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Disaster Response Management Stemming From War Operation and Terrorism in Iraq

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Abstract

Iraq has experienced various disasters either natural or manmade. Within the context of manmade disaster, war and post-war conflicts have crippled many essential services needed to reduce risks, manage hazards, and respond to disasters. This has impacted on the response phase, which is considered one of the critical phases in the Disaster Management life cycle. Due to the salient of the research model of behavioural response to disaster, which applicable to terrorism events, the effect of war and terrorism in Iraq has been highlighted during the response phase. Because of the lack of empirical data in this field, this research aims to present the significance of disaster management in general and in particular, the response management phase by doing a systematic review of the literature of disaster response management. In order to achieve the aforementioned aim, data collection included information obtained from literature relating to disaster response management. This literature contains central and local government ordinances, reports and regulations along with journal papers and books. Findings show that the paradigm shift in disaster management thinking in Iraq has not changed as regards the adoption of an all-risk disaster reduction system to replace their reactive disaster response operational mechanisms. Furthermore, the government of Iraq has traditionally responded in a reactive manner to disasters associated with flooding, earthquakes, drought, conflict and industrial accidents.

Keywords:

Disaster response management, Iraq, Terrorism, War operation

1. Introduction

Disasters are as old as human history but the dramatic increase and the damage caused by them in the recent past have become a cause of national and international concern (Dey & Singh, 2006). 'Disasters' have become a common word to people all over the world. The whole world is prone to natural disasters as well as to abrupt man-made ones, which have been occurring repeatedly in recent history (Palliyaguru, Amaratunga, & Haigh, 2013). They appear to be increasing in frequency. Figure 1 clearly shows a rise in disaster numbers each decade from the 1950s to the end of the 20th century (Aitken & Leggat, 2012). Statistics indicate that the number of natural and manmade disasters has climbed inexorably over the past decade. From 1994 to 1998, the reported disasters average was 428 per year but from 1999 to 2003, this figure went up to an average of 707 disaster events per year showing an increase of about 60 per cent over the previous years. The biggest rise was in countries of low human development, which suffered an increase of 142 per cent (Dey & Singh, 2006). The post-Cold War era has brought many changes in international relations and new challenges for the global community. Not the least of these are the responses to both natural and human-caused disasters in situations of armed

conflict. There are now more than 35 armed conflicts world-wide that inflict over 1,000 civilian or military deaths (Jenson, 1997).
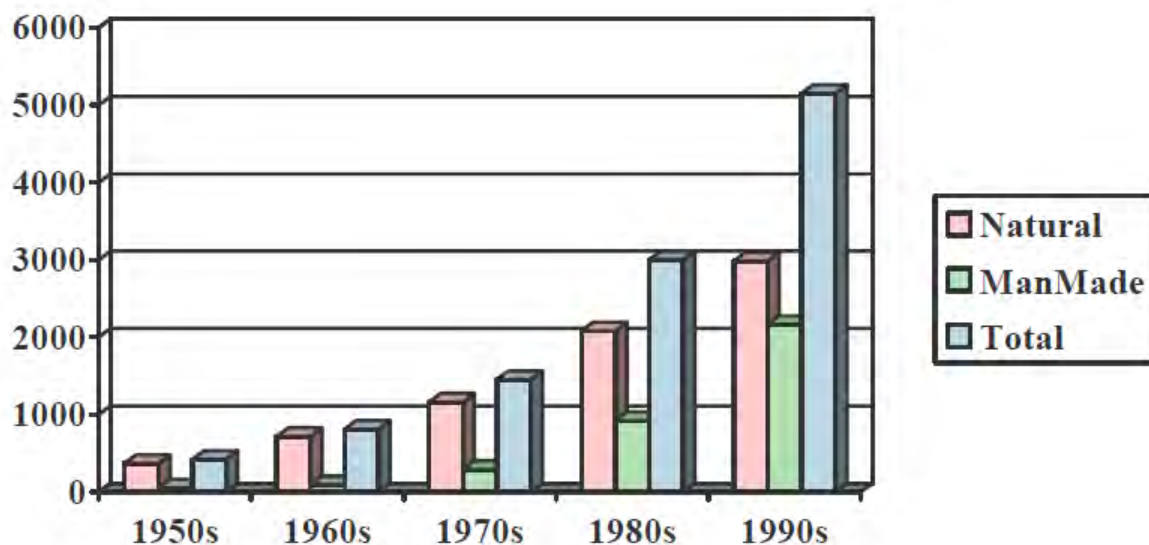

Figure 1. Frequency of Disasters Each Decade (Aitken & Leggat, 2012, p. 146)

Most noticeable, is the fact that disasters are large intractable problems that test the ability of communities and nations to effectively protect their populations and infrastructure, to reduce both human and property loss, and to rapidly recover (Altay & Green III, 2006). Thus, it is argued that natural and man-made disasters, such as earthquakes, floods, plane crashes, high-rise building collapses, or major nuclear facility malfunctions, pose an ever-present challenge to public emergency services. As a result timely interaction and coordination of public emergency services are required by disaster response and recovery efforts in order to save lives and property (Meissner, Luckenbach, Risse, Kirste, & Kirchner, 2002). Moreover, maintaining a balance between theoretical and practical significance is needed in disaster studies. Thus, linking practical problems that emerge in disasters with broader social science theories and other perspectives on disasters such as organizational crisis response should be sought by researchers (Lindell, 2013; Mitroff, 2005).

