, *i.e.*, Disaster and Emergency Management Presidency (AFAD).³⁹ Under the new law the AFAD organization is tasked with implementing and coordination of pre-disaster work (*i.e.*, risk management, mitigation, preparedness); during disaster work (*i.e.*, responding and emergency aid) and the post disaster works (*i.e.*, recovery and reconstruction).⁴⁰ This law provides for the “necessary administrative structure, its activities, responsibilities, relations with other units, and running of tasks related to disaster and emergency management of natural, technological and human originated hazards.” Further this law also aims at taking “necessary precautions and measurements on disaster and civil protection related services at country level”⁴¹ and intends “to maintain coordination amongst the organisations those have a role pre and post disaster activities”⁴² and “policy making and implementation on disaster management.”⁴³ It must be stated here that AFAD is the lead

³⁴ *Ibid.*

³⁵ Helena Hermansson, Centralized Disaster Management Collaboration in Turkey” 43 (Thesis, Uppsala Universitet, 2017) available at: <https://uu.diva-portal.org/smash/get/diva2:1086710/FULLTEXT01.pdf> (last visited on July 24, 2025).

³⁶ *Supra* note 26 at 24.

³⁷ *Ibid.*

³⁸ *Ibid.*

³⁹ *Supra* note 21.

⁴⁰ Kerem Kuterdem, “A new disaster management structure in Turkey” (AFAD, Prime Ministry, Disaster and Emergency Management Presidency, Earthquake Department, 2010), available at: https://www.preventionweb.net/files/15110_6kuterdemanewdisastermanagementstru.pdf (last visited on July 24, 2025).

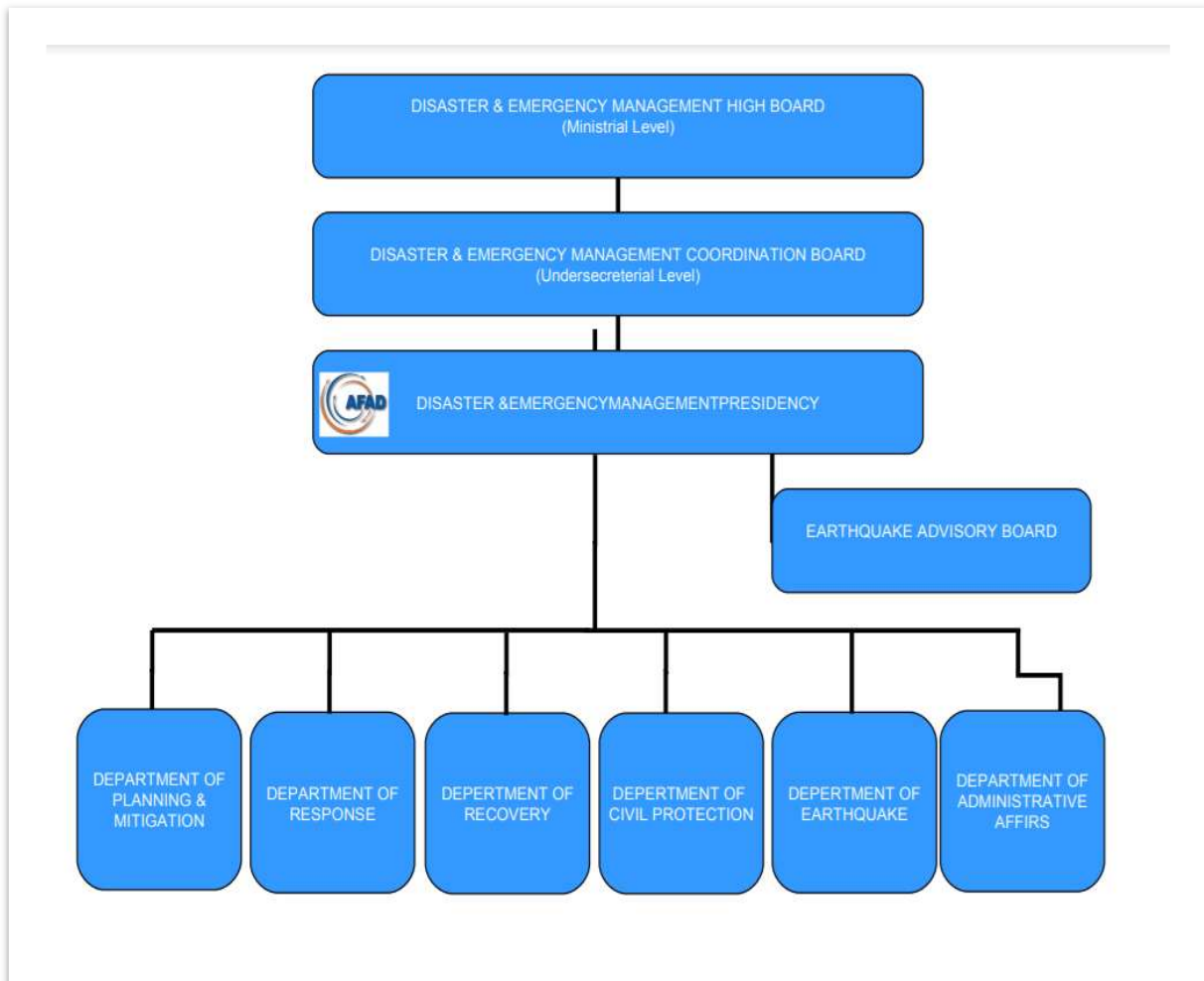
⁴¹ *Ibid.*

⁴² *Ibid.*

⁴³ *Ibid.*

institution which is responsible for governance of critical risks in Turkey.⁴⁴ The organization set-up of AFAD can be presented as follows:

Turkish Disaster and Emergency Management Presidency (AFAD)



Within this aforementioned organizational set-up there are three main committees which oversee Disaster Management *viz.*,

- a) Disaster and Emergency High Board
- b) Disaster and Emergency Coordination Board
- c) Earthquake Advisory Board⁴⁶

Main duties of Disaster and Emergency High Board are: “to approve reports, programmes and plans prepared for disaster and emergency situations.”⁴⁷ This Board is “chaired by one of the Vice Prime Minister”⁴⁸ and further “consist of Ministers of National

⁴⁴ OECD, “Turkey” (2017), *available at*: <https://www.oecd.org/gov/risk/risk-governance-country-factsheet-turkey.pdf> (last visited on July 24, 2025).

