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ماجستيـــــــــــر إدارة أعمـــــال

The Important Factors in Crisis Management for INGOs in the Gaza Strip from Employees' Perspective

العوامل المهمة في إدارة الأزمات للمؤسسات الدولية العاملة في قطاع غزة من وجهة نظر العاملين فيها

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Supervised by

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of the requirements for the degree of
Master of Business Administration

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<div align="center">إقـــــرار</div>

أنا الموقع أدناه مقدم الرسالة التي تحمل العنوان:

The Important Factors in Crisis Management for INGOs in the Gaza Strip from Employees' Perspective

العوامل المهمة في إدارة الأزمات للمؤسسات الدولية العاملة في قطاع غزة من وجهة نظر العاملين فيها

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نتيجة الحكم على أطروحة ماجستير

بناءً على موافقة شئون البحث العلمي والدراسات العليا بالجامعة الإسلامية بغزة على تشكيل لجنة الحكم على أطروحة الباحثة/ ايمان علي محمد البنا لنيل درجة الماجستير في كلية *التجارة/ قسم إدارة الأعمال* وموضوعها:

العوامل المهمة في إدارة الأزمات للمؤسسات الدولية العاملة في قطاع غزة من وجهة نظر العاملين فيها

The Important Factors in Crisis Management for INGOs in the Gaza Strip from Employees' Perspective

وبعد المناقشة العلنية التي تمت اليوم الأحد 09 جمادي الأولى 1438هـ، الموافق 2017/02/05م الساعة الحادية عشر صباحاً، اجتمعت لجنة الحكم على الأطروحة والمكونة من:

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د. جلال اسماعيل شبات	مناقشاً خارجياً	....

وبعد المداولة أوصت اللجنة بمنح الباحثة درجة الماجستير في كلية *التجارة/قسم إدارة الأعمال.*

واللجنة إذ تمنحها هذه الدرجة فإنها توصيها بتقوى الله ولزوم طاعته وأن تسخر علمها في خدمة دينها ووطنها.

والله ولي التوفيق،،،

نائب الرئيس لشئون البحث العلمي والدراسات العليا

أ.د. عبدالرؤوف علي المناعمة

Abstract

The main aim of this research is to enhance the role of INGOs in crisis management by identifying the factors that play an important role in the preparedness and response to the crisis in Gaza Strip and give recommendations for all stakeholders to enhance the effective intervention and management of the crisis.

In order to collect the needed data for this research, the researcher uses the secondary resources in collecting data such as books, journals, statistics and web pages, in addition to preliminary resources that includes questionnaires reflecting sample's opinions about the Important Factors in Crisis Management for the INGOs in the Gaza Strip. The targeted groups of research are the international non-governmental organizations including the united nation agencies. The researcher distributed 68 questionnairs and used the descriptive analysis of data using Statistical Package of Social Sciences (SPSS).

The main result of this research is that modern information technology system. The high quality of the training programs, the high qualification of the trainers, the high level of communication and coordination among stakeholders, the good transportation system, the high qualifications of the employees and the high experience of the organizations plays an important role in the crisis management

The research recommends that the INGOs should concentrate more on using the modern technology and paying more attention to the training programs they are providing for their employees.

Keywords: Crisis, Disaster, Emergency, Crisis Management Cycle, Gaza Strip

Abstract in Arabic

الملخص

الهدف الرئيسي من هذا البحث هو تعزيز دور المؤسسات الدولية غير الحكومية في إدارة الأزمات من خلال تحديد العوامل التي تلعب دورا مهما في التأهب والاستجابة للأزمة في قطاع غزة وتقديم توصيات لجميع أصحاب المصلحة لتعزيز التدخل الفعال وإدارة الأزمة.

من أجل جمع البيانات اللازمة لهذه الدراسة، استخدم الباحث الموارد الثانوية في جمع البيانات مثل الكتب والمجلات والإحصاءات وصفحات الويب، بالإضافة إلى الموارد الأولية من خلال توزيع استبيانات على مجتمع الدراسة تعكس آرائهم حول العوامل المهمة في إدارة الأزمات للمؤسسات الدولية غير الحكومية في قطاع غزة. استهدفت الدراسة المؤسسات الدولية الغير حكومية بما فيها المؤسسات الأممية. تم توزيع 68 استبيان واستخدام التحليل الوصفي للبيانات باستخدام برنامج التحليل الإحصائي (SPSS).

وقد خلصت هذه الدراسة إلى مجموعة من النتائج أهمها أن نظام تقنية المعلومات الحديثة، جودة برامج التدريب، إمكانيات المدربين العالية، المستوى العالي من التواصل والتنسيق بين الجهات المعنية، نظام النقل الفعال، مؤهلات الموظفين العالية، وخبرة المؤسسسات تلعب دورا مهما على إدارة الأزمات.

قدمت الدراسة مجموعة من التوصيات أهمها أن المؤسسات الدولية غير الحكومية ينبغي عليها أن تركز أكثر على استخدام التكنولوجيا الحديثة ودفع المزيد من الاهتمام لبرامج التدريب التي يقدمونها لموظفيها.

كلمات مفتاحية: الأزمة ، الكارثة، الطوارئ، دورة إدارة الأزمات، قطاع غزة.

Dedication

I dedicate this research…

To my great mother, who loved, encouraged and supported me throughout all my life,

To my father who supported me in the most critical situations I faced,

To my great and beloved life partner Waleed, who endured, supported and encouraged me from the beginning of our life,

To my lovely daughters Maryam & Shahed,

To my great and sweet sisters Ola & Asmaa for their continuous support,

To my lovely brothers Alaa, Raid, Mohammed, Ramzy & Mo'men,

To my sweet mother in law for her kindness and encouragement,

To all my friends and work colleagues,

To all lovely people I know

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The Researcher,

Eman Al Banna

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List of Abbreviations & Acronyms

ACF	Action Against Hunger
AIDA	Association of International Development Agencies
ANOVA	Analysis of the Variation
APELL	Awareness and Preparedness for Emergencies at Local Level
CM	Crisis Management
CMIS	Crisis Management Information System
CRED	Centre for Research on the Epidemiology of Disasters
CRS	Catholic Relief Services
EM-DAT	Emergency Database
EU	European Union
FAO	Food and Agriculture organization of the United Nations
GIS	Geographical Information System
GPP	Gaza Power Plant
ICRC	International Committee of the Red Cross
INGO	International Non-Governmental Organization
MAP	Medical Aid for Palestine
MHIs	Major Hazard Instalations
MOH	Ministry of Health
MOPWH	Ministry of Public works and Hosing
NPA	Norwegian People's Aid
NRC	Norwegian Refugee Council
OCHA	Office for the Coordination of Humanitarian Affairs
OHCHR	Office of High Commissioner for Human Rights

OPT	Occupied Palestinian Territory
PA	Palestinian Authority
PCHR	Palestinian Center for Human Rights
REDLAC	Work Group on Risk, Emergency, and Disaster of the Interagency Standing Committee for the American and Caribbean region
SPSS	Statistical Package for Social Sciences
UN	Test Driven Development
UNDP	United Nations Development Program
UNDSS	United Nations Department of Safety and Security
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFBA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNMAS	United Nations Mine Action Service
UNRWA	United Nations Relief & Works Agency
US	United States
WFB	World Food Program
WHO	World Health Organization

Chapter I
General Introduction

Chapter I
General Introduction

Introduction:

The international non-governmental orgainaizations sector has played a vital role in providing a social and economic services and support in Palestine. When Israel's occupation of West Bank and Gaza Strip began in 1967, Palestinians had managed to establish hundreds of INGOs to provide a various and several services in health, education, culture, social welfare, agriculture, trade and human rights. These INGOs had survived and even flourished despite the numerous occupations induced adversities (Abdelkareem, 2002). Palestinian INGOs services are most frequently used when the PA (Palestinian Authority) has a weak capacity or limited role, and where the cost of acquiring services from the private sector is high (Bisan Center, 2006).

The comprehensive blockade imposed on Gaza Strip since June 2007 has deprived Gaza Strip from any development and led to unprecedented poverty levels (UNDP, 2012). Moreover, three times in less than six years, a terrible escalation of violence has engulfed the Gaza Strip. The latest round of violence in July 2014 reveals clearly how unsustainable the situation in Gaza is (UNRWA website, retrieved on 2015).

Crisis management is broadly defined as an organization's pre-established activities and guidelines for preparing and responding to significant catastrophic events or incidents in a safe and effective manner (Lockwood, 2005). Recently, it become one of the most important subjects that most of human societies and organizations care on, particularly after the awareness of the bad results and worst effects of the crisis. Different kinds of crises happened as a result of numerous, quick and surprised changes (Zeyada, 2012). Furthermore, the massive progress in information technology and communication in the era of openness and globalization contributes on the rapid spread of these crises. Due to the social, economical, environmental or political dimensions of the crisis, the events that happen in any region may affect the other regions badly. Now, Governments, UN agencies, INGOs and others in the world are talking about the preparedness and their abilities to respond or handle with any future crisis or disasters

(Moqat, 2013). This research will use the term crisis management for emergency and disaster management.

1.1 Research problem:

OCHA (2015) reported that Gaza Strip has a very densely population and urbanized nature. Actually, the whole population was exposed to conflict and affected by damage. Throughout the conflict, there was a real fear among the population. In Gaza, there is no one nor any place is secure as evidenced by attacks on hospitals, residential buildings and schools designated as shelters. Psychosocial distress levels, already high among the population of Gaza, have worsened significantly as a result of the conflict 2014.

The lack of protection is most evident in the high level of civilian casualties. According to the statistics of OCHA, UNRWA, MOH, PCHR & Al Mezan (2015), that counted by the researcher, the violent conflict in the Gaza Strip since 2000 had caused immense human suffering and devastation. The statistics show that this conflict led to the death of approximately 9,000 Palestinians, 80% of them were civilians including more than 2,209 children and more than 702 women. Over 65,800 Palestinians were injured. Approximately, over 50,000 housing units are destroyed or severely damaged, causes hundreds of thousands homeless Palestinians and thousands of orphaned children need sustained support from the child protection and welfare sectors.

UNICEF predication statistics in 2012 show that by the year 2020 the population of Gaza Strip will increase to around 2.1 million, from an estimated 1.6 million people in 2012. The substantial population growth rate adds some 500,000 people to a living area, which is restricted and already heavily urbanized. Basic infrastructure in electricity, water and sanitation, municipal and social services, is struggling to keep pace with the needs of the growing population. The area has been essentially isolated, meaning that, in the longer term, its economy is fundamentally unviable under present circumstances. Gaza Strip is currently kept alive through external funding.

For the last decade, the socio-economic situation in Gaza has been in a steady decline left about three quarters of population now depend on international aid and

assistance (UNRWA website, retrieved on 2015), therefore this research concentrates on the factors that play an important role in the INGOs that works in crisis management.

1.2 Research Question:

What are the important factors in crisis management for the INGOs in the Gaza Strip?

1.3 Research Objective:

The main aim of this research is enhancing the role of INGOs in crisis management by identifying the factors that playing an important role in mitigation, preparedness and response to the crisis in Gaza Strip.

More specifically, the research work is intended to achieve the following objectives:

1. To enhance the role of INGOs in reducing the risk of the crisis that facing Gaza Strip.

2. To identify the factors that are playing an important role in managing the crisis.

3. To develop the effective level of preparedness and quick response to crisis.

4. To coordinate and have good agreements and relationships with local Authorities and other humanitarian and social actors.

5. To give recommendations for all stakeholders to enhance the effective intervention and management of the crisis.

1.4 Importance of this Research:

A successful crisis management plan incorporates organizational programs such as emergency response, disaster recovery, risk management, communications and business continuity, among others. In addition, crisis management is about developing an organization's capability to react flexibly and thus be able to make the prompt and necessary decisions when a crisis happens (Lockwood, 2005).

Dealing with INGOs sector becomes a very important subject to research because of the roles INGOs are playing in socio-economic development. The area of

crisis management process is also a research area that still needs more exploration. The research will give an overview about Gaza Strip crisis and how can the INGOs improve their way of intervention in order to minimize or avioed the risk of these crisis.

The practical significance of the research lies in considering the findings that the researcher will reach at the end of this research as well as providing some suggestions and recommendations based on the findings. These findings will reveal the shortcomings of the current assessment process and will further identify suggestions and recommendations to the problems being encountered. Ultimately; this research maybe contributes significantly and indirectly in serving Palestinian people more efficientl

1.5 Research Variables:

1.5.1 Dependent Variable:

The role of INGOs in managing the crisis.

1.5.2 Independent Variables:

1. Information Technology.
2. Training Programs.
3. Effective transportation system.
4. Coordination with local authorities and other humanitarian and social actors.
5. Characteristics of the organization. (Age, years of experience, number of employees & the service provided).
6. Characteristics of the employees (gender, age, qualification, years of experience, the experience & knowledge in crisis/disaster management)

See the below figure of the conceptual map for the research variables:
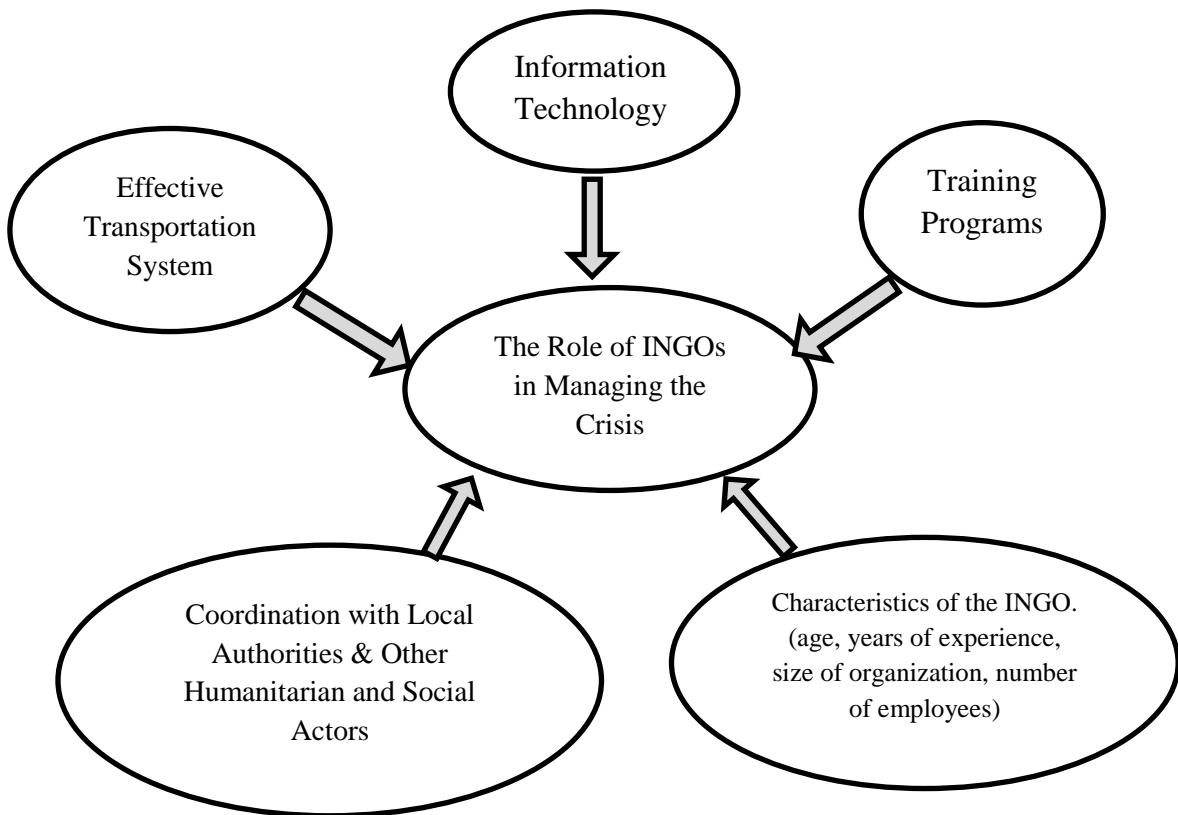
Figure (1.1): Conceptual map designed by the researcher (2015)

Based on REDLACK (2006), Salem (2009), Sahin (2009), Unlu et al. (2010), Ziyada (2012), Miqdad (2012), Chatat (2012), & Moqat (2013)

1.6 Research Hypothesis:

1- Information technology system plays an important role in managing the crisis for INGOs at a significance level (α=0.05).

2- Training programs plays an important role in managing the crisis for INGOs at a significance level (α=0.05).

3- Effective transportation system plays an important role in managing the crisis for INGOs at a significance level (α=0.05).

4- Coordination with local authorities and other humanitarian and social actors plays an important role in managing the crisis for INGOs at a significance level (α=0.05).

5- Characteristics of the INGOs (age, years of experience, number of employees & the service provided) plays an important role in managing the crisis for INGOs at a significance level (α=0.05).

6- The characteristics of the employees (gender, age, qualification, years of experience, the experience & knowledge in crisis/disaster management) plays an important role in managing the crisis for INGOs at a significance level (α=0.05).

1.7 Data Collection

Secondary resources: The researcher has utilized the relevant literature and publications related to the subject of the research.

Primary resources: The researcher will use the questionnaire, as a methodology for this research.

1.8 The Population and the sample:

The population includes the employees of the International Organizations which have interventions during any crisis that may happen in Gaza Strip. The research was implemented using a comprehensive survey with a total 68 participants from 24 INGOs that have intervention in crisis and disaster events.. Three or four employees from each organization had filled up the survey.

Chapter II
Literature Review

Chapter II
Literature Review

Introduction:

The growth of crisis or disaster management over the past two decades has seen the emergence of two distinct approaches – crisis and disasters are inevitability and as pro-active prevention (Jaques, 2010). It means that crisis and disasters are unpredictable but not unexpected. Developing a similar approach, Hearit and Courtright (2003) argued that strategists should assume that they are not just inevitable but are unavoidable.

Pathirage et al. (2008) stated that disasters, both natural and man-made, have been occurring with increasing frequency and effect in recent decades in many countries around the world.

During previous wars, Israeli attack on Gaza Strip, affected the whole life of the inhabitants whether human beings, plants, or even buildings. A massive destruction affected all productive aspects (USSD, 2011). The socioeconomic situation has been getting steadily worse since the onset of the second intifada in September 2000. Every aspect of residents' daily lives is affected, and the society is breaking down. Years of conflict and closure have left 80 per cent of the population dependent on international assistance to ensure their mere survival (UNRWA website, retrieved on 2015)..

When the wars ended, many of the international and Arab countries expressed their desire to contribute to provide emergency aid to affected people in Gaza and to participate in Gaza Strip reconstruction projects, such as inventorying the damages, preparing emergency projects or providing proposals to the sponsors for the reconstruction projects.

This chapter presents general information about crisis and disasters and the important factors in crisis management process in the Gaza Strip.

2.1 Section I:
Perspectives of Disaster & Crisis

2.1.1 Crisis and Disaster Definition:

Crisis is an event that is expected to lead to a dangerous situation, whether it is an emergency or a disaster. It is also defined as a time of intense difficulty, trouble, or danger (Lighthouse Readiness Group, 2012). According to Moe, et al. (2006), a crisis is a situation faced by an individual, group or organization, which they are unable to cope with by the use of normal routine procedures and in which stress is created by sudden change. MacNeil and Topping (2007, p. 64) defined a crisis as an event that "causes severe emotional and social distress, which may occur at any time and without warning" (as cited in Harwati, 2013).

The classification of disasters is based on the level of damage and impact, which is visible in different elements; damages to infrastructure, to the population and its humanitarian condition, to economical and environmental development. The immediate effect of a disaster is the deterioration of basic needs of the affected population. These can be related to the condition of health, water, food, shelter, source of income, and protection (REDLAC, 2006).