In disaster research literature, the response phase is identified as the most critical phase of the three phases (prevention, response, recovery). It is worthily mentioned that lives might be saved and the effects of the disaster might be mitigated due to the disaster managers' decisions in the response phase (Hale, Dulek, & Hale, 2005). As a result responding to disasters has become an essential part of modern life. Moreover, effective response to both natural and man-made disasters requires evaluating and exploring the current response management system prior to, during, and after potentially catastrophic events as well as initiating activities that will lessen their impact upon society.

Table 1: Top 10 Countries Ranked by Terrorism Risk, 2010 (Coppola, 2006, p. 118)

Rank	Country
1	Iraq
2	Afghanistan
3	Pakistan
4	Somalia
5	Lebanon
6	India

7	Algeria
8	Colombia
9	Thailand
10	Philippines

Continuing terrorist attacks worldwide are likely to sustain attention to disaster response management, particularly in Iraq. According to statistics, (see Table 1), Iraq is considered the top terror -prone country in the world and, therefore, disaster management is considered to be one of the most significant concerns in this country.

This paper provides a background study on the concept of disasters and its components in general and disaster response management in particular. It focuses on disaster response management within the Iraqi context.

2. Aim

The present paper aims to contribute to the existing knowledge on disaster response management, a field of study that is still largely underexplored in the context of the Middle East and in the context of war and terrorism more specifically, by reviewing its literature, through a systematic review methodology.

2.1. Disaster Definitions

Disasters are commonly known as "sudden events, which bring serious disruption to society with massive human, property, livelihood, industry and environmental losses, which exceed the ability of the affected society to cope using its own resources" (Eshghi & Larson, 2008; Shaluf & Ahmadun, 2006) cited in (Palliyaguru, Amaratunga, & Haigh, 2010). In a similar way Vasilescu, Khan, and Khan (2008) define disaster as " a sudden adverse or unfortunate extreme event which causes great damage to human beings as well as plants and animals. Disasters occur rapidly, instantaneously and indiscriminately". However, Fritz (1961, p. 655) and Lindell (2013, p. 797) state that a disaster is "an event concentrated in time and space, in which a society or one of its subdivisions undergoes physical harm and social disruption, such that all or some essential functions of the society or subdivision are impaired". From these definitions, it is apparent that disasters have different characteristics and impacts but have a common element, which is their severity. Thus, no definition of disaster is universally accepted (Shaluf, 2007).

2.2. Types of disasters

Disaster phenomena have been studied by research centres all over the world. Sometimes different terminology may be used to classify disasters by different researchers. The views of academics on disaster types are summarized below.

Disasters are mainly classified by many researchers into two groups: natural disaster and manmade/technological disaster (Biswas & Choudhuri, 2012; Fischer III, 1998; Goolaup et al., N.D.; Iyer & Mastorakis, 2006; Moe & Pathranarakul, 2006; Zimmerman, 1985). Figure 2 illustrates the types of disaster. However, certain research such as Moe and Pathranarakul (2006) call man-made disaster by a different name; that is "technological disaster". On the other hand, Shaluf (2007) classified it into three groups: (natural, man-made and hybrid) disasters as shown in Figure 3. Similarly Hood and Jackson (1992, p. 112) categorized it into purely natural disasters, hybrid disasters and purely social disasters. What follows is a description of these types.
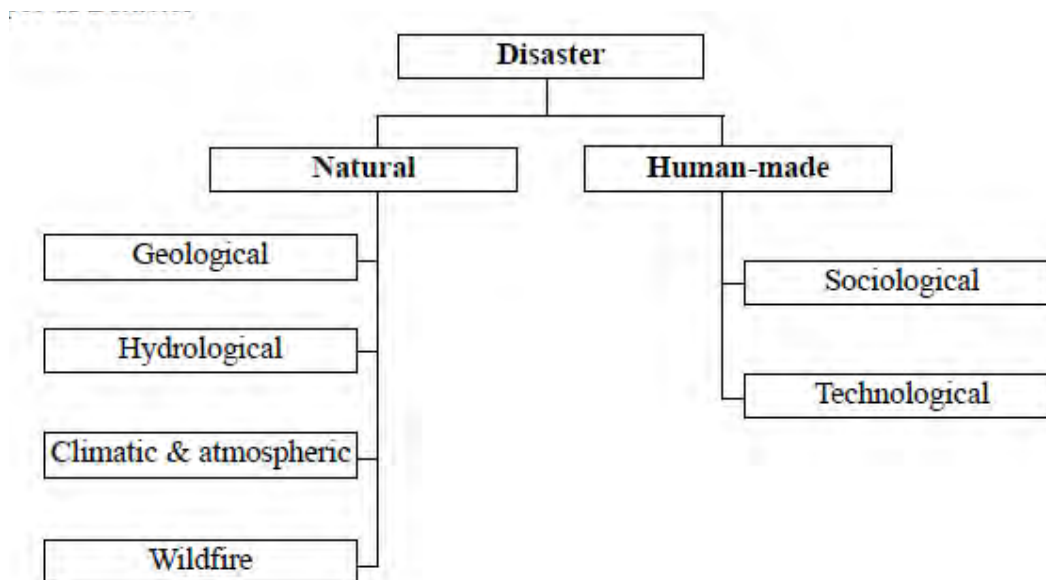
Figure 2. Types of Disaster (Biswas & Choudhuri, 2012, p. 13)

