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Humanitarian Logistics Management in the NGOs Sector in Gaza Strip during (2008-2009) War on Gaza (Operation Cast Lead)

إدارة الخدمات اللوجستية في المؤسسات غير الحكومية العاملة في قطاع غزة زمن الحرب على غزة (عملية الرصاص المصبوب) في عام (2008-2009)

By

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Supervisor

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Thesis Submitted in Partial Fulfillment of the Requirements for the Master Degree in Business Administration

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نتيجة الحكم على أطروحة ماجستير

بناءً على موافقة عمادة الدراسات العليا بالجامعة الإسلامية بغزة على تشكيل لجنة الحكم على أطروحة الباحثة/ **علا محمد رشاد الشرفا** لنيل درجة الماجستير في **كلية *التجارة*/ قسم إدارة الأعمال**، وموضوعها:

Humanitarian Logistics Management in the NGOs Sector in Gaza Strip during (2008-2009) War on Gaza (Operation Cast Lead)

وبعد المناقشة العلنية التي تمت اليوم الأحد 15 جماد آخر 1433 هـ، الموافق 2012/05/06م الساعة الواحدة والنصف ظهرًا بمبنى اللحيدان، اجتمعت لجنة الحكم على الأطروحة والمكونة من:

د. رشدي عبد اللطيف وادي	**مشرفاً ورئيساً**
أ.د. ماجد محمد الفرّا	**مناقشاً داخلياً**
د. بسام عبد الجواد أبو حمد	**مناقشاً خارجيًا**

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 ،،،

عميد الدراسات العليا

أ.د. فؤاد علي العاجز

بسم الله الرحمن الرحيم

(يَرْفَعِ اللَّهُ الَّذِينَ آمَنُوا مِنكُمْ وَالَّذِينَ أُوتُوا الْعِلْمَ دَرَجَاتٍ وَاللَّهُ بِمَا تَعْمَلُونَ خَبِيرٌ) صدق الله العظيم

(المجادلة: الآية 11)

Dedication

To my parents

To my dear husband Mahmood for all the support and encouragement

To my children Biesan, Bashar, Sama and Sameh

To my sister Islam

To my brothers Tareq, Ahmed, Khaled and Abdallah

To my family and friends

To my Supervisor

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A major debt of gratitude is owed to my husband and kids for the love and support.

The support and advice given by my brothers, sister and my closest friends played a major role in maintaining a constantly high level of motivation, and thus in the progress of my work.

Finally, I wish to express my deepest gratitude to my parents for their mental and emotional support throughout the complete period of my academic education.

Researcher: Ola M. Shorafa

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List of Abbreviations

ACCEM	Ada City-Country emergency Management
CAP	Consolidated Appeal Process
Disemnas	Disaster Emergency Needs Assessment
GSDRC	Governance and Social Development Research Center
FOG	Field Operations Guide
H.L.	Humanitarian Logistics
HLRG	Humanitarian Logistics Research Group
IFRC	International Federation of Red Cross and Red Crescent Societies
Introdp	Introduction to Disaster Preparedness
IOF	Israeli Occupation Forces
LOG	Logistics Operational Guide
MAS	Palestine Economic Policy Research Institute
MOI	Ministry of Interior
MOSA	Ministry of Social Affairs
NGOs	Nongovernmental Organizations
OCHA	Office for the Coordination of Humanitarian Affairs
OCL	Operation Cast Lead
P.C.H.R	Palestinian Centre for Human Rights
Preplan	Preparedness Planning
S.C.M.	Supply Chain Management
UNDAC	United Nations Disaster Assessment and Coordination
UNHRD	United Nations Humanitarian Response Depot
UNRWA	United Nation Relief & Work Agency for Palestinian People
UNSCO	United Nations Special Co-Coordinator Office
WFP	World Food Program
WHO	World Health Organization

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Abstract

The main objective of this study is to recognize the level of application of Humanitarian Logistics Management in NGO sector in the Gaza Strip during the war on Gaza (Operation Cast Lead) between the period (27 December 2008 and 18 January 2009).

The analytical descriptive method was used as the main tool for reaching the study results; more specifically the humanitarian logistics were analyzed to its main nine steps in any humanitarian supply chain: Preparedness, Assessment, Resource Mobilization – Financial and Human Resources–, Procurement, Transportation, Tracking and Tracing, Stock Asset Management, Extended Point of Delivery and Relief to Beneficiaries.

The study sample included 33 active Palestinian NGOs (22 international and 11 local) working in Gaza Strip in relief projects during Cast Lead Operation (Gaza War); 65 questionnaires were distributed to Logistic officers, Logistic assistant, procurement officers and others.

The main findings of the study were Gaza's NGOs applied Humanitarian Logistics Management process during Cast Lead Operation by nearly 70.52%, and there is no significant statistical difference among respondents at a significant level (05.0=α) in all the fields of humanitarian logistics management regarding to personal traits (age, gender, education and experience) of the respondents, and there is no significant statistical differences among respondents at significant level (05.0=α) in all the fields of humanitarian logistics management regarding to organizational traits (age, and type) of the NGOs.

The main recommendations of the research were that Gaza NGOs need to take essential actions to develop and improve the humanitarian logistics management applications during any urgent circumstances. Moreover, NGOs should increase their preparedness and their readiness to face and deal with any disaster, whether natural or manmade, especially in Gaza with the current unstable political situation, by developing a clear and flexible contingency plan to deal with any type of disaster that suits Gaza culture and circumstances. Detailed and clear procedures in all humanitarian logistics supply chain steps should be set and implemented more actively and quickly.

الخـــلاصـــة

تهدف هذه الدراسة إلى التعرف على مدى تطبيق إدارة الخدمات اللوجستية في المؤسسات غير الحكومية العاملة في قطاع غزة، خلال الحرب على غزة (عملية الرصاص المصبوب) الحادثة في الفترة ما بين 27 ديسمبر 2008 إلى 18 يناير 2009 .

استخدم المنهج الوصفي التحليلي للوصول إلى أهداف الدراسة، حيث تم تحليل الخدمات اللوجستية إلى المراحل التسع الأساسية الموجودة في سلسلة الإمداد وهي: الاستعداد و الجهوزية، تحديد الاحتياجات، تعبئة الموارد، المشتريات، النقل الداخلي والمواصلات، التتبع، إدارة المخزون، توزيع المساعدات و إغاثة المنكوبين.

وقد اشتملت عينة على 33 مؤسسة من المؤسسات غيرالحكومية التي عملت في مجال الإغاثة في قطاع غزة في فترة عملية الرصاص المصبوب (حرب غزة) وقد تكونت من 22 مؤسسة دولية و 11 مؤسسة محلية، وتم توزيع 65 إستبانة على مدراء الخدمات اللوجستية ، مساعدو الخدمات اللوجستية، مدراء المشتريات و آخرين.

وخلصت الدراسة إلى أن مستوى تطبيق إدارة الخدمات اللوجستية زمن الحرب بلغ 70.52% ، كما أنه لا توجد فروق ذات دلالة إحصائية عند مستوى دلالة (α=05.0) بين جميع مراحل إدارة الخدمات اللوجستية و بين الصفات الشخصية للمبحوثين (العمر،النوع، التعليم، عدد سنوات الخبرة) ، وأيضاً لا توجد فروق ذات دلالة إحصائية عند مستوى دلالة (α=05.0) بين جميع مراحل إدارة الخدمات اللوجستية و بين خصائص المؤسسة (عدد سنوات الخبرة، نوع المؤسسة) .

وأوصت الدراسة بضرورة إتخاذ المؤسسات غير الحكومية الإجراءات اللازمة لتطوير أداء الخدمات اللوجستية وتطبيقها خلال أي طارئ ، كما ويجب أن تزيد هذه المؤسسات من جهوزيتها واستعداداتها لمواجهة و معالجة أي كارثة قد تحل، سواء كانت كارثة طبيعية أو كارثة من صنع البشر، خصوصاً في غزة التي تعاني من عدم استقرار سياسي، وذلك من خلال إعداد خطة مرنة تناسب ظروف المجتمع وثقافته، ووصف دقيق و مفصل لتطبيق كل الخطوات في سلسلة إمداد الخدمات اللوجستية بهدف الوصول لنظام أكثر كفاءة و سرعة.

Chapter 1

Introduction

1.1 Preface:

Between December 27 and January 18, Israeli forces conducted a major combined military operation in the Gaza Strip. The operation lasted for 23 days and comprised bombardment by land, sea and air and incursions into Gaza by Israeli troops. The operation called was *Operation Cast Lead.*

The operation resulted in extensive casualties and destruction of homes, livelihoods and infrastructure. An estimated 21,000 homes were destroyed or badly damaged in the fighting, at the height of the fighting, nearly 51,000 people were displaced in shelters, and a larger number of people were believed to be living with host families.

According to the Palestinian Ministry of Health figures, 1,326 Palestinians were killed during this period, including an estimated 430 children and 110 women, 5,450 Palestinians were injured, including 1,855 children and 795 women (UN, CAP, 2009, P: 1).

During this period people in Gaza were suffering. A lot of them need urgent relief even as search and rescue, food, electricity, water, medical, sanitation or temporary shelter. During the war, needs in Gaza were extensive, and required the combined, coordinated response of international and national humanitarian agencies. In this context, this research tries to evaluate and analyze the way these organizations responed to the disaster (UN, CAP, 2009, P: 2).

In this point, the humanitarian logistics activities role in the relief process would be highlighted since logistics is the bridge that allows the transition between emergency and development programs, and links the entire supply chain. This link cannot be ignored by the actors of this particular supply chain because by establishing a long-term process logistics will ensure local development and sustainability.

Logistic Management: "The process of planning, implementing and controlling the efficient, effective flow and storage of goods, services, and related information from point of origin to point of consumption for the purpose of conforming to customer requirements"(Lambert, et al, 1998, P: 3).

Supply Chain Management: the Council of Supply Chain Management defines Supply Chain Management as the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, who can be suppliers, intermediaries, third party service providers and customers. In essence, supply chain management integrates supply and demand management within and across companies (Council of Supply Chain Management Professionals, 2007).

Humanitarian logistics: Humanitarian logistics is defined as ''the process of planning, implementing and controlling the efficient, cost-effective flow and storage of goods and materials as well as related information from the point of origin to the point of consumption for the purpose of alleviating the suffering of vulnerable people" (Thomas and Kopczak, 2005, P2).

Anisya Thomas, Managing Director of the Fritz Institute, subdivided the humanitarian supply chain into the following processes. They were further modified by Mitsuko Mizushima, Chief Logistics Officer of the Fritz Institute, in preparation for the Humanitarian Logistics Conference in Geneva, April 24-26, 2005(Thomas, 2004) .

There are nine main steps in the humanitarian supply chain to consider when responding to a major disaster

- Step 1: Preparedness.
- Step 2: Assessment.
- Step 3: Resource Mobilization – Financial and Human Resources
- Step 4: Procurement.
- Step 5: Transportation.
- Step 6: Tracking and Tracing.
- Step 7: Stock Asset Management.

- Step 8: Extended Point of Delivery
- Step 9: Relief to Beneficiaries.

Considering the number of organizations, workers and relief items arriving on the ground, it is vital during a disaster response operation that these nine steps are carried out under the umbrella of communication, collaboration and coordination (Thomas, 2004).

1.2 Research Problem:

In general, Gaza Strip is considered an unstable zone from a political perspective. Gaza is exposed to be attacked any time by Israeli militaries. These attacks affect civilian life in all group (children to old people), (men or women). Usually there are victims for each military attack. These victims need urgent help, if this help does not reach as soon as possible, disaster may happen.

In this time humanitarian logistics managements play a vital role in bringing the required help for those needed. This help could be medical help or food or rescue efforts.

This study tries to discuss how humanitarian logistics affected the vulnerable people during Gaza war and to what extent NGOs sector in Gaza Strip succeed in relieving people by adapting right and scientific system in applying humanitarian logistics management.

In brief, the main problem for this research could be summarized in the following question:

To what extent did NGOs sector in Gaza Strip apply humanitarian logistics management to relieve people during Gaza war?

1.3 Research hypotheses:

1) There is no significant statistical difference at significant level ($05.0=\alpha$) in the application of humanitarian logistics management during the war on Gaza due to respondents traits (age, gender, education, experience, etc.).

a. There is no significant statistical difference at significant level (05.0=α) in the application of humanitarian logistics management during the war on Gaza and the age of the respondents.
b. There is no significant statistical difference at significant level (05.0=α) in the application of humanitarian logistics management during the war on Gaza and the gender of the respondents.
c. There is no significant statistical difference at significant level (05.0=α) in the application of humanitarian logistics management during the war on Gaza and the education of the respondents.
d. There is no significant statistical difference at significant level (05.0=α) in the application of humanitarian logistics management during the war on Gaza and the experience of the respondents.

2) There is no significant statistical difference at significant level (α= 0.50) in the application of humanitarian logistics management during the war on Gaza due to organizational traits (type and age of NGO)

a. There is no significant statistical difference at significant level (05.0=α) in the application of humanitarian logistics management during the war on Gaza and the type (International, Local) of NGO.
b. There is no significant statistical difference at significant level (05.0=α) in the application of humanitarian logistics management during the war on Gaza and the age of NGO.

1.4 Research variables:

Dependent variable: Success in the application of right and scientific humanitarian logistics management in Gaza NGOs during the war on Gaza

Independent variables: humanitarian logistic supply chain steps:

Step 1: Preparedness.

Step 2: Assessment.

Step 3: Resource Mobilization – Financial and Human Resources

Step 4: Procurement.

Step 5: Transportation.

Step 6: Tracking and Tracing.

Step 7: Stock Asset Management.

Step 8: Extended Point of Delivery .

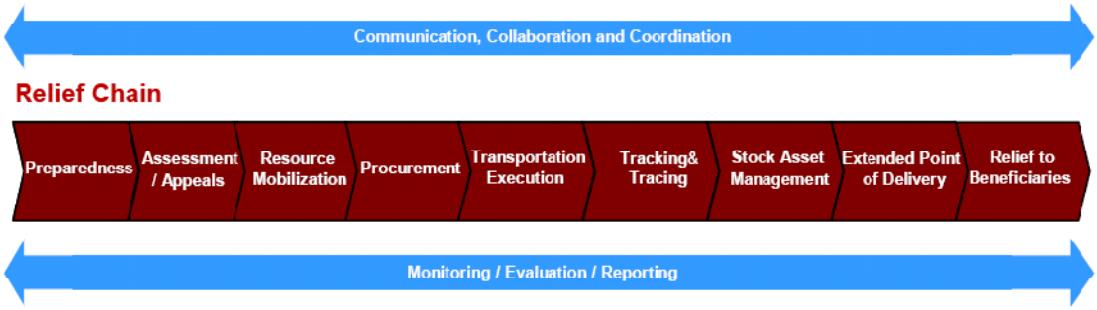
Step 9: Relief to Beneficiaries.

Step 10: Monitoring/Evaluation/Reporting

Step 11: Communication, Collaboration and Coordination.

The independent variables are pictured in Figure 1-1.

Figure 1-1: The supply chain processes for humanitarian relief



Source: Relief Chain (Thomas, 2004) modified by Mizushima

1.5 Research importance:

The political circumstances in Gaza subjectit to any military attack by Israeli at any timecausing disasters. In an attempt to lighten the catastrophic effects on people, all humanitarian organization should be ready to address these events, and humanitarian logistics is one of the most successful methods which qualifies humanitarian organizations to deal with these issues.

So this study is very important since it:

- explores the use of logistics management techniques to overcome barriers encountered by logistics managers during humanitarian relief operations.
- raises awareness on the ability and benefits that logistics would bring to humanitarian emergency response.

- gives a chance to study all the traditional logistics functions such as customer service, transportation , warehousing, and inventory management
- is also important for interested people to take the benefit from the study results and recommendations to have scientific results in logistic management, since the studies in this field are few. This study, therefore, could be considered the first detailed study devoted specifically to the humanitarian logistics in Gaza Strip,
- generally this study contributes to the development of the NGOs logistic performance. Further, it would enhance the library resources in the field of logistics.

1.6 Research Objectives:

The main objective of this research is to:

- Evaluate the reasons which make the humanitarian logistics an important part in humanitarian relief operation
- Assess the reasons that make NGOs need to pay positive attention to humanitarian logistics
- Evaluate the way humanitarian organizations in Gaza deal with any war on Gaza
- Evaluate the level of application for logistics management by Gaza NGOs during the war on Gaza
- Evaluate the current strengths and weaknesses in logistics management in NGOs sector in Gaza Strip
- Propose some recommendations that may help NGOs in Gaza to promote their logistical performance which may enable the NGO sector to flourish and perform its rule in case of disasters and emergencies.

1.7 Assumptions and Limitations

This research primarily deals with logistical elements of the ***relief phase*** in the Israeli military war on Gaza in the winter of 2008-2009 (Gaza War).

This study concentrates on the middle two steps of any disaster management cycle – preparedness and response.

Preparedness is defined as plans and procedures designed to minimize damage when an emergency occurs.

Response is defined as the actions taken to save lives and prevent further damage in a disaster or emergency situation. Response is putting preparedness plans into action. Response activities may include ***damage assessment, search and rescue, fire fighting, and sheltering victims.***

This is not intended to discount the importance of other phases (mitigation and rehabilitation) but to concentrate on one issue.

Therefore, researcher assumes six months after the start of Gaza war is a sufficient period to assess the humanitarian logistics performance in Gaza NGOs sector.

1.8 Research Difficulties:

This study faces different types of difficulties. Some of these difficulties are related to the research process itself, others are related to the type of NGOs environment in Gaza, and some difficulties could be referred to the general culture existing between Gaza people; the following will shed lights on the main difficulties facing this study:

1. There have been no previous studies conducted in this field in Gaza strip, or in the Arab society, which obliged the researcher to depend on international studies to compare their results with this study results, despite researcher's knowledge of the differences between Gaza culture and cultures of those studies.
2. There are no available references or books tackling the topic of the study in the university library; therefore, the researcher depended on the internet most of time.
3. Another major problem the researcher faced was selecting the qualified NGOs to fill out the questionnaire::

a. The researcher sent different emails for different organizations representatives in Gaza like UNRWA to identify the active NGOs that worked during the war period, and she spent about two months in some cases.

b. The working NGOs during Gaza war (Cast Lead Operation) were not identified and not recorded for any governmental or nongovernmental organization, obliging the researcher to make semi-field survey among municipality of social affairs departments in all Gaza Strip in order to identify the working NGOs in relief operations during the war.

c. Most of NGOs in Gaza Strip do not have logistical system, which makes most of them unqualified to respond to this questionnaire. That's why the researcher adopted criteria to select the biggest and active NGOs in Gaza Strip to get to the main goals of the study.

4. The qualified person to fill out this questionnaire occupies a sensitive position in the selected NGOs, meaning meeting with them was not easy most of the time.

5. Generally this study was conducted after a year and half of Gaza war, which could be considered a big time to make an evaluation for any managerial process, since some people were changed, and some organizations closed their offices because their work was mainly for relief during the war. However, the researcher continued her study despite this difficulty in order to contribute to filling in the gap in this important field of knowledge.

1.9 Previous Studies:

No local or regional studies to the knowledge of the researcher deal with logistics issues have been found, which obliged the researcher to depend on international studies only.

A- International studies:

1- **Tatham & Spens. (2011)**

"Towards a humanitarian logistics knowledge management system",

Purpose: The aim of this paper is to offer a conceptual model and an associated classification to support the development of a body of knowledge in support of the logistic response to a natural or man-made disaster.

Design/methodology/approach: Based on the literature review, the paper outlines the difficulties associated with the logistic response to a disaster before discussing a generic approach to knowledge management. The literature review is then used to identify two potential models (the Supply-Chain Operations Reference (SCOR) and the UK Defense Lines of Development (LOD)), which are then further developed and integrated in order to underpin a knowledge taxonomy.

Findings: The paper proposes a model that combines both SCOR and LOD models into a unified approach as a first step towards the development of a broad-ranging reference source to support humanitarian logisticians and, thereby, improve the effectiveness and efficiency of the response to future disasters.

2- **Kova´cs and Spens. (2011)**

"Trends and developments in humanitarian logistics – a gap analysis"

Purpose: The aim of this paper is to present current trends and developments in humanitarian logistics (HL) practices, research, and education, and analyze the gaps that may occur.

Design/methodology/approach: The paper is primarily conceptual and develops a framework for analyzing trends and gaps between HL (Humanitarian logistics) research, education, and practices. Data are compiled through keyword searches, publicly available bibliographies, and web sites of educational institutions, as well as drawing on material from practitioner workshops, tutorials, conference presentations, and personal communication with practitioners and educators.

Findings: Gaps are revealed in HL (Humanitarian logistics) practices, research, and education. Few education programs to date consider the skill needs of humanitarian logisticians, but future trends in practice and research can be used to develop them further. More empirical and practice-near research is called for at the same time as there is a need

for comparative analyses, generic models, and theory building in HL (Humanitarian logistics)

3- **Ayongwa, Sun. (2010)**

"Overlapping humanitarian logistics roles and attaining a strategic fit in civil-military relations"

Purpose: The main aim of this study is to examine civil-military relations during the preparedness and response phase of humanitarian crises.

Design/methodology/approach: Qualitative research method was used in the study since the aim of this study is to give a comprehensive description of the role each stakeholder plays respectively during a humanitarian logistics crisis situation and to explore the possibility for coordination.

Quantitative strategy will not be employed in this study since its focus on statistical and quantified procedures would not help in revealing the perception of the variables in a specific relationship in the researcher opinion.