⁴⁵ *Supra* note 40.

⁴⁶ *Ibid.*

⁴⁷ *Ibid.*

⁴⁸ *Ibid.*

Defence, Interior, Foreign Affairs, Finance, National Education, Health, Transportation, Energy and Natural Sources, Environment and Forest and Public Works and Settlement.”⁴⁹

Main duties of Disaster and Emergency Coordination Board are “to conduct coordination between foundation and institutions and Non-Governmental Organizations, to evaluate information, to identify measures to be taken and ensure the application of this measures and to supervise in case of Disaster and Emergency Situations.”⁵⁰ This Board “is chaired by the Undersecretary of Prime Ministry.”⁵¹ And further “consist of Undersecretaries of National Defence, Interior, Foreign Affairs, Finance, National Education, Health, Transportation, Energy and Natural Sources, Environment and Forest and Public Works and Settlement Ministries, Undersecretary of State Planning Organisation, Director General of Disaster and Emergency Management Presidency, Head of Turkish Red Crescent.”⁵² AFAD has also come up with strategic plan viz., a) AFAD 2013-2017 Strategic Plan; and b) AFAD 2019-2023 Strategic Plan.⁵³ Other significant document drawn up by AFAD is the formulation of National Earthquake Strategy Action Plan (UDSEP). This action plan was prepared “with the aim of decreasing damages and effects of the earthquake and taking necessary precautions.”⁵⁴ This plan “includes the targets between the years of 2012 and 2023 under three main titles and strategies and actions that are required to be applied for fulfilling these targets.”⁵⁵ From the above it may be extrapolated that in Turkey though most of the “disaster regulations and legislation have been adopted in the wake of disasters”⁵⁶ nevertheless there has been various changes in the legal institutions and the instruments which are futuristic.

III. IRAN

The Islamic Republic of Iran is susceptible to variety of disaster. As per the National Report of the Islamic Republic of Iran: “among the 40 different types of natural disasters observable in different parts of the world, 31 types have been identified in the Islamic Republic of Iran.”⁵⁷ The country is located in “one of the most arid regions of the world.”⁵⁸ Some of the more frequent hazards faced by this country are earthquake, drought, flood, wildland fires, heat waves, desertification, sand storm and dust storm.⁵⁹ These incidences can be attributed to the unique geological setting and geographical characteristics of Iran. Severity of flood in Iran is often due to the combination of factors such as distinctive topographical conditions along with

⁴⁹ *Ibid.*

⁵⁰ *Ibid.*

⁵¹ *Ibid.*

⁵² *Ibid.*

⁵³ AFAD, “Strategic Plans”, available at: <https://en.afad.gov.tr/plans> (last visited on July 24, 2025).

⁵⁴ Esra Dobrucali and Ismail Hakki Demir, “Earthquake and Flood Disaster Management Regulations in Turkey” 2 (1) *Disaster Science and Engineering* 2, available at: <http://www.disasterengineering.com/tr/download/article-file/408209> (last visited on July 25, 2025).

⁵⁵ *Ibid.*

⁵⁶ *Supra* note 35 at 42-43.

⁵⁷ World Conference on Disaster Reduction, Hyogo, Japan, “National Report of the Islamic Republic of Iran on Disaster Reduction” (2005), available at: <https://www.unisdr.org/2005/mdgs-drr/national-reports/Iran-report.pdf> (last visited on July 25, 2025).

⁵⁸ PDNA, “Post Disaster Needs Assessment: Iran 2019 Floods in Lorestan, Kuzestan and Golestan Provinces”, Oct. 2019, available at: https://reliefweb.int/sites/reliefweb.int/files/resources/IRAN%2C_FLOODS_2019_%28Final_Report%29_En_-_2019-12-09_%28low_quality%29.pdf (last visited on July 25, 2025).

⁵⁹ *Ibid.*

the unique characteristics of rivers.⁶⁰ Pertinent to also point the adverse effect of climate change which increasingly is contributing in weather related disaster such as flood in Iran.⁶¹ Pertinent would be to also enumerate that the country falls under seismically very active zones. Historically earthquake has contributed considerably in the mortality rate.⁶² Furthermore, this country is situation on the “world dry belt of which 60 percent is covered with mountains and the remaining part is desert and arid lands.”⁶³

As it can be seen from the aforesaid that the country has quite a many severe hazards which it has to deal with; in this context, it would not be out of place to illuminate the fact that historically Iran has taken fair amount of initiative to deal with natural disaster. Disaster management is not a new concept in Iran. The 2019 report on ‘Post Disaster Needs Assessment’ provides a glimpse of historical evolution of disaster management. As per the report:

*“the first law of disaster management (DM) in the country was enacted in 1907 during Qajar Dynasty that assigned the Ministry of Interior as responsible for emergency response. However, perhaps the most important step in improving disaster management system in Iran is related to establishment of the Red Lion and Sun Society (later changed to Iranian Red Crescent Society) in the early decades of last century (1923) by the efforts of Dr. Amir-Alam, during Ahmad Shah era. Dr. Amir-Alam was the president of the society for 17 years and could expand the Red Lion and Sun Society by financial assistance, facilities and supports of the Holy Shrine of Imam Reza (AS) to assist victims in disasters as well as deprived and disabled persons.”*⁶⁴

The aforesaid were the early reflection of the various initiatives taken in Iran during early twentieth century. In 1962, Iran witnessed devastating earthquake in the area of Boein Zahra. This earthquake in its wake led to the establishment of organization under the army which was called as “Committee for Assisting Victims.”⁶⁵ This committee was headed by commander general of military forces of Iran.⁶⁶ Later on, various other entities regarding disaster management were formed, there were:

- a) Establishment of the Relief Organization under Red Lion and Sun Society
- b) Formation of Civil Defese (1972)
- c) Creation of National Organization for Preparedness and Mobilization of Civilian (1975)⁶⁷

⁶⁰ *Ibid.*

⁶¹ *Ibid.*

⁶² News and Press Release, “Joint UN effort bolsters Iran’s ability to reduce its disaster risk” UNDRR Apr. 30, 2019, *available at*: <https://www.undrr.org/news/joint-un-effort-bolsters-irans-ability-reduce-its-disaster-risk> (last visited on July 25, 2025).