2.2.1. Natural Disaster

Before proceeding to examine the concept of man-made disaster, it will be necessary to understand the concept of natural disaster. Broadly, a natural disaster has been defined as a consequence when humans are affected by a natural hazard (e.g., volcanic eruption or earthquake). Human vulnerability, caused by the lack of appropriate emergency management, leads to environmental, financial, or human impact (Biswas & Choudhuri, 2012, p. 14). In a similar way Pelling et al. (2004, p. 98) defined it as "a serious disruption triggered by a natural hazard causing human, material, economic or environmental losses, which exceed the ability of those affected to cope".
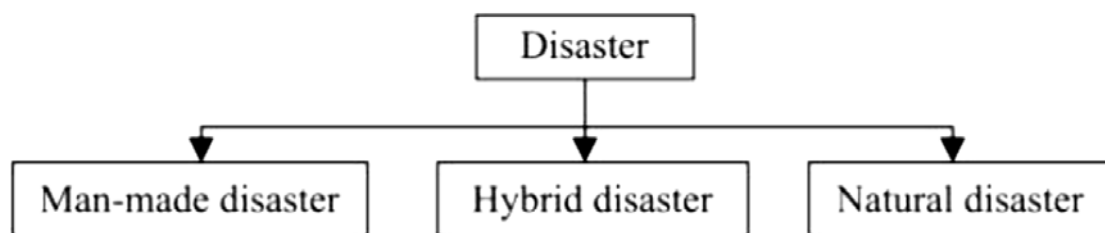

Figure 3. Types of Disaster (Shaluf, 2007, p. 705)

2.2.2. Human-made Disaster

A major term of interest for this study is that of human-made disaster. Human-made disaster has been defined as human action, error, negligence, or involving the failure of a system which caused disasters (Biswas & Choudhuri, 2012, p. 14). Similarly, Goolaup et al. (N.D., p. 25) define it as "emergency situations of which the principal, direct causes are identifiable human actions, deliberate or otherwise. Situations in which civilian populations suffer casualties, losses of property, basic services and means of livelihood as a result of war, civil strife or other conflicts, or policy implementation are mainly involved in it. People are forced to leave their homes, in many cases, giving rise to congregations of refugees or externally and/or internally displaced persons as a result of civil strife, an airplane crash, a major fire, oil spill, epidemic,

terrorism, etc." Iyer and Mastorakis (2006, p. 3), in a similar way, define it as the result of various untoward incidents. Shaluf (2007), on the other hand, defined it as those catastrophic events that result from human decisions.

Whereas the frequency and severity of natural disasters should be acknowledged, Harding (2007) states that human-made disasters are broader in scope and consequences. Furthermore, human-made disasters provoke a serious disruption of the agriculture, economy and health-care sectors of a society, typically producing long-lasting effects that perpetuate underdevelopment. To sum up, disaster management has traditionally emphasized natural hazards rather than man-made technological hazards (Zimmerman, 1985). This paper will shed light on human-made disasters stemming from war operations and terrorism in Iraq.

2.2.3. Types of human-made / man-made disasters

Biswas and Choudhuri (2012) categorized man-made disasters into two types technological and sociological. Technological disasters are the results of failure of technology, such as transport disasters, engineering failures, or environmental disasters. Sociological disasters have a strong human motive, such as war, riots, criminal acts and stampedes (Biswas & Choudhuri, 2012, p. 14). However, the International Federation of Red Cross and Red Crescent Societies (2003) classified it by its occurrences, that can be sudden or long-term. Sudden man-made disasters include mine, structural and building collapses when this occurs independently without any outside force. Moreover, land, sea, and air disasters are all man-made disasters. Long-term man-made disasters tend to refer to international and national conflicts. Nevertheless, Turner and Pidgeon (1997) cited in Shaluf (2007, p. 707) categorized it due to its causes: (see Figure 4)
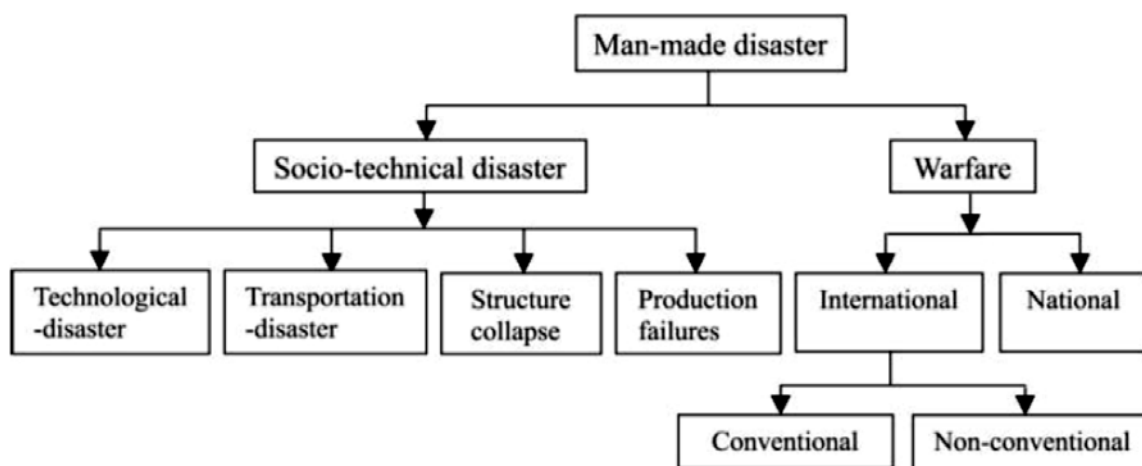