Findings: The researcher tried to answer the following three questions by drawing up theoretical frame work and empirical research:

1- What role is played by NGOs and military forces during a humanitarian crisis?

2- Does a cooperation framework exist between both parties?

3- Can a strategic fit be attained among stakeholders?

Finally the researcher answers the research questions as follows:

1- The role of the military is to provide security during humanitarian operations and clear a humanitarian space in which NGOs can operate(delivering aid deliveries and supplies to disaster victims)

   But they show there are varying degrees of overlap in roles which both parties have agreed to abide including the use of military escorts by NGOs

2- On the issue of cooperating with the military, the humanitarian organization community is split and there are varying degrees to which an NGO is willing to cooperate. But constant interaction and information sharing through an information system is expected to yield trust and that will provide the forum for coordination of activities in the humanitarian arena.

3- Lastly, the researcher identified cooperation, trust, information sharing and coordination as crucial to attain a strategic fit among stakeholders.

4- **Bilal, (2010).**

"The Role of Supply Chain Management in Humanitarian Logistics during Natural Disaster"

Purpose: The aim of this study is to develop a model for barrier conquering in humanitarian logistics and provide solutions to logistics problems faced by the response and humanitarian organizations during disaster. There are some barriers such as donation and funding issues, damaged infrastructure, unforeseen demand and complexity with personnel which rescuing organizations have to handle.

Therefore, the researcher tried to identify the barriers to humanitarian logistics of humanitarian organization during natural disaster, and proposed Solutions to those barriers through Supply Chain Management Methods.

Design/methodology/approach: The researcher utilized the secondary data and literature review. So Various articles, journals and books related to supply chain, humanitarian logistics and relief organization were studied and analyzed. And through literature review, the researcher was able to identify the barrier faced by the humanitarian logistics organization then he tried to propose the solution through the supply chain techniques and at the end results and analysis has been presented.

Findings: The author defined uncertain situations, impractical infrastructure, communication problems, human resources, distribution of funds and other barriers related to each country according to its climate and culture as the main barriers that have negative impact on logistics efforts via the disaster time.

At the end, the author nominated the supply chain management as the most efficient tool in order to overcome all the aforementioned barriers, as it has a vital role to make improvements, saving the costs, using various sources to fulfill the needs immediately during disaster.

5- **Jahre . (2010)**

"Coordination in humanitarian logistics through clusters"

Purpose: The purpose of this paper is to contribute to a greater understanding of the potential of cluster concepts using supply chain coordination and inter-cluster coordination. The focus is on the conceptual level rather than on specific means of coordination.

Design/methodology/approach: The cluster concept in humanitarian relief, along with some key empirical issues, is based on a case study. The concept is then compared to the literature on clusters and coordination in order to develop a theoretical framework with propositions on the tradeoffs between different types of coordination.

Findings: The results provide important reflections on one of the major trends in contemporary development of humanitarian logistics. This paper shows the challenges involved in achieving several types of coordination in the cluster system. An overly strong focus on the coordination of specialized actors can have a negative impact on the ability to develop efficient and effective supply chains that cover all the basic needs of a beneficiary during a disaster.

6- **Ahmed Khan. (2009)**

"Implementation of Elements of Preparedness: Not-for-profits in the Interrupted Environment of Humanitarian Supply Chain Management"

Purpose: The aim of this study is to address aspects of preparedness, by not-for-profit humanitarian relief organizations, for effectively responding to natural disasters. It asks how not-for-profit organizations, engaged in humanitarian supply chain management, develop capabilities and implement various elements of preparedness.

Design/methodology/approach: The researcher of this study compared between two scenarios. The first scenario: if the humanitarian relief organizations are based in one part

of the world, while the disasters happen in other parts, and the second scenario is if an organization has a deeper local focus.

Findings: The researcher highlights the difficulties in the first scenario, which are

- large distances from expected disaster locations
- difficulties in gaining speedy entry to disaster zones
- Limited knowledge about local conditions and culture.

On the other hand, the researcher mentions the benefits of the second scenario (local fit) according to national organizations experiences, where these organizations that established their presence in the vulnerable communities before a disaster, were able to get easier access to the region. They did this through partnering with local organizations or National Societies. They were thus able to launch effective responses when the time came.

7- **Chandes and Pache´. (2009)**

"Investigating humanitarian logistics issues: from operations management to strategic action"

Purpose: The purpose of this paper is to underline the advantages offered by applying the collective strategy model in the context of humanitarian logistics, enriching the existing benefits that operations management and business logistics techniques have brought to the field. In both man-made and natural disaster relief, humanitarian logistics operations have been hampered by a lack of coordination between actors, which directly affects performance in terms of reactivity and reliability. Adapted collective strategies could offer a solution to this problem.

Design/methodology/approach: The literature review deals with the issue of humanitarian logistics through an operational dimension, followed by a strategic approach. This is rounded out with a case study dealing with the Pisco earthquake in Peru (August 2007), which is based on a participant observation methodological approach.

Findings: The research presented in this paper reveals that a collective action approach has a positive impact on the working of humanitarian supply chains. If a technical approach,

particularly in matters of operations management (optimization of transportation, location of regional warehouses, etc.) is essential to better manages humanitarian logistics, it must also be in the service of a collective strategy, notably in the pre-positioning of supplies and the coordination of relief efforts.

8- Schulz &Heigh. (2009)

"Logistics performance management in action within a humanitarian organization",

Purpose: The purpose of this paper is to share the design and testing procedure of the

''Development Indicator Tool'' – a tool developed by the International Federation of Red Cross and Red Crescent Societies (IFRC) to guide and monitor the continuous performance improvement of their (regional) logistics unit(s) on a daily basis.

Design/methodology/approach: The paper follows a descriptive approach. It starts with a description of the situational background of the IFRC. In a second step, it briefly describes the theoretical concepts of continuous improvement and of the Balanced Scorecard and highlights the extension of existing literature on performance measurement in general and humanitarian logistics in particular.

Next, the paper summarizes the objectives of the tool and describes the four development phases as well as the tool design including the dashboard and the selected indicators. It concludes with indications on key success factors, challenges met along the way, expected impacts and the future perspective.

Findings: The process of designing and implementing (tools for) a performance measurement and management system can and should be kept simple. Important for the success of the process is the integration of key stakeholders throughout the entire process as well as the simplicity and user-friendliness of tools and system.

9- **Whiting & O¨ stro¨m. (2009)**

"Advocacy to promote logistics in humanitarian aid"

Purpose: This paper aims to examine some of the more effective means of advocacy focused on promoting the unique role of logistics in the delivery of much needed humanitarian aid and outlines some of the challenges as experienced in the outcomes of recent disasters such as the Indian Ocean Tsunami 2004.

Design/methodology/approach: The paper is drawn from the limited literature available in humanitarian relief, the researchers' firsthand experience, input from colleagues in humanitarian logistics performance measures, attitudes in both the private sector and the humanitarian aid sector and other management factors to discuss how the role of logistics is still undervalued and under resourced.

Findings: Strategic investment in logistics for humanitarian aid will impact positively on the delivery of humanitarian aid. Efforts are being made by NGOs, United Nations Agencies and to a lesser extent the donor community, but these efforts are fragmented.

Note: the researchers are considered experts in logistics. Whiting works at (Global Logistics and Supply Chain Solutions Ltd, Saltash, Cornwall, UK), and O¨ stro¨m. works at (Interconsult and Partners, Woburn Sands, Bucks, UK)

10- **Kova´cs & Spens. (2009)**

"Identifying challenges in humanitarian logistics"

Purpose: The purpose of this paper is to identify the challenges of humanitarian logisticians with respect to different types of disasters, phases of disaster relief and the type of humanitarian organization. A conceptual model is constructed that serves as a basis to identify these challenges.

Design/methodology/approach: The paper took Ghana as a case study.Structured and unstructured data are collected in a workshop with humanitarian logisticians, and complemented with presentations of humanitarian logisticians, as they perceive their challenges.

Disaster statistics and country profiles are used as secondary data.

Findings: The paper shows that some disasters defy a categorization between natural and man-made causes. Challenges of humanitarian logisticians depend not only on the disaster at hand, but also on the local presence of their organization. The utmost challenge of humanitarian logisticians is to find collaboration partners. Therefore, the researcher proposes a categorization of challenges according to their stakeholder environment. This helps to identify not only the challenge at hand, but also which other organizations share the same challenge, and which collaboration partners would be needed to mitigate it. Generally, it is important to know which other organizations are "out there" and what they are doing in order to coordinate relief and establish standard procedures. Most challenges are shared across logisticians from similar types of organizations; thus, strategic alliances will help to mitigate them.

11- **Maon, Lindgreen & Vanhamme. (2009)**

"Developing supply chains in disaster relief operations through cross-sector socially oriented collaborations: a theoretical model"

Purpose: This study seeks to provide insights into corporate achievements in supply chain management (SCM) and logistics management and to detail how they might help disaster agencies. The authors aim to highlight and identify current practices, particularities, and challenges in disaster relief supply chains.

Design/methodology/approach: Both supply chain management (SCM) and logistics management literature and examples drawn from real-life cases inform the development of the theoretical model.

Findings: The theoretical, dual-cycle model that focuses on the key missions of disaster relief agencies are, first, prevention and planning and, second, response and recovery. Three major contributions are offered: a concise representation of current practices and particularities of disaster relief supply chains compared with commercial SCM; challenges and barriers to the development of more efficient SCM practices, classified into learning, strategizing, and coordinating and measurement issues; and a simple, functional model for

understanding how collaborations between corporations and disaster relief agencies might help relief agencies meet SCM challenges.

12- **Balcik and others (2009)**

"Coordination in humanitarian relief chains: Practices, challenges and opportunities"

Purpose: The aim of this paper is to provide an overview of coordination in the relief sector and explore the coordination issues associated with the relief chain and logistics operations.

Design/methodology/approach: In this paper, the first step was examining the current and emerging practices in relief chain coordination. The focus was on typical coordination mechanisms observed among the actors in the global relief chain before and during the initial response phase of disaster response. Of particular interest are the coordination activities of international relief organizations (such as non- governmental organizations (NGOs), the International Federation of Red Cross and Red Crescent Societies (IFRC), the United Nations (UN) family agencies), and other major actors operating within the global relief chain (such as donors, private sector companies, local governments, militaries, and local relief organizations).

Findings: Achieving coordination in the relief sector is acknowledged as critical to the dual and intertwined relief goals of saving lives and using limited resources efficiently. However, there are challenges in the relief sector that hinder coordination efforts, but there are also opportunities to expand and enhance coordination mechanisms that are currently in use to maximize their benefits. Sophisticated coordination mechanisms, such as in commercial supply chain management, require further inquiry to develop new and innovative ways to define relationships and contracts in ways that support the relief mission, while fairly distributing risks and benefits to all participants.

13- **Tomasini & Wassenhove. (2009)**

"From preparedness to partnerships: case study research on humanitarian logistics"

Purpose: The aim of this paper is to discuss the evolution of supply chain management in disaster relief and the role of new players like the private sector.

Design/methodology/approach: This paper first describes the characteristics of the humanitarian supply chain to differentiate it from the commercial supply chain. Then it illustrates with cases and examples the paper agenda (i.e., preparedness, response, and collaboration). Finally, it discusses opportunities for the private and humanitarian sector to work together towards social improvements.

Findings: The paper highlights the important role of operations management in the improvement of disaster response; also it will help in raising the profile and understanding of supply chain management in the organizations.

The researchers highlight the differences between commercial and humanitarian supply chains in their literature. That leads researchers to focus on three main areas: **preparedness, response, and collaboration** on their research.

In the area of disaster preparedness, the researchers concentrated on what organizations can do between disasters in order to improve their response when disaster strikes.

In the area of disaster response, the researchers focused on coordination issues that emerge when multiple actors need to interact to respond to an emergency

And finally in the area of collaboration the researchers took a broader approach considering the different ways in which actors can contribute to emergency response operations.

14- **Tomasini, Stapleton & Wassenhove. (2009)**

"The Challenges of Matching Private Sector Donations to Humanitarian Needs and the Role of Brokers"

Purpose: This paper tried to define the ultimate way in which corporate donations of cash satisfy the most humanitarian needs.

Design/methodology/approach: This paper has four objectives:

First, it highlights some of the challenges affecting humanitarian organizations in the wake of a disaster as they appeal for and try to manage donations.

Second, it outlines the potential donations corporate donors can offer to humanitarian organizations and identifies cash as arguably the most practical form of donation.

Third, it presents the key questions facing corporate donors and recipient organizations regarding cash donations.

Finally, it examines the role of intermediary organizations in providing solutions to many of these questions, and suggests avenues for further research on this issue. Intermediary organizations are referred to in study as brokers.

Findings: The main findings of this paper

1. Describe cash as the most common and the most valuable form of corporate donations to humanitarian organizations, despite the fact that it is associated with some challenges.
2. Present a broker organization as the best facilitator in corporate-humanitarian donation process (Reduce time, cost of fundraising, increased transparency, increase visibility of donation pipeline, reduce uncertainty).

15- **Schulz. (2008)**

"Disaster Relief Logistics: Benefits of and Impediments to Horizontal Cooperation"

Purpose: The main aim of this study is to identify why should and how could humanitarian organizations cooperate with each other in the area of disaster relief logistics?

Design/methodology/approach: This study originates in practical problems facing the disaster relief community, and not in pure scientific discussion. Thus, it follows a research approach, which interprets the theory of business management as a clearly application-oriented social science that contributes to solution design for practical problems. A combination of deductive and abductive research is therefore chosen. While a deductive

research approach develops propositions from existing theory and tests them in the real world, an abductive approach consists of a "continuous interplay between theory and empirical observation"

Findings: The researcher answers the main research question:"Why should and how could humanitarian organizations cooperate with each other in the area of disaster response logistics?" by assign all the humanitarian organizations consolidate logistics infrastructure and supply chains to one service provider, by employing one organization as logistics service provider for all the others.

Then the researcher illustrates the following benefits as the result of horizontal cooperation between humanitarian organizations:

- Cost reduction
- Quality improvement through the consolidation of purchasing volume
- Lead time reduction through the streamlining of processes,
- Response time reduction through an extension of the warehouse network.

Also the researcher tries to determine the possible existing impediments which mainly exist with the private sector. Additional impediments can be observed within the cases: conflicting mission statements and principles; and a lack of available resources.

The researcher suggests three categories: contract design, performance measurement, and additional elements as main tool for reducing those impediments.

Finally, the researcher suggests adopting commercial service providers by a commercial company in order to improve the selected cooperation model, depending on the hypothesis that commercial service providers are able to operate in a more cost-efficient way than public or humanitarian service provider.

16- **Rao. (2007)**

"Issues and Challenges of Humanitarian Logistics in China"

Purpose: The main aim of this study is to identify the issues and challenges inherent in the humanitarian logistics practice performed by NGOs in China in conducting humanitarian relief operations prior to and after disasters strike.

Design/methodology/approach: Visits and interviews have been given to relevant organizations and bodies in order to collecting primary data for developing case studies that will form as backbones to support the research through and will allow for conclusions to be drawn upon.

The researcher selected two organizations to interview them trying to determine the 'what' and 'why' behind the issues and challenges of humanitarian logistics in China.

Findings:

The researcher determines the main issues and challenges in the findings of the research as follows:

The main issues:

- Speed is a crucial issue in humanitarian logistics; it often outweighs the issue of costing which is perceived crucial in commercial logistics
- Humanitarian logistics always face the unknown and uncertainty of 'where' the disaster affected area, and 'when', 'what' and 'how much' aid should be delivered to the victims
- When multiple natural disasters occur at the same time, prioritization of limited resources is a crucial decision
- Collaboration and coordination with NGOs, the Government, the military and even some private sector businesses are important to streamline the relief operation
- In general, lack of collaboration and coordination is always seen in relief operations
- The supply chain for humanitarian relief operations are often unstable.

The main challenges were

- Shortage of logistics experts in the field
- Manual supply chain process
- Inadequate assessment and planning
- Limited collaboration and coordination

17- **Van der Laan, de Brito, Vermaesen . (2007)**

"Logistics Information and Knowledge Management Issues in Humanitarian Aid Organizations"

Purpose: The main aim of this paper is to outline the role of logistics information and knowledge management in humanitarian aid organizations.

Design/methodology/approach: The methodology combines a critical review of the relevant literature and a case study. The case study was conducted during a period of about nine months; there were three main inputs for the case study: 1) historical reviews and a close involvement with the organization; 2) questionnaires, and 3) interviews.

Findings: Via the extensive case study the researchers conducted, it appears that logistics information and logistics knowledge creation is hampered by the lack of structure and coherency in the information sources that are provided by the logistics department to the field.

The researchers suggested two strategies to manage knowledge processes:

1. Codification (storing knowledge in documents such as reports, books and databases)

2. Personalization (stimulating communication and face-to-face contacts)

The main idea for these two strategies is to create a centralized system in order to locate information in the Logistics Website, a Content Management System (CMS). The CMS will overcome problem of logistics information being stored on different media and in different places

Finally the researchers give detailed suggestions to overcome the expected obstacles which may occur when applying the suggested strategies.

18- **Kova´cs and Spens. (2007)**

"Humanitarian logistics in disaster relief operations"

Purpose: This paper aims to further the understanding of planning and carrying out logistics operations in disaster relief.

Design/methodology/approach: Topical literature review of academic and practitioner journals.

Findings: the paper creates a framework distinguishing between actors, phases, and logistical processes of disaster relief. Drawing parallels of humanitarian logistics and business logistics, the paper discovers and describes the unique characteristics of humanitarian logistics while recognizing the need of humanitarian logistics to learn from business logistics.

19- **(James) Lu, Pettit, Beresford. (2006)**

"Critical Success Factors for Emergency Relief Logistics"

Purpose: The main aim of this paper is to discuss the basis of work undertaken to determine and analyze the Critical Success Factors (CSFs) necessary for ensuring that emergency relief logistics are both appropriate and effective.

Design/methodology/approach: The paper identifies, firstly, the factors which are most important to Humanitarian Aid and Emergency Relief organizations in providing an effective response in crisis situations and, secondly, the variables which contribute to the effectiveness of each.

Findings: The researchers combine between the opinion that considers Strategic Planning, Inventory Management, Transportation Planning, Capacity Planning, and Information Management as five key functions critical to a small logistics company.

The other opinion adds to the previous functions Human Resource Management (HRM), Computer Based Technology (Information Management), Resource Management

(Inventory Management), Continuous Improvement, Supplier Relations (Collaboration), Just in-Time Methodology and Technology Utilization.

20- **Russell. (2005)**

"The Humanitarian Relief Supply Chain: Analysis of the 2004 South East Asia Earthquake and Tsunami"

Purpose: The main aim of this study is to investigate the humanitarian relief supply chain.

Design/methodology/approach: The study depended on the 2004 East Asia Earthquake and Tsunami as a backdrop to investigate the humanitarian relief supply chain. The methodology employed by this thesis is conducting a survey to collect data from organizations involved in Tsunami relief operations; the survey was not designed to allow for statistical analysis of the responses.

Findings: The researcher concludes that relief efforts need more attention on the following areas: assessment, collaboration, human resources, and supply chain analysis.

Assessment: Organizations responding to the survey were unable to specify accurately what was needed for the relief effort. Poor and damaged infrastructure, the lack of a pre-existing presence in separatist regions, and the limited availability of local and trained staff to perform the assessment negatively impacted the organizations ability to produce better-quality information from the affected areas.

Collaboration: Coordination worked well for immediate needs, but was not being used for planning sustained needs.

Human resources: The scarcity of trained and experienced logistics personnel led to significant organizational reassignments. With no local capacity or staff, organizations pulled logistics people from other programs and disasters. This possibly reduced the effectiveness of relief efforts that lost personnel. Further, organizations may have ineffective processes to develop logistics skills in local staff.

Supply Chain Analysis: Supply chain processes are in place, but they are primarily supported by manual or Excel-based systems.

21- **Hale and Moberg. (2005)**

"Improving supply chain disaster preparedness, a decision process for secure site location"

Purpose: Terrorist attacks, natural disasters, and regional power outages from the past several years have all highlighted the low levels of disaster preparedness that exists at many firms. Supply chain disruptions caused by external events can have a significant financial and operational impact on firms not properly prepared. Therefore, improving disaster preparedness in supply chains is critical.

One critical component of disaster management planning in supply chains is the storage of emergency supplies, equipment, and vital documents that will be needed in times of crisis. The goal of this paper is to propose a decision process for establishing an efficient network of secure storage facilities that can effectively support multiple supply chain facilities.

Design/methodology/approach: The researchers use the five-stage disaster management process for supply chains as the framework for a proposed decision process for secure site locations. The decision process combines recommendations from FEMA's (Federal Emergency Management Association) Disaster Management Guide with a set cover location model from the location sciences field to help establish a network of secure site locations.

Findings: Storing emergency supplies at every supply chain facility can be cost-prohibitive. In addition, gaining access to emergency supplies that are stored at each facility may be prevented by some external events, such as fires or hurricanes, because items stored on-site are destroyed or are inaccessible. Therefore, the proposed secure site selection process can balance operational effectiveness and cost-efficiency by identifying the minimum number and possible locations of off-site storage facilities.

22- **Rodman. (2004)**

"SUPPLY CHAIN MANAGEMENT IN HUMANITARIAN RELIEF LOGISTICS"

Purpose: The main aim of this study is to construct an easily understood framework of solutions to logistics problems encountered by humanitarian organizations.

Design/methodology/approach: The principle of Grounded Theory was used to identify common elements from the private and humanitarian sectors. The results build the groundwork for further analysis, experimentation, operational practice, and eventual institutionalization.