⁶³ IDNDR-ESCAPE Regional meeting for Asia, “Country Report of the Islamic Republic of Iran on Natural Disaster Reduction” (1999), *available at*: https://www.preventionweb.net/files/30414_irancountryreportidndrescapmeetinga.pdf (last visited on July 26, 2025).

⁶⁴ *Supra* note 58.

⁶⁵ *Ibid.*

⁶⁶ *Ibid.*

⁶⁷ *Ibid.*

The Tabas earthquake (1978) was another event which led to the change in thought process concerning disaster management. This event made it very evident “that the military forces could not provide sufficient disaster management measures in all aspects.”⁶⁸ Islamic revolution (1979) is known for the establishment of Islamic republic.⁶⁹ Post this event brought several changes. These changes are enumerated below:

- a) Committee of Assisting Victim moved under Prime Minister Office
- b) Civil Defense Organization were dissolved and merged into *Bassij* – a branch of revolutionary guard.⁷⁰

Some other notable events are worth mentioning here, *i.e.*,

- a) Dissolution of Prime Minister position – based on new constitution.
- b) Responsibilities concerning disaster and unexpected events moved to Ministry of Interiors⁷¹

Iran witnessed major earthquake, *i.e.*, Ardebil and Ghaen Earthquake in the year 1997 and Bam earthquake in the year 2003. There were series of changes that was brought into effect during these times. They are highlighted here:

- a) Establishment of National Committee for Mitigation of Natural Disasters (1991)
- b) Establishment of a high position command system under the President – which was called as - Supreme Taskforce for Disaster Mitigation and Management. It was established in the President Office (2004)
- c) Framing of ‘General policies of the country in preventing and reducing disaster risks’ by the ‘Expediency Council’ and ratified by the Supreme Leader of Iran.⁷²

Pertinent to point out here that the disaster management paradigm in Iran drastically changed with the establishment of National Disaster Management Organization (NDMO). Ministry of Interior in the year 2006 proposed for the establishment of a Disaster Management Organization which would act as an independent deputy in the ministry. It was intended that this organization would facilitate better coordination and management “regarding relevant agencies in different aspects of disaster management.”⁷³ This was approved by the cabinet and later on by the parliament and the guardian council in the year 2007. The law on the establishment of National Disaster Management Organization (NDMO) was finally approved in the year 2019.⁷⁴ This organization serves as a new model for disaster management in Iran. NDMO is headed by deputy of the Ministry of Interior. It is central agency tasked with the responsibility of planning, coordination and supervision of Disaster Risk Reduction and Disaster Risk Management in Iran.⁷⁵ There are also various committees which have established under NDMO and each committee heading separate institutions. Organizational chart of NDMO is shown below:

⁶⁸ *Ibid.*

⁶⁹ *Ibid.*

⁷⁰ *Ibid.*

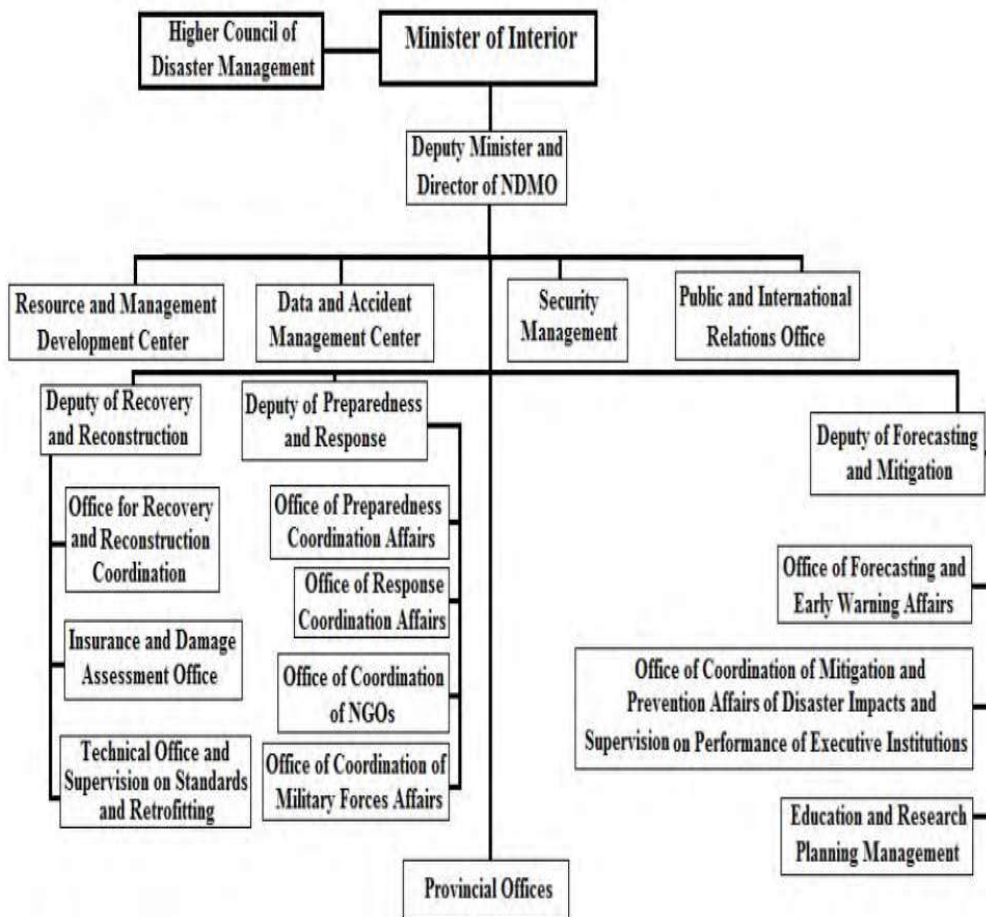
⁷¹ *Ibid.*

⁷² *Ibid.*

⁷³ *Ibid.*

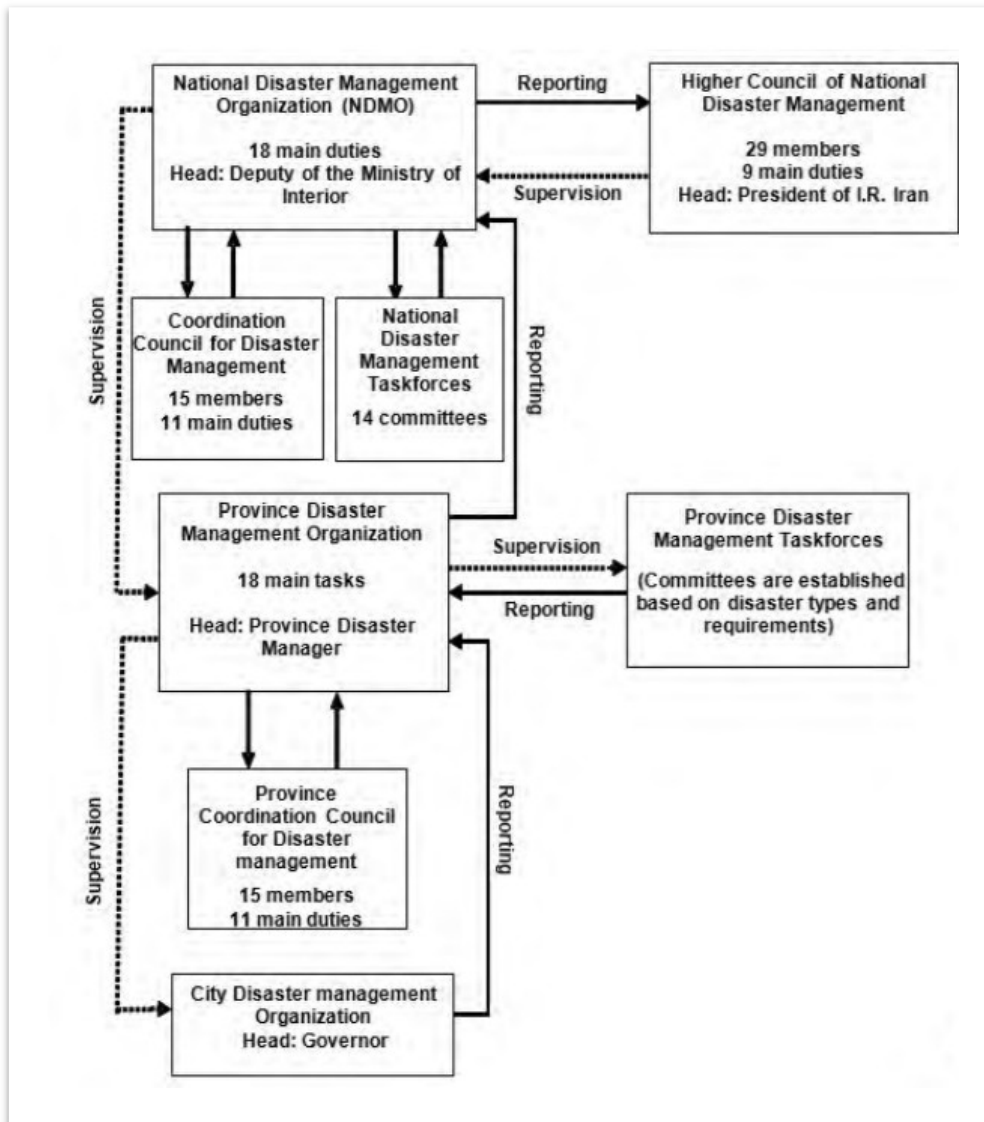
⁷⁴ *Ibid.*

⁷⁵ *Ibid.*



⁷⁶ *Ibid.*

Figure 3



Source⁷⁷

Pertinent to point out here that the relief operation in Iran is overseen by Ministry of Interior through National Disaster task force (NDTF). Furthermore, as per the existing system while the relief operation across the sector is the overseen by the relevant ministries, and in the event of disaster which is classified as of national significance then NDTF takes control and if required takes the help of military to assist in conducting relief operations.⁷⁸ It is relevant to point out that the recent “6th Economic, Social and Cultural Development Plan of I.R. Iran, 2017-2021” consists of various articles having direct and indirect relevance for disaster. Iran does have legal institutions and instruments which essentially deals with disaster and disaster management.

⁷⁷ *Ibid.*

⁷⁸ *Supra* note 63.

IV. IRAQ

Iraq faces multiple hazards which originates from natural as well as man-made factors.⁷⁹ The presence of multitudinous natural and human induced disaster has severely affected the lives of the people in Iraq. Protracted wars and conflicts have been long been a major blight of this country. On the other hand, Iraq due to its diverse topography is also exposed to myriad natural hazards.⁸⁰ The common natural hazards afflicting this region are floods, epidemics, earthquake, and drought.⁸¹ There is significant environmental risks caused by military operations which render the people of Iraq acutely vulnerable. Political uncertainty prevailing in Iraq by itself does not augur well as well as the impact of terrorism which exist in Iraq as a living reality.⁸²

Response to the natural disaster has been *reactive* in nature as it has followed – ‘response and relief approach. While doing so Iraq has come up with several legislations pertaining to disaster. They are illustrated as follows:

- a) Emergency Use Law 1961
- b) Civil Defence Law 1978
- c) Public Health Law 1981
- d) Social Care Law 1980⁸³

When it comes to the institutional level the Iraqi government has constituted various institutions especially after the year 2003. They are as follows:

- a) Governorate of Emergency Cell (GEC) – having representatives of the Directorate of Public Health Division
- b) Ministry of Migration and Immigrant
- c) local Non-Governmental Organizations (NGOs)⁸⁴

The United Nations Office at the governate is also plays an important role in disaster response. Mustafa T. M. Al-Shamsi expounding on the role GEC and the other authority in disaster events writes:

*“In response to any disastrous situation, the GEC of the affected governorate may respond in a decentralised pattern. Should a disaster occur beyond the capacity of the GEC of the affected governorate, the governor then has the right to call for the central government authority. Thereafter, a higher coordination committee may be formed under the patronage of the prime minister to manage the province that faces an emergency situation.”*⁸⁵

⁷⁹ Mustafa T. M. Al-Shamsi, “Disaster risk reduction in Iraq” 11 (1) *NCBI* (2019), available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6407463/> (last visited on July 26, 2025).