Figure 4. Types of Man-made Disaster (Shaluf, 2007, p. 705)

2.2.4. Hybrid disasters

According to Shaluf (2007) hybrid disasters are a result of both human error and natural forces. The extensive clearing of jungles causing soil erosion, and subsequently heavy rain causing landslides is considered one of many examples of hybrid disasters. In a similar way Hood and Jackson (1992) cited in Shaluf (2007, p. 710) defined it as a compound of human decisions and volatile natural forces (e.g. floods ravage communities built on a known floodplain).

To sum up, sometimes natural and/or man-made disasters trigger subsequent disasters such as displaced people, and haze (International Federation of Red Cross and Red Crescent Societies, 2003). The subsequent disasters have social and economic impacts. Furthermore, the disruption

of normal community functions through human made disaster must be recognized for its broad-based, long-term impact (Harding, 2007). For this reason war operations and terrorism in Iraq has been highlighted in this research.

a. War operations

Before proceeding to examine the concept of terrorism, it will be necessary to shed light on the concept of war. From the review of disaster literature, it can be seen that publications about disasters in general are numerous, but those addressing disaster management plans for wartime in the Middle East particularly are fairly recent and are few in number (Moustafa, 2013). Moustafa (2013, p. 18) defined war as "an organized and often prolonged conflict that is carried out by states or non-state actors; it is generally characterized by extreme violence, social disruption, and economic destruction".

b. Terrorism

As far as war is concerned, terrorism is the most salient hazard due to a remarkable upsurge in terrorist acts during the past decade particularly in Iraq (see Table 1). After the events of 11 September 2001, our world has been changed for ever. It becomes a more dangerous and uncertain place, and no-one is safe or immune from the threat of terror.

Terrorism is defined in many ways by many scholars and institutions. According to Frykberg and Tepas 3rd (1988, p. 569) terrorism is the unlawful exercise of random and ruthless violence against property or individuals, usually innocent civilians, in order to intimidate governments or societies for political or ideological purposes. In a similar way Panzer, Butler, and Goldfrank (2003, p. 2) defined terrorism as the illegal use or threatened use of force or violence to instil fear in populations, and intended to coerce societies or governments by inducing fear in their populations. While Miron and CERNUŞCA (2008, p. 65) and Romanian Law (535/2005) defined terrorism as "the unlawful use or threatened use of force or violence against people or property to coerce or intimidate governments or societies, often to achieve political, religious, or ideological objectives".

In the case of Iraq, it is widely agreed that terrorists did not have a hold on any part of Iraq before the US invasion. However, it is also generally believed that Iraq contains quite a few terrorists and terrorist organizations. Therefore a step back will be suggested rather than forward (Fischer III, 2005). As a result, violence in Iraq has become normalized, ranging from the Iraqi and US military assaults and sectarian militias, threat of suicide bombings, to violent street crime (Wong, al-Saiedi, & Silva, 2005).

As discussed above, terrorist threats and war attacks are a reality in Middle East countries particularly in Iraq. Accordingly, terrorism and war operations are the main reasons leading to the increased number of disasters in Iraq. So, to have an overall picture about Iraq's disaster management when responding to terrorist threats and war attacks, the next section will highlight disaster management.

3. Disaster Management

The following is a brief review of disaster management definitions. Lettieri, Masella, and Radaelli (2009, p. 117) defined disaster management as administrative decisions and the body of policy, the actors, the operational activities and technologies that relate to the several phases of a disaster at all levels. (Dey & Singh, 2006; Vasilescu et al., 2008) agree with this view, stating that it includes all the activities which help to avoid, reduce impact or recover from disaster loss, and these can be implemented before, during or after a disaster.

3.1. Disaster Management Cycle

Goolaup et al. (N.D., p. 27) define the disaster management cycle as "a cycle with phases that reduce or prevent disasters". Whereas Iyer and Mastorakis (2006, p. 3) define it as a logical, integrated and progressive sequence of activities as a cycle of preparedness and action followed by disaster management. Iyer and Mastorakis (2006, p. 3) identify the stages of disaster management as, risk reduction, readiness, response, and recovery. Gospodinov and Burnham (2008, p. 28) divided the disaster cycle into four phases, namely, response, reconstruction, mitigation, and preparedness see Figure 5. These divisions use the same concepts but in different terms.