Findings: The researcher outlines the barriers facing humanitarian organizations in:

- Unpredictable demand (Uncertainty)
- Degraded infrastructure
- Communications
- Difficulties with personnel (Human Resources problems)
- Funding issues.
- Other Barriers (cultural and religious prohibition)

The researcher proposed methods for overcoming the aforementioned barriers, the methods mainly based on Supply Chain Management (SCM) methods

The researcher assumes if supply chain management is used to efficiently integrate suppliers, manufacturers, warehouses, and outlets, the services or products are produced and distributed at the right quantities, to the right locations, at the right time, in order to minimize system wide costs while satisfying service level requirements.

This means satisfying as much demand for relief services and materials as possible.

Then, the researcher tests the role of SCM technique plays in each barrier, and according to these tests, he addresses potential solutions for each barrier.

1.10 Comments on Previous Studies:

Previous studies negotiated different topics related to humanitarian logistics, more than one study focused on studying the challenges facing humanitarian logistics such as Kova´cs and Spens identified challenges in humanitarian logistics and Rao defined Issues and Challenges of Humanitarian Logistics in China. Tomasini, Stapleton, and Wassenhove studied the challenges of matching private sector donations to humanitarian needs.

Other studies examined the critical success factors for relief logistics. Russell analyzed the 2004 South East Asia Earthquake and Tsunami from the side of humanitarian relief supply chain, Bilal studied the role of supply chain management in humanitarian logistics during natural disaster, Schulz &Heigh studied Logistics performance management in action within a humanitarian organization, Kova´cs and Spens discussed trends and developments in humanitarian logistics, Ahmed Khan studied the implementation of elements of preparedness in the interrupted environment of humanitarian supply chain management, and Ayongwa studied the humanitarian logistics roles to attain a strategic fit in civil-military relations.

Other studies focused on studying the dimensions of humanitarian logistics, such Van der Laan and Vermaesen who talked about Logistics Information and Knowledge Management Issues in Humanitarian Aid Organizations. Jahre studied the Coordination in humanitarian logistics through clusters, Hale and Moberg studied how to improve the supply chain disaster preparedness, Tomasinia and Wassenhoveb studied how to start from preparedness till reach partnerships, Schulz. studied the benefits of and impediments to horizontal cooperation", Tatham and Spens studied the humanitarian logistics knowledge management system, and Balcik and others focused on studying coordination in humanitarian relief chains.

From the above mentioned previous studies, it is noted that all of them consider logistics a very important function in the humanitarian relief process. Furthermore, they identified the weakness in applying some of very important steps such as coordination, since most of humanitarian organizations compete with each other which gives unsuitable environment for cooperation. Most of the previous studies talk about lack of preparedness in most of humanitarian organizations, particularly that all disasters came abruptly. Another issue which was examined by researchers is applying all logistics steps manually and not using information systema or computer software during relief process. That is why some studies talk about the importance of using information system. /other studies created models to be used as database in logistics efforts during relief process.

What distinguishes this study is that it is being conducted on Gaza NGOs; whereas, most of the existing studies are international. Therefore this study is the first detailed study devoted specifically to the humanitarian logistics in Gaza Strip.

What also distinguishes this study is studying all the supply chain steps for humanitarian logistics, unlike most of the previous studies that just studied one or more steps of the supply chain for the humanitarian logistics.

Chapter2

Logistics & Humanitarian Logistics Management

2.1 Introduction:

This chapter gives an overview of logistics, supply chain management and humanitarian logistics supply chain steps, and it also gives a general background about Gaza NGOs.

2.2 Logistics:

The Council of Logistics Management (CLM), which is one of the leading professional organizations for logistics personnel, defines logistics as that part of the supply chain process that plans, implements, and controls the efficient, effective flow and storage of goods, services, and related information from the point of origin to the point of consumption to meet customers' requirements. (Gibson, et al, 1998, P: 2)

"Logistics (business definition) is defined as a business planning framework for the management of material, service, information and capital flows. It includes the increasingly complex information, communication and control systems required in today's business environment". (Logistics world, 2012).

"Logistics is defined as the planning, organization, and controling of all activities in the material flow, from raw material until final consumption and reverse flows of the manufactured product, with the aim of satisfying the customer's and other interest party's needs and wishes i.e., to provide a good customer service, low cost, low tied-up capital and small environmental consequences" (Mahesh, et al, 2009).

" Logistics is defined as those activities that relate to receiving the right product or service in the right quantity, in the right quality, in the right place, at the right time, delivering to the right customer, and doing this at the right cost (The seven R's)" (Mahesh, et al, 2009).

"Logistics is defined as the flow of material, information, and money between consumers and supplier" (Frazelle, 2002, P: 5).

The major key logistic activities required to facilitate the flow of a product from point of origin to point of consumption is listed below, and maybe considered part of the overall logistics process.

- Customer service
- Demand forecasting/planning
- Inventory management
- Material handling
- Order processing
- Packaging
- Parts and service support
- Plant and warehouse site selection
- Procurement
- Return goods handling
- Reverse logistics
- Traffic and transportation
- Warehousing and storage. (Lambert, et al, 1998, p: 15-17)

The goal of these logistics activities is to satisfy the needs of the ultimate consumer, logistics managers ensure that...the right product, in the right quantity, in the right condition, is delivered to the right customer at the right place, at the right time, at the right cost. (Gibson, at al, 1998, P: 2)

2.3 Logistics trends and challenges

Today, logistics plays a key role in the economy, and the market volume of logistics has already reached a substantial level in many economies as a result. Companies that are successful worldwide have long recognized the critical role logistics plays in creating

added value. In addition, a close focus on the customer is a critical factor for companies working together in a supply chain. (DHL, 2012)

In the years ahead, the significance of global logistics markets will continue to increase in response to economic and social conditions. The topic of megatrends has now gained a prominent place on the business agenda, and this development will have a further impact on logistics. These megatrends include increasing globalization, a development that is related to the internationalization of procurement, production and sales as well as the evolution from a manufacturing-based society to a service society. Other aspects include shortened product life cycles and growing environmental concerns. (DHL, 2012)

2.4 Logistics importance

- Logistics has a huge impact on the domestic and global economy.
- Logistics is of critical importance to human survival.
- Logistics greatly impacts our quality of life.
- Logistics affects our success in a wide variety of endeavors.(Gibson, et al, 1998, P: 3)

2.5 The role of logistics in the organization

Logistics is critical to the success of every organization. Once considered an important, behind-the-scenes operational activity, logistics is now recognized as a strategic tool for creating customer value and loyalty. Companies like Wal-Mart, Coca Cola, and Nike attribute a great deal of their success to their global logistics systems. They realize that integrating activities within the organization and across the logistics pipeline, building strong relationships with product suppliers, and working with customer. (Gibson, et al, 1998, P: 4)

2.6 The role of logistics in economy

Logistics plays a key role in the economy in two significant ways:

First, logistics is one of the major expenditures for businesses, thereby affecting and being affected by other economic activities

Second, logistics supports the movement and flow of many economic transactions; it is an important activity in facilitating the sale of virtually all goods and services.

In recent years, effective logistics management has been organized as a key opportunity to improve both the profitability and competitive performance of firms. (Lambert, et al, 1998, p: 10)

2.7 Supply Chain Management:

Definitions:

Supply chain: Supply chain refers to the flow of materials, information, payments, and services from raw materials suppliers, through factories and warehouses, to the end customers.

A supply chain also includes the organizations and processes that create and deliver products, information, and services to the end customers. It is a network of activities that delivers a finished product or service to the customer. It includes many tasks such as purchasing, payment flow, materials handling, production planning and control, logistics and warehousing, inventory control, and distribution and delivery. (Larson & Halldorsson, 2003, P: 2).

Supply Chain: is the movement of materials as they flow from their source to the end customer. Supply Chain includes purchasing, manufacturing, warehousing, transportation, customer service; demand planning, supply planning and Supply Chain management. It is made up of the people, activities, information and resources involved in moving a product from its supplier to customer. (Supply Chain Definitions, 2012)

Supply Chain Management: The function of supply chain management (SCM) is to plan, organize, and coordinate all of the supply chain's activities. Today, the concept of SCM

refers to a total systems approach to managing the entire supply chain. (Larson and Halldorsson, 2003, P: 3).

Supply chain management (SCM) is a set of approaches utilized to efficiently integrate suppliers, manufacturers, warehouses, and stores, so that merchandise is produced and distributed at the right quantities, to the right locations, and at the right time, in order to minimize system wide costs while satisfying service level requirements. (Handfield, Nichols, 1999, P: 1)

Supply Chain Management is a set of synchronized decisions and activities utilized to efficiently integrate suppliers, manufacturers, warehouses, transporters, retailers, and customers so that the right product or service is distributed at the right quantities, to the right locations, and at the right time, in order to minimize system-wide costs while satisfying customer service level requirements. The objective of Supply Chain Management (SCM) is to achieve sustainable competitive advantage. (Ling Li, 2007, P: 5)

In a typical supply chain, raw materials are procured and items are produced at one or more factories, shipped to warehouses for intermediate storage and then shipped to retailers or customers.

People involved in business define the term supply chain in a way that each definition would reflect the nature of the business and the inputs and outputs produced.

For some, supply chain is related to purchasing and procurement; to others it is warehousing, distribution and transportation. Yet for others it would be sources of capital and labor. (Basu & Wright, 2008, P-4)

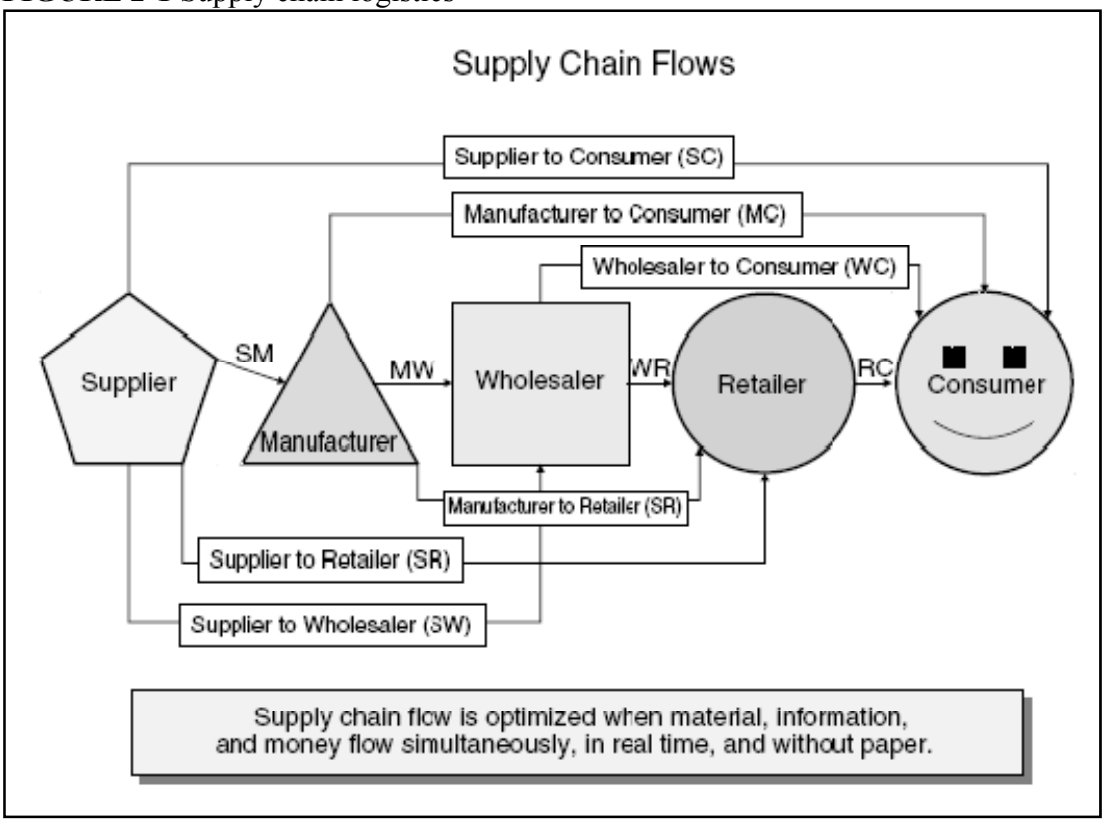
Michael Quayle in his book "Purchasing and Supply Chain Management: Strategies and Realities" defines the supply chain alternatively as the following:

- Supply chain is the process that seeks to provide for the management and coordination of all activities from sourcing and acquisition, through production, where appropriate, and through distribution channels to the customer.

- The goal of supply chain is the creation of competitive advantage through the simultaneous achievement of high customer service levels, optimum investment, and value for money.
- The detailed organization and implementation of a plan or operation.
- A term that was originally used in the military sphere to describe the organizing and moving of troops and equipment. It is now applied to any detailed planning process in an organization, which entails the distribution or redistribution of resources. (Quayle, 2006, P-106)

Edward Frazelle defines Supply chain logistics (see Figure 2-1) as the flow of material, information, and money between corporations (interwork station, inter facility, inter corporate, and intra chain). (Frazelle, 2002, P: 8).

FIGURE 2-1 Supply chain logistics



Source: Frazelle Edward, "Supply Chain Strategy, The Logistics of Supply Chain Management", 2002, McGraw-Hill

2.8 The difference between "logistics" and "supply chain"

The Council of Logistics Management has recently changed its name to Council of Supply Chain Management Professionals. This indicates that logistics management is seen as part of the supply chain process. The previous council defined logistics management as: "The process of planning, implementing and controlling the efficient, cost effective flow and storage of raw materials, in-process inventory, finished goods, and related information from point of origin to point of consumption for the purpose of conforming to customer requirement".

Their new definition is "Supply chain management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third party service providers and customers. In essence, supply chain management integrates supply and demand management within and across companies". (Council of Supply Chain Management Professionals, 2007)

Edward Frazelle distinguish the two terms by explaining that supply chain is the network of facilities (warehouses, factories, terminals, ports, stores, and homes), vehicles (trucks, trains, planes, and ocean vessels), and logistics information systems (LIS) connected by an enterprise's supplier's suppliers and its customer's customers.

Logistics is what happens in the supply chain. Logistics activities (customer response, inventory management, supply, transportation, and warehousing) connect and activate the objects in the supply chain. He also summarizes all these operations by defining logistics as the game played in the supply chain arena. (Frazelle, 2002, P: 8).

Another difference between logistics and supply chain management appears in these definitions:

Logistics includes all activities to move product and information to, from, and between members of a supply chain.

The supply chain provides a framework for businesses and their suppliers that join to bring goods, services, and information efficiently and effectively to ultimate customers. (Bowersox, et al, 2002, Preface)

Supply chain (sometimes called the value chain or demand chain) management consists of firms collaborating to leverage strategic positioning and to improve operating efficiency. For each firm involved, the supply chain relationship reflects a strategic choice. A supply chain strategy is a channel arrangement based on acknowledged dependency and relationship management. Supply chain operations require managerial processes that span across functional areas within individual firms and link trading partners and customers across organizational boundaries.

Logistics, in contrast to supply chain management, is the work required to move and position inventory throughout supply chain. As such, logistics is a subset of and occurs within the broader framework of supply chain. Logistics is the process that creates value by timing and positioning inventory; it is the combination of a firm's order management, inventory, transportation, warehousing, materials handling, and packaging as integrated throughout a facility network. Integrated logistics serves to link and synchronize the overall supply chain as a continuous process and is essential for effective supply chain connectivity. (Bowersox, etal, 2002, P: 4)

Logistics can be defined as one department responsible for organizing products and services offered by one company or establishment. Supply chain management, on the other hand, is more concerned with keeping supplies intact and ensuring that demands are adequately met. This is just one of the differences between the two. (DifferencesBetween, logistics, 2012)

Another identified difference between logistics and supply chain management is their function. The concept of logistics is employed to basically deal with how supplies are used, stored and restored. Logistics exists to keep the balance between marketing and production of goods, products and services offered by certain business firms and establishments. Supply chain management, on the contrary, is a technique that functions by ensuring everything in business works according to what is being planned and agreed upon by the

authorities running the business. More so, supply chain management sees that all concerns about the materials involved in business are addressed and appropriately monitored. (DifferencesBetween, logistics, 2012),

It could be concluded that in a manufacture and supply organization, logistics and supply chain management are synonymous.

If one is inclined to separate the physical movement of logistics in a service organization, we can see that there is a fine border between logistics and supply chain management in the service sector. (Basu & Wright, 2008, P-9)

2.9 Logistics & Emergencies

In emergency relief operations, logistics are required to support the organization and implementation of response operations in order to ensure their timeliness and efficiency. Mobilizing staff, equipment and goods of humanitarian assistance organizations, and evacuating the injured or resettlement of those directly affected by the disaster requires a logistics system to maximize effectiveness. (World Health Organization, 2001)

Research conducted by Fritz Institute suggests that logistics is central to relief for several reasons:

- Logistics serves as a bridge between disaster preparedness and response through the establishment of effective procurement procedures, supplier relationships, prepositioned stock and knowledge of local transport conditions.
- The speed of response for major humanitarian programs involving health, food, shelter, water, and sanitation interventions is dependent on the ability of logisticians to procure, transport and receive supplies at the site of a humanitarian relief effort.
- Since the logistics department is usually involved in every stage of a relief effort, it is a rich repository of data that can be analyzed to provide post-event learning.

Logistics data encompasses all aspects of execution, such as the effectiveness of suppliers and transportation providers, the cost and timeliness of relief efforts, the appropriateness of donated goods and information flows between the field, headquarters and donors. In a relief

effort, logistics is the nexus of information for donors, operations managers, finance departments and field relief activities. (Thomas, 2003)

2.10 Humanitarian Logistics:

Humanitarian logistics is "the process of planning, implementing and controlling the efficient, cost-effective flow and storage of goods and materials, as well as related information, from the point of origin to the point of consumption for the purpose of alleviating the suffering of vulnerable people". (Thomas & Kopczak, 2005)

Van Wassenhove (2006) define humanitarian logistics as "The process and systems involved in mobilizing people, resources, skills and knowledge to help vulnerable people affected by disaster.''

2.11 Humanitarian logistics in disaster relief operations

Logistics is central to disaster relief; generally, it is one of the most expensive parts of a relief effort.

So lights must be highlighted on disaster conception since disasters frame the environments where humanitarian logistics is functioning:

2.12 Disaster

2.12.1. Definition:

The term disaster is derived from the Latin roots dis- and astro, meaning "away from the stars" or, in other words, an event to be blamed on an unfortunate astrological configuration. (Coppola, 2007, P: 25)

Disasters occur when a hazard risk is realized; Hazards are events or physical conditions that have the *potential* to cause fatalities, injuries, property damage, infrastructure damage, and agricultural loss, damage to environment, interruption of business, or other types of harm or loss. (Coppola, 2007, P: 24)

EM_DAT or International Emergency Disasters Data Base consider the definition of disaster as: a situation or event which overwhelms local capacity necessitating a request to national or international level for external assistance (EM-DAT, 2012).

UN/ISDR (United Nations International Strategy for Disaster Reduction) define it as "a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources" (Source: UN/ISDR 2012).

2.12.2. Disaster Category:

Wassenhove categorized disasters according to their causes (natural versus technological or manmade), and speed of occurrence (sudden-onset versus slow-onset). The resulting four categories are shown with examples in Table 2-1.

Table2.1: Disaster categories

	Natural	**Man-made**
Sudden-onset	Earthquake Hurricane Tornadoes	Terrorist Attack Coup d'Etat Chemical leak
Slow-onset	Famine Drought Poverty	Political Crisis Refugee Crisis

Source: (Van Wassenhove, 2006, P. 476)

Coppola in his book categorized disasters as "sudden onset" or "creeping":

- Sudden-onset disasters often happen with little or no warning, and most of their damaging effects are sustained within hours or days, Examples include earthquakes, tsunamis, volcanoes, landslides, tornadoes, and floods.
- Creeping disasters occur when the ability of response agencies to support people's needs degrades over weeks or months, and they can persist for months or years once discovered. Examples are drought, famine, soil salination, the AIDS epidemic, and erosion. (Coppola, 2007, P: 25)

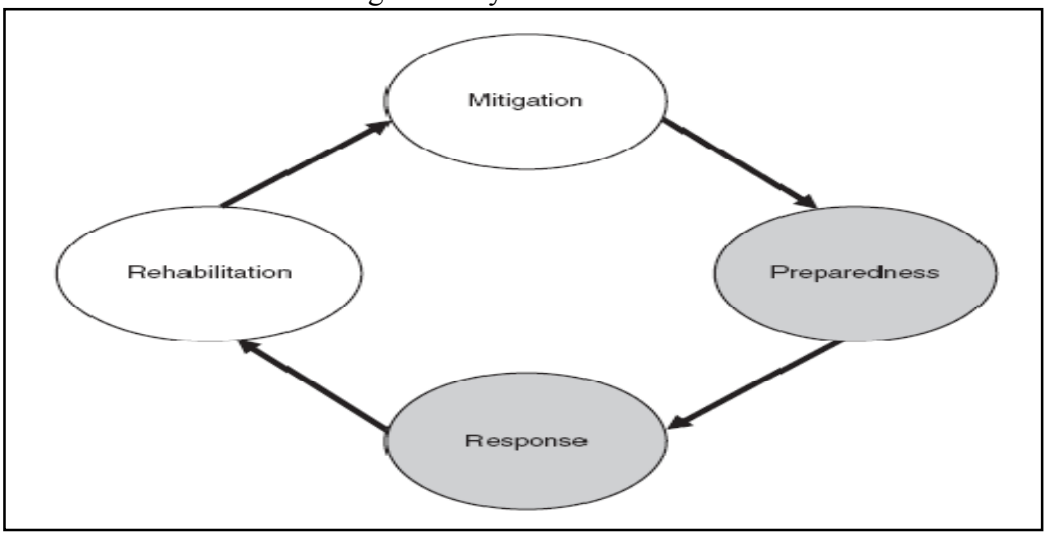
2.12.3. The Disaster Management Cycle

The full cycle of disaster management includes four steps:

Mitigation, Preparedness, Response, Rehabilitation

- **Mitigation:** Mitigation is defined as "sustained action that reduces or eliminates long-term risk to people and property from natural hazards and their effects.
- **Preparedness:** Preparedness takes the form of plans or procedures designed to save lives and to minimize damage when an emergency occurs. Planning, training, and disaster drills are the essential elements of preparedness. These activities ensure that when a disaster strikes, emergency managers will be able to provide the best response possible.
- **Response:** Response is defined as the actions taken to save lives and prevent further damage in a disaster or emergency situation. Response is putting preparedness plans into action. Response activities may include damage assessment, search and rescue, fire fighting, and sheltering victims.
- **Recovery:** Recovery is defined as the actions taken to return the community to a normal condition following a disaster. Repairing, replacing, or rebuilding property are examples of recovery. (ACCEM, 2011)

FIGURE 2.2: Disaster Management Cycle



Source: (Tomasini &Wassenhove, 2009, P: 45)

Since the focus of this study is disaster logistics, the concentration will be on the middle of two steps: preparedness and response.