⁸⁰ *Ibid.*

⁸¹ Salman Humayun and Ilham Rasheed Al-Abyadh, “Disaster Risk Reduction: Legal & Institutional Framework in Iraq” 5-6 (2015), available at: <https://files.acquia.undp.org/public/migration/arabstates/Institutional-and-Legislative-systems-for-DRR-in-Iraq.pdf> (last visited on July 26, 2025).

⁸² Institute for Economic & Peace, “Global Terrorism Index 2020: Measuring the Impact of Terrorism”, Nov. 2020, available at: <https://visionofhumanity.org/wp-content/uploads/2020/11/GTI-2020-web-1.pdf> (last visited on July 26, 2025).

⁸³ *Ibid.*

⁸⁴ *Ibid.*

⁸⁵ *Ibid.*

Apart from the above-mentioned, there are various critical centres which has been established such as:

- a) National Operation Center (NOC) – operated by prime minister’s office; specializes in terror attack
- b) National Crisis Action Cell (CAC) – its mandate being to provide a national level crisis management.

Apart from that there is committee called the Inter-Ministerial Committee on Disaster Management (IMCDM) which has been established in the year 2007. IMCDM is composed of ten ministries viz., “Ministry of Interior, Defence, Planning and Development, Health, Communication, Environment, Water Resources, Foreign Affair, Science and Technology as well as the State Ministry of National Security and the Secretariat General of Council Ministers.”⁸⁶ As per the report “IMCDM had prepared notes to establish the National Center for Disaster Management. The Center would act as a permanent secretariat for disaster risk reduction initiatives, i.e., research and studies, emergency planning, coordination of regional/provincial interventions, capacity building, media on advocacy and informational exchange, and a database for recording information on hazards, risks, vulnerability and responses to crisis episodes.”⁸⁷ The Ministry of Science and Technology (MOST) act as “the focal point for the coordination between the ministries regarding the response of disasters in Iraq.”⁸⁸ Another significant development in Iraq has been the Disaster Risk Reduction and Mitigation Law which “has been drafted and submitted for approval by the parliament in 2012 with the help of UNDP.”⁸⁹ Mustafa T. M. Al-Shamsi expounding on this law states:

*“The law complies with the Arab Strategy of Disaster Risk Reduction and is approved by the United Nation Disaster Risk Reduction framework. Under this law, a number of institutions were proposed to be created such as Disaster Reduction Councils and National Disaster Risk Reduction and Management Center. The law provides a comprehensive approach to address the risk of natural and man-made disasters in the country through early warning, preparation and response system. The institutions that support the implementation of this law are the Multi-Sectoral National Disaster Committee which is led by the Ministry of Environment and the National Center for Disaster Risk Reduction. The disaster risk plan is composed in accordance with the Hyogo Framework for Action 2005–2015.”*⁹⁰

Iraq despite various changes as enumerated above by and large follows traditional form of response to emergency. There is a lack of preparedness for a given disaster event. This can be attributed to the poor governance. Therefore, despite multiple law and institutional framework the disaster management is pretty tenuous in Iraq.⁹¹ Focus at the national, regional, and local level has been towards post disaster action and sidestepping considerations for preparation for pre-disaster phase like prevention, mitigation, and planning. Overall, Iraq lacks

⁸⁶ *Ibid.*

⁸⁷ Earl James Goodyear, “The State of Disaster Risk Reduction in Iraq” (UNDP, OCHA, 2009), available at: <https://www.humanitarianlibrary.org/sites/default/files/2013/05/unpan050289.pdf> (last visited on July 27, 2025).

⁸⁸ *Supra* note 79.

⁸⁹ *Ibid.*

⁹⁰ *Ibid.*

⁹¹ *Ibid.*

comprehensive disaster management system on par with some of the modern legal and institutional framework seen in many developed worlds.⁹² Some of the noteworthy intuitional framework for disaster management are:

- National Operations Centre (NOC)
- Ministry of Environment (MOENV)
- Ministry of Water Resources (MOWR)
- Ministry of Displaced and Migrants (MODR)
- Ministry of Science and Technology (MOST): (Inter-Ministerial Committee on Disaster Risk Management)
- Directorate General of Civil Defence
- Ministry of Health (MOH)
- Governorate Emergency Cells (GEC)/Emergency Committee (KRG)
- Department of Meteorological and Earthquake Observation.⁹³

V. SAUDI ARABIA

Saudi Arabia experiences significant number of natural hazards such as floods, epidemic and dust storms.⁹⁴ Though the country is not known for natural or man-made disaster but since 2000 rising episodes of flood has been an area of concern.⁹⁵ In fact, floods has been “the most frequently encountered natural disaster in Saudi Arabia.”⁹⁶ Other hazards such as landslides, shifting sand dunes and dust storms, heat waves, drought also poses a threat. As a matter of fact, these phenomena “has become more common in the recent years due to the expansion of cities, road and infrastructure development.”⁹⁷ Some of the notable disaster in the recent past in the Saudi Arabia can be shown as below:

Figure 4

⁹² *Ibid.*

⁹³ *Supra* note 81 at 21.

⁹⁴ S. A. Alshehri, *et.al.*, “Community resilience factors to disaster in Saudi Arabia: the case of Makkah Province” 133 *Disaster Management and Human Health Risk* 359, available at: <https://www.witpress.com/Secure/elibrary/papers/DMAN13/DMAN13032FU1.pdf> (last visited on July 27, 2025).

⁹⁵ *Ibid.*

⁹⁶ Yassar A. Alamri, “Emergency Management in Saudi Arabia: Past, Present and Future”, available at: <https://training.fema.gov/hiedu/downloads/compemmgmtbookproject/comparative%20em%20book%20-%20em%20in%20saudi%20arabia.pdf> (last visited on July 27, 2025).

⁹⁷ Abdulaziz M. Al-Bassam, *et.al.*, “Natural Hazards in Saudi Arabia”, available at: <https://www.isprs.org/proceedings/2011/Gi4DM/PDF/OP56.pdf> (last visited on July 27, 2025).