Disaster is a serious disruption in a community or a society causing widespread material, economic, social or environmental losses that go beyond the ability of the affected society to cope using its own resources (Chik, 2011) and (Shaluf, 2007). Furthermore, Center for Research on the Epidemiology of Disasters (CRED) (2013) defines a disaster as "a situation or event which overwhelms local capacity, necessitating a request to a national or international level for external assistance; an unforeseen and often sudden event that causes great damage, destruction and human suffering". Disaster can be defined also as "a natural or man-made event that negatively affects life, property, livelihood or industry often resulting in permanent changes to human societies, ecosystems and environment" (Bayandor, 2005) (as Cited in Moqat, 2013, p.10).

As can be seen from the above definitions, the term "crisis" and "disaster" refers to the same concept, they share the same words and phrases such as: "sudden change or unexpected event", "critical situation" that needs an emergency response, "inability to cope", "widespread losses" and "breaking down of social structure".

2.1.2 Types of Disaster:

- **Natural Disasters:**

Natural disasters are catastrophic events resulting from natural causes such as volcanic eruptions, tornadoes, earthquakes, floods, flows, thunders, heavy rains, earth gliding, drought, deforestation, sand accumulation etc., over which man has no control. Natural disasters are often termed "Acts of God" (Shaluf, 2007).

- **Man-made Disasters:**

Man-made disasters, on the other hand, are those catastrophic events that result from human decisions (Shaluf, 2007). They include structural, building and mine collapse due to man, riots, fires, chemical accidents, main road accidents, terrorism, wars, environment pollution, epidemics and many others. In addition, air, land, and sea disasters are all man-made disasters.

- **Hybrid Disasters:**

Hybrid disasters result from both human error and natural forces. An example of a hybrid disaster is the extensive clearing of jungles causing soil erosion, and subsequently heavy rain causing landslides (Shaluf, 2007).

2.1.3 Disasters Criteria:

Several criteria have been proposed to define disasters in terms of their consequences. The United Nations Environmental Program (UNEP-APELL) (2003) and the Center for Research on the Epidemiology of Disasters (CRED) (2003) have created internet websites and proposed criteria to define disasters to be entered into databases. CRED requires that for a disaster to be entered into the database (EM-DAT), it must fulfill at least one of four criteria:

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(1) About 10 or more people reported killed in the event;

(2) About 100 people reported affected by the event;

(3) Declaration of a state of emergency following the event; and

(4) Call for international assistance on the aftermath of the event.

For the purpose of the database the number of people killed in the event are "the persons confirmed as dead together with the persons missing and presumed dead"; the people affected by the event are those "requiring immediate assistance during a period of emergency, i.e. requiring basic survival needs such as food, water, shelter, sanitation and immediate medical assistance". CRED also evaluates the economic impact of the disasters that are registered as being direct (e.g. damage to infrastructure, crops, housing) and indirect (e.g. loss of revenues, unemployment, market destabilization, losses to the local economy).

2.1.4 Crisis Management

The term "crisis management" is often given to the response for dealing with the emergency or disaster. Crisis management efforts aim to reduce or avoid the potential losses from hazards, assure prompt and appropriate assistance to victims of disaster, and achieve rapid and effective recovery (Pathirage, Seneviratne, Amaratunga, & Haigh, 2012).

Jaques (2010, p. 471) defined crisis management as "an integrated continuum of management activities proceeding from potential crisis identification and prevention through event response and on to long term post-crisis management".

2.1.5 Crisis Management Cycle:

The crisis management cycle illustrates the ongoing process by which various stakeholders in a society plan for and reduces the impact of crisis or disasters, react during and immediately following a disaster, and take steps to recover from the impact (Clerveaux, et al., 2010) (as Cited in Pathirage, et al., 2012). However, key phases of disaster management are identified as mitigation, preparedness, response and Recovery.

- **Mitigation:**

    Mitigation refers to all actions taken before a disaster. It is considered a risk reduction activities including structural and non-structural measures undertaken to limit the adverse impacts of hazards (Pathirage, et al., 2012) and (Moe, et al., 2006).

    Structural mitigation: engineering solutions such as construction projects which reduce economic and social impacts

    Non-structural mitigation: policies and practices which raise awareness of hazards including Land use planning, insurance, establishing warning systems, legislation and evacuation planning, or encourage development to reduce the impact of disasters (Sahin, 2007), (Chatat, 2012), (Miqdad, 2012).

    Sahin (2007) illustrated that thousands of public and private organizations take place in mitigation efforts, which can require several decades or even more. Mitigation policies are not conducted against a specific hazard; they are applied in an all-hazard concept.

- **Preparedness:**

    Moe et al. (2006), Shaluf (2008) and Pathirage et al. (2012) mentioned that preparedness, within the field of emergency management, can best be defined as a state of readiness or activities and measures taken in advance to ensure effective response to a disaster, crisis, or any other type of emergency situation. It includes the issuance of timely and effective early warnings and temporary evacuation of people and property from threatened locations. Preparedness is not only a state of readiness, but also a theme throughout most aspects of emergency management.

    No emergency management organization can function without a strong preparedness capability (Shaluf, 2008). This capability is built through planning a disaster management policy, training first responders and volunteers, and developing essential agreements among public, local, and nonprofit organizations that are supposed to act together in a crisis situation. (Sahin, 2007).

- **Response:**

Response or relief phase is actually just a smaller portion of CM. It includes the provision of assistance and emergency aid or intervention during or immediately after a disaster to meet the life preservation and basic subsistence needs of those people affected. It can be of an immediate, short-term, or protracted duration (Sahin, 2007) and (Pathirage, et al., 2012). The goal of the responder is to save lives, minimize property damage and enhance the beginning of recovery from the incident (Shaluf, 2008).

- **Recovery:**

According to Moe et al. (2006), recovery includes decisions and actions taken after a disaster with a view to restore or improves the pre-disaster living conditions of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk. Shaluf (2008) stated that it is a very daunting phase of emergency management because it requires personnel and community motivation.

Typically, recovery is a two-step process; short-term recovery (Rehabilitation), which returns vital life-support system to minimum operating standards, long-term recovery (Reconstruction), which may continue for a number of years after a disaster (Moqat, 2013).

Shaluf (2008) concluded that crisis management cycle is an open-ended process. The four phases comprising the cycle begin and end with mitigation. The stages are not mutually exclusive - there is an overlap. The stages of disaster management can be operative concurrently, because those stages are interrelated; they are not independent entities with one stopping and the next following.

Finally, Khan et al. (2008) draw a figure which specifically shows and summaries the crisis management stages and its interferences. See Figure 2.1
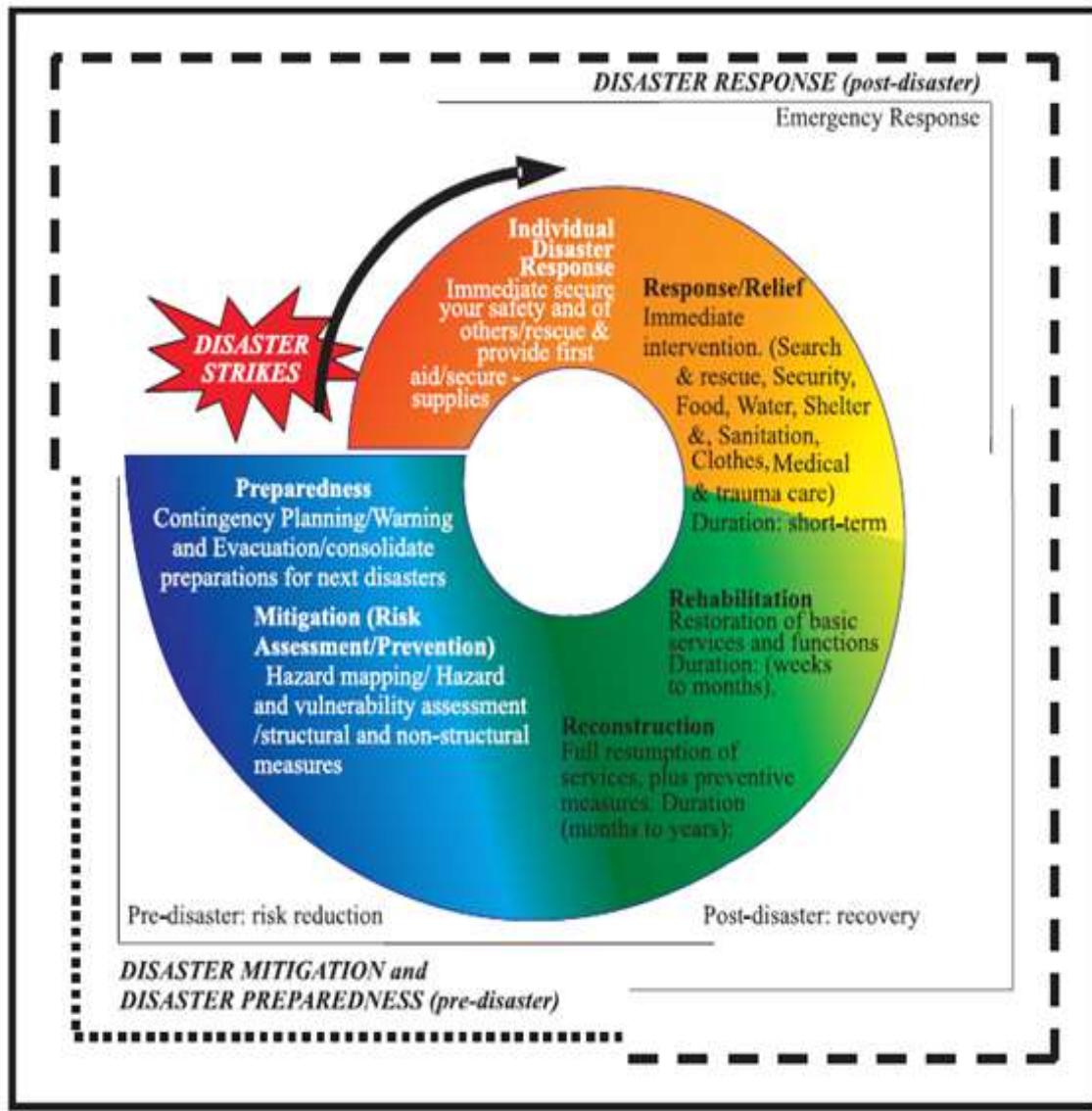
Figure (2.1): Disaster Management Cycle (Khan, et al., 2008)

Moe and Pathranarakul (2006), as cited in Miqdad (2012), considered disaster management as a public project management and define 10 critical success factors that must be taking into consideration in disaster management as follow:

1. Effective institutional arrangement;

2. Coordination and collaboration. Effective coordination and collaboration among stakeholders are the key factor in managing disaster management at international, regional, national, organizational, and project level;

3. Supportive laws and regulations;

4. Effective information management system. Sharing important information among key stakeholders and effective information management system are important for successful outcomes of disaster management;

5. Competencies of managers and team members. Administrative, conceptual and technical skills are important for planning, implementing, and managing disaster project successfully;

6. Effective consultation with key stakeholders and target beneficiaries;

7. Effective communication mechanism. Effective communication will result to trust and cohesion among stakeholders in the project and therefore will lead to successful project;

8. Clearly defined goals and commitments by key stakeholders;

9. Effective logistic management. People, expertise and technology are also logistics for disaster management. Using new technology such as Geographical Information System (GIS) and remote sensing will enhance capacity to coordinate among organizations and more effective logistic management;

10. Sufficient mobilization and disbursement of resource. Inadequate of resource (people, equipment, and material) and poor or no risk analysis may result problems in the project and may lead to project termination or suspension.

2.2 Section II
Disaster Knowledge Factors

2.2.1 Definition:

Pathirage et al. (2014) defined disaster knowledge factors as factors that enhance knowledge of managing disasters successfully. Therefore disaster knowledge factors can directly or indirectly affect the process and outcomes of disaster management. Identified factors are classified into several categories based on their characteristics: Technological, Social, Environmental, Legal, Economical, Operational/ Managerial, Institutional and Political.

2.2.2 Disaster Factors:
2.2.2.1 Technological Factors

This includes aspects relating to or involving the application of scientific advances including any tool, technique, product, process and method benefiting disaster management (Pathirage et al., 2014). Information and communication technology, and other scientific advances are applicable to the mitigation of hazards, which consequently helps to save lives and property while reducing the loss of livelihoods (UNDP, 2005) (as cited at Oloruntoba, 2005). Under this main category, three sub-categories are identified: warning systems, communication systems and structural measures.

Warning system should be as inclusive as possible to raise the awareness amongst public officials in the region and globally (Pathirage et al., 2014). In other words, warning systems should be integrated with communication, education and awareness raising of the population (Rodriguez et al., 2006) (as cited at Pathirage et al., 2014).

Communication systems: The media is able to fulfill the strategic role of information distribution, mass communications and the education of people on how to evacuate, locate and relocate (Pathirage et al., 2014). Mass communication systems such as the use of emergency public sirens and warning broadcasts using radios, televisions and print media should be put in place. Public presentations, notices and pamphlets, signs and posters too have been used to communicate mitigation and

protective measures. Geographic information systems and remote sensing tools have been suggested to enable effective logistics management among organizations during relief (Moe and Pathranarakul, 2006). Communication between stakeholders is vital for successful reconstruction. Therefore, an effective communication mechanism should be established. Computer networks and decision support systems can enhance disaster communication during the reconstruction stage (Ozceylan and Coskun, 2008).

Structural measures: The strengthening of buildings and infrastructure exposed to hazards via engineering design and construction practices come under this sub-category. As Allotey et al. (2010) emphasized, effective application of science and engineering principles in the development of the built environment has reduced the risks faced by some natural disasters.

2.2.2.2 Social Factors

This category includes the aspects relating to human society and its members in managing disasters: initiatives to increase the population's level of education, increase employment opportunity, reduce poverty, enhance the role and participation in decision-making, including women that would support preparations for future disasters (Pathirage et al., 2014). Awareness of disaster impact is necessary in impressing in the citizen's culture of disaster preparedness, prevention and mitigation. Public information and enlightenment campaigns in print and electronic media, and through community-based organizations should be vigorously pursued. In addition, disaster management studies should be incorporated into the educational curriculum at all levels, with an emphasis on disaster vulnerability reduction. This will produce the qualified professionals, policy makers and managers required to meet the human resources needed for disaster management organizations, and enhance the capacity of agencies to formulate the right policies needed for effective vulnerability reduction strategies (Ibem, 2011) (as cited at Pathirage et al., 2014).

A culture of safety and resilience requires people's awareness and understanding, which in turn leads to actions for reducing risk and vulnerability to disasters (UNESCO, 2005). Education for disaster risk reduction is an interactive process of mutual learning among people and institutions. Promotion of awareness

among children not only represents future investment in disaster loss-reduction, but in addition, children are recognized as an important link of risk information between schools and households (Clerveaux et al., 2010). It encompasses far more than formal education at schools and universities. Indigenous information and experience, training and the use of technology and media, all contribute means to manage valuable knowledge on disaster risk for the benefit of citizens, professionals, organizations, community stakeholders and policymakers (UNESCO, 2005).

Educational practices can be conducted through direct learning, information technology, staff training, electronic and printed media and other innovative actions to facilitate and manage and transfer of knowledge and information to citizens, professionals, organizations, community stakeholders and policy makers. Preparation through education is accepted as less costly than learning through tragedy (Pathirage et al., 2014).

Therefore, the value of education of school children cannot be underestimated and it indirectly raises the awareness of communities (Sonak et al., 2008)

2.2.2.3 Environmental Factors

Aspects relating to the natural environment in managing disasters are considered here. Re-forestation of watersheds helps to minimize the effects of droughts. Disasters create tons of waste, comprising hazardous waste, vegetation, soil, sediment, demolition debris and municipal waste. This waste poses a threat to human health, ground water supplies and the marine environment (Pathirage et al., 2014). Management of waste created by natural hazards is important, with a need for clear guidelines. It is important to explore ways of recycling and reusing of debris, and the need for proper sewerage systems and cost-effective sewerage treatment plants is emphasized. Rehabilitation of saline soils needs to be performed through assessment and monitoring operations by trained staff. Development of a proper and adequate drainage system is also critical to minimize the harm to the ground. Remediation of ground water supplies that have been polluted is likely to take several years. Therefore, it is necessary to provide drinking water for affected people to avoid the risks of diseases (Sonak et al., 2008).

2.2.2.4 Legal Factors

These include aspects relating to law, accepted rules, and regulations for managing disasters. Various regulations that apply to routine construction provide for the safe development of infrastructure, capital improvements and land use, ensuring preservation and environmental protection (Wilkinson et al., 2006). Disaster management supportive laws and regulations must be established and enforced so as to create an enabling environment (Moe and Pathranarakul, 2006). According to Pheng et al. (2006), these laws and regulations can be legislated based on hazard and vulnerability assessment. It is claimed that much of the existing legislation was not drafted nor developed to cope with an emergency situation. The process of attaining building consent is identified as a bottleneck, which hinders the achievement of reconstruction objectives. On the other hand, poor construction quality can be a major reason for a higher level of destruction and deaths in developing countries (Pheng et al., 2006). Therefore laws relating to these areas should be strengthened and enforced.

2.2.2.5 Economic Factors

Economic factors can be classified into two areas: long-term economic planning measures and financial aspects. Economic planning measures include aspects relating to production, distribution, and consumption of goods and services in a society, while aspects relating to money and management of monetary assets are covered under the financial sub-category (Pathirage et al., 2014).

Economic planning measures: Destruction of infrastructure during a disaster directly affects the economy of a country. Papathoma et al. (2003) claimed that destruction of property and engineered structures, and coastal infrastructure had resulted in countries experiencing major losses due to economic and business interruption.

Financial: The lack of funds for long-term reconstruction after short-term relief operations is another frequently cited problem (Pathirage et al., 2014). Authorities should also endeavor to invest in measures that reduce the impact of disasters. It is vital for countries to make the financial investment to create a culture of preparedness. Donors are known to make financial pledges which are not fulfilled (Oloruntoba, 2005).

Particularly when subsequent disasters occur, financial resources, personnel and political attention may soon be moved to other disasters. Furthermore, donor administration and financial policies are usually not suited for rapid release of funds for disaster response and can cause delays in reconstruction work (Pathirage et al., 2014).

2.2.2.6 Operational/Managerial Factors

This category includes factors relating to the planning, coordination and management of disaster related activities. Participants' lack of skills and knowledge in disaster risk management initiatives is identified as a major issue of reconstruction (Pathirage et al., 2014). For cost effective mitigation measures to be developed and applied, detailed information must be available, including those buildings, infrastructural works and groups of people who are particularly vulnerable to hazards. Managing complex, large and demanding types of projects require competent and experienced staff; otherwise, it may lead to unsuccessful project delivery (Koria, 2009). In addition, the effectiveness of the reconstruction process will depend on how much planning has been carried out and which contingencies are provided for in preparing for the disaster (Pathirage et al., 2014)

Coordination of recovery is usually accepted as slow, expensive and complex (Koria, 2009). The extent of effective collaboration and coordination between national authorities, local actors and international actors appear to be insufficient to achieve effective planning, damage assessment and public information management (Oloruntoba, 2005). Coordination should be considered at different levels including international, national, regional, organizational and project (Moe and Pathranarakul, 2006).

After a disaster, information is the most valuable and often most elusive asset (Pathirage et al., 2014). An effective information management system is important, which is vital for early warning, planning, rehabilitation and reconstruction. Lack of information complicates the efficient management of catastrophes and makes the decision making process a difficult task (Puras and Iglesias, 2009) (as cited at Pathirage et al., 2014).