The mitigation and rehabilitation phases fall outside this study scope.

2.12.4. Key Phases of disaster response:

Disaster response must and invariably happens in three or more phases:

Table 2.2: key phases of disaster response

Phase	Needs and Timely Actions	Timeline/remark
Phase-I Acute emergency phase or early recovery	Search and rescue, first aid, disposal of dead bodies and animal carcasses, damage and needs assessment, relief mobilization and distribution, temporary shelter, registration, information management, coordination etc.	1 to 30 days (depending on extent and gravity of disaster) Timely and appropriate response will depend on the preparedness and contingency planning put in place by the Government and NGOs, CBOs and CSOs.
Phase-II Care, maintenance and recovery phase	Food, water, sanitation, health care, psycho-social care, education, livelihoods, training, coordination	The length of this phase will depend on the type of emergency. In floods, this might not exist; while in case of big earthquake, it might be couple of years. This is the phase before affected population can return to normal ways of living. It also called transitional phase.
Phase-III Reconstruction and long term recovery	'Durable solution' for livelihoods, housing, skill building, institution building, coordination etc.	It may take 2 to 5 years to restore the life back to normalcy and establish all the institutions and infrastructure 'better than pre-disaster days'.

Source: (National Disaster Management Guidelines, 2010, P: 34)

2.13 The Scope and Importance of Humanitarian Logistics

In fact, humanitarian logistics is a combination of service and manufacturing, given that it exists to respond to an emergency at a given time. Humanitarian logistics is a service in as much as it provides direct support to people involved in assisting disaster affected populations, as well as the populations themselves; the idea is to optimize the delivery process of a number of products needed to save lives, and then to rebuild destroyed infrastructure. Humanitarian logistics also parallels the manufacturing sector, as the delivery process requires a great deal of material and technological resources, notable in terms of transportation, handling, and warehousing of products. (Chandes& Pache´, 2010)

Humanitarian logistics is essential to aid relief for several reasons:

- It is crucial to the effectiveness and speed of response for major humanitarian programs – it does not matter how good a program is, without the logistic support to deliver it to the right place at the right time, it will fail;
- With procurement and transport included in its function, logistics can be one of the most expensive and critical part of the relief effort;
- Often, the only repository of data can be analyzed to provide post-event learning; and
- Humanitarian logistics activities could be undertaken by armed forces or private sector organizations with resilient and supportive supply chains threatening the humanitarian aid and relief sector as needed. The military has the capability but their support is conditional, and if conditions are met, it is as efficient and welcome as private sector logistics support.(Whiting and Ayala, 2009)

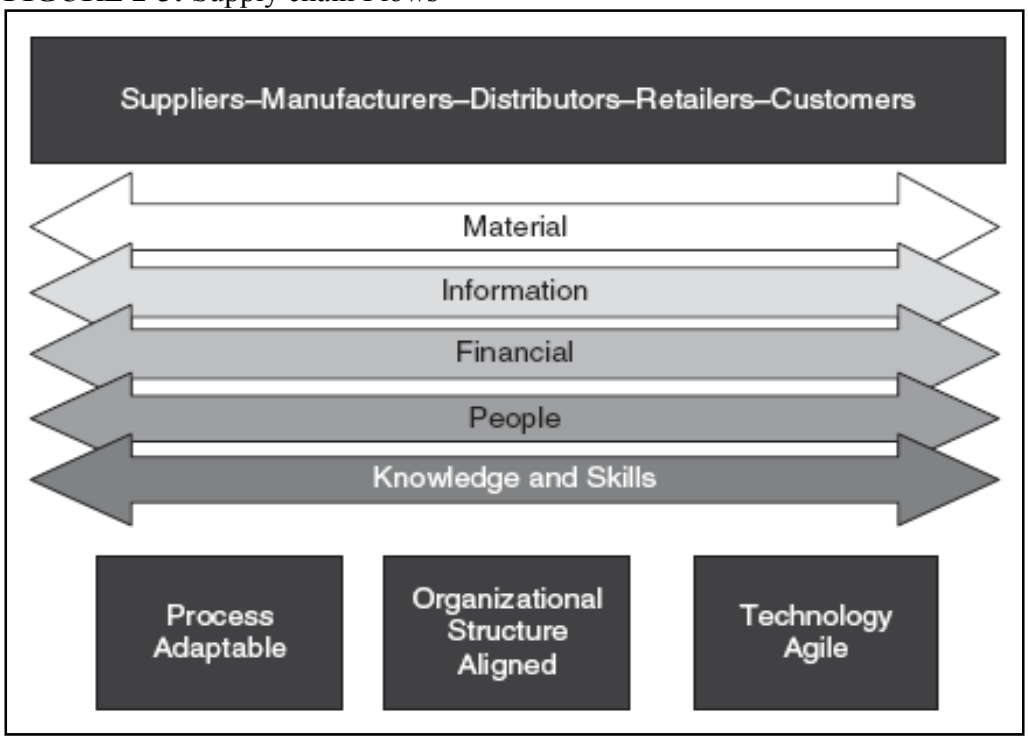
2.14 Humanitarian Supply Chain Management Flows:

In the commercial sector, flows in supply chains are sometimes referred to as the Three Bs: Boxes, Bytes, and Bucks; in the humanitarian supply chain, a fourth and a fifth Bs are added for Bodies and Brains, representing people, and their knowledge and skills.

Types of Flows in Supply Chains:

- Material (Boxes): It represents the physical product flow from suppliers to customers as well as the reverse flow for product returns, servicing, and recycling.
- Information (Bytes): It represents the order transmission and order tracking which coordinates the physical flows.
- Financial (Bucks): It represents the credit terms, payment schedules, and consignment arrangements.
- People (Bodies): This represents all the manpower deployed at each intervention to implement the supply chain.
- Knowledge and Skills (Brains): This is particularly acute in the humanitarian sector since each time a supply chain is deployed in response to a disaster, the required skills need to be quickly reconfigured; that is, every supply chain is new and different (see Figure 2.3). (Tomasini & Wassenhove, 2009, P: 4-5)

FIGURE 2-3: Supply chain Flows



Source: (Tomasini & Wassenhove, 2009, P: 5)

2.15 Characteristics of Humanitarian Supply Chain:

1. **Ambiguous Objectivity**: It is difficult to assess the level of commitment of the different actors and their relationship to one another, as the operations typically rollout with large numbers of stakeholders (donors, agencies, media, and beneficiaries).
2. **Limited Resources:** These are mixed with asymmetric investment of different actors:

   Human: High turnover, heavy physical and emotional demands.

   Capital: Funds are not always available on time.

   Infrastructure: Often damaged by disasters.

3. **High Uncertainty:** It depends on assessments and dynamic changes in supply and demand.
4. **Urgency:** Humanitarian interventions after a disaster are typically characterized by an acute urgency.
5. **Politicized Environment:** Humanitarian operations are highly political throughout the supply chain, from donations to distribution in the field.
6. **SPEED:** Typically, after a sudden-onset disaster, speed of reaction is of the utmost importance in the first 72 hours in order to save maximum human lives. (Tomasini & Wassenhove, 2009, P: 9-12)

2.16 Humanitarian Supply Chain versus Commercial Supply Chain

Table2.3: Summary of the characteristics of the humanitarian and commercial supply chains.

	Commercial supply chain	Humanitarian supply chain
Demand Pattern	Relatively stable, predictable demand patterns. Demand locates from fixed locations in set quantities	Demand is generated from random events that are unpredictable in terms of timing, location, type and size. Demand requirements are estimated after they are needed, based on an

		assessment of disaster characteristics.
Lead Time	Lead time determined by supplier- manufacturer – DC-retailer chain.	Approximately zero lead times requirements (zero time between the occurrence of the demand and the need for the demand), but the actual lead time is still determined by the chain of the material flow.
Distribution network configuration	Well-defined methods for determining the number and locations of distribution centers.	Challenging due to the nature of the unknowns (location, type and size of events, politics and culture). And "last mile" considerations.
Inventory control	Utilizes well-defined methods for determining inventory levels based on lead time, demand, and target customer service levels.	Inventory control is challenging due to the high variations in lead times, demands, and demand locations.
Information system	Generally well-defined, used advanced technology	Information is often unreliable, incomplete or non-existent.
Strategic goals	Typically: to produce high quality products at low cost to maximize profitability and achieve high customer satisfaction	Minimize loss of life and alleviate suffering
Performance measurement system	Traditionally: focused on performance measures, such as maximizing profit or minimizing costs	Primary focus on output performance measures, such as time required to respond to disaster, or ability to meet needs of the disaster (customer satisfaction).
What is "Demand"?	Products	Supplies and people

Source: (Beamon, 2004)

2.17 Humanitarian Logistics Challenges:

Kovacs and Spens classify challenges faces humanitarian relief process to:

1. **Types of disasters :** Different types of disasters can be distinguished according to origin of a disaster being natural or man-made, and its warning time being slow vs. rapid, or sudden-onset disasters

   Identifying the causes for a disaster helps in setting early warning indicators, mitigate the disaster, and prepare for its occurrence.

2. **Phases of disaster relief:** Humanitarian organizations determines which phase of disaster relief they can be involved in, for example:
   - World Food Program (WFP) focusing on immediate response, whereas
   - Food and Agricultural Organization (FAO) is in charge of development aid when it comes to food aid.

   Another mandate-based divide can be seen between natural and man-made disasters. For example:

   - IFRC (International Federation of Red Cross) focuses on disaster relief in (mostly) sudden-onset natural disasters, while
   - International Committee of the Red Cross (ICRC) responds to political and armed conflicts, leading to the presence of both in complex emergencies.
3. **Type of humanitarian organization:** The mandate of a humanitarian organization defines its operational boundaries, including:
   - The items it delivers, for example, Oxfam focuses on water and sanitation, United Nations High Commissioner for Refugees and IFRC focuses on sheltering, and the WFP on food;
   - Which beneficiaries it focuses on, such as the children and their families are focus of both UNICEF and Save the Children. (Kovacs and Spens, 2009)

2.18 Humanitarian Logistics (Core Challenges):

Fritz Institute four-year research suggests that certain common challenges face the field of humanitarian logistics:

1. Lack of Recognition of the Importance of Logistics**:** Logistics and other support services may not have adequate funding for strategic disaster preparedness.

   A related challenge has to do with the fact that most decisions during relief operation are made by program staff that control the budget.

2. Lack of Professional Staff: The majority of people with logistics responsibilities do not have training in logistics. While this is changing in large multilateral organizations, the trend toward the "professionalization" of logistics has been slow to take hold as field experience is considered more valuable than formal training in logistics.

   The operations of international humanitarian organizations expand to simultaneously include multiple geographies; organizations are struggling to find people who can manage the complex supply chains of relief.

3. Inadequate Use of Technology: Survey of logisticians who participated in the Tsunami relief operations showed that only 26% of the respondents had access to any tracking and tracing software.

   The remainder used Excel spreadsheets or manual processes for updates and tracking of goods arriving in the field. Despite this, 58% stated that they received accurate and timely information of what was in the pipeline.

4. Lack of Institutional Learning: The intensity of relief efforts, high turnover and the crisis-oriented nature of disaster response create an environment in which there is a lack of institutional learning.

   Once a crisis is dealt with, aid workers are immediately assigned to the next mission, rather than taking the time needed to reflect and improve.

5. Limited Collaboration: With the emerging competition for funding among major relief organizations, the heads of logistics tend to lack collaboration among each other. Although many of them face the same challenges, they do not meet or talk to one another often, except during an actual disaster response operation. (Thomas & Kopczak, 2005)

2.19 The supply chain for humanitarian relief

Humanitarian supply chain is defined as the network created through the flow of supplies, services, finances and information between donors, beneficiaries, suppliers and different units of humanitarian organizations for the purpose of providing physical aid to beneficiaries (Mentzer , et al. 2001).

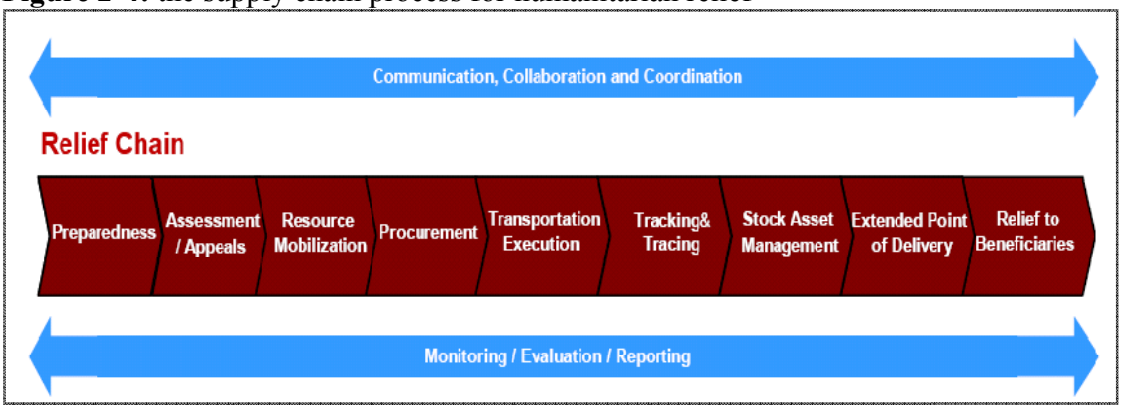
The Fritz Institute defines humanitarian logistics as "The process of planning, implementing, and controlling the efficient, cost-effective flow and storage of goods, and materials, as well as related information, from the point of origin to the point of consumption for the purpose of alleviating suffering of vulnerable people" (Fritz Institute, 2012).

The function encompasses a range of activities, including preparedness, planning, procurement, transport, warehousing, tracking and tracing, and custom clearance (Thomas and Kopczak, 2005).

Humanitarian logistics encompasses a range of activities, including procurement, transport, tracking and tracing, customs clearance, local transportation, warehousing and last mile delivery.(Thomas,2003).

Anisya Thomas, Managing Director of the Fritz Institute, subdivided the humanitarian supply chain into the following process, in preparation for the Humanitarian Logistics Council meeting in Geneva in January, 2003. The process is pictured in Figure 2-4.

Figure 2-4: the supply chain process for humanitarian relief



Source: Relief Chain (Thomas, 2003)

There are nine main steps in the humanitarian supply chain under the umbrella of communication, collaboration and coordination to consider when to respond to a major disaster.

2.19.1 Planning & Preparedness

Disaster planning

It is considered a vital tool to establish an adequate logistics system. This planning should be based on good knowledge of the geographic, social, political, and physical context in which the operations are implemented. Building this system requires an effective implementation and operational plan, one that has to be understood by all parties involved in its application.

This plan should respond to the following questions with clear, detailed answers:

- Which tasks are to be performed? How do they relate to other activities, and what is the sequence for their implementation?
- Who is responsible for these tasks? (Rather than just individuals, sections or departments should be identified).
- Who will be in charge of the global coordination of the logistics system?
- What resources will be necessary? How and where will they be acquired?
- What alternative actions will be implemented in case the defined system breaks down? (Pan-American Health Organization, et al, 2000, P: 13)

Preparedness serves as a temporal connector between the pre-impact and post-impact phases of a disaster event.

Preparedness is typically understood as consisting of measures that enable different units of analysis—individuals, households, organizations, communities, and societies—to respond effectively and recover more quickly when disasters strike.

Preparedness efforts also aim at ensuring that resources necessary for responding effectively in the event of a disaster are in place, and people facing it know how to use these resources. The activities that are commonly associated with disaster preparedness include developing planning processes to ensure readiness, formulating disaster plans, stockpiling resources necessary for effective response, and developing skills and competencies to ensure effective performance of disaster-related tasks.

The concept of disaster preparedness encompasses measures aimed at enhancing life safety when a disaster occurs, such as protective actions during an earthquake, hazardous materials spill, or terrorist attack. It also includes actions designed to enhance the ability to undertake emergency actions in order to protect property and contain disaster damage and disruption, as well as the ability to engage in post-disaster restoration and early recovery activities. (National Research Council, 2006)

Factors to consider in the development of a good logistics plan

- Financial resources availability.
- Staff availability:
- Information management tools:
- External infrastructure available:
- Stocks and movements:
- Transport Information available :
- Distribution, monitoring and evaluation. (Logistics Cluster, Assessment & Planning, 2011),

Disaster preparedness

Logistics preparedness is a key component of any disaster reduction effort. Planning is both necessary and practical, since it is generally possible to foresee types of disasters that may affect a given location and the needs that such disasters will be likely to engender. Logistics preparedness must be based on the vulnerability and resource assessment (IFRC, 2012)

This implies a list of preparation activities that require an important investment of efforts but that will contribute greatly to improve the knowledge of the possible areas of operation, to identify weaknesses, potential needs, and possible solutions and alternatives. ((Pan-American Health Organization, et al, 2000, P: 13)

International Federation of Red Cross and Red Crescent Societies define disaster preparedness as the measures taken to prepare for and reduce the effects of disasters. That is, to predict and—where possible—to prevent them, mitigate their impact on vulnerable populations, and respond to and effectively cope with their consequences. (IFRC/ Introdp.doc, 2000, P: 6)

Disaster preparedness minimizes the adverse effects of a hazard through effective precautionary actions, rehabilitation and recovery to ensure the timely, appropriate and effective organization and delivery of relief and assistance following a disaster. (Kent, 1994).

Disaster preparedness encompasses the following objectives:

- Increasing the efficiency, effectiveness and impact of disaster emergency response mechanisms at the community, national and federation level. This includes:
  - The development and regular testing of warning systems (linked to forecasting systems) and plans for evacuation or other measures to be taken during a disaster
  - Alert period to minimize potential loss of life and physical damage
  - The education and training of officials and the population at risk
  - The training of first-aid and emergency response teams
  - The establishment of emergency response policies, standards, organizational arrangements and operational plans.

- Strengthening community-based disaster preparedness through National Society programs for the community or through direct support of the community's own activity. This could include educating, preparing and supporting local populations and communities in their everyday efforts to reduce risks and prepare their own local response mechanisms to address disaster emergency situations.
- Developing activities that are useful for both addressing everyday risks that communities face and for responding to disaster situations—for example, health, first aid or social welfare programs that have components useful for disaster reduction and response. (IFRC/ Introdp.doc, 2000, P: 6)

2.19.2 Assessment

Assessment is a vital component of the planning and implementation of response. Assessments provide information on which response is designed and adapted. While good assessment information does not guarantee a good response, poor assessment information almost certainly guarantees a bad one. (UNDAC, 2006)

- An emergency logistics assessment is the process of gathering, analyzing and disseminating logistics related data and information in relation to the impact of a disaster. It determines the extent of impact (through a situational assessment) and the logistical needs (through a capacity assessment). Assessments should be continuous in nature and enable organizations to monitor changes as a response or intervention evolves. (Logistics Cluster, Assessment & Planning, 2011),

Purpose of an Assessment

Disaster needs assessment will help national society emergency response decision makers determine and implement appropriate emergency response measures. To plan effective response efforts, decision makers need to know:

- Whether or not an emergency exists;
- The demographics of affected population and number of people affected;
- The details of emergency (cause, location, magnitude of disaster, etc.);

- The condition of affected population (mortality and morbidity rates);
- The local response capacities and available resources, including organizational and Logistical capabilities;
- The extent and type of life-saving needs and priorities;
- The likelihood of additional future problems or needs (IFRC/Disemnas.doc, 2000, P: 7);

Types of Assessments

Assessment Teams collect two types of information: what has happened as a result of a disaster and what is needed?

A. <u>Situation (Disaster) Assessment</u>

This assessment gathers information on the magnitude of a disaster and the extent of its impact on both population and infrastructure of a society.

Areas assessed and reported on include:

- Area affected by a disaster (location and size)
- Number affected by a disaster.
- Mortality and morbidity rates.
- Types of injuries and illness.
- Characteristics and condition of affected population.
- Emergency medical, health, nutritional, water, and sanitation situation.
- Level of continuing or emerging threats (natural/human caused).
- Damage to infrastructure and critical facilities.
- Damage to homes and commercial buildings.
- Damage to agriculture and food supply system.
- Damage to economic resources, and social organization.
- Vulnerability of population to continuing or expanding impacts of disaster over the coming weeks and months.
- Level of response by affected country and internal capacities to cope with the situation.
- Level of response from other donor countries and NGO.