Type of disaster	Date	No. affected	No. killed	Effect estimates
Heavy rains	April 1964	1,000	20	NDA
Fire during Hajj	December 1975	NDA	200	NDA
Militant occupation of Holy Mosque in Makkah	November 1979	600	250	Help from Pakistani and French forces
Floods in north-western Saudi	December 1985	5,000	At least 32	\$450,000
Iranian riots during Hajj	July 1987	649	402	NDA
Stampede inside pedestrian tunnel during Hajj	July 1990	NDA	1,426	Compounded by failure of ventilation system inside the tunnel
Fire during Hajj	April 1997	More than 1,500	343	
Rift Valley Fever outbreak	September 2000	500	87	NDA
Jizan floods	April 2004	430	5	Destroyed 2,680 km ² of hoses, lands and roads
Jiddah floods	November 2009	More than 10,000	163	\$900,000

Disaster Management in Kingdom of Saudi Arabia can be traced to the Hajj with the establishment of fire department in Makkah in the year 1927. This fire department was overseen by the Makkah Commonplace Council. The Makkah Fire Brigade joined Centre of General Security to frame the General Security and Fire Services. Later on, General Security and Fire Services “developed five fire units in Makkah alone and five in Medina, Jeddah, Riyadh, Qasim and Dammam to improve disaster management and response.”⁹⁹ Thereafter, in 1965 by Royal Decree by King Faisal General Security and Fire Services was broken up and General Directorate of Civil Defence (GDCD) was established.¹⁰⁰ As per Abdullah Alyami *et.al.*, on the relevance of GDCD writes:

“The scope of the GDCD was more extensive than the General Security and Fire Services as it applied to all nonmilitary personnel protection in times of peace and in times of wars. Additionally, the organization began working

⁹⁸ *Supra* note 96.

⁹⁹ Abdullah Alyami *et.al.*, “Disaster Preparedness in the Kingdom of Saudi Arabia: Exploring and Evaluating the Policy, Legislative Organizational Arrangement Particularly During the Hajj Period” 5 (1) *European Journal of Environment and Public Health* (2021), available at: <https://www.ejeph.com/download/disaster-preparedness-in-the-kingdom-of-saudi-arabia-exploring-and-evaluating-the-policy-legislative-8424.pdf> (last visited on July 27, 2025).

¹⁰⁰ *Ibid.*

in other urban and rural areas in the Kingdom supported by the advances in media transmission systems.”¹⁰¹

Further in the year 1987, King Fahad “proposed a change to the GDCCD’s structure, objectives, and obligations as recommended by the International Association of Fire Fighters.”¹⁰² After extensive consultation the current Civil Defence Law in Saudi Arabia announced thirty-six area which would be listed under GDCCD. This legislation listed out key roles of the GDCCD for disasters and conflicts which are:

- Arranging the national alert system, in the case of disasters or assaults by an armed force, including terrorists.
- Controlling key infrastructure including buildings, electrical lines, roads and arranging evacuations and shelters plans.
- Protection of victims and giving essential life-support measures in affected areas.
- Controlling hazardous areas and directing residents away from dangers.
- Collaboration with other organisational bodies (*e.g.*, police, firefighters and Department of Transportation) to ensure safe evacuation.
- Monitoring the recovery process and restoring day-today usual businesses.”¹⁰³

Pertinent to point out here that General Directorate of Civil Defence (GDCCD), is constituted as an integral part of Ministry of Interior (MOI) and as such is responsible for emergency and disaster management in Kingdom of Saudi Arabia. On the other hand, “the Presidency of Meteorology and Environment is responsible for disaster risk reduction efforts in SA, and the Civil Defense at the MOI is responsible for emergency planning and response.”¹⁰⁴ Apart from the aforementioned it would not out of place to elaborate some of the unique challenges as relevant with reference to Saudi Arabia. Language barrier among the immigrant workers is a very unique challenge especially in the context of disaster. Immigrant workers as per the data (2008) made up 53.1 percentage of the workforce. Despite this considerable immigrant worker most of the precautionary warning issued by official during the event of disaster are publicized in Arabic.¹⁰⁵ Illiteracy is another issue faced by the country.¹⁰⁶

VI. COMPARATIVE ANALYSIS/PERSPECTIVE

This segment of the paper briefly provides the comparative analysis between the countries in West Asian region. The comparison is done with certain parameters, viz.,

Notable timeline:

Turkey

- Early foundations: Ottoman-era edict post 1509 Istanbul earthquake. Sultan Bayezid II introduced early construction and relief measures.

¹⁰¹ *Ibid.*

¹⁰² *Ibid.*

¹⁰³ *Ibid.*

¹⁰⁴ Ahmad M. Al-Wathinani, *et.al.*, “A Cross-Sectional Study on the Flood Emergency Preparedness among Healthcare Providers in Saudi Arabia” (2021), *available at*: <https://pubmed.ncbi.nlm.nih.gov/33540547/> (last visited on July 27, 2025).

¹⁰⁵ *Supra* note 96.

¹⁰⁶ *Ibid.*

- 20th century: Several laws followed major events. Notable ones are - Enbiye Ordinance (1848), Municipality Law (1930), Erzincan earthquake responses (Law No. 3773, 1940; Law No. 4623, 1944).
- Mid-century: Flood-related Law No. 4373 (1943); Zoning Law (1956); Civil Defense Law No. 7126 (1959) and creation of General Directorate of Civil Defense.
- Post-1999 Marmara earthquake: Major reorganization - establishment of modern emergency institutions. It culminated in Law No. 5902 (2009). This law created Disaster and Emergency Management Presidency (AFAD) and consolidated responsibilities under AFAD. Other notable government initiatives include: AFAD strategic plans (2013–2017; 2019–2023) and National Earthquake Strategy Action Plan (UDSEP) are notable development.

Iran

- Early 20th century: First disaster law (1907) which *inter-alia* assigned responsibility to the Ministry of Interior; Red Lion and Sun Society (1923) - later Iranian Red Crescent.
- During 1960s–70s: Boein Zahra (1962) earthquake prompted military committee for victims; other initiatives include - Civil Defence (1972) and National Organization for Preparedness (1975).
- 1990s–2000s: Series of major quakes (Ardebil, Ghaen, Bam 2003) that triggered various reforms viz., National Committee for Mitigation (1991); Supreme Taskforce for Disaster Mitigation and Management (2004).
- 2006–2019: Proposal and eventual approval of the National Disaster Management Organization (NDMO). This law was approved in 2019; and *inter-alia* aimed to centralize planning, coordination, and to bolster DRR responsibilities.