Another important aspect considered under this theme is community engagement. Local groups should be given the opportunity to engage in the decision making process and local skills should be utilized (Moe and Pathranarakul, 2006). If the relocation efforts are to be successful, it should involve the local communities in the decision making process (Rodriguez et al., 2006) (as cited at Pathirage et al., 2014). Further, it should be appreciated that local participation in recovery efforts includes the distribution of relief aid and cleaning up of debris.

Institutional factors include aspects relating to an organization founded and dedicated to disaster management and related activities. An effective institutional arrangement is essential for managing disasters successfully. Unclear lines of authorities coupled with slow decision-making processes, cause delays in activities (Moe and Pathranarakul, 2006). These units should be fully authorized and empowered for disaster management, and should have developed a disaster management master plan (Pathirage et al., 2014).

Professional institutions need to carry out training programs and disaster management courses to enhance capacity and disseminate knowledge on disaster risk management initiatives. For example, it is found that the pre-construction phase is considered as the most critical phase for integrating disaster risk management into the construction; hence, designers, civil engineers, structural engineers, specialist contractors, engineering consultants and developers should be actively involved (Bosher et al., 2007).

Education on disaster management should be institutionalized and a curriculum should be developed to include disaster management modules to educate school children and university students (Pathirage et al., 2014). Further educational programs can be introduced to carry out research in the field. Designing and constructing a resilient built environment demands an in-depth knowledge of avoiding the effects of hazards; therefore research should support finding how disaster risk reduction can effectively be mainstreamed into construction (Bosher et al., 2007).

2.2.2.7 Political Factors

These include aspects relating to politics, parties or politicians in the context of disaster management. The political situation in a region may not be supportive of immediate distribution of relief materials or long term reconstruction and the safety and security of the disaster management practitioners can be affected (Pathirage et al., 2014). Provision of adequate budget, the adoption of proactive rather than reactive responses, the amendment of conflicting policies and legislations and the definition of clear responsibilities for fire management are among the highlighted political commitments (Maditinos and Vassiliadis, 2011) (as cited in Pathirage et al., 2014).

2.2.3 Important Factors in Crisis Management for the INGOs:
2.2.3.1 Information Technology

According to Pathirage, et al. (2008), information and knowledge play an extremely important role in effective disaster reduction and response. It is imperative that organizations involved in the disaster recovery process have all the information they need – quickly and accurately (Banipal, 2006). Sharing important information among key stakeholders and effective information management system are important for successful outcomes of disaster management (Moe and Pathranarakul, 2006). The foundation for decision making is funded information derived from actual and high-quality data. Managing, conditioning, analyzing and processing as well as presenting such data and information depend on information technological applications; such as, data warehouses, information systems, dispatching and coordinating systems and tools like mobile devices (Moqat, 2013). The requirements and technology needed for the communication process and the information systems used during the response and recovery phases.

Information systems are essential tools for rapid decision making in disaster management (Göbel et al, 2005) (as cited at Moqat, 2013). A series of information management mechanisms must be supported by Crisis Management Information Systems (CMIS). Mechanisms like validation, interpretation, filing, distribution and opening large amounts of data, the relevancy of which is yet to be determined. All information processing activities such as; historic data, knowledge on how to handle

situations and accessing knowledge networks in search for relevant aspects to keep in mind, must be supported in a CMIS. The system requires a simple and effective user interface (Moqat, 2013). It can be summarized that it is so important to have an effective information technology to manage the collected data. This system contributes to improving the reporting activities, tracking progress, estimating the costs and enhancing the response on the beneficiaries and donors level.

2.2.3.2 Training Programs

According to Moqat, (2013), training is vital issue that should be taken into consideration by the organization to have all the staff updated in regard of its plans, forms, procedures and systems. This will help in having the staff working in the field equally in the regard of assessment and dealing with the affected families in accepted humanitarian manner. All organizations working in disasters response must work in increasing the knowledge about disasters management by specialized training and researching (Miqdad 2012). During the past years it has also been shown, that training and consulting of the decision makers and field workers in the ministries, NGOs and other relief agencies plays a key role in proper understanding and accepting the space based information products as one information source for decision making or mission planning. In addition, Burton, et al. (2005) as cited in Moqat (2013) recommend that training and workshops are required to increase the awareness and capacity of the staff to use the forms and resources in effective manner. The low level of use can be related to the level of technical training available among the supporting staff. Nevertheless, organizations must manage with whatever existing resources they have and with whomever in the staff are willing to learn how to use the application.

Islam and Chik, (2011) conclude that the awareness and training on information technology, relief distribution and evacuation for the people affected is required to develop human resources, particularly in developing countries such as Bangladesh , that suffer chronically from disasters. The success of training depends on several factors, including the knowledge of the person who delivers the training, the environment in which the training is delivered, the level of resources needed to support the training and the absorptive capacity of the people who receive training (Pathirage, et al 2012).

2.2.3.3 Effective Transportation System

Transportation is the means of conveyance by land, sea or air of goods, services and personnel. Transportation is seen as critical to all aspects of response; hence, it is important to identify all means of transportation, which will be available for response at national, parish and community levels (Lucia, 2005). Emergency transportation management activities can vary depending on the type and scale of disaster. Many disasters involve a variety of catastrophes, such as an earthquake that causes fires and toxic chemical release. Specific transport issues vary depending on the type and scale of disaster (Victoria Transport Policy Institute, 2010) (as cited in Moqat, 2013). It is essential to develop tools and techniques that can model urbanization as it relates to the meteorological environment, particularly in situations where there is deployment of biological, chemical, or radiological weapons of mass destruction or others. These tools and techniques may also improve communication and transportation networks during such disasters (Jad-al-Hak, 2008).

According to Indian Institute of Technology Roorkee (2009), the transportation network and evacuation planning are an integral component of disaster management. Better existing networks in terms of road, rail, water, air and lifeline structures such as bridges, telecom network, pipelines, etc. promote better rescue, relief, recovery process, relocation, rehabilitation and reconstruction. To support humanitarian efforts in the area, a first step required is to have relevant transportation related information provided continuously to decision makers throughout the participating organizations (Timothy B. Love, 2005). It can be concluded that an emergency transportation plan is much needed to response effectively to any disaster. The team should be aware and trained on this plan to be followed in emergency situations. It is also important that the team should have an assigned vehicle to be used in the disaster situations. This vehicle should be will prepared and suitable for the existing infrastructure and county roads.

2.2.3.4 Collaboration, Communication and Coordination among stakeholders

According to Kapucu, et al. (2010, p. 460), collaboration is "any joint activity by two or more agencies that is intended to increase public value by their working together rather than separately." Communication speaks to how people understand each other

and how information, not just "facts," but policies, prospects, rumors, feelings, failures, and all other human experiences, is transferred in organizations. Coordination, like communication, begins with an assumption of differences. Different persons and different units create overlap, redundancy and/or separation without coordination. Coordination is about efficacy. Cooperation is now a hallmark for not just corporate behavior, but corporate culture (Mandell and Keast, 2007) (as cited at Kapucu, et al. 2010).

The effective coordination and collaboration is also critical in successfully managing disasters. There are five different levels of coordination and collaboration among key stakeholders, namely international, national, regional, organizational, and project level. Lack of coordination among different level of organizations, including governmental agencies, NGOs, International NGOs, donors was found as common problem. Project success is strongly linked to communication and co-operation between stakeholders (Moe and Pathranarakul, 2006).

Coordination is often a scarce resource in disasters, yet remains the key operational principle for effective response. It is important in order to avoid duplication of effort that resources are directed to those most severely affected by the disaster. Good coordination can also facilitate learning lessons (Miqdad, 2012). Coordination is an essential element of disaster prevention, mitigation, preparedness and response for the entire UN system, governments and non-governmental organizations. Efforts need to be made to promote complementary services and avoid duplication. Reducing risk depends on communication and information exchange between the scientific community and politicians (Pathirage et al., 2008).

Siriwardena, et al. (2010) clarified that the communication among stakeholders make possible is a collaborative planning process of developing high quality, systematic data collection methods, information management systems, and communication and coordination mechanisms. Regular communication between these stakeholders, meetings, workshops, and seminars organized by the government can provide a platform. In this regard, government needs to take a lead role of coordination and facilitation to support fully inclusive planning processes both before and after the event to ensure resource availability for post-disaster (Chatat, 2012).

Perception of cooperation in disasters may vary significantly due to differences in organizational goals, objectives, and cultures. Some organizations may perceive it just as informing others about their own operations while the correct perception is to see it as a mutual agreement on who is going to perform effectively (Kapucu, et al., 2010). In designing emergency response system, the issues that policy makers have to pay attention are: creating and disseminating incident situation reports, strategic planning, performance monitoring, prioritizing response efforts, building group consensus and cooperative behavior, information and intelligence analysis, control, sharing and dissemination (Chen et al., 2007).

2.3 Section III :

Gaza Strip & INGOs

2.3.1 General Information about Gaza Strip

The Gaza Strip is a region of Palestine, lies on the eastern coast of the Mediterranean Sea. It is the narrowest figure land which is about 41 kilometers long (25 miles), and 6 to 12 kilometers wide (3.7 to 7.5 miles), with a total area of 365 square kilometers (141 sq. miles). The west of Gaza Strip is the Mediterranean Sea with 40 km coastline; to the southwest is Egypt with 11 Km (8.6 mi) and to the east and north is the Occupied Palestinian Land -which is under Israel control- with the along of 51 km (32mi). (See figure 2.2). (UNDP fact sheet, 2012) and (UN-OCHA, 2015).

The Gaza Strip is one of the most densely populated places on Earth. Its estimated population at mid-2015 was about 1.82 million of which 925 thousand males and 895 thousand females with a population density at 4,986 persons/km2. During 2014, approximately 66.8 percent of the residents of Gaza Strip are refugees and a lot of them live in the eight camps created by UN since 1948 (Annual Book for Palestinian Statistics, 2015).

2.3.1.1 The History of Conflict of Gaza Strip:

Gaza is not a state but one of the two regions that make up the Palestinian Territories with the West Bank. After being occupied by Israeli army following the six days war in 1967, these lands have been managed by Palestinian Authority since Oslo records. Three administrative divisions were then created; area (A), under the Palestinian control; area (B) under civilian Palestinian control, but for the security, it's jointly enforced with Israel; and area (C) under Israeli control which includes the Jewish settlements. At the time, the Palestinian Authority (PA) was on control over 2/3 (two-thirds) of the Gaza Strip. Then in 2005 with the dismantling of the 21 Jewish settlements in Gaza Strip and the Israeli military disengagements, the whole of Gaza Strip went under the PA, except for its air and coastline space (UNRWA, 2014) and (Holzinger, 2014).
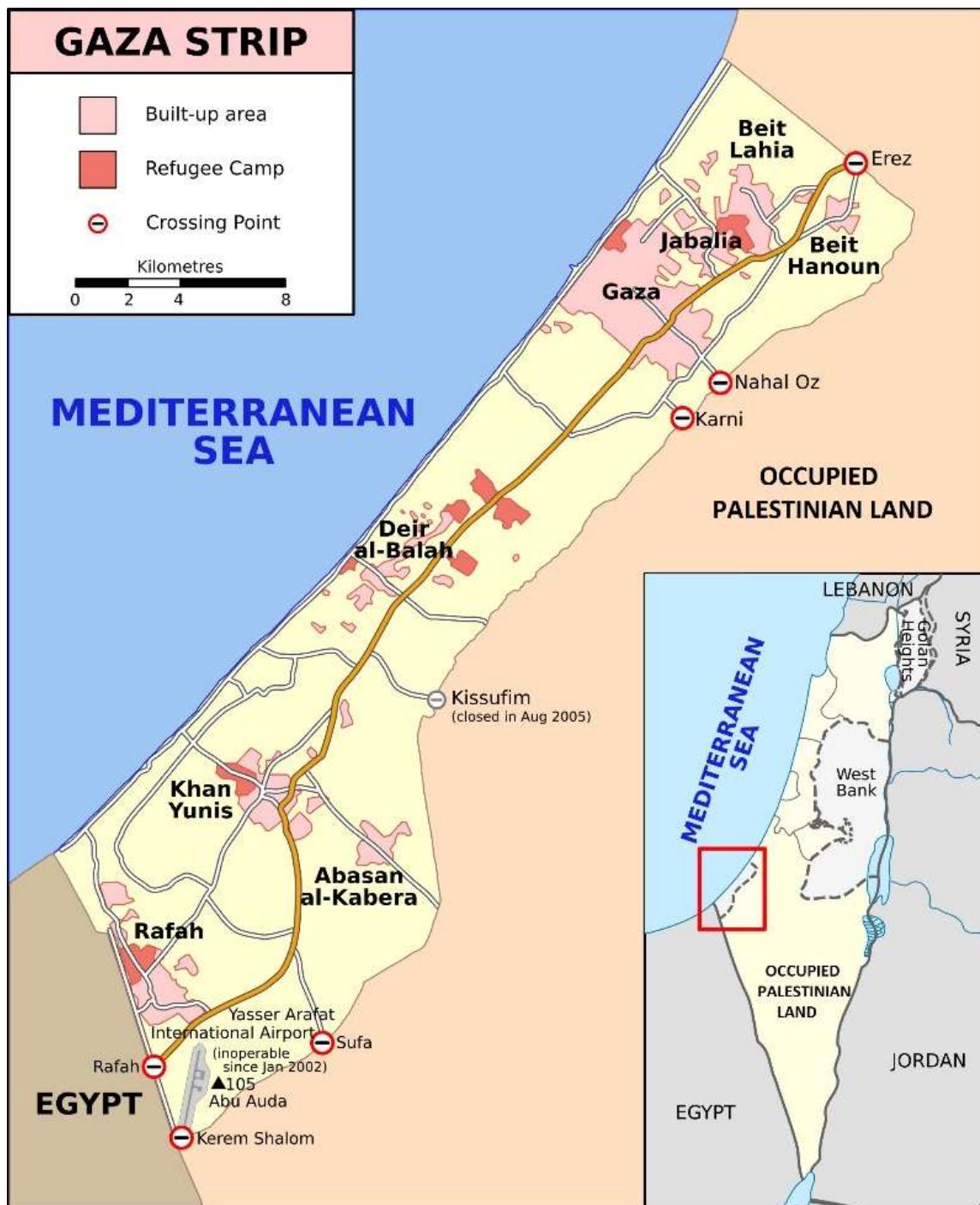
Figure (2.2): Geographic Location of Gaza Strip (Palestinian National Authority)

In 2006, when Hamas won the legislative elections and prevailed over Fatah, the results were not recognized by the port of the national community because Hamas advocates to complete destruction of Israel, rejects the Oslo records and wants to create a Palestinian Islamic statement. Over since their victory, the Gaza Strip has grown more and more isolated. Isolated diplomatically as Israel stopped paying customs' duties

while the US and EU stopped their financial aids. Isolated politically after the violent clashes between Hamas and Fatah and Hamas took over total control of the Gaza strip in 2007. The geographical division of the OPT become a political and Ideological one. On one side, the West Bank is controlled by Fatah and, on the other side, the Gaza Strip controlled by Hamas (Palestinian Center for Human Rights, 2011) and (Holzinger, 2014).

As a consequence of the continued conflict between Hamas and Israel, all boarders with Gaza Strip have been closed. On the Egyptian side, the Rafah border crossing closed under Mubarak's presidency and re-opened in 2011. Again, it has been closed after the Egyptian military coup in 2013. The Egyptian army has destroyed the tunnels through which food, building materials and weapons were smuggled. On the Israeli side, the situation is even more severe (Holzinger, 2014).

According OCHA (2014), there is a security barrier along with buffer zones that Gazans cannot access even though there were a lot of fertile agricultural lands are located. Every other border crossing has been closed (Nahal Oz, Karni & Sufa) with the exception of Kerem Shalom for goods and Erez for people, only international and medical emergency can go through them.

Access to borders by boat is also forbidden to Gazans. The fishing area of 20 miles, stated by Oslo records, has been repeatedly reduced by Israel to 6 or even to 3 miles when tension were the highest. Even though, the fishes can mostly be found beyond 8 miles according to the UN. The end of this limit has been the major demands of Hamas in the 2014 conflict, as fishing is one of the main source of income (Holzinger, 2014).

The isolation of Gaza Strip has made social and economic inequalities grown even higher and increased the rate of unemployment. The Gazans are in a prison in the narrow strip (Holzinger, 2014). These facts show that the Gaza Strip is living in a real crisis and disaster that needs a quick intervention

2.3.1.2 Gaza Strip Crisis

Gaza Strip is one of the areas of Palestine that prone to crisis and disasters either natural or man-made. Regarding to the natural ones, for example;

In 2007, Um AL Nasser village in north Gaza Strip was flooded by collapse of the nearby sewage pool. In this event, 5 people were killed, 64 were injured (Palestinian Center for Human Rights culture, 2007). According to UN-OCHA, (2009) more than 90 houses sustained damages and about 1500 people were displaced.

In 2010, the Gaza Valley was flooded, as a result of opening a number of dams by the Israeli authorities near the border, causing an evacuation for more than 80 families from both sides of the Gaza Valley (Wadi Gaza) (Global Research, 2015), 25 houses had been damaged and more than 420 people were displaced (UNRWA and MOPWH Database, 2012).

In 2013, A winter storm, characterized by strong winds, heavy rains, low temperatures and, in some areas, heavy snowfall, hit the occupied Palestinian territory (oPt), and has generated humanitarian needs in multiple locations. As a result, several water storm lagoons and pumping stations across Gaza city have overflowed, flooding extensive residential areas. This resulting in the displacement of approximately 10,000 people to temporary shelters and relatives' homes, one infant died and nearly 100 were injured. Over 20 per cent of greenhouses and 10 per cent of open fields crops in Gaza have been flooded or damaged (OCHA, 2013).

Most of these disasters are not purely natural. OCHA (2013) declared that the reasons of these floods was due to an acute fuel and energy crisis, and the long standing restrictions on the movement of people and goods into and out of the Gaza Strip. The fuel and energy crisis has included the shutdown of the Gaza Power Plant (GPP), which leads to the difficulty in pumping water or in operating generators.

On the other hand, several man-made crisis were happened to Gaza Strip, for example;

From Sept, 2000 until Feb, 2005, "the Second Intifada", commonly referred to as the Al-Aqsa Intifada or the second uprising, was triggered by a visit to Al Aqsa

mosque compound by former Prime Minister Ariel Sharon and about 1,000 Israeli police (AMP, 2012). According to the Palestinian Center for Human Rights retrieved on (2015), at least 4,973 Palestinian civilians were killed. Among them were 1,262 children, 274 women, and 32 medical personnel attempting to administer aid to injured civilians. Thousands were wounded; among them were more than 10,000 children. During this period, nearly 2,771 houses have been demolished or destroyed, while 3,431 houses have been partially damaged (Miqdad, 2012).

In 2006, the Israeli Army attacked the Gaza Strip with an operation called "Summer Rains". This operation refers to series of battles between Palestinian and Israeli army during summer 2006, launched in the wake of the abduction of the Israeli soldier Gilad Shalit. This was the first major ground operation in the Gaza Strip since Israel's disengagement plan was implemented in 2005. HAARETZ, (2006) claimed that the UN reported that 202 Palestinians have been killed, among them were 44 children. The operation also causes the destruction of 120 structures, including homes and shops, and 160 partially damaged. Moreover, the UN Development Program reported that the electricity grid and the bridges in Gaza Strip have suffered the most damage. Consequently, more than a million people have been left with no regular supply of water and electricity.