B. Needs Assessment

The initial needs assessment identifies resources and services for immediate emergency measures to save and sustain the lives of the affected population. It is conducted at the site of a disaster or at the location of a displaced population. A quick response based on this information should help reduce excessive death rates, and stabilize the nutritional, health, and living conditions among population at risk. A quick response to urgent needs must never be delayed because a comprehensive assessment has not yet been completed. (FOG, 1998, P4-5)

Rapid Needs Assessment Checklist

Number of affected people requiring assistance:

1. **Water needs**: Ideally each person should be provided with 15 liters of potable water per day to cover drinking, cooking and personal hygiene needs
2. **Shelter needs:** If using tents, one tent is needed for 4-6 people—ideally of the same family.
3. **Nutritional needs**: A food ration ideally should provide a minimum of 2,100 kilocalories per person per day.
4. **Sanitation needs:** Maximum of 20 people per toilet. Use of toilets is arranged by household and/or segregated by sex.
5. **Fuel needs:** Access of people to firewood, coal or other fuel is often overlooked in needs assessments.
6. **Health care needs**: There should be approximately one small clinic per 10,000-35,000 people (IFRC, Disemnas.doc, 2002, P: 43)

Principles of Good Assessment Practice:

Timeliness: Information and analysis is provided on time.

Continuity: Relevant information is provided throughout the course of a crisis.

Relevance: Information and analysis provided is most relevant to those decisions.

Coverage: The scope of assessment is adequate to the scale and nature of the problem and the decisions to be taken.

Validity: Experienced personnel use recognized assessment methodologies

Transparency: The assumptions made, methods used and information relied on to reach

Accuracy: Reasonable accuracy.

Consistency and comparability: Data obtained by using standards.

Participation: Disaster affected population should have the opportunity to participate. (OCHA, 2011)

2.19.3 Resource Mobilization – Financial and Human Resources

National Societies should develop strategies, agreements and procedures for mobilizing and acquiring emergency funds, supplies and equipment in the event of a disaster.

Preparedness plan should spell out policies for acquisition and disbursement of funds, use of outside equipment and services, and emergency funding strategies. Well before a disaster occurs, National Societies should establish procedures for activating the appeal process for requesting funding support from National Society headquarters, government and Federation funds. International relief appeals are made through the International Federation by the affected country's National Society to the Secretariat. (IFRC, Introdp.doc, 2000, P: 14).

Responding to any emergency the following plans should be considered?

- What resources are already available and in what quantities?
- Which staff and volunteers can be shifted over from other programs during times of emergency?
- What resources will be needed that we don't have?
- Plans for procuring resources that are not currently available. (IFRC, Preplan.doc, 2000, P: 9).

Resource mobilization was analyzed in two categories: Financial Resources and Human Resources.

Financial Resources and Donations

Once the response operation is underway, organizations allocate available resources and begin requesting additional resources via the appeals process. Appeals for disasters can be carried out by a single organization acting alone or through broker organizations.

The media plays a vital role in promoting appeals to the wider public thereby increasing the visibility of organizations operating on the ground and what they need... (Wassenhove, et al, 2010).

Human Resources

Human resources come in the form of professional humanitarian workers, volunteers, firemen, ambulance workers, police or military staff. Resources have different levels of training, skills, and affiliation. Training varies across organizations and within every organization. Governmental agencies are used to having full-time staff. NGOs have full-time staff and also short-term contracts to cope with increased needs. ... (Wassenhove, et al, 2010).

2.19.4 Procurement

Procurement is the process of identifying and obtaining goods and services. It includes sourcing, purchasing and covers all activities from identifying potential suppliers and delivering services to users or beneficiaries;

Purchasing is the specific function associated with the actual buying of goods and services from suppliers; and

- **Sourcing** is simply: “Identifying and working with appropriate suppliers”. (Logistics Cluster, Procurement, 2011),

Procurement is used to describe a variety of entities (e.g., functions, organizations, systems, processes).

The term is also evolving through time, as the activities associated with procurement have become increasingly important to enterprise success. For instance, procurement was once describing the clerical activities associated with purchasing well-specified items, but it has evolved in some organizations to describe strategic partnering efforts made by senior executives. (Morris & Pinto, 2007, P: 247)

Procurement in the Humanitarian Context

Procurement is carried out using available financial resources or credit. The goal of procurement in relief operations is to enable orders to be placed and delivered on schedule at a good price. When possible, governments and organizations prefer to buy locally to avoid delay times and try to help the local economy. However, some organizations prefer to use their regular suppliers to guarantee the quality and standardization of their supplies, or to get better prices. (Wassenhove, et al, 2010)

Procurement purpose:

The purchase of goods and services is necessary for smooth operation of organization. The aim of internal control system for the supplying of goods and services is to ensure orders are handled by individuals who having skills to evaluate what purchases are required from suppliers offering the best deals, to ensure purchases made do not exceed the budget provided and to ensure purchased goods and services conform with the quantity and price specified in the order (fundsforngos, 2012) .

Procurement Objectives

The aim and objective of procurement is to carry out activities related to procurement in such a way that the goods and services procured are of the right quality, from the right source, at the right cost and can be delivered in the right quantities, to the right place, at the right time.

Meeting the following objectives of procurement enables logisticians to fulfill the "Six Rights":

- Buy quality materials, items and services economically from reliable sources;
- Ensure timely delivery through the selection of capable and efficient suppliers;
- Continuously locate, evaluate and develop economical and reliable supply sources;
- Identify the most reliable sources of supply through either open tender, multi-stage tendering (pre-qualifying suppliers and retaining only those that are capable of meeting the organization's requirements - strategic sourcing) and limited tendering.
- Investigate the availability of new materials and monitor trends in market prices;
- Buy in accordance with organizations policies;
- Estimate, position and monitor appropriate levels of stocks based on estimated needs, operational policy, objectives and priorities, estimated time for replenishment and availability of funds; and
- Participate in planning and coordinate purchasing needs across all central procurement teams and the field in order to reduce administration and make the best use of money spent.
- Recognize that the 'Six Rights' are interrelated and may influence each other but do not carry the same weight depending on the situation. For example, in an emergency situation, it may be possible to obtain the right quantity but not at the right price. There may be competition for certain goods, so to get the quantities required may mean paying a slightly higher price. (Logistics Cluster, Procurement, 2011).

2.19.5 Transportation

Definition

- Transport infrastructure consists of the fixed installations necessary for transport, and may be roads, railways, airways, waterways, canals and pipelines, and terminals such as airports, railway stations, bus stations, warehouses, trucking terminals, refueling depots (including fueling docks and fuel stations), and seaports. Terminals may be used both for interchange of passengers and cargo and for maintenance. (Wikipedia, Transport, 2012)
- Any device used to move an item from one location to another. Common forms of transportation include planes, trains, automobiles, and other two-wheel devices such as bikes or motorcycles, The process of shipping or moving an item from point A to point B. (businessdictionary, transportation, 2012)
- In the context of humanitarian organizations, transport is defined as: **"The activities involved in moving supplies from point of origin to internal customers or beneficiaries".** (Logistics Cluster, transport, 2011)

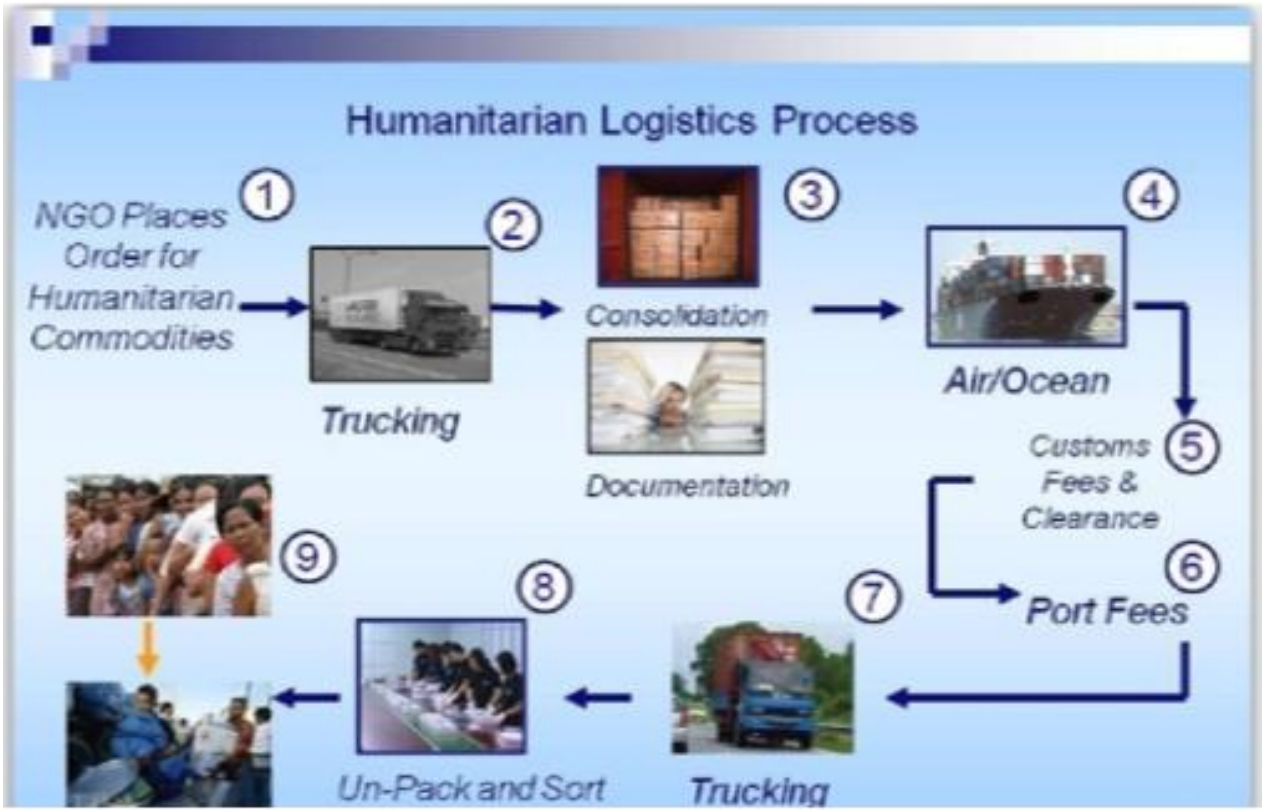
The Role of Transport

By means of well-handled transport system, goods could be sent to the right place at right time in order to satisfy customers' demands. It brings efficacy, and also builds a bridge between producers and consumers. Therefore, transportation is the base of efficiency and economy in business logistics and expands other functions of logistics system. In addition, a good transport system performing in logistics activities brings benefits not only to service quality but also to company competitiveness. (TSENG, etal, 2005)

Transport in Emergencies:

Transport management in emergencies is a complex task depending on the nature of the disaster. How it is structured is very dependent on the state of infrastructure, security in the area of disaster, demand, nature of product etc. (Logistics Cluster, transport, 2011)

Figure 2-5: Humanitarian Logistics Process



Source: Americas Relief Team, **Website:** www.americasrelief.org

Transport Strategy:

A transport strategy depends, not only on the needs within the organization, but varies from organization to another and from a situation to another one. Some factors to consider when developing a transport strategy are:

- how to identify transport service providers;
- how to manage the function; i.e. whether to lease, outsource or manage own fleet;
- capacity of transport modes available;
- quantities requiring movement over a period of time;
- nature of goods/products/supplies to be transported;
- distances to be covered;
- environmental issues such as climate, government legislature, infrastructure, taxes etc;

- number of destinations, hubs and pre-positioning locations;
- origins and routes;
- available transport modes & their relative costs;
- human resources;
- terrain;
- funding;
- security; and
- Circumstances – such as Nature of disaster. (Logistics Cluster, transport, 2011)

Mode of Transport

Transportation modes are an essential component of transport systems since they are the means by which mobilty is supported. Geographers consider a wide range of modes that may be grouped into three broad categories based on the medium they exploit: land, water and air. Each mode has its own requirements and features, and is adapted to serve the specific demands of freight and passenger traffic. (Rodrigue, etal, 2009)

Administration - Safety and security of goods to be moved

Legislation and regulatory frameworks for transport usually include a specific requirement for vehicle safety. Most humanitarian organizations also lay down safety and security policies that need to be followed. Requirements will include the vehicle weight, the way it is loaded and how the load is distributed.

Drivers and operators of vehicles are responsible for using a vehicle on road with a safe and secure load. Legislation will often state that, in transit, drivers have full responsibility for the safety of their load, even if they did not load it personally. Even if, in some countries, the legislation is not implemented, respected or followed. Every effort must be made to ensure that the organization's drivers are following the legislation that has been laid down (Logistics Cluster, transport, 2011).

Basic requirements for controlling the movement of relief goods

1. Field staff stationed at the local level, to supervise and monitor receipt and distribution.

2. Procedures for giving prior warning to field staff of the dates and times of shipments.
3. A checkpoint system at the field end, with radio or other communications, to monitor and report arrivals.
4. Secure local storage for goods: local facilities or lockable containers.
5. Designated, accountable individuals responsible for the security of stored items.
6. Separate staff responsible for recording the receipt and dispatching of goods from each store.
7. A basic inventory accounting system, using printed and numbered waybills and ledgers.
8. Arrangements for verifying the eligibility of recipients.
9. Arrangements for supervising distribution to final recipients (Stephenson,1993, P:38) .

Avoiding in-transit theft

A thief intending to steal a loaded vehicle requires:

- Knowledge of an attractive load;
- The opportunity to access it;
- Time to steal it and to get away before detection;
- A market for the goods; and
- Limited or negligible perception of risk.

Main sources of vehicle theft are from depots, from overnight parking areas and from the roadside. Theft can be committed by:

- Stealing an unattended vehicle;
- Hi-jacking the vehicle;
- Threatening or bribing drivers.

Drivers are central to prevention of this type of loss, and their integrity is essential.

Consequently, careful recruitment and selection of drivers is critical. Training will impress upon them the need for care, and procedures to follow to avoid risk of theft. Driver identification cards can be used for added security and to avoid thieves from gaining access

to vehicles by misrepresentation when parked on third party premises. (Logistics Cluster, transport, 2011)

2.19.6 Tracking and Tracing.

Tracking is a forward process to determine the path followed by aid from origin to destination. Tracing is a backward activity to determine where the shipment was sent.

Tracking and tracing are related to the goal of delivering to the right people, to the right place and at the right time. Additionally, these processes are essential to show impartiality and neutrality in relief operations. (Wassenhove, et al, 2010).

Tracking and tracing are not synonyms in logistics. Tracking is the process of building a history of shipment movements from origin to destination. Tracing describes the process of retrospectively determining where a shipment was during the course of a move. Both terms are used in conjunction as Tracking and Tracing to describe the process of gathering information about the current position or status of shipments. (Russell, 2005, P: 42).

2.19.7 Stock Asset Management

Definitions:

- Stock Asset Management is the process of organizing warehouses at certain points, and organizing supplies held in those warehouses for delivery. (Wassenhove, et al, 2010).
- Activities employed in maintaining the optimum number or amount of each inventory item. (businessdictionary, inventory-management, 2012)
- Stocks are physical goods that contain economic value, and are held in various forms by an organization in its custody awaiting packing, processing, transformation, use or sale in a future point of time. (Management study guide, inventory, 2012).

Stock control and movements

Stock control is used to show how much stock you have at any time, and how you keep track of it. (businesslink, 2012)

The warehouse/inventory manager is responsible for monitoring the movement of goods as they are transported from a supplier and for the control of stock movement in the warehouse facility.

The vital stock control measurements include:

- Establish levels of operating stocks based on consumption/rate of usage. The stock levels shall be reviewed from time to time depending on current needs.
- Ensure that weekly and monthly stock balances reports of each stock item and the total value are prepared;
- Maintain monthly stock usage report of each item kept in the store and the overall usage trend in last six months;
- Review and report on a biannual basis slow moving items indicating the last movement date, the unit value, and total value, and liaise with user department;
- Establish quantity, lead -time and availability of each item supplied on the market;
- Keep a record of all non- stock items received from suppliers, returned to suppliers and issued out to users.
- Monitoring Goods in Transit
- Order lead time
- Tracking orders for goods
- Controlling stock movements. (Muller, 2011, P:45)

Protecting emergency stocks

Heavy rain and flooding: Food aid commodities, electrical items, and packaging for medical items are especially vulnerable to water damage. There have been several recent incidents where thousands of tons of emergency food shipments for famine victims have been destroyed by rain and flooding on dockside quays because safe warehousing was already full. Consider the risk to aid shipments at crowded ports and airfields in any future

emergency. Fast removal of vulnerable items and stockpiling of wooden pallets and large tarpaulins can reduce the risk to food stockpiles and other goods. Drainage for warehouses, quays and storage areas may be worth reviewing during port development programs.

Wind or earthquake damage: At some sites, there may be a risk of collapse of internal storage racks for medicines, engineering equipment or spare parts.

There may also be a serious risk of contamination where insecticides, fuel, or other chemicals are inappropriately stored in the same building as food or medicines. Ensure that storage bins and racks are well secured, and that potentially dangerous items are kept in separate storage and are properly marked and recorded.

Loss of power: Items such as vaccines and some medicines may require electric power for refrigeration. Emergency generating equipment should be assured on a routine basis. In a major disaster, generators may be needed for longer periods than usual, and additional fuel, spare parts, back-up equipment and trained staff may be needed. (Stephenson, 1993, P: 44)

Inventory Management

The objective of inventory management is to replace a very expensive asset called "inventory" with a less-expensive asset called "information". The major reason for managing inventory is to reconcile the following potentially conflicting objectives:

1- Maximize customer service
2- Maximizing efficiency of purchasing and production
3- Minimizing inventory investment
4- Maximizing profit. (Viale,1996, P:3)

Why Hold Inventory?

Inventory serves five purposes within the firm:

1. It enables the firm to achieve economies of scale;
2. It balances supply and demand;
3. It enables specialization in manufacturing;
4. It provides protection from uncertainties in demand and order cycle;

5. It acts as a buffer between critical interfaces with the channel of distribution. (Lambert, etal, 1998)

In general, warehouses are focal points for product and information flow between sources of supply and beneficiaries. However, in humanitarian supply chains, warehouses vary greatly in terms of their role and their characteristics.

The warehouse is a key component of the supply chain in emergencies. It buffers uncertainties and breakdowns that may occur in the supply chain. When properly managed and appropriately stocked, a warehouse provides a consistent supply of material when needed. (Logistics Cluster, warehouse-management, 2011)

Warehouses and transshipment points should be located strategically to use the available infrastructure guaranteeing safety conditions for assets and people. Usually during the response phase, warehouses are prepared. (Wassenhove, et al, 2010).

In relief chain, stock can accumulate in many places. Collection sites can act as transshipment points, warehouses, and places to prepare and pack goods. They can be located in impacted areas or near ports, border crossings, or airports. At this stage, notification of receipt of goods should be sent; records of inbound supplies should be maintained; and supplies must be secured to prevent theft and spoilage. Loads should be inspected to ensure that they correspond to shipping papers and that they are not contaminated. If goods are contaminated, reverse logistics come into play. Goods must be returned, given to livestock, or destroyed. (Russell, 2005, P: 42).

Four Essential Components for Skills Inventory Management

1. A Well-defined Classification System: A detailed system of classification is fundamental to any inventory management program.

2. A Consistent Unit of Measure: While companies have little difficulty tracking their inventory of office supplies or other physical resources–which can be measured by the number of units, weight, or volume–calculating the supply of employee skills is a different story.

3. An Efficient Measurement Process: A company's ability to assess skills on a periodic basis and arrive at a quantifiable measurement can determine program success.

4. A Practical Tracking and Reporting System: The success of any inventory management initiative is based on its ability to deliver consistent, actionable results. (Brainbench, 2002)

Humanitarian Inventory Management Problem:

- Time when an order is placed,
- Probability of disruption,
- Number of delivery times,
- Number of items,
- Space occupied by each item,
- Cost of storage,
- Cost of adjustment,
- Cost of surplus,
- Cost of shortage,
- Initial inventory level,
- Minimum amount of stock supplied in a delivery time,
- Total amount of stock/demand supplied,
- Initial safety stock,
- Number of consumption times,
- Minimal amount of goods consumed in a delivery time,
- Total amount of goods consumed,
- Total storage capacity,
- Type of demand D. (Ozbay, Ozguven, 2007)

Inventory Control

Inventory control involves procurement, care and disposition of materials. There are three kinds of inventory that are of concern to managers:

- Raw materials,
- In-process or semi-finished goods,
- Finished goods. (SCORE, 2012)

The reasons for inventory control are:

- Help balance the stock as to value, size, color, style, and price line in proportion to demand or sales trends.
- Help plan winners as well as move slow sellers
- Help secure the best rate of stock turnover for each item.
- Help reduce expenses and markdowns.
- Help maintain a business reputation for always having new, fresh merchandise in wanted sizes and colors.