Figure 5. Disaster Cycle (Gospodinov & Burnham, 2008, p. 28)

3.2. Disaster response management

Having defined what is meant by the disaster management cycle, disaster response management definitions will be reviewed. According to EMA (2004, p. 32) response is an "action taken in anticipation of, during, and immediately after an emergency to ensure that its effects are minimised, and that people affected are given immediate relief and support". In the same way, Vasilescu et al. (2008, p. 47) defined response activity as initiatives taken in response to a disaster with the purpose to achieve early recovery and rehabilitation of affected communities, immediately after a disaster strikes. Goolaup et al. (N.D., p. 50) agree with this view, stating that disaster response is "the sum total of actions taken by people and institutions in the face of disaster. These actions commence with the warning of an oncoming threatening event or with the event itself if it occurs without warning". Using a narrower concept, the World Health Organization (2002, p. 22) defined it as a set of activities implemented after the impact of a disaster. On the other hand, Iyer and Mastorakis (2006, p. 3) define it as "The core of the initial response to a disaster provided by the emergency services and thereafter, depending on its nature and scale by the local authorities and voluntary and utility services.". While Coppola (2006, p. 305) stated that the beginning of response processes is as soon as the hazard event has become imminent and lasts until the emergency is declared to be over.

As Baharin, Shibghatullah, and Othman (2009) stated, the response phase is one of the critical phases in the Disaster Management System life cycle. Furthermore, due to the salience of the disaster research model of behavioural response to disaster as applicable to terrorism events (Fischer III, 1998a, 1998b, 2005). The focus of this study is at the response phase of man-made disasters in Iraq.

The key problem with this phase is it is widely believed by the public that the behavioural response to disaster is deviant and chaotic (Fischer III, 1998a, 1998b). Previously, Fischer III (2005) noted that the behavioural response is actually very altruistic. While Comfort (2002)

mentioned that the effective mobilization of response to extreme events on a large scale is considered one of the least understood problems in public management. He also stated that the knowledge base to support response operations in such an event needs to be scalable.

Regarding the effectiveness of the organizational response, Fischer III (2005) presented three factors which affected the organizational response, namely: the extent to which emergency plans are rehearsed; the degree of prior disaster experience; and the level of prior planning. Whilst Comfort (2002) listed three different factors, namely: pre-disaster planning among organizations to identify what information will be required; how this information may be accessed and rapidly searched, exchange, and absorption of valid information regarding sudden, damaging events transmitted through a network of organizations that crosses disciplinary, organizational, and jurisdictional boundaries required for this process.

On the other hand, Cardona (2005) believed that in order to reduce vulnerability, all types of risk management capabilities need to be strengthened. Furthermore, existing risks and likely future risks should also be identified. This cannot be achieved without an adequate measure of risk and monitoring to determine the effectiveness and efficiency of corrective or prospective intervention measures to mitigate or prevent disasters. Similarly, Ugwu and Ihejirika (2013) emphasised that when disaster occurs the need assessment process has become an initial process to follow up; it is a problematic or daunting task to understand the required need to administer more accurately and swiftly in such situations. Cardona (2005) also mentions that the lack of a comprehensive conceptual framework of disaster risk to facilitate a multidisciplinary evaluation and intervention resulted from the difficulty in achieving effective disaster risk management. Most existing indices and evaluation techniques have not adequately expressed risk and are not based on a holistic approach that invites intervention. To sum up, Cardona (2005) stated that evaluation and follow up should be undertaken using methods that facilitate an understanding of the problem and that can help guide the decision-making process.

So for all these reasons, research and evaluation provide disaster practitioners with the knowledge needed for preparedness and response. They also provide good platforms to exchange knowledge. As humanitarian crises become more complex, with new and varied actors on the ground, strong partnerships and collaboration between experts, organisations, and disciplines is vital to build capacity.

4. Disaster's in Iraq

Iraq is exposed to various forms of natural and human made disasters, as listed in Table 2.

Table 2. Natural and Human Induced Vulnerabilities Faced by Iraq
(Humayun & Al-Abyadh, N.D., pp. 9)

Natural	Human Induced
Earthquakes	IDPs and refugees
Floods	Terrorism/civil unrest
Land Slides	Toxic environmental pollution
Sand Storms	Landmines & Unexploded Ordnance (UXO)
Drought	High risk structural collapses
Depletion of Natural Resources	Transport and industrial accidents
Health Epidemics	

The country is increasingly susceptible to natural disasters including floods, drought, epidemics, desertification, sandstorms, earthquakes, soil salination of fertile lands, destruction of marshlands, and chemical and industrial hazards (Humayun & Al-Abyadh, 2014, N.D.).

Table 3: Top Ten Natural Disasters in Iraq (1900 – 2011) (Goodyear, 2009, pp. 13-14) (Humayun & Al-Abyadh, N.D., pp. 9-10)

"EM-DAT: The OFDA/CRED International Disaster Database (www.em-dat.net)"

DISASTER	DATE	TOTAL POPULATION AFFECTED
DROUGHT	1969	500,000
FLOOD	11 MAY 1967	260,000
FLOOD	MAY 1968	150,000
FLOOD	4 FEBRUARY 2006	41,890
FLOOD	5 NOVEMBER 2006	18,000
FLOOD	10 JANUARY 2004	8,000
EPIDEMIC	14 AUGUST 2007	4,696
FLOOD	2011	2,001
EPIDEMIC	7 AUGUST 2008	892
FLOOD	27 JULY 1991	600
EARTHQUAKE	10 SEPTEMBER 2008	500

The following tables' No. 3, 4, 5 summarises the impact of ten major natural disasters in Iraq since 1900. These tables reveal that hydrological, meteorological or climatological events induced 76 percent of all natural hazards in Iraq. An approximate of 45 percent of deaths and 80 percent of economic losses was accounted by these disasters (Humayun & Al-Abyadh, 2014, N.D.).