From 27 Dec, 2008 until 18 Jan, 2009, the operation "Cast lead", also known as "Gaza Massacre" and the "Battle of al-Furqan", was a three-week war against Gaza strip (Gaita, 2010). PCHR, (2009) declared that at least 1,417 Palestinians were killed, among them were 926 civilians, including 313 children and 116 women. 255 police officers were also killed; the majority (240) in air strikes carried out on the first day of the attacks. The Ministry of Health (2009) have also confirmed that 5,303 Palestinians were injured, including 1,606 children and 828 women. According to Al Mezan (2009), 2657 houses were destroyed and 3598 were partially damaged. Furthermore, hundreds of commercial, industrial, Islamic, political, medical and educational institutions have been destroyed, besides several water wells and thousands of agricultural lands. OCHA (2009) concluded that it is a humanitarian crisis and deterioration of infrastructure and basic services in Gaza Strip.

In 2012, the "Operation Pillar of Defense" or "Hijarat al Sijil" was an eight-day Israeli Army operation in the Gaza Strip. AL Mezan (2013) reported that 171 Palestinians were killed, among them were 130 civilians, 34 children and 13 women. During the course of the operation, 124 houses were destroyed and 2,050 were partially damaged. In just one week, the Israeli army destroyed 259 public and private premises; including worships, NGOs, schools, health institutions, journalist premises, police stations, government buildings and political sites. They also destroyed several water wells, factories, trade premises and razed agricultural lands.

In 2014, another military operation launched by Israel known as "Operation Protective Edge" or "Al Asf al Ma'kol". It had caused immense human suffering and devastation. This conflict led to the death of at least 2,219 Palestinians including at least 1,545 civilians, of whom 556 were children and 299 were women. Over 11,100 Palestinians were injured. More than 106,600 Palestinians were displaced at the height of the hostilities, with approximately 8,381 housing units were destroyed and 23,598 were partially damaged (Al Haq, Al Mezan, Al Dameer, PCHR, 2015).

The following table 2.1 summaries the number of deaths during the major Israeli military operation on Gaza Strip.

Table (2.1) : Number of deaths during the major Israeli military operations

Year	Total Death	Children	Women
2000-2005	4973	1262	274
2006	202	44	-
2008-2009	1417	313	116
2012	171	34	13
2014	2219	556	299
Total	8982	2209	702

Source: PCHR (2007 & 2009), Miqdad (2012), MOH (2015)

Also, The following table 2.2 summaries the number of demolished houses during the major Israeli military operation on Gaza Strip.

Table (2.2): Number of destroyed and damaged houses during the major Israeli military operations

Year	Type of Damage		Total
	Total	**Partial**	
2000-2005	2771	3431	6202
2006	120	160	280
2008-2009	2657	3598	6255
2012	124	2050	2174
2014	8381	23598	31979
Total	14053	32837	46890

Source: Al Haq (2015), Al Mezan (2015), Al Dameer (2015), PCHR (2015) and UNRWA (2015)

2.3.2 INGOs:

INGOs play a significant role in the social and economical development process in all regions of the World. Gaza Strip is a very critical area that needs lots of external and international help that may help people to cope and able to complete their life in a proper way. This section will give an overview about the INGOs and their role in the crisis alleviation.

2.3.2.1 History of INGOs:

The term non-governmental organization (NGO) is a post-World War II expression, which has initially coined by the United Nations (UN). When the UN charter was adopted in 1945, it was stipulated that NGOs could be accredited to the UN for consulting purposes. Thus, scholars first mainly applied the term international NGOs only when referring to those societal actors, which are (because of the UN criteria) international bodies and engage within the UN context. In recent decades, especially since the 1980, the term NGO has also become popular for societal actors of all sorts

engaged outside the UN framework, internationally and nationally and has indeed been increasingly adopted more broadly by academics as well as activities themselves (Martens, 2002).

The international organizations that support the development process in the third world view the international characteristics of the Non-Governmental Organizations, (creativity, flexibility, and work and cost efficiency), to be more capable to reach the marginalized groups and areas. These INGOs are more able to express the interests of these groups (Abu Nahla, 2008).

2.3.2.2 Definition of INGOs:

Defining INGOs turns out to be a key problem in determining what they are and what they do. Organizations are often called NGOs with little concern for clarity of meaning. Scholars tend to define them in ways that suit their particular research agendas. NGOs themselves sometimes use different definitions; for example, the International Committee of the Red Cross (ICRC) is defined as a nongovernmental humanitarian *agency*, the last word denoting an intermediate status between NGO and Intergovernmental Organization (IGO). PVO (Private Voluntary Organization) is sometimes used in the United States and is synonymous with NGO used in other countries. Today, NPO (Nonprofit Organization) and NGO are used nearly synonymously in the United States, although that is not always the case elsewhere in the world (Ahmed & Potter, 2006).

Based on the above, there are many definitions for the NGOs. The United Nations defined the NGOs as "Nonprofit entities, their members are citizens or groups of citizens who belong to one state or more, their activities are determined by the group willingness of entity" (UN, 2006).

Moreover, the World Bank defined the NGOs as "Private organizations that pursue activities to relieve suffering, promote the interests of the poor, provide basic social services or undertake community development" (World Bank & Bissan Centre, 2006).

Another definition for the NGOs is "Those organizations that are nongovernmental, have a main goal of the promotion of social and/or environmental purposes, are not aimed at making a profit and any profit made is applied towards the goal" (Monster, 2006) (as cited in Abu Nahla, 2008, p.35).

This research adopts the definition of INGOs as any international organization which is not established by inter-governmental agreement, working at the development sector in order to achieve socio-economic positive changes and are not aiming to gain personal profits or interests. The purpose of INGOs is to provide services that the state is unable or unwilling to provide for their people.

Chapter III
Previous Studies

Chapter III

Previous Studies

Introduction:

A number of studies and articles that discussed Crisis Management and its efficiency were reviewed and cited within this chapter. The following studies have direct relationship to this research, matching its purpose and objectives, and they helped in setting its dimensions taking into consideration its local application and cultural differences.

3.1 Local Studies:

1. **Moqat, Muin, 2013. "Shelter Damage Assessment Process and UNRWA's Preparedness for Response to Potential Disaster at Gaza Strip"**

The aim of this research was to evaluate the shelter damage assessment and UNRWA preparedness to respond to any potential disaster in Gaza strip. This study showed the relation between the damage assessment process and preparedness of UNRWA, in addition to the factors affecting this process such as monitoring, communication, incentive, training, forms and standards, transportation, and computerized information system.

The study follows the procedure of a descriptive study. The researcher adapted analytical approach using the questionnaire.

The recommendations of this research that UNRWA should increase the emergency stock of food and non-food aids in warehouses distributed all over Gaza strip. It should increase community awareness about its emergency plans and shelter locations and think in using modern methods for the damage assessment such as Geographical information system (GIS) and satellites. UNRWA should use modern method for training such as simulation; establish an online-computerized information system accessible anytime and anywhere. Finally, it should provide the damage assessment teams with the proper transportation vehicles suitable for the work in difficult areas to access the affected area quickly and safely.

2. **Chatat, 2012. "Investigate the Disaster Management Process In the Gaza Strip"**

The main purpose of this study was to improve the disaster management by investigate the current practices of disaster management after (2008-2009) Gaza war and to identify the factors influencing the disaster management process and reconstruction in the Gaza Strip.

The methodology adopted by the researcher is the review of literature related to disaster management, questionnaire for gathering data, and interview with representatives of relevant governmental, non-governmental, local and international institutions and data analysis.

The researcher recommended establishing a center to be an effective national body for the disaster management and coordination to prepare legislation necessary, policies, and fundraising, creating awareness to improve preparedness amongst the communities, using media and school education and developing the staff efficiency, institutional capacities and management skills for managing disasters and dealing with pre, during, and post disaster stages.

3. **Miqdad, Mohammad, 2012. "Evaluation of Actual Performance of the Key Players in Disasters Management Phases in Gaza Strip"**

The purpose of this study was to enhance the disaster management process, by identifying the deficiencies in key player's performance who are working in disaster management phases in Gaza strip. The targeted groups of research are the governmental organizations, international agencies and semi-governmental organizations.

The researcher used a semi-structure interviews and questionnaire survey for collecting data, and use a descriptive- comparative study to show the deficit in the key player's performance. It is found that the decision makers experience and scientific knowledge in disaster management were low. The decisions are based on practical experience only, also more than 65% of decision makers emphasize that there is now specialized unit in their organizations for managing disasters.

The study recommended that all organization should assign an adequate budget for the purpose of disasters mitigation activities, develop projects for educating public

for the simple measures for reducing losses and injuries, plan for land-use, to relocate the affected families and finally measure the effects of the non-governmental organizations actions in disasters management process in Gaza Strip.

4. **Ziyada, 2012. "The Impact of Training on the Ability of International Institutions Operating in the Gaza Strip on Crisis Management"**

This study aimed to identify the importance of developing skills such as; crisis planning, designing and using effective communication systems, and ability to design effective team, and their impact on improving the ability of international organizations to address crisis.

The researcher used the descriptive approach. He concluded that developing communication, planning, leadership, and teamwork skills have direct impact on the capacity of international organizations to address and manage crisis. Furthermore, international organizations are keen to train their staff and build their capacity to be able to address crisis.

This study recommended giving more focus on designing special units within the international organizations to address crisis and availing training programs on brainstorming, negotiation skills, creative thinking and providing solutions for better management of crisis. It recommended also rebuilding the organizational structures to enjoy higher flexibility to address crisis as soon as they occur. Finally, organization's management should establish equipped operations room to contain the crisis and limit its impact.

5. **Abu Warda, 2010. "Communication and its Impact on Work Performance at UNRWA – Gaza Field Office: Case Study"**

The main purpose of this research was to identify the impact of organizational communication on the work performance at UNRWA - Gaza. This is attained through showing the effect of the media of organizational communication, organizational communication climate and the personal communication skills on the work performance in UNRWA - Gaza.

The study followed the analytical descriptive approach. The researcher concluded that there is a significant statistical correlation between the media of communication and the work performance. The study found that UNRWA employees think that the size limit for e-mail messages is not adequate for fulfilling their work duties besides there is a common feeling between them that the board meetings inside UNRWA is not well organized. In addition, there is an important statistical correlation between the organizational communication climate and the Work Performance, where the study found that UNRWA managers do not have sufficient knowledge of the problems that face UNRWA employees and it found that the employees could not communicate freely with their managers.

The researcher recommended that there is an urgent need for working on improving the media of communication in the organization. UNRWA - Gaza managers should improve communication skills with the employees and intensify the English language courses.

6. **Sharekh, 2010. "Assessment of the Impact of Incentives on the Work Performance Level in the Palestinian Telecommunications Company: Employee Perspective"**

The research aimed to evaluate the impact of incentives on the work performance level at the Palestinian Telecommunication Company from the employees' perspective.

This study used the analytical descriptive approach where (220) questionnaires were distributed to the employees at the Palestinian Telecommunication company and (210) questionnaires were returned by 95.5%.

The researcher recommended that justice should be available particularly in granting incentives to get rid of favoritism, which will ensure fairness in the work environment in order to raise the level of performance. He also recommended connecting between the results of the annual performance and offering the incentives according to the results. Finally, he suggested renewing the standards and system of promotion, which should be according to the abilities of the employee for the new job.

7. **Tayeh, 2008. "Effectiveness of Information "Security Management at the Palestinian Information Technology Companies"**

This study aimed to identify the extent of the effectiveness of information security management in Palestinian Information Technology Companies (Jerusalem, West bank, and Gaza).

The researcher investigated ten domains of information security management in forty-one companies. The ten domains included the information security policy, organizational security, asset classification and control, personnel security, physical and environmental security, computer and network management, system access control, systems development and maintenance, business continuity planning, and compliance.

The findings of the research showed that all domains except the organizational security were affecting the effectiveness of information security management in Palestinian Information Technology Companies. This confirmed that the business continuity planning in the Palestinian Information Technology Companies affecting the effectiveness of information security management in these companies to some extent.

8. **MAS, 2005. "Towards a More Effective Use of International Aid to the Palestinian People"**

This study focused on the international aid provided to the Palestinians. It was divided into four main sections:

- A comprehensive profile of the international aid directed to the Palestinians since signing Oslo Accords.
- Assessment of the extent to which the Palestinian (government agencies, private sector and NGOs) have managed to utilize this assistance to serve national interests successfully.
- Putting forward some concrete recommendations to enhance the efficiency and effectiveness of the use of international aid.
- Finding strategies to tackle current and future term sustainable development.

The study drew some recommendations as summarized below:

Palestinian recipient institutions should have better coordination with donor agencies. The Palestinian National Authority (PNA) should plan and design projects balancing between short-term emergency and long-term development needs. The direction of funds should be based on a detailed vision and identification of needs and priorities, in order to avoid supply-driven, uncoordinated aid strategies and channeling of funds. It should involve local governments much more closely in deciding on national spending priorities and the use of international aid. The PNA should pay more attention to the Palestinian informal sector and its needs and should devise lending strategies for small-scale projects in general and finalize and implement its national reform plan, in order to coordinate reform efforts instead of sporadically implementing individual measures.

3.2 Arabic Studies:

9. **Al Dulaimi, Hamed, 2008. "Crisis Management in the Environment of Globalization", case study "the Relief and Reconstruction of Fallujah City in the Republic of Iraq".**

The purpose of this study was to show the general framework of how to work with crisis resulted from conflicts and disaster. This research aimed at examining the condition which Fallujah city was subject to before, during and after the military operations of the coalition forces directed by the USA on 08/11/2004. The research also attempts to study the way used by the crisis management team to deal with the condition in which city inhabitants lived and the means to handle these results.

The researcher used the descriptive and analytical method. He used the questionnaires, interviews and observation as tools for his study.

The recommendation of this research that it is vital to clearly inform the inhabitants of the cities which would be under military operations about the urgency to evacuate the city, allowing them to have enough time to do this. Moreover, the study showed that it is important to let the crisis management team be formed of experts some of whom have formerly dealt with such crises. This study recommended putting international laws into effect on all fighting sides, and it showed that excluding any side

from legal questioning would result in increasing the number or victims and the range of distraction.

10. **Salem, 2008. "The readiness for crisis and disaster management", "a survey on the officers of the security services in Najran"**

The purpose of this study was to identify the extent of readiness for crisis and disaster management in the security services in Najran through what kind of crisis and potential disasters, the availability of necessary information, training programs, equipment and capabilities, appropriate contingency plans and constraints readiness and its impact on the readiness of crisis and disaster management.

The researcher used the descriptive analytical method by using a questionnaire survey tool to collect data sample of 406 officers has reached questionnaire retriever and good analysis of 368 questionnaire.

The study recommended that providing information are necessary for the readiness of crisis and disaster management, there is a need for training programs for crisis management and disaster management and appropriate contingency plans should be provided to deal with crisis and disasters and finally, increasing coordination between the actors involved in the management of crisis and disasters.

11. **Al Ameer, M. Ali, 2003. "Emergency Plans and Crisis Management in Petrol Sector: Empirical Study"**

This study aimed to recognize the reality of crisis management in public sectors working in petroleum and gas sector in Egypt. The research found that the emergency plans and procedures in this sector are not real kinds of crisis management; they are only procedures of safety, health and environmental protection.

The research recommended that it is necessary to tack into consideration all crisis management methods in order to prepare themselves to respond to different kinds of crisis, not only the operational and environmental services. Moreover, the research concentrated on the importance of high-level management awareness about crisis management. Finally, the study suggests having a special unit for disaster and crisis management in these organizations.

3.3 Foreign Studies:

12. **Pathirage, et al., 2014. "Knowledge Factors and Association Challenges for Successful Disaster Knowledge Sharing"**

The research project reported in this paper, the 'ISLAND-II' (Inspiring Sri-LankAn renewal and Development – Phase II), aimed at increasing the effectiveness of disaster management by facilitating the sharing of appropriate knowledge and good practices. Due to the broad scope of disaster-management related activities, the study focused on the post-tsunami response, with specific reference to situation in Sri Lanka. Specifically, it identified key disaster knowledge factors pertaining to disaster management cycle and examined associated key gaps and challenges. Further, the project focused on natural disasters, such as floods, tsunami, earthquakes, hurricanes etc.

A comprehensive literature survey and semi-structured interviews were used in this research to identify the disaster knowledge factors, which support successful disaster management and to explore the level and how these factors influence managing disasters successfully.

The research identified that certain overlaps among knowledge factors, e.g. political measures hamper the uptake of technology. Mitigation/preparedness phase seemed influenced by almost all the factors discussed. Among key challenges, the lack of detection and warning systems, the need for effective education, training and awareness raising programs, the need for regular updating of disaster related laws, lack of funds for economic planning measures, poor planning, poor communication, poor leadership, and poor institutional arrangement were highlighted by most of the respondents.

13. **Harwati, Lusia, 2013. "Crisis Management Determining Specific Strategies and Leadership Style for Effective Outcomes"**

The purpose of this study was to investigate and discuss current literature on crisis management within organizational settings, analyzing what the literature explains about the nature of crisis, having steps toward effective crisis management, and having

a general model of crisis management provides a theoretical framework to understand what organizations should undertake in order to manage a crisis.

From the discussion, it is found that a crisis, which is classified into two main types, namely natural and human-induced, can be viewed from two different perspectives.

In order to be able to manage a crisis effectively, an organization should be able to determine the role of the stakeholders and choose appropriate strategies and leadership style. More specifically, an organization needs to focus on the importance of a two-way style of communication, re-evaluate existing strategies before implementing new strategies as proposed in the study, and introduce a transformational visionary leadership style as essential steps to recover from the crisis situation.

14. **Hayward, 2011. "A Global Assessment of Large Scale Earthquakes: The Impact of Mitigation and Preparation Policies on the Loss of Human Life"**

The study purpose is to evaluate the weaknesses that are affecting areas where earthquakes remain a constant threat.

The researcher used the United States Geological Survey's earthquake database. This information includes the time, location, intensity, depth, number of lives lost, and number of injured people.

The researcher suggested that the governments need to ensure that areas are safe for construction, even if it is unpopular with their citizens. He also recommended that agencies need to educate people about both the dangers that certain areas of countries pose and the dangers that homes may pose during an earthquake. Moreover, emergency services should not be earthquake specific, they should be all hazard encompassing with earthquake specific training and equipment.

15. **Magnaye, Lindsay, Muñoz and Muro, 2011. "The Role, Preparedness and Management of Nurses During Disasters"**

The study aimed to determine current trends, status and practices of nurses during disaster situations, specifically in their application of roles, preparedness and

management competencies. It also correlated the assessment of the nurse's roles, preparedness and management with their demographic data.

The researcher used the analytical method and concluded that the variations in the demographic profile of the respondents have an impact on their assessment of their roles, preparedness and management during disaster situations. In addition, regardless of the variations in their demographic profile variables, the nurses manifest significant awareness of their professional nursing roles during disaster.

The study recommended the department of Health to take this study seriously since emergency preparedness is a program of long-term development activities, which goals are to strengthen the overall capacity and capability of a country to manage efficiently all types of emergency. Moreover, Future researchers may conduct a study similar or related to this present study to determine whether similar or related trends or situations about nurses occur in other localities.

16. **Unlu, et al., 2010. "Disaster and Crisis Management in Turkey: a need for a unified crisis management system".**

This paper has two purposes. The first is to illustrate how the Turkish government's disaster and crisis management system has been developed. The second purpose is to make a qualitative evaluation of the current disaster and crisis management systems. Literature review shows that the disaster and crisis management system in Turkey has been developed after tragic events.

This study used literature review and found that the disaster and crisis management system in Turkey has been developed after tragic events. The paper examined what kinds of initiatives were introduced and what is the trend in shift. After analyzing recent cases and exploring some government initiatives, alternative approaches and suggestions were included. The paper examines what kinds of initiatives were introduced and what is the trend in shift. After analyzing recent cases and exploring some government initiatives, alternative approaches and suggestions were included.