Three major approaches can be used for inventory control in any type and size of operation. The actual system selected will depend upon the type of operation and the amount of goods. (SCORE, 2012)

Warehousing:

Definitions

A warehouse is a planned space for the storage and handling of goods and materials. (Logistics Cluster, warehouse-management, 2011)

Facility designed for temporary storage (businessdictionary, warehouse, 2012)

Warehousing has traditionally provided storage for products (referred to as inventory) during all phases of logistics process. Two basic types of inventories can be placed into storage:

1- Raw materials, components and parts (physical supply)
2- Finished goods(physical distribution)
3- There may be inventories of goods in-process and material to be disposed of or recycled (Lambert, et al, 1998)

Aspects to consider when managing Warehouse Operations

- Planning the workload
- Allocating resources
- Space utilization & handling
    - Receiving goods;
    - Storing goods.
- Assembling consignments
- Dispatching consignments
- Disposal of goods
- Best control
- Security
- Inventory management
- Handling and stacking techniques

Occupational health and safety (Logistics Cluster, warehouse-management, 2011)

2.19.8 Extended Point of Delivery

An extended delivery point is an inland destination close to the affected area where goods can be staged before the final distribution of relief to beneficiaries. In most relief operations, supplies are brought close to refugee camps for storage. (Russell, 2005, P: 42).

Extended delivery points or *last mile distribution* points are located in the impacted area. These are the places where supplies are staged before their final distribution to victims of a disaster. Points of delivery should be chosen by taking into account the conditions of infrastructure after a disaster, access routes for assets, and distance to beneficiaries. . (Wassenhove, et al, 2010).

Key elements for successful delivery operations:

The Humanitarian Logistics Research Group (HLRG) outlines some key elements to enable successful delivery operations:

- Local distribution is the most challenging part of humanitarian logistic process (in contrast, many planning efforts focus only on the transportation of large flows of aid to impacted area, not on PODs)
- Engagement of the community leadership—building on previously established relations—was key to the success of collaborative multi-agent networks
- This brought to bear geographically distributed leadership, manpower, resources, and trust of population (HLRG, 2011)

Distribution centers:

Distribution centers are passive containers. They are busy, dynamic places that must be well-organized and efficiently operated. There are trucks bringing goods in, people and machines assembling orders, and people loading orders onto trucks to be transported to retail stores, factories, or other distribution centers. (Walgreen's Disaster Relief Module, 2006, P: 27)

Warehouses & Distribution centers:

Actually, people now distinguish between warehouses and distribution centers.

A **warehouse** is focused on storage.

A **distribution center** is focused on transmittal – receiving, combining, and shipping goods. For a distribution center, the ideal storage time is zero.

Distribution centers exist because they provide cost savings and efficiency. This, according to *Contemporary Logistics*, is because they make it more efficient to regroup and rearrange products as they move through supply chain. Two of the most important regrouping and rearranging functions are:

- **Bulk-making** – combining supplies from several different sources for delivery to a single customer, such as receiving steel rulers in several different sizes from several different factories, and combining them all together to be sent to a single office supply store.
- **Bulk-breaking** – breaking up a large quantity from a single supplier for delivery to several customers, such as receiving a large shipment of ball point pens from a single factory, and splitting it up into smaller shipments to be sent to a collection of individual office supply stores.(Walgreen's Disaster Relief Module, 2006, P:27)

What goes on in distribution centers?

The following activities occur in distribution centers. Some of these activities used to be done exclusively by factories, wholesalers, and retailers.

- Product movement
- Receiving – products, product parts, and packaging are received from several different sources.
- Product preparation – light assembly, product localization (such as state tax stamps), labeling, and product packaging are done in distribution centers (these activities used to be done exclusively in factories),
- Put away (storing) – received goods are stored in a pre-assigned place so they can be found later when they must be sent to a customer
- Order picking – items requested by an order are retrieved from their storage places
- Order assembly – the items in an order are assembled into a form suitable for shipping to customers
- Loading and shipping – assembled orders are loaded onto a transportation device, and sent to customers
- Customer relations
    - invoicing
    - billing credit cards
    - handling customer returns
- Information collection of

- Throughput statistics – distribution center managers need to know how fast products are
- Moving through their distribution centers.
- Utilization statistics – distribution center managers need to know if their facilities are working close to capacity, or if there are resources that are seldom or never used.
- Transportation documentation – distribution center managers need to know where products are coming from and where they are going.
- Loss and damage reports – distribution center managers need to know how much product is lost, so they can adjust their ordering policies,
- Cycle counting and inventory control – distribution center managers need to know how fast products are moving through their facilities. .(Walgreen's Disaster Relief Module, 2006, P:28)

Distribution Inventory

The inventory should be held at a point as close to the customer as possible. Distribution points such as warehouses or stores. (Viale, 1996, P: 7)

Distribution method:

The distribution method represents the movement of a product or service from the point of purchase to the time it is handed over to the final user/consumer. This may entail a chain of intermediaries passing the product down the chain within the organization before it finally reaches the consumer or end-user. Or it could be direct from the point of purchase to the end user. Each of the elements in these chains will have its own specific needs which the producer must take into account, along with those of the all-important end user; Reliability of the distribution chain is critical. (Logistics Cluster, distribution, 2011)

Distribution method in humanitarian context:

In the humanitarian context, distribution is viewed from three perspectives:

- Movement of goods from the point of purchase or transfer of ownership (vendor to humanitarian organization) to the point of final use. This is common in sudden on-set emergencies where goods are often taken straight to end user. The internal distribution occurs at the point the commodity or goods are being handed over to the beneficiary;
- Movement of goods from one location within the organization to another location within the same organization. For example, from hub to hub, or hub to end user point. This is common when resources are being mobilized to strategic locations for onward movement to the point of use as in the case of preparedness for an anticipated emergency; or
- The point at which the goods are handed over by the organization to beneficiaries or partner organization. For example, WFP food distribution direct to beneficiaries or partner agency conducting the distribution exercise.

Some of the distribution activities embrace materials handling, storage and warehousing, packaging, transportation etc. Distribution is sometimes referred to as the "final mile" and is a critical part of the supply chain. This is where the risk of loss and insecurity tends to be high, where communication is the most sporadic, where monitoring is most difficult, where costs require close monitoring, and where the organization sometimes has less direct control and can integrate with the program the most closely (Logistics Cluster, distribution, 2011).

Distribution Staff

The relationship between beneficiaries and distribution staff is a potential source of tension, corruption and abuse. Staff should be selected objectively and should be clear about standards expected of them. Distributing of staff must be subject to stringent monitoring. They should sign for receipt of goods to be distributed, and should be held accountable for any losses. If tokens are being used, then the quantity of tokens received by staff should be monitored to check that it corresponds to the amount of food distributed. The token system is a distribution method where beneficiaries in a list are registered, the name crossed off, and a token issued. The goods are exchanged for this token. Staff may find themselves in a position which could give them a potential for sexual

exploitation of beneficiaries. Any sexual relationship between a member staff and a beneficiary population is considered by the UN an abuse of power. Make sure that all staff understands clearly that sexual coercion or exploitation will result in immediate dismissal (Logistics Cluster, distribution, 2011)

2.19.9 Relief to Beneficiaries

Humanitarian logistics endeavors to bring assistance to people affected by a disaster; this assistance must be distributed to those who truly need it in proportion to their needs in a culturally appropriate manner. To ensure these conditions are met, there must be monitoring, not only at the storage stage, but throughout the distribution of supplies. They should ensure vulnerable populations receive their share of food distribution. This can take the form of distribution via identity cards or by giving female heads of household food for family. (Russell, 2005, P: 42).

There is a risk that supplies will fall into the wrong hands when being transferred between international and local organizations and end up on the black market instead of where they are needed. This highlights the need for multiple points in stock asset management. (Wassenhove, et al, 2010).

2.19.10 The Relief Supply Chain Umbrella: Coordination, Collaboration and Communication

Coordination: overview and background

A supply chain consists of many organizations acting together, with each organization dependent on the performance of other organizations in the chain; Coordination within a supply chain is a strategic response to the challenges that arise from these dependencies.

A coordination mechanism is a set of methods used to manage interdependence between organizations. (Beamon, 2006).

Coordination describes the relationships and interactions among different actors operating within the relief environment.

Humanitarian relief environments engage international relief organizations, host governments, the military, local and regional relief organizations, and private sector companies, each of which may have different interests, mandates, capacity and logistics expertise.

Typically, no single actor has sufficient resources to respond effectively to a major disaster.

Many factors contribute to coordination difficulties in disaster relief, such as the large number and variety of actors involved in disaster relief, and the lack of sufficient resource. (Chandraprakaikul)

By definition, there are a number of different people, entities, and processes that interact in order to execute supply chain objectives.

Coordination mechanisms provide tools for effectively managing these interactions. (Lei Xu, Beamon, 2006)

Vertical coordination and horizontal coordination used to describe the types of coordination:

Vertical coordination refers to the extent to which an organization coordinates with upstream or downstream activities. For e ample, if a traditional NGO coordinates with a transportation company, this would be an example of vertical coordination.

Horizontal coordination refers to the extent to which an organization coordinates with other organizations at the same level within the chain. An example of horizontal coordination would be if one NGO coordinated with a second NGO to provide relief goods and/or services. **(**Balcik, et al, 2009)

Humanitarian organizations frequently use the terms collaboration and coordination interchangeably.

Some studies in the supply chain literature differentiate between these terms based on the strength of the relationships among actors involved.

In practice, the term coordination has varied interpretations within the relief environment. For instance, coordination may refer to resource and information sharing, centralized decision-making, conducting joint projects, regional division of tasks, or a cluster-based system in which each cluster represents a different sector area (e.g., food, water and sanitation, and information technology).

Factors affecting coordination in humanitarian relief:

Relief actors operate in an environment that does not necessarily encourage coordination. Indeed, no single individual or group controls a relief operation. In this subsection, we provide a brief review of the characteristics of relief environment that impact planning and coordination.

Number and diversity of actors

While each e actor involved in disaster response has the same general goal: to help people and alleviate suffering, their primary motivations, missions and operating constraints may differ. Differences in geographical, cultural and organizational policies may create additional barriers.

Donor expectations and funding structure

Donors are not obliged to fund any given disaster situation, and if they do, they have an exit option if agencies do not meet the obligations specified in their contracts.

Therefore, relief organizations seek to justify their existence to those who support them.

Competition for funding and the effects on the media

Relief organizations compete for funding, which may also affect coordination and the humanitarian mission.

Unpredictability

There are many sources of unpredictability in disaster relief that may affect coordination efforts:

1. By their very nature, the location, timing, and intensity of sudden-onset disasters are typically unknown a priori.

2. The population characteristics and pre-existing regional infrastructure (communications, transportation) in many disaster-prone areas may not be readily available, and the extent of post-disaster infrastructure damage may not be predictable in advance.
3. The political environment and post disaster funding levels are unpredictable.

Resource scarcity/oversupply

Matching demand to supply is a particular problem in pre and post-disaster relief activities. This is due to uncertainties associated with the disasters themselves (location, timing, intensity) and a lack of supporting resources (financial, human, technological, and informational), both of which can create coordination difficulties.

Cost of coordination

Coordination initiatives cost time and money for relief organizations. At the strategic and tactical levels, coordination costs may also include staff salaries and travel costs for coordination meetings held during the pre-disaster period. **(**Balcik, et al, 2009).

2.19.11 Monitoring, Evaluation, Reporting:

The Logistics function in humanitarian organizations is made up of people, processes and systems working together to support efficient and effective delivery of services.

Controls are normally put in place to monitor weaknesses, poor designs in projects and improper implementation of programs. Based on continuous monitoring, these weaknesses or shortfalls against targets or objectives can be corrected or revised in order to continually improve performance, thus reducing the risk of exposure and strengthening the response to needs.

Monitoring and evaluation are integral an part of management and provide a link between planning and implementation. While monitoring focuses on the activities and outputs, evaluation focuses on the outcome and goals (Logistics Cluster, Monitoring and Evaluation, 2011)

Definition

For logisticians, monitoring and evaluation may be defined as follows:

Monitoring: to review, on a continuous basis, the degree to which the logistics activity is completed and if targets are being met. This allows corrective actions to be taken.

Evaluation: to analyze progress towards meeting established objectives and goals. It is done on a monthly, quarterly or yearly basis. Evaluation provides feedback on whether plans have been met and the reasons for success or failure. It should also provide direction for future plans (Logistics Cluster, Monitoring and Evaluation, 2011).

Objectives

Monitoring and evaluation has several purposes:

- to provide information to users on the service level they can expect;
- make an objective evaluation of services and activities;
- identify problems in the supply chain;
- determine what measures are needed for improving services;
- understand the need to increase or decrease resources;
- objective measurement for calculating reorder levels;
- define parameters for periodic review system calculations;
- evaluate performance of individual staff members;
- Motivate logisticians. (Logistics Cluster, Monitoring and Evaluation, 2011)

Some aspects to monitor in logistics

1. Supply chain response/lead time

   Lead time is the time between placing an order and receiving the goods or service. Delivery too early or too late may also incur unnecessary costs.
2. Information on status of orders

   The internal performance of logistics function is dependent on the efficiency and effectiveness of each of the logistics components.
3. Efficiency

The measurement of efficiency is sometimes relative and dependant on what an entity defines as efficiency. In this context, efficiency is the satisfactory delivery of a logistics service that enables the end user to fulfill the intended purpose of the request.

4. Total supply chain costs

The total cost concept focuses on reducing the total cost of logistics rather than the cost of each activity. An organization should monitor the cost reduction across the board and evaluate the impact on each of the logistics components. For example, purchasing in bulk may reduce the cost of the product but at the same time increase the stock holding costs.

5. Inventory costs

Inventory carrying costs include:

- inventory service costs - insurance and taxes;
- storage space costs - leasing costs or land rates;
- inventory risk costs - these are costs related to pilferage, the risk of goods being kept so long that they become obsolete, the risk of damage, etc; and
- Carrying costs - the cost of storing - labor, depreciation and other overheads.

6. Inventory value

The concept of value has shifted. In recent years, the concept of value has become accepted as the difference between the value a customer attributes to a product or service and the cost of acquiring value.

7. Order management costs

Order management costs include those for issuing and closing orders, the related handling costs, and the associated communications costs.

8. Cost of waste

The cost of waste covers the cost of disposing of packaging and damaged or unserviceable equipment. Waste disposal costs have sharply increased due to environmental impacts (Logistics Cluster, Monitoring and Evaluation, 2011)

Reporting performance

Customers provide feedback on the performance of procurement. This feedback should be both qualitative and quantitative.

Qualitative - how they felt about the service they were given and how helpful people in logistics were.

Quantitative - is objective and measurable. This can be achieved by setting and agreeing service standards with customers.

Information and data can be recorded and kept within logistics. The analysis of information will provide feedback on performance. It is possible to measure performance in carrying out the logistics process particularly if there are standards set; for example:

- documents sent to accounts in time;
- goods delivered on specified date or within specified period of time;
- number of times a vendor has delivered correct goods or number of time goods have been rejected; and
- Number of requests rejected by procurement due to poor specifications.

In an emergency situation performance monitoring is a very important aspect and should be instantaneous with immediate remedial measures taken. The reporting back should be more structured and targeted to get immediate attention and action taken.

Some of the key indicators would be:

- on time delivery;
- delivery of exact specification requested;
- reliable transport services; and

Delivery of exact quantities requested. (Logistics Cluster, Monitoring and Evaluation, 2011)

2.20 An Overview of Palestinian NGOs & War on Gaza

2.20.1 Palestinian NGOs

Definition: Palestinian NGO is an independent body established by no less than seven persons in order to achieve legitimate objectives for the public welfare on a non-profit basis.

It should be characterized by independence, freedom, voluntarism and the accomplishment of public welfare; it must be legally registered at the Palestinian Ministry of Interior according to the Charitable Societies' Law carrying No. 1 and issued in the year 2000. The objective is to promote community service on a nonprofit basis.

It includes charitable societies, grassroots organizations, sports clubs and the Palestinian networks and unions representing Palestinian charitable societies and NGOs. (The Code of Conduct Coalition, 2008)

Background of the Palestinian NGOs Sector: Since the beginnings of the last century, NGOs played an integral role in the Palestinian struggle for liberation and development. The development process of NGOs was linked to the changing socio-political environment in Palestine which was associated with the development of Palestinian civil society concepts. It was characterized by a remarkable level of creativity and steadfastness within a highly complex set-up.

The Palestinian NGOs sector was prolific during the First Intifada of 1987. However, drastic changes occurred following the establishment of the PA in the functioning of the NGOs both politically and sociologically. As such, the vision and mandate of the NGOs had to be accommodated to the new developments.

In addition to the essential role of NGOs in socioeconomic development, it was instrumental in relief activities with the unfolding events. It proved to be capable of operating under a complex environment and adapt remarkably with a distinctive performance in providing basic services.

Under such exceptional circumstances, the NGOs were keen to upgrade and broaden the range of services with a greater impact on Palestinian development. This is revealed through self-awareness of its community role.

Although there is a disparity within the outlook of various NGOs, there is a consensus as to the centrality of its role in the process of development and liberation.

The true challenge is the ability to proceed with the mission and effectively contribute in the formation of the Palestinian society. (The Code of Conduct Coalition, 2008)

The historical context of the formation of Palestinian CSOs: Before the Nakba (1948) the Palestinians were subject to British colonial rule which was accompanied by a settler-colonialism that aimed at the establishing a Jewish state in Palestine, an aim that was realized in 1948, upon which Palestinians were dispersed partly in what was left of Palestine (i.e., West Bank (WB) and GS (GS) and the rest, mostly in the surrounding Arab states. In June 1967 Palestinians in the West Bank and Gaza Strip (WBGS) fell under Israeli occupation which reconnected the WB, with GS with the territory occupied in 1948 (inside Green Line) thus making the connect between the three communities possible (till the first intifada). One can argue that the differences between Palestinians in the WBGS and those within the Green Line (in Israel) are one of degree of the institutionalization of an apartheid regime. In the Diasporas (al-shatat) Palestinian civil society organizations can be said to exist in two senses; first in the sense of scattered Palestinian communities becoming connected with each other's through political parties and mass organizations (women, youth and workers and many professional unions), and second in the sense of networking charities and human rights organizations devoted to defend civil rights of Palestinians and provide relief for those in need. (Hilal, 2011)

The Roles of Palestinian NGOs: Civil society and NGOs have historically played an important role in Palestinian society, According to a recent study, around 2,100 NGOs are registered in the West Bank and Gaza, and about 1,500 of these are active.

Palestinian civil society is made up of charitable organizations, service-provision associations, development organizations, human rights and democracy organizations,

research organizations, lobbying and advocacy organizations, cultural organizations and sports clubs and associations. (Walton, 2010)

PNGOs working in this field usually offer several types of assistance. The percentage of PNGOs offering only one type of assistance is 16 %, while 19 % offer two types, 24 % offer three and 43 % offer four or more types of help.

By type, 73 % of assistance-providing PNGOs offer food aid, 61 % provide health related services (including 5 % offering health insurance), 49 % offer financial aid, and 30 % of organizations create and offer employment opportunities. (MAS, 2008)

Number of NGOs: According to the Ministry of Interior, the number of NGOs that are operating at Gaza Strip was 894 organizations. Table (2.4) shows how NGOs were distributed based on geographical areas, and table (2.5) shows how NGOs were distributed based on work sector categories.

Table (2.4): NGOs Categories based on geographical area in the Gaza Strip in 2011

NO.	Geographical area	Number of NGOs
1	North area	133
2	Gaza	453
3	Middle area	109
4	Khanyonis	111
5	Rafah	89
Total		**895**

Source: Ministry of Interior, 2011

Table (2.5): Categories based on work sector in the Gaza Strip in 2011

NO.	Work sector	Number of NGOs
1	Islamic	34
2	Union	39
3	Familial & Tribal	14
4	Foreign	67
5	Tourism and Antiquities	2

6	Agricultural	39
7	higher education	14
8	Human rights	7
9	Alumni	8
10	Youth and Sports	56
11	Handicapped	33
12	Environmental	12
13	maternal and child	42
14	Culture and Art	69
15	Social	402
16	Education	13
17	Brotherhood	3
18	Medical	37
19	Friendship Societies	4
Total		**895**

Source: Ministry of Interior, 2011

2.20.2 War on Gaza (Operation Cast Lead):

In the early hours of Sunday, 18 January 2009, Israeli Occupation Forces (IOF) declared a unilateral ceasefire, calling a halt to their military operations against the Gaza Strip. This declaration marked an end to the 23-day offensive known as "Operation Cast Lead"; the most extensive and brutal offensive in history of Israeli occupation. Over the following days, Israeli Occupation Forces (IOF) continued to withdraw from the areas they had invaded and redeployed to areas outside the Gaza Strip leaving in their wake extensive destruction (PCHR, 2009).

Operation Cast Lead was the most violent, the most brutal and the bloodiest offensive against Palestinian civilians and their property since the beginning of Israeli occupation in 1967. IOF used various kinds of weapons against Palestinian civilians and their property. IOF's naval; land and air forces launched thousands of missiles and bombs, some of which

weighed approximately 1,000 kilograms, targeting civilian communities. This bombardment led to large losses of both lives and property. The most violent attacks were in the first hours of the offensive, when the Israeli warplanes bombarded the headquarters and sites of the Palestinian civil police and security services, killing hundreds of police officers and dozens of civilian bystanders (PCHR, 2009).

On the eighth day of the offensive, IOF launched a ground operation, moving forces deep into the Gaza Strip from several directions under the cover of intensive fire. These forces divided the Gaza Strip into several zones and moved towards civilian-populated areas. IOF stayed inside the Gaza Strip for nearly two weeks, during which they continued to move closer towards populated areas, especially in Gaza City and Beit Lahia and Jabalya towns. During the offensive, IOF used various kinds of lethal weapons, including white phosphorous and flechettes. PCHR believes that the IOF's conduct of hostilities implies that Israel intended to harm Palestinian civilians; Israel engaged in acts of reprisal, and launched attacks that employed excessive force in violation of international legal standards relating to proportionality and distinction; entire families were killed. Among those weapons which IOF deliberately used in civilian-populated areas, in a clear expression of systematic policy, were white phosphorous and flechettes. The use of these weapons resulted in serious injuries to individuals and property (PCHR, 2009).