Table 4. Top Ten Natural Disasters in Iraq for the Period 1900 to 2009 Sorted by The Number of People Killed (Goodyear, 2009, p. 14)

DISASTER	DATE	PERSONS KILLED
EPIDEMIC	14 AUGUST 2007	24
EARTHQUAKE	27 JULY 1991	20
FLOOD	5 NOVEMBER 2006	20
EPIDEMIC	7 AUGUST 2008	11
FLOOD	10 SEPTEMBER 2008	4
EPIDEMIC	1 JANUARY 2006	2
EPIDEMIC	AUGUST 1978	1

The effects of war in Iraq are coupled with the susceptibility to natural hazards which has exposed the people of Iraq to multiple human made disasters. Such disasters have included Sulphur Dioxide release due to Sulphur stockpiles, depleted uranium, Industrial and military legacy of contamination and dangerous waste, unexploded ordnance and land mines, military scrap yards, land pollution and dangerous waste by Oil industry, fire, and surface water pollution by oil spills due to sabotage of oil pipelines.

Table 5. Top Ten Natural Disasters in Iraq for the Period 1900 to 2009 Sorted by The Economic Damage (Goodyear, 2009, p. 14)

DISASTER	DATE	DAMAGE IN (OOO'S US $)
FLOOD	MARCH 1954	50,000
FLOOD	11 MAY 1967	5,000
FLOOD	MAY 1968	3,000
DROUGHT	1969	2,000
FLOOD	4 February 2006	1,300

The continuing effects of conflict, displacement and severe poverty have exacerbated the exposure of the Iraqi people to these disasters. Many essential services needed to manage hazards, reduce risks and respond to disasters have been crippled by war and post-war conflicts (ibid).
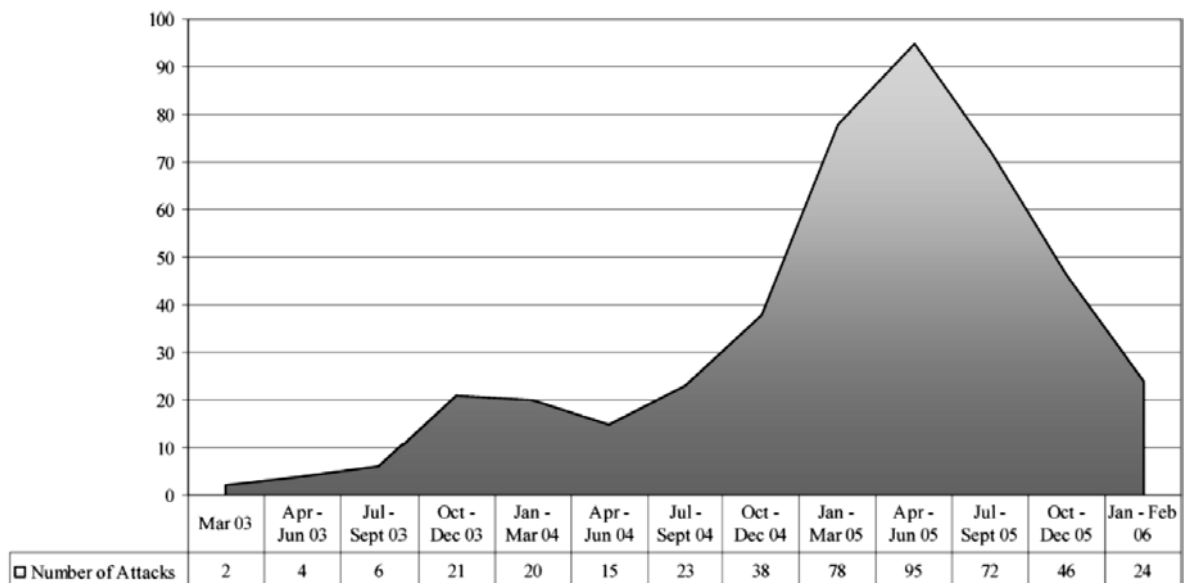

	Mar 03	Apr - Jun 03	Jul - Sept 03	Oct - Dec 03	Jan - Mar 04	Apr - Jun 04	Jul - Sept 04	Oct - Dec 04	Jan - Mar 05	Apr - Jun 05	Jul - Sept 05	Oct - Dec 05	Jan - Feb 06
Number of Attacks	2	4	6	21	20	15	23	38	78	95	72	46	24

Figure 6. Number of Suicide Attacks in Iraq by Quarter, 2003–2006 (Hafez, 2006, p. 601)