This paper concluded that the higher authority is essential for coordinating government agencies and other organizations. The researcher suggested that the more control local governments have over crisis management, the more effective plans will be. Particularly, local volunteers are important for disasters and they need frequent contact with government representatives for training and planning purposes.

17. **Sahin, Bahadir, 2009. "Factors Influencing Effectiveness of Interorganizational Networks among Crisis Management Organizations": A Comparative Perspective.**

This study considered crisis management effort as a network effort and employs complex adaptive systems theory in order to understand factors influencing effectiveness of crisis management networks. Complex adaptive systems theory presents that more open communication lines in a given network or an organization would increase effectiveness of it since inner processes of the network or organization would obtain more information from the chaotic environment.

The methodology used a three-fold path. The multiple-case study method was used to find CM cases from the world. By using those cases, informal relationships were tested to see whether they had an impact on perceived CM effectiveness. Four terrorist bombing cases were conducted by the same terrorist network with different methods. It can be argued that terrorist bombing cases do not represent all CM efforts. In addition, only the response and recovery phases were utilized, which left the mitigation and preparedness phases out of the study.

Discussions suggested improving informal relationships among crisis management employees to provide a better crisis management during an extreme event. Collaborative social events were offered to improve crisis management effectiveness. An agency's openness to change proposed that a crisis management organization should be flexible in rules and structure to gain more efficacy. The other adaptive variable, intra-organizational training efforts were proposed to have certain influence on effectiveness of crisis management network.

18. **Patterson, Weil, Patel, 2009. "The Role of Community in Disaster Response":**
    Conceptual Models

The book focused on the role that community plays in the continuum of disaster preparedness, response and recovery, and explore where community fits in conceptual frameworks concerning disaster decision-making. It offered an overview of models developed in the literature as well as insights drawn from research related to Hurricane Katrina. Each model illustrates some aspect of the spectrum of disaster preparedness and recovery, beginning with risk perception and vulnerability assessments, and proceeding to notions of resiliency and capacity building.

The book traced two contrasting notions of community to Tocqueville. On the one hand, community is simply an aggregation of individual persons, that is, a population. As individuals, they have only limited capacity to act effectively or make decisions for themselves, and they are strongly subject to administrative decisions that authorities impose on them. On the other hand, community is an autonomous actor, with its own interests, preferences, resources, and capabilities. This definition of community has also been embraced by community-based participatory researchers and has been thought to offer an approach that is more active and advocacy oriented. In the conclusion, there is a discussion of the strengths and weaknesses of community in disaster response and in disaster research.

19. **Shaluf, Ibrahim, 2008. "Technological Disaster Stages and Management"**

This paper aimed to provide graduate students, researchers, governmental and independent agencies with an overview on the stages and management of technological disasters.

The researcher used the descriptive method. The information of this paper has been collected from several sources such as the technical and general articles, internet web sites, and internal reports. The technological disaster definition and stages have been reviewed.

This paper presents an overview on the technological disaster management cycle. Technological disasters consist of three stages. The stages are classified into pre-,

during and post-disaster stages. It presents an overview on the technological disaster definition and stages. It provides the major hazard installations (MHIs) management and the related authority with a background on the technological disaster management cycle. It motivates the members of the MHIs, particularly managerial staff, and the emergency planners to continually improve the control of MHIs. It provides the background and basis for further research in disaster and disaster management.

20. **Murad, Nora, 2007. "Association Aid to Palestinians That Would Really Help: An Indigenous Call to Implement International Rhetoric for the Sake of Peace with Justice and Sustainable Development"**

The paper argued that the international community should implement aid policies that respect indigenous priorities and abilities. The paper described the Palestinian community and focused on Palestinian civil society, a sector critical to Palestinian democracy, stability and development regardless of the status of the government. It also examined the distorted development of civil society in oPt and Israel, where physical steadfastness of the Palestinian community is essential to an ultimate just resolution of the political conflict.

The Data of this paper was gained from hundreds of interviews with members of Palestinian civil society, activists and professionals to explore how dependence on international aid has had unintended negative consequences on Palestinian civil society and on its ability to advance social change and sustainable development.

The study concluded that Palestinians in the occupied territories are the largest per capita recipients of international aid, but despite the hundreds of millions of dollars spent, "development" did not result. Many Palestinian NGOs became accountable to donors and alienated from the grassroots. Then, after the Hamas victory in the January 2006 elections, nearly all international development aid was cut and only partially redirected to emergency relief. Palestinians' lack of control over nearly all aspects of their lives contradicts all enabling factors for health, democracy, sustainable development and nonviolent social change.

21. **Shaluf, Ibrahim, 2007. "Disaster Types"**

This paper aimed to provide graduate students, researchers, and government and independent agencies with an overview of disaster types.

The paper summarized the views of researchers and agencies. Disaster types are collected from several sources such as technical, general articles, internet web sites, and internal reports. Disaster definitions, criteria and types are reviewed. Disasters are classified into natural disasters, man-made disasters, and hybrid disasters. Man-made disasters are classified into technological disasters, transportation accidents, public places failure, and production failure. The paper presented a comparison between the main types of disasters.

This paper found out that disasters are classified into three types: naturals, man-made, and hybrid disasters. It is believed that the three disaster types cover all disastrous events. No definition of disaster is universally accepted. Several criteria are proposed to define disasters. Understanding of disaster definitions, criteria, and types aids researchers and agencies in the proper classification, good recording, and better analysis of disasters. Disasters have different characteristics and impact; however, disasters have a common element, which is their severity.

22. **Barbara, 2006. "Determining the Critical Success Factors of an Effective Business Continuity/ Disaster Recovery Program in a Post 9/11 World".**

This research project aimed to fulfill two key objectives. First, this project examined whether the ranking of critical success factors for implementing a business continuity and disaster recovery program have changed from previous research, specifically subsequent to the events of September 11th , 2001 (9/11). Second, this study attempted to further increase contribution to the academic and practitioner communities by outlining several critical success factors not referenced within previous research.

A multi-method approach was used in this research, a qualitative and quantitative analysis. The researcher concentrated on the three factors were Effective communication, service level agreement, and business continuity and disaster recovery implantation plan.

Consequently, the researcher concluded that there were some critical success factors are; top management commitment, adequate financial support, alignment of disaster recovery planning objectives with company goals, adoption of project management techniques, presence of formal recovery planning committee, participation of representatives from each department, engagement of external consultant, etc.

23. **Bandyopadhya, 2002. "Disaster-Preparedness of Health Maintenance Organizations".**

This paper discussed disaster recovery in Health maintenance organizations; Health maintenance organizations are becoming increasingly dependent on health management information systems for their effective functioning. Because of this reliance, Health maintenance organizations must use disaster recovery planning to safeguard their health management information system assets from natural as well as man-made disasters.

This article assessed the health management information system environment, and identifies the state of practice by Health maintenance organizations as it pertains to health management information system disaster preparedness.

The results indicated that most of Health maintenance organizations were either heavily or totally dependent on health management information system.

The study suggested that Health maintenance organizations should complete business impact analysis. A major component of the business impact analysis is the gathering of data and documentation germane to the various functional areas of a health maintenance organization, and their needs with respect to health management information system. Moreover, Health maintenance organizations should activate and implement disaster recovery planning.

24. **Gupta, 2002. "Communication Based Disaster: Perspective Bangladesh", Hospitals Preparedness for Disaster: A Case Study:"**

The aim of this research was to study the level of preparedness for disaster in hospitals in Indore, and to suggest for bridging out various gaps found while conducting this study.

The researcher used the questionnaire named as Hospitals Preparedness for Disaster Management, developed on the basis of various resources including JCAHO (joint commission for accreditation of health care organization) and the personal discussions with the various experts in disaster management. There were few open-ended questions also to help respondents give their preparedness in terms of the information, which could not be elicited through dichotomous questions.

The researcher suggested having possible emergencies to be classified in accordance with the committee on trauma of the American college of Surgeons in selection of facilities required for different categories of casualties and their awareness among staff as well as other hospital staff. Moreover, he suggested routing exercise of patients in a previously decided number according to the nature of injury, facilities available in hospitals and the availability of attending staff needs to be carried out and a proper information should be made available to emergency responders.

3.4 Comments on the Previous Studies:

The research on crisis management and the factors which are playing an important role in managing them sufficiently, is the new orientation for the researchers. They try to discuss most of the crisis happened among the world, by searching on different kinds of disasters from natural ones and manmade. They all concluded that there is a need to have more studies and researchers to achieve the best way for facing disasters.

After exploring the previous studies, the researcher found that there are some similarities with this research. Most of the researchers are aiming to discuss disasters and crisis all over the world. Some of them discuss the best practices to deal with the disasters aiming to increase the effectiveness of crisis management, enhance the crisis management process and discuss the disaster and crisis management cycle. Some studies discussed similar variables and talk about similar organizations that are working in managing the crisis.

Most of the researchers concluded that information technology, good training practices, effective education, awareness raising programs, the need of regular updating of disaster related laws , lack of funds, good planning, good communication, good

leadership, using modern technology methods such as GIS, using suitable vehicles are all important factors in the crisis management.

Some studies used the descriptive analytical method which is the same method that is used by the researcher for this study.

On the other hand, the researcher found some differences in the scope of the research. For example, some researches concentrated on one type of the crisis and disasters; natural one or man made only. Moreover, some researches discuss the effects of the disasters on one area, such as health, politics, education or finance, etc. other difference is that some researches discussed one or two stages of the crisis management cycle, such as discussing only preparedness or preparedness and mitigation or discussing recovery stage only or recovery and response together.

Some researchers discussed some critical factors for better crisis management such as; top management commitment, adequate financial support, engagement of external consultants and others, which is not discussed in this study.

This research is distinguished by being comprehensive. It is discussing the two types of the disaster, natural or man-made. It is considered the first research to discuss these variables in the INGOs including UN agencies. It will contribute in giving all these NGOs with specific recommendations that may help in minimizing the risk of disasters.

Chapter IV
Methodology

Chapter IV

Methodology

Introduction

This chapter describes the methodology that was used in this research. The adopted methodology to accomplish this research uses the following techniques: the information about the research design, research population, questionnaire design, statistical data analysis, content validity and pilot study.

4.1 Research Design

The first phase of the research was the thesis proposal included identifying and defining the problems and establishment objective of the research and development research plan.

The second phase of this research included a summary of the comprehensive literature review. Literatures on crisis management were reviewed.

The third phase of the research included a field survey which was conducted with the employees, experts, and stakeholders. This face resulted in developing and then judging the questionnaire.

The fourth phase of the research focused on the modification of the questionnaire design, through distributing the questionnaire to pilot study, The purpose of the pilot study was to test and prove that the questionnaire questions are clear to be answered in a way that help to achieve the target of the research. The questionnaire was modified based on the results of the pilot study.

The fifth phase of the research focused on distributing a questionnaire. This questionnaire was used to collect the required data in order to achieve the research objective.

The sixth phase of the research was data analysis and discussion. Statistical Package for the Social Sciences, (SPSS) was used to perform the required analysis.

The final phase includes the conclusions and recommendations.

80 questionnaires were distributed to the research population and 68 questionnaires were received. Figure (4.1) shows the methodology flowchart, which leads to achieve the research objective.
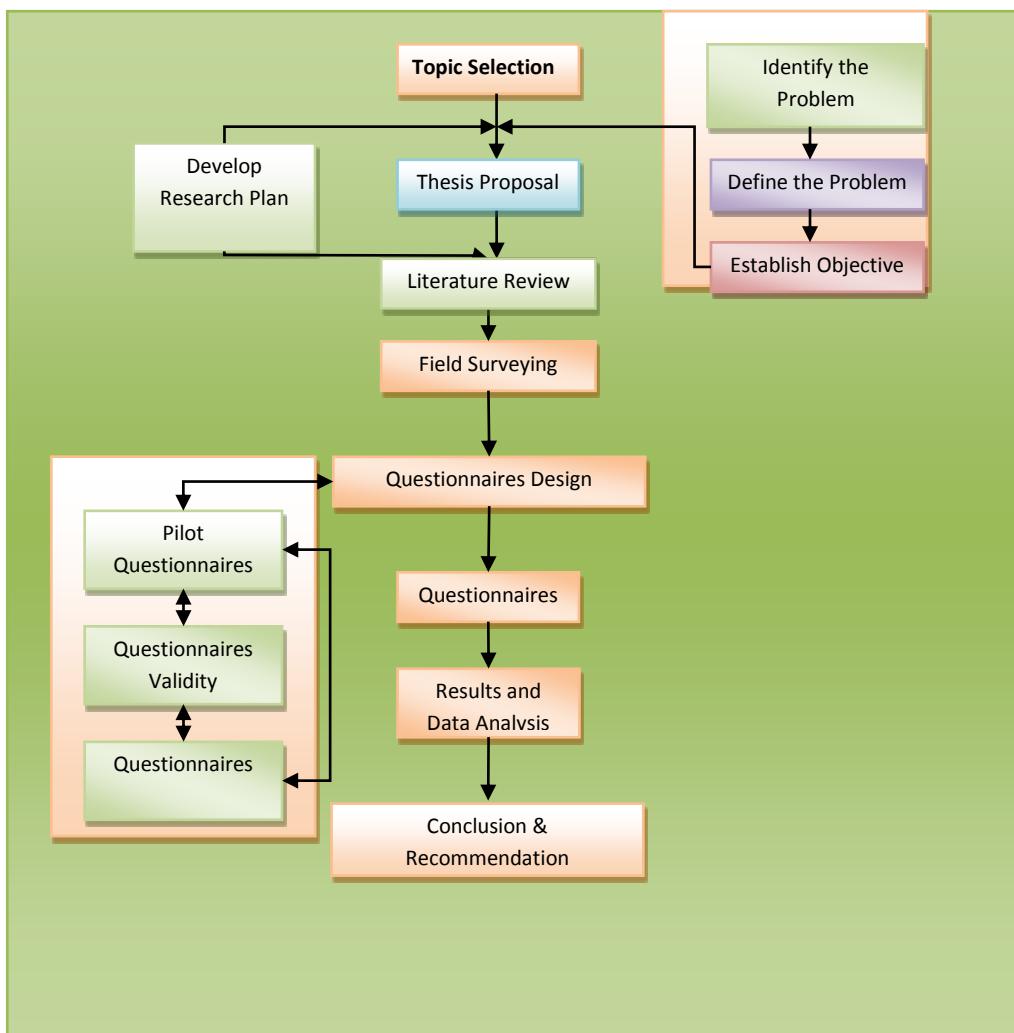
Figure (4.1): Illustrates the methodology flow chart (Skaik, 2013)

4.2 Data Collection Methodology

In order to collect the needed data for this research, the researcher used the secondary resources in collecting data such as books, journals, statistics and web pages, in addition to preliminary resources includes questionnaires reflecting sample's opinions about the Important Factors in Crisis Management for the INGOs in the Gaza Strip. Research methodology used the descriptive analysis of data using Statistical Package of Social Sciences program (SPSS).

4.3 Population and Sample Size:

The population includes the employees of the International Organizations which have interventions during any crisis that may happen in Gaza Strip. The research was implemented using a comprehensive survey with a total 68 participants from 24 INGOs that have intervention in crisis and disaster events.. Three or four employees from each organization had filled up the survey. This figure represents the research population up to December 2016.

4.4 Pilot Study

Thirty questionnaires are distributed and conducted before collecting the results of the sample. It provides a trial run for the questionnaire, which involves testing the wordings of question, identifying ambiguous questions, testing the techniques that used to collect data, and measuring the effectiveness of standard invitation to respondents. After analyzing the pilot study, the researcher continued distributing the rest of the questionnaires which formed the whole sample of this reaserach.

4.5 Data Measurement

In order to be able to select the appropriate method of analysis, the level of measurement must be understood. For each type of measurement, there is/are an appropriate method/s that can be applied and not others. In this research, ordinal scales were used. Ordinal scale is a ranking or a rating data that normally uses integers in ascending or descending order. The numbers assigned to the important (1,2,3,4,5) do not indicate that the interval between scales are equal, nor do they indicate absolute quantities. They are merely numerical labels. Based on Likert scale we have the following:

Item	Strongly agree	Agree	Do not Know	Disagree	Strongly Disagree
Scale	5	4	3	2	1

4.6 Test of Normality

The One-Sample Kolmogorov-Smirnov test procedure compares the observed cumulative distribution function for a variable with a specified theoretical distribution, which may be normal, uniform, Poisson, or exponential. The Kolmogorov-Smirnov Z is computed from the largest difference (in absolute value) between the observed and theoretical cumulative distribution functions. This goodness-of-fit test tests whether the observations could reasonably have come from the specified distribution. Many parametric tests require normally distributed variables. The one-sample Kolmogorov-Smirnov test can be used to test that a variable of interest is normally distributed (Henry, C. and Thode, Jr., 2002).

Table (4.1): Kolmogorov-Smirnov Test

Field	Kolmogorov-Smirnov	
	Statistic	**P-value**
The importance of Information Technology	0.611	0.850
The importance of Training	1.018	0.251
The importance of communication, coordination, among stakeholders	0.540	0.933
The importance of Transportation:	0.831	0.494
All items of the questionnaire	0.737	0.650

Table (4.1) shows the results for Kolmogorov-Smirnov test of normality. From Table (4.1), the p-value for each variable is greater than 0.05 level of significance, then the distributions for these variables are normally distributed. Consequently, parametric tests should be used to perform the statistical data analysis.

4.7 Statistical Analysis Tools

The researcher used data analysis both qualitative and quantitative data analysis methods. The Data analysis made utilizing (SPSS 24). The researcher utilizes the following statistical tools:

1) Kolmogorov-Smirnov test of normality.
2) Pearson correlation coefficient for Validity.
3) Cronbach's Alpha for Reliability Statistics.

4) Frequency and Descriptive analysis.

5) Parametric Tests (One-sample T test, Independent Samples T-test and Analysis of Variance (ANOVA)).

T-test is used to determine if the mean of the item is significantly different from a hypothesized value 3 (Middle value of Likert scale). If the P-value (Sig.) is smaller than or equal to the level of significance, $\alpha = 0.05$, then the mean of the item is significantly different from a hypothesized value 3. The sign of the Test value indicates whether the mean is significantly greater or smaller than hypothesized value 3. On the other hand, if the P-value (Sig.) is greater than the level of significance $\alpha = 0.05$, then the mean the item is insignificantly different from a hypothesized value 3.

The Independent Samples T-test is used to examine if there is a statistical significant difference between two means among the respondents toward the Important Factors in Crisis Management for INGOs in Gaza Strip due to (gender).

The One- Way Analysis of Variance (ANOVA) is used to examine if there is a statistical significant difference between several means among the respondents toward the Important Factors in Crisis Management for the INGOs in Gaza Strip due to (age, qualification, experience in the organization, experience in crisis/disaster management, Job title, Scientific knowledge in crisis/disaster management, Years of experience in working in crisis management and Number of employees).

4.8 Validity of Questionnaire:

Validity refers to the degree to which an instrument measures what it is supposed to be measuring. Validity has a number of different aspects and assessment approaches. Statistical validity is used to evaluate instrument validity, which include internal validity and structure validity.

4.9 Internal Validity:

Internal validity of the questionnaire is the first statistical test that used to test the validity of the questionnaire. It is measured by a scouting sample, which consisted of 34 questionnaires through measuring the correlation coefficients between each item in one field and the whole field.