Iraq

- Pre-2003 legislation: some of the initial developments were - Emergency Use Law (1961); Civil Defence Law (1978); Public Health Law (1981); Social Care Law (1980).
- Post-2003: Proliferation of various institutions such as - Governorate Emergency Cells, Ministries for migration/displaced; Creation of National Operation Center (NOC) and Crisis Action Cell (CAC).
- 2007–2012: Some of the development during this period include - Inter-Ministerial Committee on Disaster Management (2007); Draft Disaster Risk Reduction and Mitigation Law prepared with UNDP and submitted in 2012 (not fully implemented). The overall pattern which was visible was the creation of multiple agencies but weak coherence. Also, emphasis was on response over preparedness.

Saudi Arabia

- Historical roots: historically the evolution of disaster management is linked to Hajj logistics. Other notable developments were – constitution of Makkah fire department (1927) and later formation of General Security & Fire Services.
- 1965–1987: Establishment of General Directorate of Civil Defence (GDGD) in 1965; structural reforms occurred in 1987; further, Civil Defence Law expanded GDGD roles.
- GDGD under Ministry of Interior and Presidency of Meteorology & Environment handle DRR and emergency response. Emphasis was given on infrastructure protection and national alert systems.

Institutional frameworks:

Turkey

- Institutional framework is centralized and consolidated under AFAD (Disaster and Emergency Management Presidency) established 2009.
- AFAD coordinates pre-disaster (risk management, mitigation, preparedness), during-disaster (response, emergency aid), post-disaster (recovery, reconstruction).
- There are three high-level committees which are - Disaster & Emergency High Board, Coordination Board, and Earthquake Advisory Board. These committees bring multiple ministries into planning and the approval roles.

Iran

- NDMO is a Central agency earmarked with the responsibility to plan, coordinate and supervise DRR/DRM initiatives. There is a strong role for Ministry of Interior and Presidential-level Supreme Taskforce.
- There are also multiple committees and institutional actors (Red Crescent, military-affiliated bodies historically involved). Ministries manage sectoral relief; for national-scale events, national taskforces and military support are mobilized.

Iraq

- The institutional framework is quite fragmented in Iraq. Some notables are - Governorate Emergency Cells (GEC) at local level, plus National Operation Centre (PMO-level), Crisis Action Cell, Inter-Ministerial Committee (IMCDM).
- Ministries (Environment, Water Resources, Health, etc.) and international agencies such as United Nations play significant roles; but permanent central coordinating body remains weak or tentative.

Saudi Arabia

- General Directorate of Civil Defence (GDCCD) within the Ministry of Interior leads the role for the emergency planning and response.
- Presidency of Meteorology & Environment handles DRR efforts. The institutional framework in Saudi Arabia is strongly centralized. Security-oriented model focuses on infrastructure and population protection. Civil defence is in charge of evacuations, shelters, hazard control.

Legal frameworks:

Turkey

- Turkey showcases extensive legal history with progressive codification. Examples are - zoning laws, civil defense, flood laws, building inspection, and Law No. 5902 (2009) which legally established AFAD and clarified roles for disaster governance. Legislation increasingly oriented toward integrated disaster management and risk reduction (post-1999 reforms).

Iran

- Major laws in Iran can be traced from the year 1907. Multiple reforms and policy instruments culminated in legislative approval for NDMO in 2019. Legal instruments include civil defense provisions, national development plans with DRR elements viz., Sixth Development Plan 2017–2021, and policies ratified by high-level authorities. Law aims at centralized coordination, but implementation involves both of civil and military actors.

Iraq

- There were older laws (1960s–1980s) on emergency use and public health. However, modern comprehensive disaster law is drafted in the year 2012 with UNDP support. Iraq faces continuous political and implementation barriers. Legal environment characterized by overt fragmentation and serious gaps in enforcement.

Saudi Arabia

- Civil Defence Law and associated regulations consolidated roles for GDCC. The legal framework strives on national alert systems, infrastructure control, evacuation authorities, and emergency measures. These are centralized under MOI; normative emphasis on protection and immediate response.

Government policies and responses:

Turkey

- Policy has shifted from relief-only to comprehensive DRM: other notable policies are - AFAD strategic plans, national earthquake strategy (UDSEP). Also, there are building inspections, insurance systems, and interagency coordination. The emphasis on mitigation (zoning, building codes) and recovery planning.

Iran

- Iran has drawn multi-hazard preparedness and centralized under NDMO. The focus of national development planning is to embed DRR. Reliance has placed on both civilian agencies and quasi-military/local networks for operational response. Policy emphasis combines the relief capacity along with risk reduction planning post-major events.

Iraq

- Country has predominantly reactive/relief-oriented policy. Disaster responses are hampered by governance deficits, poor preparedness, and limited capacity at the provincial levels. There is a heavy reliance on international actors for large-scale humanitarian response.

Saudi Arabia

- The policy framework showcases a preventive and security-focused policies. Some notable area such as national alerting, infrastructure control, evacuations, and civil defence operations is prioritized. Policies emphasize protecting key facilities and ensuring rapid response. There is unique issue as seen in this country in the form of communication barrier with the migrant workers.

Coun try	Major timeline & key laws / events	Institution al framework	Legal framework	Governme nt policies & responses	Key strength s	Key weaknesses