According to PCHR's documentation, 1,419 Palestinians were killed. This number includes 1,167 non-combatants (82.2%) and 252 resistance activists (17.8%). The non-combatants include civilians and civil police officers who were not involved in hostilities, the 'protected persons' of IHL. Investigations conducted by PCHR indicate that 918 civilians were killed (64.7% of the total number of victims). The civilian victims include 318 children (22.4 % of the total number of victims and 34.7% of the number of civilian victims) and 111 women (7.8% of the total number of victims and 12.1% of the number of civilian victims). Thus, 429 women and children were killed (30.2% of the total number of victims and 46.7% of the total number of civilian victims) (PCHR, 2009).

According to sources of the Ministry of Health in Gaza, at least 5,300 Palestinians were wounded. This number includes at least 1,600 children (30%) and 830 women (15.6%).

Thus, at least 2,430 children and women were wounded, which constitutes 45.6% of the total number of the wounded (PCHR, 2009).

According to PCHR's data, 318 children aged under 18 were killed; 22.4% of the total number of all victims and 34.6% of the total number of civilian victims. This figure includes 215 boys (67.6%) and 103 girls (32.4%). Additionally, 1,600 children were wounded, constituting 30% of the total number of the wounded (PCHR, 2009).

Children were killed in different contexts, often while inside homes or while playing outside. In some instances they were targeted directly, in others, they were killed when IOF bombarded mosques, public facilities or residential complexes, or extra-judicially-executed Palestinian activists (PCHR, 2009).

According to investigations conducted by PCHR, 111 women were killed (7.8% of the total number of victims and 12% of the total number of civilians). 830 women were wounded (15.6% of the total number of the wounded), dozens of whom sustained permanent disabilities. Some women were directly targeted and murdered by IOF soldiers, others were killed inside their homes, while seeking refuge, or while hiding inside UNRWA Schools turned into shelters for families forced to flee their homes (PCHR, 2009).

According to PCHR documentation, a number of crimes committed against Palestinian civilians during the daily ceasefire period declared by IOF. A number of civilians, including complete families, were killed (PCHR, 2009).

IOF also committed war crimes by using Civilians as human shields, and by targeting medical and humanitarian relief personnel. They killed and wounded dozens of medical personnel. IOF also committed war crimes against journalists and media professionals (PCHR, 2009).

The offensive also inflicted heavy damage to the educational sector in the Gaza Strip., Twenty seven NGOs and charitable societies were targeted by IOF during offensive directly and indirectly (PCHR, 2009).

During the land incursions into Palestinian communities in the Gaza Strip, IOF committed large scale campaigns of arbitrary arrests against Palestinians, mostly in the northern Gaza Strip and Gaza City (PCHR, 2009).

Twenty seven national institutions and civil benevolent associations were targeted by IOF during the offensive (PCHR, 2009).

According to PCHR's documentations, IOF lunched hundreds of air, sea and ground strikes during the offensive (PCHR, 2009).

These attacks resulted in complete destruction of 2114 houses, comprising 2864 apartments; these housing units were home to 3314 families (19592 civilians). IOF also partially destroyed 3242 houses, comprising 5014 apartments; these housing units were home to 5470 families (32250 civilians). Moreover, approximately 16000 houses were damaged as a result of bombardment and destruction, including the burning of dozens of houses in different areas in Gaza. As a result of this devastation, approximately 51453 Palestinians were made homeless (PCHR, 2009).

During the offensive, IOF launched military air, sea and ground attacks targeting all governmental facilities and installations including ministries and local bodies. These attacks also targeted property and civil objects including residential buildings, different economic sectors' facilities such as factories, shops, companies, blacksmith and carpentry workshops, national institutions' buildings, tourism facilities, sport clubs, mosques, graveyards, kindergartens, schools, universities, media institutions, medical installations, farmlands (including wells, water and irrigation networks), animal barns (apiaries and bird farms), hunters' port, ships and equipment. Medical installations and humanitarian relief organizations were also systematically damaged as they were the target of frequent shelling and bombardment. Military attacks also targeted media installations working in the Gaza Strip, forcing the evacuation of these institutions and their staff (PCHR, 2009).

During the IOF's wide-scale military offensive, the Gaza Strip witnessed horrific humanitarian conditions in which all aspects of life deteriorated. The 1.5 million Palestinians living in the Gaza Strip suffered extensive food shortages; many civilians

could not obtain basic food supplies, and food supplies could not reach Gaza's cities, villages and camps (PCHR, 2009).

According to various official sources, the flour and grains crisis negatively affected flour mills working in the Gaza Strip (PCHR, 2009).

Civilians were forced to place themselves in danger as they left their homes in search of bread and flour. As a result of the closure of the commercial boarders, the tightened two-year long blockade and the rationing of goods, hundreds of goods, especially foodstuffs ran out and were subject to massive price inflation, often doubling in price (PCHR, 2009).

UNRWA's food distribution – the single largest food program in the Gaza Strip – was completely stopped twice during the offensive, for periods lasting four days. UNRWA sources said that the main reason behind this was the targeting of its staff, the closure of Gaza borders, and the obstruction or strict rationing of food aid. This disastrous situation resulted in serious hardship for the hundreds of thousands of refugees, who are distributed across 8 camps in the Gaza Strip, negatively affecting their health and their ability to get the required calories (PCHR, 2009).

Hundred of thousands of civilians were forced to evacuate their houses during the offensive, as their property was subject to direct or indirect targeting by IOF. Compulsory evacuation increased when IOF began their ground invasion of several areas in the Gaza Strip. PCHR estimated the number of civilians who were obliged to evacuate their houses at nearly 500,000 (half a million) civilians (PCHR, 2009).

In an aggravation of the fear and panic caused by the offensive, IOF launched a psychological war against Palestinian civilians, using different methods to terrify and scare them. One of the most notable means was the warning phone calls which thousands of families received around the Gaza Strip asking them to leave and evacuate their houses as IOF may shell or target them or other nearby houses. According to IOF accounts, 70,000 Palestinian families received warning phone calls (PCHR, 2009).

This action contributed to the displacement of thousands of families to other areas as they sought to protect themselves and their children (PCHR, 2009).

IOF warplanes also dropped leaflets over cities, villages and camps in Gaza, warning civilians not to help what IOF called “terrorist groups” (armed resistance). Moreover, IOF radio penetrated the Palestinian local radio waves in Gaza and broadcast newscasts and propaganda releases targeted at Palestinian civilians in an attempt to undermine their morale (PCHR, 2009).

During the offensive, IOF systematically targeted the main facilities providing services to the civilians of the Gaza Strip. Targeted facilities included electricity facilities, wells (including those supplying households), main and secondary water networks, and sewage services including stations’ treatment plants and their supplies (PCHR, 2009).

Chapter 3

METHODOLOGY & PROCEDURES

3.1. Introduction

This chapter presents procedures of study, types and source of data, questionnaire design, scale of measurement, statistical methods and procedures of application of the study.

3.2. Study methodology

In order to achieve the study results, which aims at assessing the humanitarian logistics management in NGOs sector in Gaza strip based on cast lead operation events, Analytical descriptive method was used, since the descriptive analysis method compares, explains, and evaluates, in order to generalize meaningful results to enrich knowledge in this regard. Analytical descriptive method scans past studies to make full use of them when applied to diagnose strengths and weaknesses and looks forward to future threats and opportunities, and predicts the outcomes of the study in the coming stage.

3.3. Study population

- The research population includes all major and active international and local NGOs that have been worked in Gaza Strip during cast lead operation in relief operations.
- Ministry of social affairs mainly used to determine the names of the NGOs worked during that period, since it was the authorized side for monitoring NGOs working during that period. **(See Annex 9)**
- Ministry of social affairs accomplished five committees in all Gaza governorates (North sector, Gaza sector, middle sector, Khanyounis sector, Rafah sector) to enhance the monitoring performance. **(See Annex 9)**

- The researcher visited and interviewed the five committee's heads in the five governorates and obtained the names and addresses of the working NGOs during that period. **(See Annex 9)**
- 106 (Palestinian & International) NGOs have been worked during that period as recorded in the committee's files. **(See Annex 5)**
- These organizations composed of 31 international & 75 Palestinian local NGOs.
- In a trial to select only the big and active NGOs, the following criteria have been adopted :

1. ***All the international NGOs were selected,*** because all of them were expected to consider logistics aspects in their relieving process.
2. ***Only local NGOs that have the following criteria***:
   - To have official legalized presence.
   - NGOs that employ more than 20 persons as full time employee.
   - Have more than 500,000$ as an average annual budget.
   - Implemented more than 10 projects on an annual basis.
   - To be unrepresented – not limited to specific sector such as student unions or workers unions and professional unions.

The UNSCO directory of Non-Governmental Organizations in the Gaza Strip (2007) had been used to determine the names, numbers and locations of NGOs that were considered in this research, where the directory contained 262 NGOs, include 246 Palestinian organizations as shown in the table (3.1). The UNSCO directory was selected because it contains the best NGOs working in Gaza Strip, despite there are other resources.

Table (3.1): NGOs Categories Based on UNSCO directory 2007

Work sector	**Responses**	
	N	**Percent**
Social development	**16**	6.1%
Culture and sport	**32**	12.2%
Agriculture and environment	**14**	5.3%
Democracy and human rights	**12**	4.6%
Education and training	**45**	17.2%

Women and child	**26**	9.9%
Social services and relief	**53**	20.2%
Economic development	**17**	6.5%
Health and rehabilitation	**47**	17.9%
Total	**262**	100.0%

Source: UNSCO, 2007

The directory showed 57 NGOs **(See Annex 6)** were applicable for the study, yet when examined more closely by the researcher, only 11 of these NGOs shared in relief process during Cast Lead Operation (Gaza war)

3. ***42 NGOs (31 International & 11 Local) were selected to represent the sample of study* (See Annex 7& 8).**

3.4. Study sample

The researchers try to contact all the 42 organizations, but only (22 international and 11 local) agree to fill the questionnaire.

65 questionnaires distributed to Logistic officers, logistic assistants, procurement officers, and others who may be program managers, financial managers or others.

The received questionnaires were 51 questionnaires which form 78%.

NOTE: *All the studies that the researcher found related to this discipline have been conducted by interviewing the logistics officers for only one or two organizations, and this may be the first study that depended on statistical analysis for hypothesis testing and according to the knowledge of the researcher.*

3.5. Types and sources of data

The researcher used two types of data:

The primary source is mainly through using a questionnaire which was specifically designed for this study.

The secondary sources include academic works such as articles, reports, books, special studies and other library housed material.

The internet was also used to get recent information about NGOs.

3.6. The Questionnaire Design

The questionnaire was designed in Arabic and English to suit all levels of respondents, which some of them were unfamiliar with the English language and others were unfamiliar with Arabic (international staff) to be more understandable. Both Arabic and English versions were attached in (Annex 4). Unnecessary personal data, complex and duplicated questions were avoided. The questionnaire was provided with a covering letter which explained the purpose of the study, the way of responding, the aim of the research and the security of information in order to encourage high response.

A structured questionnaire was specially designed for the study and it consisted of three main sections:

I. The first section was general information about respondents.

II. The second section was general information about the organization characteristics.

III. The third section was the main body of the questionnaire and it was divided into 11 sub-sections related to the humanitarian logistic management steps.

3.7. Scale of Measurement

The respondents were asked to give grade from 1 to 10 for each question where 1 is the least applicable and 10 is the highest applicable.

3.8. Procedures of application of the study

The researcher used the questionnaire as the main tool for collecting all data needed, the questionnaire was prepared as following:

1. Preparing a preliminary questionnaire.
2. The questionnaire was checked by the supervisor
3. The questionnaire was modified according to supervisor directions
4. The questionnaire was distributed among arbitrators (instructors at the university and some people who have experience in this field of work).
5. The questionnaire was modified according to their suggestions.
6. The questionnaire was distributed among the preselected NGOs which formed the research sample as described in research sample section.
7. 65 questionnaires distributed, 51 of them were received which form 78%. (All of the received questionnaires were valid for analysis, so all of them were used).

3.9. Test of Normality:

Table (3-2) shows the results for Kolmogorov-Smirnov test of normality. From Table (3-1), the p-value for each field is greater than or equal 0.05 level of significance, then the distribution for each field is normally distributed. Consequently, parametric tests will be used to perform statistical data analysis.

Table (3-2): Test of Normality

No	Field	Kolmogorov-Smirnov	
		Statistic	P-value
1.	Preparedness	0.810	0.528
2.	Assessment	0.979	0.293

3.	Resource Mobilization	0.885	0.413
4.	Procurements	0.828	0.499
5.	Transport (Local)	0.730	0.661
6.	Track and Trace	0.796	0.551
7.	Stock Asset Management	1.146	0.145
8.	Extended Point of Delivery & Relief to Beneficiaries	0.930	0.352
9.	Monitoring/Evaluation/Reporting	1.196	0.114
10.	Communication	0.785	0.569
11.	Collaboration and Coordination	1.367	0.058
	All statements of the questionnaire	0.658	0.780

3.10. Statistical analysis Tools

To achieve the research goal, researcher used the statistical package for the Social Science (SPSS) for analyzing the data. The statistical methods were used:

1. Kolmogorov-Smirnov test of normality.
2. Cronbach's Alpha for Reliability Statistics.
3. Pearson correlation coefficient for Validity.
4. Frequency and Descriptive analysis.
5. Parametric Tests (One-sample T test, Independent Samples T-test , Analysis of Variance)

- T-test is used to determine if the mean of a statement is significantly different from a hypothesized value 6 (Approximately the middle value of numerical scale 1-10). If the P-value (Sig.) is smaller than or equal to the level of significance, $\alpha = 0.05$, then the mean of a statement is significantly different from a hypothesized value 6. The sign of the Test value indicates whether the mean is significantly greater or smaller than hypothesized value 6. On the other hand, if the P-value (Sig.) is greater than the level of significance, $\alpha = 0.05$, then the mean a statement is insignificantly different from a hypothesized value 6.

- The Independent Samples T-test is used to examine if there is a statistical significant difference between two means among the respondents toward the (Assessment of Humanitarian Logistics Management In NGO sector 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 respondents toward the (Assessment of Humanitarian Logistics Management In NGO sector in Gaza strip) due to age, education, experience, type of NGO and age of NGO.

3.11. Statistical Validity of the Questionnaire

To insure validity of the questionnaire, two statistical tests should be applied. The first test is Criterion-related validity test (person test) which measures the correlation coefficient between each item in the field and the whole field. The second test is structure validity test (Pearson test) that is 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 filed and all fields of the questionnaire that have the same level of similar scale.

3.11.1. Internal consistency:

Internal validity of the questionnaire is the first statistical test that is used to test the validity of the questionnaire. It is measured by a scouting sample, which consisted of 30 questionnaires through measuring the correlation coefficients between each statement in one field and the whole filed.

Table (3-3) clarifies the correlation coefficient for each statement of the Preparedness 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 statements of this field are consistent and valid to measure what it was set for.

Table (3-3) Correlation coefficient of each statement of "Preparedness" and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Applying an emergency a pre specified response policy or contingency plan	0.589	0.000*
2.	Determining the tasks which should be performed	0.746	0.000*
3.	Determining the responsible staff for accomplish these tasks	0.763	0.000*

4.	Determining who will be in charge of the global coordination for the logistics system	0.663	0.000*
5.	Determining the necessary resources	0.726	0.000*
6.	Determining how and where the needed resources will be acquired	0.739	0.000*
7.	Ability to deal with the impractical infrastructure	0.727	0.000*
8.	Ability to deal with unstable political situation	0.687	0.000*
9.	Ability to deal with Gaza society culture	0.755	0.000*
10.	Ability to deal with the climate in Gaza	0.437	0.001*
11.	flexibility to deal with any unexpected scenario	0.529	0.000*

* Correlation is significant at the 0.05 level

Table (3-4) clarifies the correlation coefficient for each statement of the Assessment 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 statements of this field are consistent and valid to measure what it was set for.

Table (3-4) Correlation coefficient of each statement of "Assessment" and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Conducting an assessment to determine the affected area in Gaza war	0.543	0.000*
2.	Identifying the number of affected people needed assistance	0.862	0.000*
3.	Identifying the needs of affected	0.734	0.000*

	people		
4.	Identifying the level of damage to the local infrastructure capacity	0.755	0.000*
5.	Identifying the level of damaged homes and commercial buildings	0.847	0.000*
6.	Identifying the level of damaged agriculture and food supply system	0.812	0.000*
7.	Determining the available and the lacking resources.	0.762	0.000*
8.	Considering multidisciplinary (i.e., water needs, shelter needs, sanitation needs , logistic needs, medical needs ,..etc)	0.746	0.000*
9.	Preparing the assessment process in a timely manner (not late)	0.684	0.000*

* Correlation is significant at the 0.05 level

Table (3-5) clarifies the correlation coefficient for each statement of the Financial Resources 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 $\alpha = 0.05$. Thus, it can be said that the statements of this field are consistent and valid to measure what it was set for.

Table (3-5) Correlation coefficient of each statement of "Financial Resources" and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Determining the needed financial resource when the response process started	0.901	0.000*
2.	Requesting additional financial resources which are unavailable via appealing process.	0.840	0.000*

* Correlation is significant at the 0.05 level

Table (3-6) clarifies the correlation coefficient for each statement of the Human Resources 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 $\alpha = 0.05$. Therefore, it can be said that the statements of this field are consistent and valid to measure what it was set for.

Table (3-6) Correlation coefficient of each statement of "Human Resources" and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Exploiting humanitarian workers with the required experience to give assistance in relief efforts	0.793	0.000*
2.	Exploiting a trained volunteers to give assistance in relief efforts	0.865	0.000*
3.	Shifting another staff from globe to help in relief efforts	0.717	0.000*

* Correlation is significant at the 0.05 level

Table (3-7) clarifies the correlation coefficient for each statement of the Procurements 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 statements of this field are consistent and valid to measure what it was set for.

Table (3-7) Correlation coefficient of each statement of "Procurements" and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Following a pre-described policy in all procuring activities	0.695	0.000*
2.	Depending on specified suppliers capable of meeting its requirements	0.647	0.000*
3.	Getting the required procurements locally	0.646	0.000*

4.	Getting the required procurements globally	0.255	0.039*
5.	Getting procurements in a good quality	0.728	0.000*
6.	Getting procurements in a reasonable cost	0.817	0.000*
7.	Getting procurements in right quantities	0.683	0.000*
8.	Avoiding suffering from delays in material arriving	0.713	0.000*

* Correlation is significant at the 0.05 level

Table (3-8) clarifies the correlation coefficient for each statement of the Transport (Local) 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 statements of this field are consistent and valid to measure what it was set for.

Table (3-8) Correlation coefficient of each statement of "Transport (Local)" and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Planning movements for organization's drivers to identify which roads they should use	0.671	0.000*
2.	Depending on mobile vehicles to convey aids for the needed	0.669	0.000*
3.	Selecting the mode of local transportation depending on security requirements	0.707	0.000*
4.	Selecting the mode of local transportation depending on the availability	0.743	0.000*
5.	Selecting the mode of local	0.475	0.000*

	transportation depending on cost		
6.	Selecting the mode of local transportation depending on speed and time	0.711	0.000*
7.	Selecting the mode of local transportation depending on the distances to be covered	0.806	0.000*
8.	Selecting the mode of local transportation depending on available infrastructure	0.717	0.000*
9.	Selecting the mode of local transportation depending on the nature of goods/products/supplies to be transported	0.714	0.000*
10.	Training organization's drivers to avoid risk and hijacked	0.620	0.000*
11.	Exploiting commercial provider for transportation	0.490	0.000*
12.	Facing problems due to poor infrastructure in the affected area	0.763	0.000*
13.	Facing problems due to political barriers	0.832	0.000*
14.	Facing problems in accessing the fuel sources	0.547	0.000*
15.	Facing problems in stealing vehicles and products	0.644	0.000*

* Correlation is significant at the 0.05 level

Table (3-9) clarifies the correlation coefficient for each statement of the Track and Trace 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 statements of this field are consistent and valid to measure what it was set for.

Table (3-9) Correlation coefficient of each statement of "Track and Trace" and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Tracking goods and services manually	0.787	0.000*
2.	Tracking goods and services by excel sheets	0.761	0.000*
3.	Tracking goods and services by computer software	0.802	0.000*

* Correlation is significant at the 0.05 level

Table (3-10) clarifies the correlation coefficient for each statement of the Stock Asset Management 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 statements of this field are consistent and valid to measure what it was set for.