Table (4.2): Correlation coefficient of each item of "The importance of Information Technology" and the total of this field

No.	Item	Pearson Correlation Coefficient	P-Value (Sig.)
1.	The organization has an effective IT system.	.441	0.005*
2.	The organization uses a modern ICT in collecting data for preparedness to the crisis.	.755	0.000*
3.	The organization uses a modern ICT for effective report system after the crisis.	.641	0.000*
4.	The organization has a unit for checking, following up the information.	.660	0.000*
5.	The organization has a database for entering the collected data of the affected beneficiaries.	.707	0.000*
6.	The organization has a database for all the damage after the crisis.	.569	0.001*
7.	The organization uses new technology such as geographical information system (GIS).	.461	0.003*
8.	The organization trained its staff for using the IT effectively.	.633	0.000*
9.	The organization updates its information and data periodically.	.496	0.001*
10.	All collected data are entered into a unified computerized system to ensure the accuracy.	.675	0.000*
11.	The existence of Information Technology System is very important for mitigation and preparedness for the crisis.	.707	0.000*
12.	The existence of Information Technology System is very important for an effective response in crises.	.658	0.000*
13.	The existence of Information Technology System is very important to support decision making after crisis.	.706	0.000*

* Correlation is significant at the 0.05 level

Table (4.2) clarifies the correlation coefficient for each item of the "The importance of Information Technology "and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at α = 0.05, so it can be said that the items of this field are consistent and valid to be measure what it was set for.

Table (4.3): Correlation coefficient of each item of "The importance of Training" and the total of this field

No.	Item	Pearson Correlation Coefficient	P-Value (Sig.)
1.	The organization has well-trained team for managing crisis.	.632	0.000*
2.	Every member of the team is trained on his roles and responsibilities regularly.	.809	0.000*
3.	The organization trains the staff working in crisis regularly on how deal and communicate with affected people in humanitarian way.	.866	0.000*
4.	The organization trains the staff working in crisis regularly on how to coordinate with others.	.726	0.000*
5.	The organization trains the staff working in crisis based on the predicted scenarios using simulation.	.650	0.000*
6.	The organization trains the staff working in crisis on how to prepare contingency planning	.767	0.000*
7.	The organization trained its managers to be able to make quick and effective decisions	.810	0.000*
8.	The managers are trained to prioritize the needs for effective intervention.	.709	0.000*
9.	The trainers are well qualified and experienced in emergency and crisis situations.	.763	0.000*
10.	The organization allocates a special budget for crisis management training.	.707	0.000*

* Correlation is significant at the 0.05 level

Table (4.3) clarifies the correlation coefficient for each item of the "The importance of Training" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at α = 0.05, so it can be said that the items of this field are consistent and valid to be measure what it was set for.

Table (4.4): Correlation coefficient of each item of "The importance of communication and coordination among stakeholders ″and the total of this field.

No.	Item	Pearson Correlation Coefficient	P-Value (Sig.)
1.	There are clear communication channels between the team working in crisis and their supervisors.	.701	0.000*
2.	The staff who are working in emergency have an effective communication tools to contact others.	.799	0.000*
3.	There is a high accuracy in exchanging information with relevant authorities.	.782	0.000*
4.	The organization has clear communication plans in case of the disasters.	.657	0.000*
5.	The organization coordinates with other INGOs working in emergency during disaster.	.612	0.000*
6.	The organization coordinates with other CBOs working in emergency during disaster.	.834	0.000*
7.	The organization coordinates with governmental authorities during disaster.	.811	0.000*
8.	The organization coordinates with the different parties of the conflict during crisis to facilitate its tasks.	.843	0.000*
9.	There is a positive relationship between the organization's efficiency in doing its job and the level of cooperation with other NGOs.	.675	0.000*
10.	There is a positive relationship between the organization's efficiency in doing its job and the level of cooperation with local authorities.	.714	0.000*
11.	The organization distributes brochures and guidelines on how to deal during disasters.	.639	0.000*
12.	The organization uses the new technology such as GIS for coordination among organizations.	.681	0.000*
13.	The organization shared learning lessons with other organizations.	.619	0.000*

* Correlation is significant at the 0.05 level

Table (4.4) clarifies the correlation coefficient for each item of the "The importance of communication and coordination among stakeholders" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the items of this field are consistent and valid to be measure what it was set for.

Table (4.5): Correlation coefficient of each item of "The importance of Transportation*"* and the total of this field

No.	Item	Pearson Correlation Coefficient	P-Value (Sig.)
1.	The organization gets permission for accessing the dangerous areas during crisis from relevant authorities.	.827	0.000*
2.	The organization provides the teams with effective transportation vehicles suitable for the work in the difficult areas.	.758	0.000*
3.	The vehicles are well prepared for any emergency response.	.874	0.000*
4.	The organization has a special stockpile for fuels or any other transportation logistics for the use during emergency.	.822	0.000*
5.	The organization has an effective preparedness plan for transportation.	.813	0.000*

* Correlation is significant at the 0.05 level

Table (4.5) clarifies the correlation coefficient for each item of the "The importance of Transportation *"and* the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at α = 0.05, so it can be said that the items of this field are consistent and valid to be measure what it was set for.

4.10   Structure Validity of the Questionnaire

Structure validity is the second statistical test that used to test the validity of the questionnaire structure by testing the validity of each field and the validity of the whole questionnaire. It measures the correlation coefficient between one field and all the fields of the questionnaire that have the same level of liker scale.

Table (4.6): Correlation coefficient of each field and the whole of questionnaire

No.	Field	Pearson Correlation Coefficient	P-Value (Sig.)
1.	The importance of Information Technology	.814	0.000*
2.	The importance of Training	.837	0.000*
3.	The importance of communication and coordination among stakeholders	.923	0.000*
4.	The importance of Transportation:	.809	0.000*

* Correlation is significant at the 0.05 level

Table (4.6) clarifies the correlation coefficient for each field and the whole questionnaire. The p-values (Sig.) are less than 0.05, so the correlation coefficients of all the fields are significant at $\alpha = 0.05$, so it can be said that the fields are valid to be measured what it was set for to achieve the main aim of the research.

4.11 Reliability of the Research

The reliability of an instrument is the degree of consistency which measures the attribute; it is supposed to be measuring (George and Mallery, 2006). The less variation an instrument produces in repeated measurements of an attribute, the higher its reliability. Reliability can be equated with the stability, consistency, or dependability of a measuring tool. The test is repeated to the same sample of people on two occasions and then compares the scores obtained by computing a reliability coefficient (George and Mallery, 2006). To insure the reliability of the questionnaire, Cronbach's Coefficient Alpha should be applied.

4.12 Cronbach's Coefficient Alpha

Cronbach's alpha (George D. & Mallery P, 2006) is designed as a measure of internal consistency, that is, do all items within the instrument measure the same thing? The normal range of Cronbach's coefficient alpha value between 0.0 and + 1.0, and the higher values reflects a higher degree of internal consistency. The Cronbach's coefficient alpha was calculated for each field of the questionnaire.

Table (4.7): Cronbach's Alpha for each field of the questionnaire

No.	Field	Cronbach's Alpha
1.	The importance of Information Technology	0.852
2.	The importance of Training	0.912
3.	The importance of communication and coordination among stakeholders	0.923
4.	The importance of Transportation:	0.870
	All items of the questionnaire	**0.958**

Table (4.7) shows the values of Cronbach's Alpha for each field of the questionnaire and the entire questionnaire. For the fields, values of Cronbach's Alpha were in the range from 0.852 and 0.923. This range is considered high; the result ensures the reliability of each field of the questionnaire. Cronbach's Alpha equals 0.958 for the entire questionnaire which indicates an excellent reliability of the entire questionnaire.

The thereby, it can be said that the researcher proved that the questionnaire was valid, reliable, and ready for distribution for the population sample.

Chapter V
Data Analysis and Discussion

Chapter V

Data Analysis and Discussion

Introduction:

In this chapter, researcher tests the thesis hypothesis. The findings of this chapter are responding to the objectives of the research. All of these findings were discusses in the context of the previous literature.

5.1 Personal Information:

5.1.1 Gender:

Table (5.1): Gender

Gender	Frequency	Percent
Male	42	61.8
Female	26	38.2

Table (5.1) shows that the two-third of the sample is males and one-third is females. The researcher unintentionally distributed the questionnaires that may refer that males tend to work with crisis in the INGOs more than females. This can be understood as the work during the disaster and crisis is under stressed situation where people have to work for long time and need high efforts that may not suitable for female nature.

5.1.2 Age

Table (5.2): Age

Age	Frequency	Percent
less than 25 Year	4	5.9
25 - less than 35 Year	31	45.6
35- less than 45 Year	23	33.8
45 Years and above	10	14.7

The table (5.2) also shows that 45.6% of the sample between" 25 and 35 years", 33.8% of the sample between" 35 and 45 years" and 14.7% of the sample are of "45 years and above". These percentages can be interpreted by the researcher that the staff working in the disaster management who responded to the questionnaire are of different

ages. The highest number are aged between 25 to 45 years old, which may refer that these two age groups are more experienced and more energetic that they can work in this important field.

5.1.3 Qualifications

Table (5.3): Qualifications

Qualifications	Frequency	Percent
Secondary school	-	-
Diploma	3	4.4
Bachelor	36	52.9
Master	26	38.2
PhD	3	4.4

According to the qualifications, the table (5.3) shows that 52.9% have "Bachelor degree", and most of the rest have advanced degrees. This indicates that most of the staff working in the disaster and crisis management are highly educated and hold bachelor degree and above, which means that this type of business needs high qualification.

5.1.4 Experience

Table (5.4): Experience

Experience		Frequency	Percent
Your experience with the organization	Less than 5 years	23	33.8
	From 5 to less than 10 years	28	41.2
	From 10 to less than 15 years	9	13.2
	15 years and above	8	11.8
Your experience in crisis/disaster management	Less than 5 years	32	47.1
	From 5 to less than 10 years	28	41.2
	From 10 to less than 15 years	5	7.4
	15 years and above	3	4.4

Table (5.4) shows that the participants of the questionnaire have different experiences even in working in the same organization or in the crisis intervention in general. As the table shows that 41.2% have "from 5 -10 years" of experience in the same organization and the same percentage have the same years of experience in

working in crisis generally. The table shows that 47.1% have less than 5 years of experience in the crisis intervention. From the researcher point of view, this result agrees with (Miqdad, 2012) when he showed that decision makers' experience in disaster management is low.

5.1.5 Job title

Table (5.5): Job title

Job title	Frequency	Percent
Head of the institution	1	1.5
Executive "crisis/ disasters management field"	3	4.4
Disasters committee member	10	14.7
Participator in crisis/ disaster management activities	50	73.5
Other	4	5.9

The researcher did not mention the exact job title name of the respondents as the organizations have different structures in their recruitment system. Therefore, the table (5.5) shows that 73.5% of the respondents are participating in the crisis or disaster management activities, and the others have high positions in the same field. When looking at those who choose other work, they mention that they are working as an "Operation Room Coordinator, Engineer and two Safety and Security Officers" which means that they are participating in the crisis management activities. This ensures the quality of information and data collection.

5.1.6 Scientific knowledge in crisis/disaster management

Table (5.6): Scientific knowledge in crisis/disaster management

Scientific knowledge in crisis/disaster management	Frequency	Percent
High studies in disasters management	3	4.4
Diploma in disasters management	1	1.5
Training course in disaster management	11	16.2
Practical experience	46	67.6
Other	7	10.3

The questionnaire also asked about their scientific knowledge in crisis and the analysis of data shows that 67.6% of the participants have just practical experience and 16.2% have training courses. While very few has special research in the field of crisis management. This agree with (Moqat, 2013) that most of the workers in the crisis management do not have a special research and not specialized in the crisis management.

The researcher is convinced that the practical experience is very important in the field of work but also, from his point of view, the organizations should concentrate more on the training courses or encouraging the employees to complete their studies in related field.

The result of the table (5.6) disagrees with (Magnaye et al., 2011) who found that the demographic profiles had an impact on crisis management. This result may be due to the type of intervention or the place where he applied his tools.

5.2 Organization Information
5.2.1 Years of experience in working in crisis management

Table (5.7): Years of experience in working in crisis management

Years of experience in working in crisis management	Frequency	Percent
Less than 5 years	21	30.9
From 5 to less than 10 years	13	19.1
From 10 to less than 15 years	6	8.8
15 years and above	28	41.2

The table (5.7) shows that most of the organizations that participated in the questionnaire have many years of experience and some of them have more than 15 years of experience. This indicated that INGOs with UN agencies have good experience in working in crisis. The researcher thinks that some organizations are established from the beginning of the Gaza Strip crisis and the others may have been established or started to work in crisis after wars.

5.2.2 Number of employees

Table (5.8): Number of employees

Number of employees	Frequency	Percent
less than 20	17	25
20 – 40	15	22.1
40- 60	9	13.2
60 – 80	11	16.2
80 – 100	9	13.2
More than 100	7	10.3

Table (5.8) shows that the organizations differs in the number of the employees which may refer to the nature of their service provided or the number of projects that they have.

5.2.3 The service provided by the organization

Table (5.9): The service provided by the organization

The service provided by the organization	Frequency	Percent
Education	54	79.4
Health	48	70.6
Protection	49	72.1
Shelter	49	72.1
Legal	28	41.2
Food security	39	57.4
WASH	43	63.2
Financial	24	35.3
Other	11	16.2

Regarding the service provided, the participants can choose more than one choice of the service provided by their organization. As the table (5.9) shows, the services are different and most of the organizations interfere in more than one area which enables them to cover most of the needs for Gaza people such as: "education, health, protection, shelter, legal, food security, water and sanitation, financial or others like emergency and gender based violence" which indicates that all of these areas are important in any crisis event.

5.3 Research Hypothesis

1. **Information technology system plays an important role in managing the crisis for INGOs at a significance level (α=0.05).**

Table (5.10): Means and Test values for "The importance of Information Technology"

	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	The organization has an effective IT system.	4.12	0.81	82.42	11.20	0.000*	2
2.	The organization uses a modern ICT in collecting data for preparedness to the crisis.	3.95	0.83	79.09	9.33	0.000*	7
3.	The organization uses a modern ICT for effective report system after the crisis.	4.06	0.89	81.21	9.66	0.000*	3
4.	The organization has a unit for checking, following up the information.	3.88	0.94	77.58	7.62	0.000*	9
5.	The organization has a database for entering the collected data of the affected beneficiaries.	3.90	0.97	77.91	7.55	0.000*	8
6.	The organization has a database for all the damage after the crisis.	3.64	1.01	72.84	5.20	0.000*	12
7.	The organization uses new technology such as geographical information system (GIS).	3.40	1.00	68.06	3.30	0.002*	13
8.	The organization trained its staff for using the IT effectively.	3.72	0.85	74.33	6.90	0.000*	11
9.	The organization updates its information and data periodically.	3.78	0.95	75.52	6.68	0.000*	10
10.	All collected data are entered into a unified computerized system to ensure the accuracy.	4.01	0.96	80.30	8.64	0.000*	5
11.	The existence of Information Technology System is very important for mitigation and preparedness for the crisis.	4.28	0.90	85.67	11.66	0.000*	1
12.	The existence of Information Technology System is very important for an effective response in crises.	4.03	0.92	80.60	9.16	0.000*	4
13.	The existence of Information Technology System is very important to support decision making after crisis.	4.01	0.88	80.30	9.45	0.000*	5
	All items of the field	3.91	0.65	78.12	11.44	0.000*	

* The mean is significantly different from 3

Table (5.10) shows the following results:

● The mean of item #11 "The existence of Information Technology System is very important for mitigation and preparedness for the crisis" equals 4.28 (85.67%), Test-value = 11.66, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 3. The researcher concludes that the respondents agreed to this item.

● The mean of item #7 "The organization uses new technology such as geographical information system (GIS)" equals 3.40 (68.06%), Test-value = 3.30, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 3. The researcher concludes that the respondents agreed to this item.

● The mean of the field "The importance of Information Technology" equals 3.91 (78.12%), Test-value = 11.44, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3. The researcher concludes that the respondents agreed to field of "The importance of Information Technology ".

The result shows that most the respondents agreed on the importance of having an effective Information Technology System in the whole process of the crisis management cycle to ensure the quality and accuracy. Most of INGOs are using IT system but they still needs an improvement in using modern methods such as GIS. This result can be understood, based on the researcher point of view, is due to the employees capacity and experiences, which also should be improved by concentrating more on training and capacity building as shown in the table. This result agrees with (Moqat, 2013) which proves that GIS needs an improvement in the crisis management cycle, and agrees with (Isleem, 2006), (Hawamdeh, 2003), which proves that the workers in such fields have big role in improving the effectiveness of the disaster management and its activities.

2. Training programs plays an important role in managing the crisis for INGOs at a significance level (α=0.05).

Table (5.11): Means and Test values for "The importance of Training"

	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	The organization has well-trained team for managing crisis.	3.76	0.78	75.22	7.99	0.000*	2
2.	Every member of the team is trained on his roles and responsibilities regularly.	3.72	0.77	74.33	7.57	0.000*	4
3.	The organization trains the staff working in crisis regularly on how deal and communicate with affected people in humanitarian way.	3.73	0.79	74.63	7.58	0.000*	3
4.	The organization trains the staff working in crisis regularly on how to coordinate with others.	3.54	0.89	70.75	4.92	0.000*	8
5.	The organization trains the staff working in crisis based on the predicted scenarios using simulation.	3.54	0.89	70.75	4.92	0.000*	8
6.	The organization trains the staff working in crisis on how to prepare contingency planning	3.72	0.77	74.33	7.57	0.000*	4
7.	The organization trained its managers to be able to make quick and effective decisions	3.68	0.81	73.64	6.86	0.000*	6
8.	The managers are trained to prioritize the needs for effective intervention.	3.60	0.78	71.94	6.27	0.000*	7
9.	The trainers are well qualified and experienced in emergency and crisis situations.	3.48	0.85	69.70	4.66	0.000*	10
10.	The organization allocates a special budget for crisis management training.	3.87	0.83	77.31	8.51	0.000*	1
	All items of the field	3.67	0.60	73.32	9.22	0.000*	

* The mean is significantly different from 3

Table (5.11) shows the following results:

- The mean of item #10 "The organization allocate a special budget for crisis management training" equals 3.87 (77.31%), Test-value = 8.51 and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 3. The researcher concludes that the respondents agreed to this item.

- The mean of item #9 "The trainers are well qualified and experienced in emergency and crisis situations" equals 3.48 (69.70%), Test-value = 4.66, and P-value = 0.019 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 3. The researcher concludes that the respondents agreed to this item.

- The mean of the field "The importance of Training" equals 3.67 (73.32%), Test-value = 9.22, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3. The researcher concludes that the respondents agreed to field of "The importance of Training ".

The result showed that the respondents agreed on the importance of training and capacity building and most of the organizations allocate special budget for that. This result disagree with (Miqdad, 2012) which showed that all organizations did not assign an adequate budget for the purpose of disaster activities, this may refer to the good improvement of the organizations. Even though, just 74.33% of the participants are trained. As shown in the table, the organizations also should improve the topics and methods of the training by choosing more qualified and experienced trainers in crisis and emergency situations. This result agrees with most studies such as (Moqat, 2013), (Chatat, 2012), (Migdad, 2012), (Ziyada, 2012), (Pathirage et al., 2014) which proves that training for crisis or emergency is very important and still needs some improvement.

3. Communication and coordination among stakeholders plays an important role in managing the crisis for INGOs at a significance level (α=0.05).