According to Hafez (2006) 443 suicide attacks took place in Iraq between 22 March 2003 to 20 February 2006. See Figure 6. Moreover, due to the development of insurgency after the U.S.-led invasion in March 2003, the lethality of suicide attacks increased. See Figures 7.
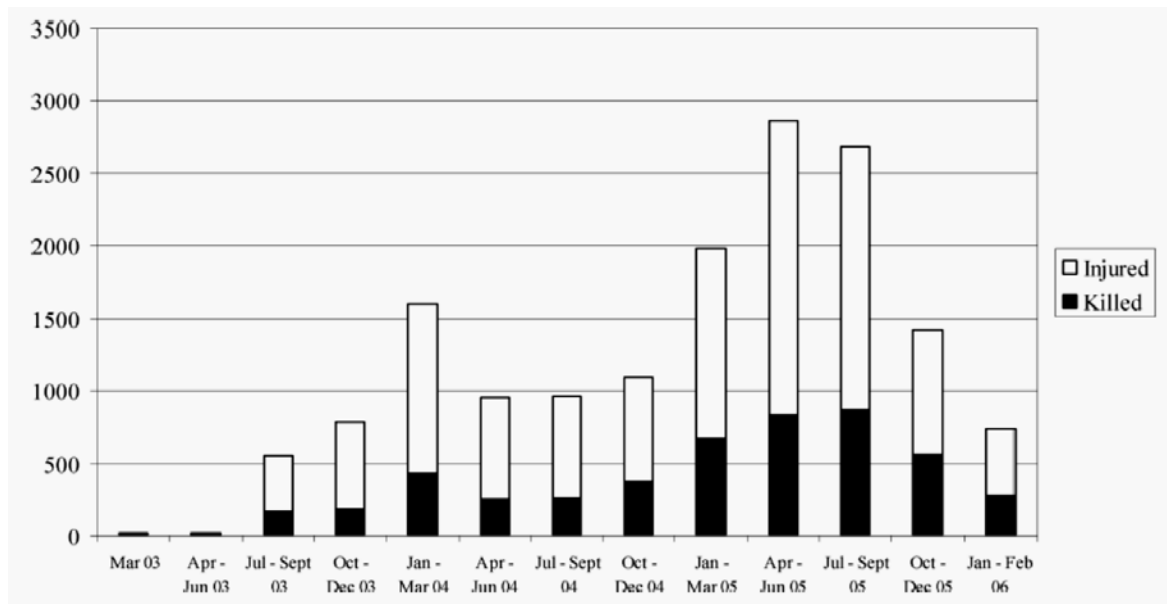
Figure 7. Number of Persons Killed and Injured in Suicide Attacks by Quarter, 2003–2006 (Hafez, 2006, p. 606)

The post war transitions in Iraq have affected the institutional capacities of the state to respond in an efficient manner. Furthermore, it appears that the lack of a national platform to organize the efforts of multiple institutions at all tiers of government have serious limitations for the current institutional and legislative systems for disaster risk reduction (DRR) (Humayun & Al-Abyadh, 2014, N.D.).

5. Conclusion

This paper presents an overview on disaster definitions and its types. It provides the existing knowledge with a background on the disaster response management due to war operation and terrorism in Iraq. It revealed that disasters have various definitions. Furthermore, different terms have been used to describe the types of disasters; however, the natural and man-made disasters cover all types of disasters.

Iraq has experienced multiple crises and disasters in the last decade. Thus Iraq is considered one of the top man-made disaster-prone countries in the world and, therefore, disaster management is considered to be one of the most important issues in this country.

At the end, it can be stated that, successful management of disasters depends on effective disaster response management, especially in large scale disruptive disasters such as wars and terrorism.

References

Aitken, P., & Leggat, P. (2012). Considerations in mass casualty and disaster management. Emergency Medicine – An International Perspective, 143-182.

Altay, N., & Green III, W. G. (2006). OR/MS research in disaster operations management. European Journal of Operational Research, 175(1), 475-493.

Biswas, B. C., & Choudhuri, S. K. (2012). Digital Information Resources for Disaster Management of Libraries and Information Centres. Bangladesh Journal of Library and Information Science, 2(1), 12-21.

Coppola, D. P. (2006). Introduction to international disaster management: Butterworth-Heinemann.

Dey, B., & Singh, R. B. (2006). Natural hazards and disaster management. Delhi: The Secretary, Central Board of Secondary Education.

EMA. (2004). Emergency Planning- Australian Emergency Manual Series: Manual 43 (pp. 32): Emergency Management Australia.

Eshghi, K., & Larson, R. C. (2008). Disasters: lessons from the past 105 years. Disaster Prevention and Management, 17(1), 62-82.

Fischer III, H. W. (1998). Response to disaster: Fact versus fiction & its perpetuation: The sociology of disaster (2nd ed.). USA: University Press of America.

Fischer III, H. W. (2005). The danger in over-reacting to terrorism: Has the US embarked upon a road that should have remained less traveled? Disaster Prevention and Management, 14(5), 657-665.

Fritz, C. E. (1961). Disaster: Institute for Defense Analyses, Weapons Systems Evaluation Division.

Frykberg, E. R., & Tepas 3rd, J. (1988). Terrorist bombings. Lessons learned from Belfast to Beirut. Annals of surgery, 208(5), 569-576.

Goodyear, E. J. (2009). The state of disaster risk reduction in iraq (pp. 94): UNDP/OCHA.