Turkey	<ul style="list-style-type: none"> • Ottoman edict after 1509 Istanbul earthquake (early regulation of construction/relief). • 19th–20th c.: Enbiye Ordinance (1848), Municipality Law (1930), Zoning Law (1956). • Erzincan (1939) and later earthquakes → Laws No. 3773 (1940), 4623 (1944). • 1959 Civil Defence Law (No. 7126) and flood laws (No. 4373, 1943). • 1999 Marmara earthquake → major reforms: building inspection, insurance. • Law No. 5902 (2009) → establishes AFAD; AFAD strategic plans (2013–17, 2019–23); National Earthquake 	Disaster & Emergency Management Presidency (AFAD) — centralized lead agency (pre-disaster DRM, emergency response, recovery). Three high-level committees: Disaster & Emergency High Board; Disaster & Emergency Coordination Board; Earthquake Advisory Board. Provincial directorates under governors.	Extensive codification across decades (zoning, civil defence, flood laws, building inspection). Law No. 5902 (2009) legally consolidates roles and coordination under AFAD, enabling national strategic planning (UDSEP) and institutional mandates.	Shift from reactive relief to comprehensive DRM : national strategic planning, strengthened building codes & inspection, insurance schemes, early warning and coordination mechanisms; emphasis on earthquake mitigation and reconstruction planning.	Clear post-crisis institutional consolidation; legal clarity (Law 5902); strategic plans and national earthquake focus.	Persistent seismic exposure; enforcement gaps (building codes, inspections); political/administrative challenges and corruption may limit full implementation.
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	Strategy (UDSEP).					
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Iran	<p>• 1907: early disaster law; 1923: Red Lion & Sun Society (later Iranian Red Crescent).• 1962 Boein Zahra quake → military committee for victims; 1972 Civil Defence; 1975 National Organization for Preparedness .• 1978 Tabas quake; post-1979 institutional realignments; some civil defence folded into paramilitary structures. • 1990s–2000s: Ardebil, Ghaen, Bam (2003) → reforms; National Committee for Mitigation (1991); Supreme Taskforce (2004).• Proposal for NDMO (2006); NDMO law approved 2019 →</p>	<p>National Disaster Management Organization (NDMO) (central agency under Ministry of Interior / deputy) — plans, coordinates, supervises DRR/DRM. Multiple committees and sectoral ministries; Iranian Red Crescent and quasi-military/local networks involved in operations.</p>	<p>Historical patchwork of laws and policies evolving to centralize DRR. NDMO (2019) codifies central planning/coordination. National development plans (e.g., Sixth Development Plan 2017–2021) include DRR provisions; high-level policy instruments ratified by Expediency Council/Supreme Leader.</p>	<p>Multi-hazard approach; institutionalization of DRR into national planning; reliance on Red Crescent and local networks; mobilization of military for large events when needed. Policy mix: preparedness, response, recovery, plus development plan integration.</p>	<p>Long institutional history and explicit multi-hazard recognition; recent legal centralization (NDMO).</p>	<p>Complex civil–military coordination; sanctions/resource constraints; overlapping authorities; implementation and enforcement gaps at local levels.</p>
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	central agency.					
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Iraq	<ul style="list-style-type: none"> Pre-2003 laws: Emergency Use Law (1961); Civil Defence Law (1978); Social Care Law (1980); Public Health Law (1981). Post-2003 proliferation of institutions: Governorate Emergency Cells (GEC), Ministries (Migration, Health), UN involvement. 2007: Inter-Ministerial Committee on Disaster Management (IMCDM). 2012: Draft Disaster Risk Reduction & Mitigation Law (UNDP-assisted) — submitted but not fully enacted/implemented. 	<p>Fragmented setup:</p> <p>Governorate Emergency Cells (local); National Operation Center (NOC — PMO-level); Crisis Action Cell (CAC); IMCDM; sectoral ministries (Environment, Water Resources, Health, MOST). Heavy UN/international agency role in large-scale responses.</p>	<p>Older sectoral laws remain; no consolidated/fully-implemented modern disaster law in widespread effect despite 2012 draft. Legal environment fragmented and unevenly enforced.</p>	<p>Predominantly reactive/relief-oriented approach. Localized decentralized responses via GECs; central escalation to NOC/CAC for large events. Dependence on international humanitarian assistance and UN coordination for major crises. Some draft laws and planning align with Hyogo Framework but weak implementation.</p>	<p>Presence of multiple bodies and draft reforms shows recognition of need; existence of local cells (GEC) for decentralized response.</p>	<p>Severe fragmentation, weak governance, politicization, limited enforcement and preparedness; damaged infrastructure and ongoing conflict complicate response; heavy reliance on external actors.</p>
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Saudi Arabia	<p>1927: Makkah fire department (Hajj-linked beginnings).¹ 1965: Establishment of General Directorate of Civil Defence (GD CD) (split from General Security & Fire Services).[•] 1987: Structural reforms to GD CD; Civil Defence Law and subsequent regulations expanding GD CD remit.</p> <p>• 2000s–present: increasing attention to flood incidents and urban expansion-related hazards.</p>	<p>General Directorate of Civil Defence (GD CD) within Ministry of Interior — lead for emergency planning, evacuations, sheltering, infrastructure protection.</p> <p>Presidency of Meteorology & Environment responsible for DRR science/forecasting. Strong centralized, security-oriented model.</p>	<p>Civil Defence Law and related regulations (structure expanded after 1987). Legal framework emphasizes national alert systems, infrastructure protection, evacuation authority, and coordination under MOI.</p>	<p>Preventive & security-focused policies: national alert systems, infrastructure control/inspections, evacuation planning, rapid response capabilities (esp. for Hajj contexts), shelters and continuity of critical services. Communication & public messaging are official tools, but language barriers to migrant workers are a policy gap.</p>	<p>Strong central authority and clear civil-defence remit; experience with mass-event logistics (Hajj) informs large-scale crowd/disaster management; focus on infrastructure protection.</p>	<p>Limited community-level engagement; communication gaps with large migrant workforce; increasing flood/climate risk with urban expansion; potential overemphasis on top-down/security responses.</p>
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VII. CONCLUSION

The study of disaster management paradigms in the West Asia reveals a complex landscape of chronic political instability and frequent bout of civic unrest which cumulatively has led to the constitution of very feeble disaster management framework in the region. While the region is associated with some of the frequent disasters as highlighted in this research paper, the effort to countervail the effects of disaster has remained quite inert. Institutional arrangement is still evolving. Notable exception such as Turkey does appear to have a dedicated administrative set up to counter disaster. What emerges in this comparative analysis is the recognition that the disaster management is deeply intertwined with the broader socio-political context. The efficacy of the disaster management paradigm is contingent on the stability of the socio-political regime. West Asian realities of protracted violence, authoritarian governance and the consequent displacement affect the effectiveness of disaster framework. disaster management paradigm in West Asia reflects both progress and challenges. The legal framework in Turkey coupled with strategic plans demonstrate the existence of robust governance mechanism. Saudi Arabia Civil Defence Law model represents a unique model rooted in centralized authority. Iraq as country is one of the most fragile states in the region. It faces daunting task of constituting disaster resilience. In essence, it can be stated that without addressing the structural drivers of vulnerability such as authoritarianism, conflict etc. no disaster framework can truly function. It cannot be overstated that only by embedding disaster management within the wider landscape of regional stability can bear the lasting hope of meaningful disaster management framework.