Table (5.12): Means and Test values for "The importance of communication and coordination among stakeholders"

	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	There are clear communication channels between the team working in crisis and their supervisors.	3.97	0.67	79.40	11.79	0.000*	4
2.	The staff who are working in emergency have an effective communication tools to contact others.	3.72	0.75	74.33	7.77	0.000*	10
3.	There is a high accuracy in exchanging information with relevant authorities.	3.73	0.75	74.63	7.98	0.000*	9
4.	The organization has clear communication plans in case of the disasters.	4.15	0.76	82.99	12.32	0.000*	1
5.	The organization coordinates with other INGOs working in emergency during disaster.	4.09	0.73	81.79	12.17	0.000*	2
6.	The organization coordinates with other CBOs working in emergency during disaster.	3.91	0.83	78.21	8.98	0.000*	5
7.	The organization coordinates with governmental authorities during disaster.	3.82	0.76	76.36	8.71	0.000*	6
8.	The organization coordinates with the different parties of the conflict during crisis to facilitate its tasks.	3.81	0.72	76.12	9.13	0.000*	7
9.	There is a positive relationship between the organization's efficiency in doing its job and the level of cooperation with other NGOs.	4.00	0.74	80.00	11.08	0.000*	3
10.	There is a positive relationship between the organization's efficiency in doing its job and the level of cooperation with local authorities.	3.75	0.91	74.93	6.71	0.000*	8
11.	The organization distributes brochures and guidelines on how to deal during disasters.	3.46	0.89	69.25	4.24	0.000*	13
12.	The organization uses the new technology such as GIS for coordination among organizations.	3.52	0.89	70.45	4.78	0.000*	12
13.	The organization shared learning lessons with other organizations.	3.54	0.96	70.75	4.59	0.000*	11
	All items of the field	3.80	0.48	76.08	13.77	0.000*	

Table (5.12) shows the following results:

● The mean of item #4 "The organization has clear connection networks in case of the disasters" equals 4.15 (82.99%), Test-value = 12.32, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 3. The researcher concludes that the respondents agreed to this item.

● The mean of item #11 "The organization distribute brochures and guidelines on how to deal during disasters" equals 3.46 (69.25%), Test-value = 4.24, and P-value = 0.006 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 3. The researcher concludes that the respondents agreed to this item.

● The mean of the field "The importance of communication and coordination among stakeholders" equals 3.80 (76.08%), Test-value = 13.77, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3. The researcher concludes that the respondents agreed to field of "The importance of communication and coordination among stakeholders ".

It is concluded that the effective communication and coordination among stakeholders is very important in managing the crisis. This result shows that this field is acceptable where most of the INGOs are using clear connection networks and they coordinate with others in case of the disaster. This result disagree with (MAS, 2005) that the coordination and communication with other stakeholders, especially with PNA was not good. This may reflect that the INGOs become aware of the importance of communication with others.

As mentioned before, the result shows again that these organizations need improvements for using modern technology methods such as GIS for communication and coordination. This result agrees with (Chatat, 2012) that the organizations did not use the GIS for communication and coordination, and this field has a significant effect on the disaster management process. Moreover, this result shows that INGOs can improve their work in mitigation and preparation phase by distributing brochures and guidelines on how to deal during disasters.

4. Effective transportation system plays an important role in managing the crisis for INGOs at a significance level (α=0.05).

Table (5.13): Means and Test values for "The Importance of Transportation"

	Item	Mean	S.D	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	The organization gets permission for accessing the dangerous areas during crisis from relevant authorities.	3.79	0.89	75.76	7.22	0.000*	3
2.	The organization provides the teams with effective transportation vehicles suitable for the work in the difficult areas.	3.73	0.97	74.55	6.09	0.000*	4
3.	The vehicles are well prepared for any emergency response.	3.88	0.90	77.58	7.90	0.000*	1
4.	The organization has a special stockpile for fuels or any other transportation logistics for the use during emergency.	3.71	0.96	74.24	6.05	0.000*	5
5.	The organization has an effective preparedness plan for transportation.	3.83	0.76	76.62	7.58	0.000*	2
	All items of the field	3.79	0.74	75.88	8.88	0.000*	

* The mean is significantly different from 3

Table (5.13) shows the following results:

● The mean of item #3 "The vehicles are well prepared for any emergency response" equals 3.88 (77.58%), Test-value = 7.90, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 3. The researcher concludes that the respondents agreed to this item.

● The mean of item #4 "The organization has a special stockpile for fuels or any other transportation logistics for the use during emergency" equals 3.71 (74.24%), Test-value = 6.05, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this item is significantly greater than the hypothesized value 3. The researcher concludes that the respondents agreed to this item.

● The mean of the field "The importance of Transportation" equals 3.79 (75.88%), Test-value = 8.88, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3. The researcher concludes that the respondents agreed to field of "The importance of Transportation".

It is concluded that INGOs transportation system is acceptable and most of the participants agreed on the importance of effective transportation system. As the table shows that, the less ranked item is that INGOs has a special stockpile for fuels or any other transportation logistics for the use during emergency, which means that INGOs should consider this activity as a mean for readiness and preparedness. This result agrees with (Moqat, 2013) which indicated that the effective transportation system is very important and the organizations need some improvement in using it effectively.

5. There is no significant differences among respondents at level α = 0.05 towards the Important Factors in Crisis Management for the INGOs in Gaza Strip, due to the following personal information (Gender, Age, Qualifications, Your experience with the organization, Your experience in crisis/ disaster management, Job title and Scientific knowledge in crisis/disaster management).

This hypothesis can be divided into the following sub-hypotheses:

- **There is no significant differences among respondents at level α = 0.05 towards the Important Factors in Crisis Management for the INGOs in Gaza Strip, due to Gender.**

Table (5.14): Independent Samples T-test of the fields and their p-values for gender

No.	Field	Means		Test Value	Sig.
		Male	**Female**		
1.	The importance of Information Technology	4.03	3.71	1.774	0.085
2.	The importance of Training	3.77	3.50	1.734	0.089
3.	The importance of communication and coordination among stakeholders	3.90	3.64	2.190	0.034*
4.	The importance of Transportation:	3.87	3.68	1.017	0.314
	All items of the questionnaire	3.90	3.63	2.110	0.041*

Table (5.14) shows that the p-value (Sig.) is smaller than the level of significance α = 0.05 for the field "The importance of communication and coordination among stakeholders", then there is significant difference among the respondents toward this field due to gender. The researcher concludes that the personal characteristics' gender is important for this field.

The result, from the researcher point of view, is due to the level of participation and awareness of females in this section or the females may not have the experience in working during crisis intervention, as males are more able to work during such situation.

For the other fields, the p-value (Sig.) is greater than the level of significance α = 0.05, then there is insignificant difference among the respondents toward these fields due to

gender. The researcher concludes that the personal characteristics' gender is not important for the other fields.

This result may show that males and females have access to the same information and experience in the fields of IT, training or Transportation. This result disagrees with (Moqat, 2013) that the gender has an effect on most of his variables when assessing the crisis management.

- **There is no significant differences among respondents at level α = 0.05 towards the Important Factors in Crisis Management for the INGOs in Gaza Strip, due to age.**

Table (5.15): ANOVA test of the fields and their p-values for age**.**

No.	Field	Means				Test Value	Sig.
		less than 25 Year	25-less than 35 Year	35-less than 45 Year	45 Years and over		
1.	The importance of Information Technology	3.69	3.86	3.94	4.05	0.365	0.779
2.	The importance of Training	3.48	3.61	3.73	3.78	0.416	0.742
3.	The importance of communication and coordination among stakeholders	3.44	3.82	3.79	3.88	0.703	0.554
4.	The importance of Transportation:	3.61	3.91	3.71	3.71	0.469	0.705
	All items of the questionnaire	3.56	3.79	3.81	3.89	0.429	0.733

Table (5.15) shows that the p-value (Sig.) is greater than the level of significance α = 0.05 for each field, then there is in significant difference among the respondents toward each field due to age. The researcher concludes that the personal characteristics' age is not important for all fields.

This result may clarify that the age of the employee is not a main criteria in the level of participation or employment in such organizations. This also ensures the importance of these fields by the agreement from all ages who are working in the organization.

- **There is no significant differences among respondents at level α = 0.05 towards the Important Factors in Crisis Management for the INGOs in Gaza Strip, due to qualifications.**

Table (5.16): ANOVA test of the fields and their p-values for qualifications

No.	Field	Means				Test Value	Sig.
		Diploma	Bachelor	Master	PhD		
1.	The importance of Information Technology	3.64	3.94	3.85	4.26	0.535	0.660
2.	The importance of Training	3.33	3.80	3.48	4.03	2.239	0.092
3.	The importance of communication and coordination among stakeholders	3.38	3.91	3.68	3.92	1.871	0.144
4.	The importance of Transportation:	3.90	4.01	3.52	3.48	2.578	0.061
	All items of the questionnaire	3.54	3.90	3.66	4.00	1.664	0.184

Table (5.16) shows that the p-value (Sig.) is greater than the level of significance α = 0.05 for each field, then there is in significant difference among the respondents toward each field due to qualifications. The researcher concludes that the personal characteristics' qualifications are not very important for these fields.

This result shows that all of different qualifications have the same access of information and they may have the same experience. Despite of that, the researcher finds that the PHD level agrees on all fields of the questionnaire more than the others do. This may due to their educational background.

- **There is no significant differences among respondents at level α = 0.05 towards the Important Factors in Crisis Management for the INGOs in Gaza Strip, due to experience in organization.**

Table (5.17): ANOVA test of the fields and their p-values for experience in organization

No.	Field	Means			Test Value	Sig.
		Less than 5 years	From 5 to less than 10 years	10 years and above		
1.	The importance of Information Technology	3.94	3.88	3.90	0.059	0.942
2.	The importance of Training	3.65	3.60	3.80	0.610	0.547
3.	The importance of communication and coordination among stakeholders	3.77	3.83	3.81	0.115	0.892
4.	The importance of Transportation:	3.88	3.74	3.77	0.257	0.774
	All items of the questionnaire	3.80	3.78	3.83	0.061	0.940

Table (5.17) shows that the p-value (Sig.) is greater than the level of significance α = 0.05 for each field, then there is in significant difference among the respondents toward each field due to experience in organization. The researcher concludes that the personal characteristics' experience in organization is not important for these fields.

This result shows that all employees have the same point of view which may indicate that the new employees got an induction or training from the beginning of his/her work in the organization. This result agree with (Pathirage et al., 2014) when he emphasized at the importance of having knowledge and lesson learned from others.

- **There is no significant differences among respondents at level α = 0.05 towards the Important Factors in Crisis Management for the INGOS in Gaza Strip, due to experience in crisis/ disaster management.**

Table (5.18): ANOVA test of the fields and their p-values for experience in crisis/ disaster management

No.	Field	Means			Test Value	Sig.
		Less than 5 years	From 5 to less than 10 years	10 years and above		
1.	The importance of Information Technology	3.88	3.86	4.14	0.613	0.545
2.	The importance of Training	3.53	3.80	3.73	1.546	0.221
3.	The importance of communication and coordination among stakeholders	3.69	3.91	3.88	1.681	0.194
4.	The importance of Transportation:	3.74	3.88	3.70	0.354	0.703
	All items of the questionnaire	3.72	3.86	3.91	0.866	0.425

Table (5.18) shows that the p-value (Sig.) is greater than the level of significance α = 0.05 for each field, then there is in significant difference among the respondents toward each field due to experience in crisis/ disaster management. The researcher concludes that the personal characteristics' experience in crisis/ disaster management is not very important for these fields.

This result, as the above one, shows that all employees have the same point of view which may indicate that the new employees got an induction or training from the beginning of his/her work.

Nevertheless, the researcher finds that the higher years of experience agree more on the fields of the questionnaire, which indicates that the more experience of the employees got, the more efficiency in working in disasters.

- **There is no significant differences among respondents at level α = 0.05 towards the Important Factors in Crisis Management for the INGOs in Gaza Strip, due to job title.**

Table (5.19): ANOVA test of the fields and their p-values for job title

No.	Field	Means				Test Value	Sig.
		Head of the institution/ Executive	Disasters committee member	Participator in crisis/ disaster management activities	Other		
1.	The importance of Information Technology	4.15	3.98	3.69	4.02	1.487	0.227
2.	The importance of Training	4.10	3.64	3.43	3.80	2.642	0.057
3.	The importance of communication and coordination among stakeholders	4.21	4.00	3.73	3.74	1.972	0.127
4.	The importance of Transportation:	3.76	3.79	3.85	3.75	0.079	0.971
	All items of the questionnaire	4.11	3.88	3.66	3.84	1.376	0.258

Table (5.19) shows that the p-value (Sig.) is greater than the level of significance α = 0.05 for each field, then there is in significant difference among the respondents toward each field due to job title. The researcher concludes that the personal characteristics' job title is not very important for these fields.

This result may refer to the importance of understanding and sharing all information about crisis intervention. Despite of not having big difference among these groups, it is noticed that in the fields of information technology, training and communication & coordination the head of the institutions agree more than the disaster committee members and the last agree more than the participants in the disaster activities which means that these field are the responsibility of the higher positions. On

contrast, the participants in the disaster activities agree on the field of transportation more than the others, which is due to their direct contact and the need of movement to the fieldwork.

- **There is no significant differences among respondents at level α = 0.05 towards the Important Factors in Crisis Management for the INGOs in Gaza Strip, due to Scientific knowledge in crisis/disaster management**

Table (5.20): ANOVA test of the fields and their p-values for scientific knowledge in crisis/disaster management

No.	Field	Means				Test Value	Sig.
		High studies in disasters management/ Diploma	Training course in disaster management	Practical experience	Other		
1.	The importance of Information Technology	4.32	3.82	3.85	4.13	0.968	0.413
2.	The importance of Training	4.10	3.66	3.57	4.03	2.033	0.118
3.	The importance of communication and coordination among stakeholders	4.08	3.78	3.78	3.82	0.468	0.706
4.	The importance of Transportation:	4.34	3.72	3.73	4.02	1.109	0.352
	All items of the questionnaire	4.19	3.76	3.75	4.00	1.410	0.248

Table (5.20) shows that the p-value (Sig.) is greater than the level of significance α = 0.05 for each field, then there is in significant difference among the respondents toward each field due to Scientific knowledge in crisis/disaster management. The researcher concludes that the personal characteristics' scientific knowledge in crisis/disaster management is not very important for these fields.

The result shows that the higher positions agree on these factors more than the others, which may understood that the scientific knowledge may have a little importance in crisis management.

6- There is no significant differences among respondents at level α = 0.05 towards the Important Factors in Crisis Management for the INGOs in Gaza Strip, due to the following organization information (Years of experience in working in crisis management and Number of employees).

This hypothesis can be divided into the following sub-hypotheses:

- **There is no significant differences among respondents at level α = 0.05 towards the Important Factors in Crisis Management for the INGOs in Gaza Strip, due to Years of NGOs' experience in working in crisis management.**

Table (5.21): ANOVA test of the fields and their p-values for years of experience in working in crisis management

No.	Field	Means				Test Value	Sig.
		Less than 5 years	From 5 to less than 10 years	from 10 to less than 15 Years	More than 15 years		
1.	The importance of Information Technology	4.01	3.72	4.05	3.88	0.620	0.605
2.	The importance of Training	3.62	3.58	3.65	3.75	0.306	0.821
3.	The importance of communication and coordination among stakeholders	3.70	3.64	4.06	3.90	1.801	0.156
4.	The importance of Transportation:	3.77	3.60	3.91	3.88	0.470	0.705
	All items of the questionnaire	3.79	3.65	3.94	3.85	0.655	0.583

Table (5.21) shows that the p-value (Sig.) is greater than the level of significance α = 0.05 for each field, then there is in significant difference among the respondents toward each field due to years of experience in working in crisis management. The

researcher concludes that the years of experience in working in crisis management is not very important for these fields.

The table shows that the high experienced organizations agree on all the items more than the others do. It means that the more experience that organization has, the more efficiency in managing the crisis.

- **There is no significant differences among respondents at level α = 0.05 towards the Important Factors in Crisis Management for the INGOs in Gaza Strip, due to number of employees.**

Table (5.22): ANOVA test of the fields and their p-values number of employees

No.	Field	Means				Test Value	Sig.
		less than 20	20 - 40	41-100	More than 100		
1.	The importance of Information Technology	3.95	4.22	3.40	3.99	4.345	0.008*
2.	The importance of Training	3.57	4.02	3.19	3.78	5.761	0.001*
3.	The importance of communication and coordination among stakeholders	3.75	4.07	3.57	3.82	2.608	0.059
4.	The importance of Transportation:	3.51	4.12	3.42	3.99	3.772	0.015*
	All items of the questionnaire	3.74	4.10	3.41	3.88	5.673	0.002*

* The mean difference is significant a 0.05 level

Table (5.22) shows that the p-value (Sig.) is greater than the level of significance α = 0.05 for the field "The importance of communication and coordination among stakeholders", then there is insignificant difference among the respondents toward this field due to number of employees. The researcher concludes that the number of employees is not very important for this field.

This result may explain that the big and small organizations have the same opinion that the communication and coordination among stakeholders is playing a very important role in crisis management

For the other fields, the p-value (Sig.) is smaller than the level of significance $\alpha = 0.05$, then there is significant difference among the respondents toward these fields due to number of employees. The researcher concludes that the number of employees is important for the other fields.

This result may explain that the size of organization may has an important role in the crisis management and their intervention.

For the other fields, The mean for the category " 20 - 40 employees " respondents have the highest among the other number of employees category, then The researcher concludes that the category " 20 - 40 employees " respondents is agreed much more than the other number of employees category.

On the researcher point of view, this category of the employees' number refer to the few projects that the organization has, but maybe they are concentrating more on working in crisis.

Chapter VI
Conclusion and Recommendation

Chapter VI

Conclusion and Recommendation

Introduction

This chapter lists the conclusions, findings, some recommendations based on these findings, and suggestions for future researches in order to improve the crisis management field in the INGOs in the Gaza Strip.

6.1 Conclusions

The main objective of this research is to enhance the role of INGOs in crisis management by identifying the important factors that are playing an effective role in the preparedness and response to the crisis in Gaza Strip. It also intend to achieve some objectives such as; enhancing the role of INGOs in reducing the risk of the crisis that facing Gaza Strip, identifying the factors that are playing an important role in managing the crisis, developing the effective level of preparedness and quick response to crisis, coordinating and having good agreements and relationships with local Authorities and other humanitarian and social actors and giving recommendations for all stakeholders to enhance the effective intervention and management of the crisis.

The following conclusions are drawn from this research:

1. Most the respondents agreed on the importance of having an effective Information Technology System in the whole process of the crisis management cycle to ensure the quality and accuracy. Most of INGOs are using IT system but they still needs an improvement in using modern methods such as GIS. This result can be understood, based on the researcher point of view, is due to the employees capacity and experiences, which also should be improved by concentrating more on training and capacity building as shown in the table.

2. The respondents agreed on the importance of training and capacity building and most of the organizations allocate special budget for that. Even though, just 74.33% of the participants are trained. As shown in the table, the organizations also should improve the topics and methods of the training by choosing more qualified and experienced trainers in crisis and emergency situations.

3. The research also shows that the effective communication and coordination among stakeholders is very important in managing the crisis. This result shows that this field is acceptable where most of the INGOs are using clear connection networks and they coordinate with others in case of the disaster. As mentioned before, the result shows again that these organizations need improvements for using modern technology methods such as GIS for communication and coordination. Moreover, this result shows that INGOs can improve their work in mitigation and preparation phase by distributing brochures and guidelines on how to deal during disasters.

4. INGOs transportation system is acceptable and most of the participants agreed on the importance of effective transportation system. As the table shows that, the less ranked item is that INGOs has a special stockpile for fuels or any other transportation logistics for the use during emergency, which means that INGOs should consider this activity as a mean for readiness and preparedness.

5. The research shows that the personal characteristic, which is gender, is important for communication and coordination among stakeholders. From the researcher point of view, this is due to the level of participation and awareness of females in this section or the females may not have the experience in working during crisis intervention, as males are more able to work during such situation. On the other hand, the research also concludes that males and females have access to the same information and experience in the fields of IT, training or Transportation.

6. The age of the employee is not main criteria in the level of participation or employment in such organizations. This also ensures the importance of these fields by the agreement from all ages who are working in the organization.