Goolaup, T. M. F. M. P., Minol, E. K. E. T. K., Faalafi, M. K. S. P. S., Watson, L. B. C. S. C., Tovia, M. J. J. S. V., Joris, S. S. J. K. A.,. .. Askounis, T. A. H. F. H. (N.D.). Introduction to Disaster Management (Vol. 1): Virtual University for Small States of the Commonwealth (VUSSC).

Gospodinov, E., & Burnham, G. (2008). Public health guide for emergencies The Johns Hopkins and Red Cross/Red Crescent. Learn Ware International Corporation, Baltimore, Maryland, USA(Second edition), 1-601.

Hafez, M. M. (2006). Suicide terrorism in Iraq: A preliminary assessment of the quantitative data and documentary evidence. Studies in Conflict & Terrorism, 29(6), 591-619.

Hale, J. E., Dulek, R. E., & Hale, D. P. (2005). Crisis Response Communication Challenges Building Theory From Qualitative Data. Journal of Business Communication, 42(2), 112-134.

Harding, S. (2007). Man-made disaster and development The case of Iraq. International Social Work, 50(3), 295-306.

Hood, C., & Jackson, M. (1992). The new public management: a recipe for disaster? Hazard Management and Emergency Planning–Perspectives on Britain.

Humayun, S., & Al-Abyadh, I. R. (2014). Iraq: country case study report - How law and regulation supports disaster risk reduction (pp. 40): International Federation of Red Cross and Red Crescent Societies (IFRC); United Nations Development Programme - Headquarters (UNDP).

Humayun, S., & Al-Abyadh, I. R. (N.D.). Disaster risk reduction: legal & institutional framework in iraq. 44.

International Federation of Red Cross and Red Crescent Societies. (2003). Types of disasters. Retrieved February 2003, from www.ifrc.org

Iyer, V., & Mastorakis, N. E. (2006). Important elements of disaster management and mitigation and design and development of a software tool. Wseas Transactions on Environment and Development, 2(4), 263-282.

Jenson, E. (1997). Disaster management ethics Disaster management ethics: UN. Disaster Management Training Programme (DMTP).

Lettieri, E., Masella, C., & Radaelli, G. (2009). Disaster management: findings from a systematic review. Disaster Prevention and Management, 18(2), 117-136.

Lindell, M. K. (2013). Disaster studies Current Sociology, 61(5/6), 797-825.

Meissner, A., Luckenbach, T., Risse, T., Kirste, T., & Kirchner, H. (2002). Design challenges for an integrated disaster management communication and information system. Paper presented at the The First IEEE Workshop on Disaster Recovery Networks (DIREN 2002), New York City.

Miron, C. H., & CERNUŞCA, L. (2008). The impact of terrorist attacks upon the global economy. Impact Strategic(1), 65-69.

Mitroff, I. I. (2005). Why some companies emerge stronger and better from a crisis: 7 essential lessons for surviving disaster: AMACOM Div American Mgmt Assn.

Moe, T. L., & Pathranarakul, P. (2006). An integrated approach to natural disaster management: public project management and its critical success factors. Disaster Prevention and Management, 15(3), 396-413.

Moustafa, L. H. (2013). Disaster Management Plans in Middle East Libraries and Archives in Time of War: Case Studies of Iraq and Egypt. Library & Archival Security, 26(1-2), 15-35.

Palliyaguru, R., Amaratunga, D., & Haigh, R. (2010). Integration of "disaster risk reduction" into infrastructure reconstruction sector: Policy vs practise gaps. International journal of disaster resilience in the built environment, 1(3), 277-296.

Palliyaguru, R., Amaratunga, D., & Haigh, R. (2013). Developing an approach to assess the influence of integrating disaster risk reduction practices into infrastructure reconstruction on socio-economic development. Disaster Prevention and Management, 22(2), 160-171.

Panzer, A. M., Butler, A. S., & Goldfrank, L. R. (2003). Preparing for the Psychological Consequences of Terrorism:: A Public Health Strategy: National Academies Press.

Pelling, M., Maskrey, A., Ruiz, P., Hall, L., Peduzzi, P., Dao, Q.-H.,. .. Kluser, S. (2004). Reducing disaster risk: a challenge for development (pp. 146). New York: United Nations Development Programme.

Shaluf, I. M. (2007). Disaster types. Disaster Prevention and Management, 16(5), 704-717.

Shaluf, I. M., & Ahmadun, F. l.-R. (2006). Disaster types in Malaysia: an overview. Disaster Prevention and Management, 15(2), 286-298.

Turner, B. A., & Pidgeon, N. F. (1997). Man-made disasters (2nd ed.): Butterworth-Heinemann, Oxford

Vasilescu, L., Khan, A., & Khan, H. (2008). Disaster management cycle–a theoretical approach. Management & Marketing-Craiova(1), 43-50.

Wong, E., al-Saiedi, A. R., & Silva, J. (2005, 27 November). Shiite Cleric Wields Violence and Popularity to Increase Power in Iraq, The New York Times.

World Health Organization. (2002). Disasters and emergencies. Definitions Training Package. WHO/EHA PanAfrican Emergency Training Centre, Addis Ababa. Retrieved August, 10, 2006.

Zimmerman, R. (1985). The relationship of emergency management to governmental policies on man-made technological disasters. Public Administration Review, 45(Special Issue: Emergency Management: A Challenge for Public Administration), 29-39.