7. All different qualifications for the respondents agree on the important factors in crisis management for the INGOs which may explain that they have the same access of information and they may have the same experience. Despite of that, the researcher finds that the PHD level agrees on all fields of the questionnaire more than the others do. This may due to their educational background.

8. The result concludes that all employees have the same point of view despite their different experience in the organization which may indicate that the new employees got an induction or training from the beginning of his/her work in the

organization. Nevertheless, the researcher finds that the higher years of experience agree more on the fields of the questionnaire, which indicates that the more experience of the employees got, the more efficiency in working in disasters.

9. The research concludes that the position of the employees does not have a very big role on the crisis management but it is noticed that in the fields of information technology, training and communication & coordination, the head of the institutions agree more than the disaster committee members and the last agree more than the participants in the disaster activities which means that these fields are the responsibility of the higher positions. On contrast, the participants in the disaster activities agree on the field of transportation more than the others, which is due to their direct contact and the need of movement to the fieldwork.

10. The research shows that the higher positions agree on the factors more than the others, which may understood that the scientific knowledge have little importance on crisis management.

11. The research concluded that the high experienced organizations agree on all the items more than the others do. It means that the more experience that organization has, the more efficiency in managing the crisis.

12. The research concludes that that the big and small organizations have the same opinion that the communication and coordination among stakeholders is a very important factor in the crisis management. On the other hand, the research concludes that the size of organization may have little importance in the crisis management and their intervention.

13. The research concludes that few number of employees that are working in a specified project concentrate more in their work in crisis.

6.2 Recommendations

The research proposed the following recommendations based on the findings of the research:

1. It is highly recommended for the INGOs to use the modern methods such as GIS in the mitigation, preparation, investigation and response when disaster hits to ensure the quality and accuracy. This should motivate the organizations to increase the capacity of their employees to be able to use such methods of new technology.

2. INGOs should concentrate more on the training and capacity building of the employees by having well experienced and qualified trainers that can give wide and inclusive information to the trainee and can use new methods such as simulation in the training course.

3. INGOs should keep on the right way of communication and coordination among all stockholders to ensure the accuracy of their work. It is highly recommended that they should use the new methods such as GIS also to help them to gain accurate information to share with others.

4. INGOs should improve their work in mitigation and preparation phase by distributing brochures and guidelines on how to deal during disasters.

5. It is highly recommended that INGOs should keep a special stockpile for fuels or any other transportation logistics for the use during emergency, which means that INGOs should consider this activity as a mean for readiness and preparedness.

6. It is important to encourage females to participate more in the crisis intervention as she has an effective role in the society.

7. It is good for the organizations to encourage different ages and qualifications in crisis management, but they should the suitable training to ensure the best quality for work.

8. It is good for the INGOs to encourage people with different experiences, but they should concentrate more on teaching them and giving them the best induction and training courses about specific intervention.

9. It is important for the high positions in these organizations to be aware of the challenges facing the field workers.

10. It is important for the organizations to keep the low positions aware of what they are doing that may help in better sharing advise or suggestions.

11. It is recommended for the organizations to share ideas with others and the organizations with limited experience can participate in cluster meeting to have the best practices from others.

12. It is important for the organizations to have the suitable number of employees to enhance the best quality of their intervention.

6.3 Suggested future studies:

1. Investigate the quality of disaster management training for NGOs employees in the Gaza Strip.

2. The extend of using GIS in the disaster management process in Gaza Strip.

3. Comparison between factors affecting the role of NGOs in crisis management in the Gaza Strip and West Bank.

4. Evaluate the Palestinian Authority role in the mitigation and preparedness phases for response to potential disaster at the Gaza Strip.

5. Transparency and accountability in INGOs for providing emergency assistance

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Appendices

Appendices

Appendix 1- Questionnaire Judging Committee

No.	Referee	Place of work
1.	Dr. Yaser Al Shurafa	The Islamic University of Gaza
2.	Dr. Sami Abu Al Ross	The Islamic University of Gaza
3.	Dr. Akram Samour	The Islamic University of Gaza
4.	Dr. Emad Nashwan	Al Quds Open University
5.	Dr. Hazem Al Sheikh Ahmad	Al Quds Open University
6.	Dr. Sohaila Kanan	Al Quds Open University
7.	Dr. Jalal Shabat	Al Quds Open University
8.	Dr. Sabri Moshtaha	Al Quds Open University

Appendix 2- Questionnaire Arabic Version.

<div dir="rtl">

الجامعة الإسلامية ـ غزة

عمادة الدراسات العليا

كلية التجارة

برنامج ماجستير إدارة الأعمال

اســـتبيان

"العوامل المؤثرة على دور المؤسسات الدولية في إدارة الأزمات في قطاع غزة من وجهة نظر العاملين فيها"

الأخ الكريم/ الأخت الكريمة،،،

يرجى من حضرتكم تعبئة هذا الاستبيان المرفق والذي يهدف إلى دراسة "العوامل المؤثرة على دور المؤسسات الدولية في إدارة الأزمات في قطاع غزة من وجهة نظر العاملين فيها" وذلك استكمالا للحصول على درجة الماجستير في إدارة الأعمال من كلية التجارة بالجامعة الإسلامية **للباحثة/ إيمان علي البنا** تحت إشراف **الدكتور/ وسيم الهابيل.**

أثمن جهودكم وإجاباتكم الحقيقية والممثلة للواقع قدر الإمكان حيث ستعامل هذه البيانات بالسرية التامة وسوف تستخدم للدراسة الأكاديمية والبحث العلمي فقط. عند استكمال هذه الدراسة يمكنكم الحصول على النتائج المستخلصة منها.

مع خالص الشكر والتقدير ،،

الباحثة

إيمان علي البنا

</div>

أ) البيانات الشخصية

1. **الجنس:**

☐ ذكر   ☐ أنثى

2. **العمر:**

☐ أقل من 25 سنة   ☐ من 25 إلى أقل من 35 سنة   ☐ من 35 إلى أقل من 45 سنة   ☐ 45 سنة فأكثر

3. **المؤهل العلمي:**

☐ ثانوية عامة   ☐ دبلوم   ☐ بكالوريوس   ☐ ماجستير   ☐ دكتوراه

4. **عدد سنوات الخبرة في العمل داخل المنظمة:**

☐ أقل من 5 سنوات   ☐ من 5 إلى أقل من10 سنوات   ☐ من 10 إلى أقل من 15 سنة   ☐ 15 سنة فأكثر

5. **عدد سنوات الخبرة في العمل في مجال الكوارث والأزمات:**

☐ أقل من 5 سنوات   ☐ من 5 إلى أقل من10 سنوات   ☐ من 10 إلى أقل من 15 سنة   ☐ 15 سنة فأكثر

6. **المسمى الوظيفي:**

☐ مدير مؤسسة   ☐ مدير تنفيذي " إدارة الكوارث والأزمات"

☐ عضو لجنة إدارة الكوارث والأزمات   ☐ مشارك في نشاطات إدارة الكوارث والأزمات

☐ أخرى...

7. **درجة المعرفة في مجال إدارة الكوارث والأزمات من الناحية العلمية:**

☐ درجة جامعية عليا في إدارة الكوارث والأزمات   ☐ دبلوم متخصص في إدارة الكوارث والأزمات

☐ دورة تدريبية في إدارة الكوارث والأزمات   ☐ خبرة عملية من أحداث سابقة

☐ أخرى...

ب) بيانات المنظمة

1. **عدد سنوات الخبرة في مجال الكوارث والأزمات:**

☐ أقل من 5 سنوات   ☐ من 5 إلى أقل من10 سنوات   ☐ من 10 إلى أقل من 15 سنة   ☐ 15 سنة فأكثر

2. **عدد الموظفين:**

☐ أقل من 20 موظف ☐ من 20 إلى أقل من 40 موظف ☐ من 40 إلى أقل من 60 موظف ☐ من 60 إلى أقل 80 موظف ☐ من 80 إلى أقل من 100 موظف ☐ 100 موظف فأكثر

3. **الخدمات المقدمة من قبل المنظمة: " يمكن اختيار أكثر من إجابة"**

☐ التعليم ☐ الصحة ☐ الحماية ☐ الاسكان ☐ الخدمة القانونية

☐ الأمن الغذائي ☐ المياه والاصحاح البيئي ☐ مالية ☐ أخرى

....

الجزء الثاني:

العوامل المؤثرة على إدارة الأزمات:

غير موافق بشدة	غير موافق	غير متأكد	موافق	موافق بشدة	العبارة	م
					تأثير نظام تكنولوجيا المعلومات على إدارة الأزمات	
					تمتلك المنظمة نظام تكنولوجيا معلومات فعال.	1
					تستخدم المنظمة تكنولوجيا المعلومات والاتصالات الحديثة في جمع البيانات للجاهزية وقت الأزمات.	2
					تستخدم المنظمة تكنولوجيا المعلومات والاتصالات الحديثة في إعداد التقارير ما بعد الأزمات.	3
					يوجد في المنظمة وحدة متخصصة بفحص ومتابعة المعلومات المدخلة.	4
					يوجد في المنظمة قاعدة بيانات يتم من خلالها إدخال جميع البيانات المتعلقة بالمتضررين	5

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م	العبارة	موافق بشدة	موافق	غير متأكد	غير موافق	غير موافق بشدة
6	يوجد في المنظمة قاعدة بيانات لحصر جميع الأضرار بعد الأزمات					
7	تستخدم المنظمة أنظمة المعلومات الجغرافية					
8	تدرب المنظمة العاملين على استخدام تكنولوجيا المعلومات بشكل فعال.					
9	تحدث المنظمة المعلومات والبيانات بشكل دوري.					
10	تدخل جميع البيانات التي تم جمعها في نظام محوسب موحد لضمان الدقة					
11	وجود نظام تكنولوجيا المعلومات مهم للتخفيف والتأهب لمواجهة الأزمات.					
12	وجود نظام تكنولوجيا المعلومات مهم لسرعة الاستجابة الفعالة وقت الأزمات.					
13	اتخاذ القرار بعد الأزمات مبني على نظام المعلومات.					
	تأثير التدريب على إدارة الأزمات					
1	يوجد في المنظمة فريق مدرب جيدا على إدارة الأزمات.					
2	يتم تدريب كل عضو من أعضاء الفريق على أدواره ومسؤولياته بشكل منتظم.					
3	تقوم المنظمة بتدريب الموظفين العاملين في مجال الأزمات بانتظام حول كيفية التعامل والتواصل مع الناس المتضررين بطريقة إنسانية.					

م	العبارة	موافق بشدة	موافق	غير متأكد	غير موافق	غير موافق بشدة
4	تقوم المنظمة بتدريب الموظفين العاملين في مجال الأزمات بانتظام حول كيفية التنسيق مع الآخرين.					
5	تقوم المنظمة بتدريب الموظفين العاملين في مجال الأزمات على أساس السيناريوهات المتوقعة باستخدام المحاكاة.					
6	تقوم المنظمة بتدريب الموظفين العاملين في مجال الأزمات على كيفية إعداد خطط للطوارئ.					
7	تقوم المنظمة بتدريب المدراء على اتخاذ قرارات سريعة وفعالة.					
8	يتم تدريب المدراء على تحديد الأولويات للتدخل الفعال.					
9	يتمتع المدربون بخبرات ومؤهلات جيدة للتدريب في مجالات الطوارئ والأزمات.					
10	تخصص المنظمة ميزانية خاصة للتدريب على إدارة الأزمة.					
تأثير الاتصال والتواصل على إدارة الأزمات						
1	يتوفر قنوات اتصال واضحة بين فريق العمل في الأزمات والمشرفين عليهم.					
2	تتوفر أدوات اتصال فعالة لدى الموظفين الذين يعملون في مجال الأزمات للتواصل مع الآخرين.					
3	يوجد دقة عالية في تبادل المعلومات مع الجهات ذات العلاقة.					

غير موافق بشدة	غير موافق	غير متأكد	موافق	موافق بشدة	العبارة	م
					توفر المنظمة شبكة اتصال واضحة في حالات الكوارث.	4
					تقوم المنظمة بالتنسيق مع المؤسسات الدولية الأخرى العاملة في مجالات الطوارئ أثناء وقوع الكارثة.	5
					تقوم المنظمة بالتنسيق مع منظمات المجتمع المدني العاملة في مجالات الطوارئ أثناء وقوع الكارثة.	6
					تقوم المنظمة بالتنسيق مع السلطات الحكومية أثناء وقوع الكارثة.	7
					تقوم المنظمة بالتنسيق مع أطراف النزاع المختلفة أثناء وقوع الكارثة لتسهيل مهماتها.	8
					يوجد علاقة إيجابية بين كفاءة المنظمة في أداء وظيفتها ومستوى التعاون مع المؤسسات الغير حكومية الأخرى.	9
					يوجد علاقة إيجابية بين كفاءة المنظمة في أداء وظيفتها ومستوى التعاون مع السلطات المحلية.	10
					تقوم المنظمة بتوزيع كتيبات وإرشادات حول كيفية التعامل أثناء الكوارث.	11
					تستخدم المنظمة التكنولوجيا الحديثة مثل نظم المعلومات الجغرافية للتنسيق بين المؤسسات.	12
					تشارك المنظمة الدروس المستفادة في إدارة الأزمات مع المؤسسات الأخرى.	13
تأثير نظام المواصلات على إدارة الأزمات						

م	العبارة	موافق بشدة	موافق	غير متأكد	غير موافق	غير موافق بشدة
1	يسمح للمنظمة الوصول للمناطق الخطرة أثناء الأزمات من قبل الجهات ذات العلاقة.					
2	توفر المنظمة للفريق وسائل نقل فعالة ومناسبة للعمل في المناطق الصعبة.					
3	وسائل النقل مجهزة بشكل جيد لأي استجابة في حالات الطوارئ.					
4	يتوفر في المنظمة مخزونا خاصا للوقود ولأي لوجستيات أخرى خاصة بالمواصلات لاستخدامها أثناء حالات الطوارئ.					
5	يتوفر في المنظمة خطة استعداد فعالة للمواصلات.					

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Appendix 3- Questionnaire English Version.

The Islamic University-Gaza

Higher Education Deanship

Faculty of Commerce

Master of Business Administration Program

Questionnaire

The Important Factors in Crisis Management for INGOs in Gaza Strip from Employees' Perspective

Dear Sir\ Ms

Please fill in the required information in the attached questionnaire that aims to evaluate the important factors in crisis management for INGOs in the Gaza Strip.

This Research is a part of the Master Study at the Islamic University for the researcher **Eman Al Banna** under the supervision of **Dr. / Wasim Al-Habil**.

I appreciate your effort in answering the questions of the questionnaire. The given information will be used for the purpose of the scientific study only and will be treated confidentially. After the study finished, the result will be available upon request.

Thank you for your cooperation.

Researcher

Eman Al Banna

<u>Section one:</u>   **A) Personal Information:**

1. **Gender**:

    ☐ Male   ☐ Female

2. **Age:**

  ☐ Less than 25 years   ☐ From 25 to less than 35 years

  ☐ From 35 to less than 45 years   ☐ 45 years and above

3. **Qualification:**

    ☐ Secondary school   ☐ Diploma   ☐ Bachelor   ☐ Master   ☐ PHD

4. **Your experience with the organization:**

  ☐ Less than 5 years   ☐ From 5 to less than 10 years

  ☐ From 10 to less than 15 years   ☐ 15 years and above

5. **Your experience in crisis/disaster management:**

  ☐ Less than 5 years   ☐ From 5 to less than 10 years

  ☐ From 10 to less than 15 years   ☐ 15 years and above

6. **Job title:**

    ☐ Head of the institution   ☐ Executive "crisis/ disasters management field"

  ☐ Disasters committee member   ☐ Participator in crisis/ disaster management activities

  ☐ Other……………………..

7. **Scientific knowledge in crisis/disaster management:**

  ☐ High studies in disasters management   ☐ Diploma in disasters management.

  ☐ Training course in disaster management   ☐ Practical experience.

  ☐ Other……………………..

<div align="center">

B) Organization Information:

</div>

1. **Years of experience in working in crisis management**

  ☐ Less than 5 years   ☐ From 5 to less than 10 years

  ☐ From 10 to less than 15 years   ☐ 15 years and above

2. Number of employees:

☐ less than 20   ☐ 20 - 40   ☐ 40- 60   ☐ 60 – 80   ☐ 80 – 100

☐ More than 100

3. The service provided by the organization: "you can choose more than one"

☐ Education   ☐ Health   ☐ Protection   ☐ Shelter   ☐ Legal

☐Food security   ☐ WASH   ☐ Financial   ☐ Others…………………

<u>Section two:</u>

The important factors in crisis management in Gaza Strip:

	The importance of Information Technology:	Totally agree	Agree	Not sure	disagree	Totally disagree
1	The organization has an effective IT system.					
2	The organization uses a modern ICT in collecting data for preparedness to the crisis.					
3	The organization uses a modern ICT for effective report system after the crisis.					
4	The organization has a unit for checking, following up the information.					
5	The organization has a database for entering the collected data of the affected beneficiaries.					
6	The organization has a database for all the damage after the crisis.					
7	The organization uses new technology such as geographical information system (GIS).					
8	The organization trained its staff for using the IT effectively.					
9	The organization updates its information and data periodically.					
10	All collected data are entered into a unified computerized system to ensure the accuracy.					
11	The existence of Information Technology System is very important for mitigation and					

	The importance of Information Technology:	Totally agree	Agree	Not sure	disagree	Totally disagree
	preparedness for the crisis.					
12	The existence of Information Technology System is very important for an effective response in crises.					
13	The existence of Information Technology System is very important to support decision making after crisis.					
	The importance of Training:					
1	The organization has well-trained team for managing crisis.					
2	Every member of the team is trained on his roles and responsibilities regularly.					
3	The organization trains the staff working in crisis regularly on how deal and communicate with affected people in humanitarian way.					
4	The organization trains the staff working in crisis regularly on how to coordinate with others.					
5	The organization trains the staff working in crisis based on the predicted scenarios using simulation.					
6	The organization trains the staff working in crisis on how to prepare contingency planning					
7	The organization trained its managers to be able to make quick and effective decisions					
8	The managers are trained to prioritize the needs for effective intervention.					
9	The trainers are well qualified and experienced in emergency and crisis situations.					
10	The organization allocates a special budget for crisis management training.					

	The importance of Information Technology:	Totally agree	Agree	Not sure	disagree	Totally disagree
	The importance of communication and coordination among stakeholders:					
1	There are clear communication channels between the team working in crisis and their supervisors.					
2	The staff who are working in emergency have an effective communication tools to contact others.					
3	There is a high accuracy in exchanging information with relevant authorities.					
4	The organization has clear communication plans in case of the disasters.					
5	The organization coordinates with other INGOs working in emergency during disaster.					
6	The organization coordinates with other CBOs working in emergency during disaster.					
7	The organization coordinates with governmental authorities during disaster.					
8	The organization coordinates with the different parties of the conflict during crisis to facilitate its tasks.					
9	There is a positive relationship between the organization's efficiency in doing its job and the level of cooperation with other NGOs.					
10	There is a positive relationship between the organization's efficiency in doing its job and the level of cooperation with local authorities.					
11	The organization distributes brochures and guidelines on how to deal during disasters.					
12	The organization uses the new technology such as GIS for coordination among organizations.					

	The importance of Information Technology:	Totally agree	Agree	Not sure	disagree	Totally disagree
13	The organization shared learning lessons with other organizations.					
	The importance of Transportation:					
1	The organization gets permission for accessing the dangerous areas during crisis from relevant authorities.					
2	The organization provides the teams with effective transportation vehicles suitable for the work in the difficult areas.					
3	The vehicles are well prepared for any emergency response.					
4	The organization has a special stockpile for fuels or any other transportation logistics for the use during emergency.					
5	The organization has an effective preparedness plan for transportation.					