Table (3-10) Correlation coefficient of each statement of "Stock Asset Management" and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Following specific warehouse management policy and procedures guidelines	0.839	0.000*
2.	Defining all the activities to be adopted in the warehouse clearly and step by step	0.898	0.000*
3.	Providing clear visibility of the operations in the warehouse for both managers and donors	0.896	0.000*
4.	Identifying the methods of receiving and issuing supplies	0.527	0.000*
5.	Defining quality control system method	0.716	0.000*
6.	Identifying the way to storing goods	0.856	0.000*

7.	Identifying the way to control the stock movement	0.882	0.000*
8.	Determining how to deal with the stock losses	0.905	0.000*
9.	Determining how rejected material will be managed	0.803	0.000*
10.	Determining how to deal with unwanted material, obsolete, and scrap disposal	0.860	0.000*
11.	Using space warehouses owned by the organization	0.620	0.000*
12.	Using commercial warehouses in rented building	0.477	0.000*
13.	Using transit warehouses destined for different locations	0.314	0.018*
14.	Using Governmental warehouses	0.336	0.013*
15.	Conducting a professional study in order to determine the best location for the warehouses	0.709	0.000*
16.	Selecting the warehouses with sufficient spaces for all the needed activities to be done	0.703	0.000*
17.	Selecting the warehouses which enable all the required care needed to some storage items	0.829	0.000*
18.	Selecting the warehouses with enough security in order to keep the required degree of safety	0.895	0.000*

* Correlation is significant at the 0.05 level

Table (3-11) clarifies the correlation coefficient for each statement of the Extended Point of Delivery & Relief to Beneficiaries 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 statements of this field are consistent and valid to measure what it was set for.

Table (3-11) Correlation coefficient of each statement of "Extended Point of Delivery & Relief to Beneficiaries "and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Selecting suitable points for aids distribution which are far enough from the hot areas	0.834	0.000*
2.	Selecting suitable points for aids distribution which are safe enough for both workers and beneficiaries	0.788	0.000*
3.	Considering the distance to beneficiaries when selected the points of distribution	0.675	0.000*
4.	Considering the conditions of infrastructure when selected the points of distribution	0.719	0.000*
5.	Monitoring the distribution method	0.821	0.000*
6.	Ensuring that aids didn't reach to the wrong hands or black market	0.655	0.000*
7.	Taking care to ensure women's and children's safety during the distribution method (sexual harassment not existed)	0.727	0.000*
8.	Training the distribution staff to ensure neutrality, impartiality and respect for culture and beneficiaries in Gaza	0.830	0.000*
9.	Carrying out the distribution method	0.771	0.000*

	in an efficient and organized matter		
10.	Engaging the local community in the distribution method	0.592	0.000*
11.	Handing over the aids via partner organization	0.315	0.016*

* Correlation is significant at the 0.05 level

Table (3-12) clarifies the correlation coefficient for each statement of the Monitoring/Evaluation/Reporting 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 statements of this field are consistent and valid to measure what it was set for.

Table (3-12) Correlation coefficient of each statement of "Monitoring/Evaluation/Reporting" and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Depending on an official system for collection, analysis, and utilization of information about the humanitarian logistics performance	0.812	0.000*
2.	Depending on an official system for the periodic assessment of the relevance, efficiency, effectiveness, impact, and sustainability of humanitarian logistics	0.773	0.000*
3.	Depending on an official system for reporting all activities for donors	0.837	0.000*
4.	Evaluating logistics performance to measure if it met the established objectives and goals	0.929	0.000*
5.	Succeeding in managing the information system in order to provide accountability to donors	0.797	0.000*

* Correlation is significant at the 0.05 level

Table (3-13) clarifies the correlation coefficient for each statement of the Communication 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 statements of this field are consistent and valid to measure what it was set for.

Table (3-13) Correlation coefficient of each statement of "Communication" and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Selecting a suitable mode of communication and capable to meet the required needs	0.718	0.000*
2.	Depending on the E-mail as a tool of communication	0.760	0.000*
3.	Depending on cellular phone as a tool of communication	0.547	0.000
4.	Depending on satellite phone as a tool of communication	0.535	0.000*
5.	Facing problems in communication method	0.611	0.000*
6.	Supplying staff with the required and needed communication methods in the operation theater	0.789	0.000*
7.	Equipping the vehicles with the required and needed communication methods in the operation theater	0.736	0.000*

* Correlation is significant at the 0.05 level

Table (3-14) clarifies the correlation coefficient for each statement of the Collaboration and Coordination 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 statements of this field are consistent and valid to measure what it was set for.

Table (3-14) Correlation coefficient of each statement of "Collaboration and Coordination" and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Working with other agencies (NGOs) in setting up humanitarian logistics	0.909	0.000*
2.	Working with the local authority in setting up humanitarian logistics	0.895	0.000*
3.	Working with the private sector in setting up humanitarian logistics	0.713	0.000*
4.	Utilizing the other partner existing to develop logistic services	0.852	0.000*

* Correlation is significant at the 0.05 level

3.11.2. Structure Validity of the Questionnaire

Structure validity is the second statistical test 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.

Table (3-15) Correlation coefficient of each field and the whole of questionnaire

No.	Field	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Preparedness	0.570	0.000*
2.	Assessment	0.657	0.000*
3.	Resource Mobilization	0.512	0.000*
4.	Procurements	0.716	0.000*
5.	Transport (Local)	0.864	0.000*
6.	Track and Trace	0.726	0.000*
7.	Stock Asset Management	0.856	0.000*
8.	Extended Point of Delivery & Relief to Beneficiaries	0.712	0.000*
9.	Monitoring/Evaluation/Reporting	0.747	0.000*

10.	Communication	0.698	0.000*
11.	Collaboration and Coordination	0.741	0.000*

* Correlation is significant at the 0.05 level

Table (3-15) 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 measured what it was set for to achieve the main aim of the study.

3.12. Reliability of the Research

The reliability of an instrument is the degree of consistency which measures the attribute; it is supposed to be measuring (Polit & Hunger, 1985). 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 (Polit & Hunger, 1985).

3.12.1. Cronbach's Coefficient Alpha

This method is used to measure the reliability of the questionnaire between each field and the mean of the whole fields of the questionnaire. The normal range of Cronbach's coefficient alpha value between 0.0 and + 1.0, and the higher values reflect a higher degree of internal consistency. The Cronbach's coefficient alpha was calculated for each field of the questionnaire.

Table (3-16) shows the values of Cronbach's Alpha for each filed of the questionnaire and the entire questionnaire. For the fields, values of Cronbach's Alpha were in the range from 0.637 and 0.944. This range is considered high; the result ensures the reliability of each field of the questionnaire. Cronbach's Alpha equals **0.951** for the entire questionnaire which indicates an excellent reliability of the entire questionnaire.

Table (3-16) Cronbach's Alpha for each filed of the questionnaire and the entire questionnaire

No.	Field	Cronbach's Alpha
1.	Preparedness	0.871
2.	Assessment	0.897
3.	Resource Mobilization	0.767
4.	Procurements	0.766
5.	Transport (Local)	0.906
6.	Track and Trace	0.637
7.	Stock Asset Management	0.944
8.	Extended Point of Delivery & Relief to Beneficiaries	0.893
9.	Monitoring/Evaluation/Reporting	0.880
10.	Communication	0.794
11.	Collaboration and Coordination	0.844
	All statements of the questionnaire	**0.951**

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

Chapter 4

DATA ANALYSIS AND DISCUSION

4.1 Introduction

The aim of this section is to statically analyze the empirical data collected through the questionnaire in order to provide a real picture about the humanitarian logistics performance during Gaza war in the NGOs sector in Gaza Strip. This chapter includes 4 main sections. The first is about the Personal and organizational traits. The second is a discussion and interpretation of the research fields, and the third is a discussion and interpretation of the research fields. The last section is hypothesis testing.

4.2 Personal & organizational traits

4.2.1 Personal traits

a. Age:

Table No.(4-1) shows that 7.8% of the sample are" less than 25 years old", 39.2% of the sample are "25 – less than 35 years old", 29.4% of the sample are "35 – less than 45 years old and 23.5% of the sample are "older than 45 years".

This indicates that the majority of the respondents are over 25 years, which indicates that most of respondents were mature enough to be qualified to perform their works and duties.

Table (4-1): Age

Age	Frequency	Percent
Less than 25 years old	4	7.8
25 – less than 35 years old	20	39.2
35 – Less than 45 years old	15	29.4
Older than 45 years old	12	23.5
Total	51	100.0

b. Gender

Table No. (4-2) Shows that 86.3% of the sample are “Males and 13.7% of the sample are Females”.

The researcher considers this normal since she expects the number of males working in logistics issues are much greater than females. This is probably due to the nature of logistics work where females may avoid encounter in those types of jobs to avoid difficulties they may face.

Table (4-2): Gender

Gender	Frequency	Percent
Male	44	86.3
Female	7	13.7
Total	51	100.0

c. Qualification

Table No.(4-3) shows that 7.8% of the sample are " Diploma degree" holders, 58.8% of the sample are " Bachelor degree " holders, 27.5% of the sample are " Master degree " holders, 3.9% of the sample are " PhD degree " holders and 2.0% of the sample are "other degree ".

This means that the majority of the respondents are highly qualified, which reflects on their skills and abilities in implementing their work duties and dealing with questionnaire sections.

Table (4-3): Qualification

Qualification	Frequency	Percent
Diploma	4	7.8
Bachelor	30	58.8
Master degree	14	27.5
PHD degree	2	3.9
Others	1	2.0
Total	51	100.0

d. Title/ Position

Table No.(4-4) shows that 37.3% of the sample are "logistic officer", 9.8% of the sample are " logistic assistant", 3.9 % of the sample are" procurement officer, 49% of the sample are"others".

51 percent of the respondents range between logistic officers, logistic assistant and procurement officer, and 49 percent of respondents were others and this is considered high percent, but the researcher refers this to the high percent of people who perform the logistical work in the NGOs in Gaza Strip and are not necessarily named logisticians or work in logistical department.

Table (4-4): Title/ Position

Title/ Position	Frequency	Percent
Logistic officer	19	37.3
Logistic assistant	5	9.8
Procurement officer	2	3.9
Others	25	49.0
Total	51	100.0

e. Years of Experience

Table No. (4-5) shows that 25.5% of the sample has experience “Less than 5 years",35.3% of the sample have experience "5 – Less than 10 years and 39.2% of the sample have experience” 10 years and higher”.

Most of respondents have more than 10 years which clearly shows that most of the respondents have enough experience and education level to successfully perform their duties.

Table (4-5): Years of Experience

Years of Experience	Frequency	Percent
Less than 5 years	13	25.5
5 – Less than 10 years	18	35.3
10 years and higher	20	39.2
Total	51	100.0

4.2.2 Organizational traits

a. Number of working years in Gaza:

Table (4-6) shows that more than 80% of the NGOs have more than 5 years of existence which reflects their sustainability and success, in the same time they know the nature, culture and the situation of Gaza very well.

Table (4-6): Number of working years in Gaza

Number of working years in Gaza	Frequency	Percent
Less than 5 years	10	19.6
5 – Less than 10 years	10	19.6
10 – Less than 15 years	9	17.6
15 years and higher	22	43.1
Total	51	100.0

b. NGO Field of Work

Table (4-7) shows that most of respondent NGOs were not specialized in working in one type of work and engaged in more than one field of work, but the majority of these organizations work in Agriculture and environment, health and rehabilitation and social development, and other fields which have a direct relation to the relief process.

Table (4-7): NGO Field of Work

NGO Field of Work	Frequency	Percent
Agriculture & Environment	25	49.0
Culture and Sports	5	9.8
Economic Development	10	19.6
Democracy and Human Rights	11	21.6
Education & Training	19	37.3
Health & Rehabilitation	26	51.0
Social Development	26	51.0
Social Services & Relief	20	39.2
Women & Child	24	47.1
Others	6	11.8

c. Type of organization

Table (4-8) shows that 60.8% of the respondent NGOs were international NGOs. The researcher considers this natural and expected where the study sample contains 66% international NGOs and 33% local NGOs.

In the researcher's point of view international NGOs may have a better system than local NGOs in the logistics fields, because of their strong financial situation which enables them to invest enough in logistics. In addition, most of the international NGOs in Gaza have another management center in their country of origin, and most of times those countries are more developed than Gaza. This makes different managerial fields such as logistics more advanced in the international NGOs than the local NGOs.

Table (4-8): Origin of organization

Type of organization	Frequency	Percent
International NGO	31	60.8
Local NGO	20	39.2
Total	51	100.0

4.3 Discussion and Interpretation of the study dimensions:

4.3.1 Field of Preparedness

Table (4-9) shows the following results:

- The mean of statement #10 "Ability to deal with the climate in Gaza" equals 8.16 (81.60%), the mean of statement #3 "Determining the responsible staff for accomplish these tasks" equals 8.14, and the mean of statement #4 "Determining who will be in charge of the global coordination for logistics system" equals 8.12, and P-value for all these statements = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of these statements is significantly greater than the hypothesized value 6 which means that the majority of respondents agreed to these statements and considers their organization prepared in a high way in these fields. That means enhancement should be done to the organization's managerial actions towards these statements.

- The mean of statement #7 “Ability to deal with the impractical infrastructure” equals 6.16 (61.60%), and P-value = 0.325 which is greater than the level of significance $\alpha = 0.05$. Then the mean of this statement is insignificantly different from the hypothesized value 6. This means that respondents have no concrete answer and neutral to give any information about this statement. This means that organizations should take this field in consideration when preparing their plans.

- The mean of statement #8 “Ability to deal with unstable political situation” equals 66.53, P-value 0.012 and the mean of statement #1 “Applying an emergency a pre specified response policy or contingency plan” equals 6.88, P-value= 0.008 which means that the majority of respondents consider that their organizations have a moderate level in these statements and need to change their managerial actions towards these fields.

- The overall mean of the field “Preparedness” equals 7.44 (74.40%), 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 6 meaning the majority of respondents agreed to this field and considers that their organizations have a suitable level in the field “Preparedness”. This means organization needs to make some improvements in their managerial processes when preparing their plans to be more active in facing any disasters.

  This result disagrees with Roa (2007) who considered inadequate planning one of the major challenges faces humanitarian relief operations. In the same time this result disagrees with Bilal (2010) and Rodman (2004) since they considered each country climate and culture as the main barriers that have negative impact on logistics efforts via the disaster time, but the respondents' answers show that no problem exists with climate in Gaza, The researcher refers this to the moderate climate in Gaza (neither too hot nor too cold) which creates no problems to deal with.

  But this result agrees with Bilal (2010) and Rodman (2004) where they considered the impractical infrastructure as one of the major problems encountering humanitarian logistics.

Table (4-9): Means and Test values for "Preparedness"

	Statement	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Applying an emergency a pre specified response policy or contingency plan	6.88	68.78	2.477	0.008*	9
2.	Determining the tasks which should be performed	7.14	71.40	3.753	0.000*	8
3.	Determining the responsible staff for accomplish these tasks	8.14	81.40	9.589	0.000*	2
4.	Determining who will be in charge of the global coordination for the logistics system	8.12	81.20	8.532	0.000*	3
5.	Determining the necessary resources	7.72	77.20	7.044	0.000*	5
6.	Determining how and where the needed resources will be acquired	7.34	73.40	6.126	0.000*	7
7.	Ability to deal with the impractical infrastructure	6.16	61.60	0.457	0.325	11
8.	Ability to deal with unstable political situation	6.65	66.53	2.328	0.012*	10
9.	Ability to deal with Gaza society culture	7.86	78.60	6.644	0.000*	4
10.	Ability to deal with the climate in Gaza	8.16	81.60	8.709	0.000*	1
11.	Flexibility to deal with any unexpected scenario	7.62	76.20	6.083	0.000*	6
	All statements of the filed	7.44	74.40	7.840	0.000*	

* The mean is significantly different from 6

4.3.2 Field of Assessment

Table (4-10) shows the following results:

- The mean of statement #1 "Conducting an assessment to determine the affected area in Gaza war" equals 7.52 (75.20%), and the mean of statement #3 "Identifying the needs of the affected people" equals 7.40(74.0%), and for the two statements P-value= 0.000 which is smaller than the level of significance. The sign of the test is positive, so the means of these two statements are significantly greater than the hypothesized value 6. That means the majority of respondents agrees to this two statements. In addition, it means that organizations have a suitable level and need to make improvements in those issues.
- The P-value for statement #6 "Identifying the level of damaged agriculture and food supply system", and statement #5 "Identifying the level of damaged homes and commercial building", and for statement #4 "Identifying the level of damage to the local infrastructure capacity" are greater than the level of significance, which means that respondents are neutral and have no idea about these statements.

  The researcher traces this back to the general problem in understanding nature of logistics, where most NGOs logisticians are not part of the assessment process, where the program staff determines the supplies that need to be procured in order to provide relief services, and then they inform logisticians that they are responsible for the immediate procurement and transport to the field.

- The mean of the statement #2 "Identifying the number of the affected people needed assistance" is 6.86 (68.57%), the mean of the statement #9 "Preparing the assessment process in a timely manner (not late)" is 6.80 (86.00%), and the mean for statement #8 "Considering multidisciplinary (i.e., water needs, shelter needs, sanitation needs, logistic needs, medical needs, ..etc) is 6.76 (67.60%). The mean for statement #7 "Determining the available and the lacking resources" is 6.64 (66.40%) and for all these statements P-value is smaller than the level of significance. The sign of the test is positive, so the means of these statements are significantly greater than the hypothesized value 6. which means that respondents

agrees to these statements. Meanwhile, respondents consider that their organizations have a moderate level in these statements and need to take actions in order to reach a better level in these issues.

- The overall mean of the field "Assessment" equals 6.74 (67.40%), and P-value=0.002 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 6, which means that the majority of the respondents consider their organizations have a moderate level in the assessment step meaning it is essential to take actions in order to develop this important step in the logistic humanitarian supply chain.

  This result agrees with Russell (2005) who considers that relief efforts need more attention in the assessment field agrees with Roa (2007) who considered inadequate assessment one of the major challenges facing humanitarian relief operations, and also agrees with Bilal (2010) and Rodman (2004) who considered the unpredictable demand as one of the major problems encountered by humanitarian logistics.

Table (4-10): Means and Test values for "Assessment"

	Statement	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Conducting an assessment to determine the affected area in Gaza war	7.52	75.20	5.367	0.000*	1
2.	Identifying the number of the affected people needed assistance	6.86	68.57	3.098	0.002*	3
3.	Identifying the needs of the affected people	7.40	74.00	5.478	0.000*	2
4.	Identifying the level of damage to the local infrastructure capacity	6.00	60.00	0.000	0.500	9
5.	Identifying the level of damaged homes and commercial buildings	6.06	60.63	0.185	0.427	8

6.	Identifying the level of damaged agriculture and food supply system	6.38	63.80	0.986	0.164	7
7.	Determining the available and the lacking resources.	6.64	66.40	1.862	0.034*	6
8.	Considering multidisciplinary (i.e., water needs, shelter needs, sanitation needs, logistic needs, medical needs,..etc)	6.76	67.60	2.364	0.011*	5
9.	Preparing the assessment process in a timely manner (not late)	6.80	68.00	2.494	0.008*	4
	All statements of the filed	6.74	67.40	3.098	0.002*	

* The mean is significantly different from 6

4.3.3 Field of Resource Mobilization

4.3.3.1 Field of Financial Resources

Table (4-11) shows the following results:

- The mean of statement #2 "Requesting additional financial resources which are unavailable via appealing process" equals 7.96 (79.60%), 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 statement is significantly greater than the hypothesized value 6. which means that the majority of respondents consider their organization have a high level in requesting the financial resources via appealing process.

- The mean of statement #1 "Determining the needed financial resource when the response process started" equals 6.94 (69.41%), and P-value = 0.003 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this statement is significantly greater than the hypothesized value 6. which means that majority of respondents consider their organizations have a suitable level when determining the financial resources when the response process started.

- The overall mean of the field "Financial Resources" equals 7.44 (74.41%), 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 6. which means that: the majority of respondents consider their organizations have a suitable level in the financial resources step, which means that improving the present managerial actions related to the filed "Financial Resources" is essential.

  This result disagrees with Bilal (2010) who considered distribution of funds as one of the barriers to humanitarian logistics of humanitarian organization during natural disaster; also, this result disagrees with Rodman (2004) who outlines fund issues as one of the barriers facing humanitarian logistics.

  The researcher traces this conflict back to the huge amount of fund donated to Gaza from different parts of the world after cast lead operation (Gaza war), this fact recorded in OACHA report.

Table (4-11): Means and Test values for "Financial Resources"

No	Statement	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Determining the needed financial resource when the response process started	6.94	69.41	2.888	0.003*	2
2.	Requesting additional financial resources which are unavailable via appealing process.	7.96	79.60	7.399	0.000*	1
	All statements of the filed	7.44	74.41	5.626	0.000*	

* The mean is significantly different from 6

4.3.3.2 Field of Human Resources

Table (4-12) shows the following results:

- The mean of statement #1 "Exploiting humanitarian workers with the required experience to give assistance in relief efforts" equals 7.71 (77.06%), 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 statement is significantly greater than the hypothesized value 6. This means that the majority of respondents agreed to this statement and considered their organizations have a suitable level in this statement.

- The mean of statement #3 "Shifting another staff from globe to help in relief efforts" equals 5.68 (56.84%), and P-value = 0.277 and the mean of statement #2 equals 6.08 (60.82%), P-value = 0.423 which is greater than the level of significance $\alpha = 0.05$. Then the mean of this statement is insignificantly different from the hypothesized value 6. This means that the majorities of respondents are neutral and did not give any concrete answer about these two statements, or they have no idea about these two statements.

- The overall mean of the field "Human Resources" equals 6.63 (66.27%), and P-value=0.027 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. This means that the majority of respondents consider their organizations have a moderate level, which means that their managerial steps towards this field needs new actions to be modified.

  The researcher noted that the low mean in this field came as a result of not involving any other staff neither from volunteers nor from another part of the world.

  The researcher refers this to the NGOs status in Gaza which has a complete staff in their offices, since most of relief organizations were functioning in full capacity in Gaza. So when the war took place, there was no need to exploit any global staff.

Also it may happen as a result of the Israeli policy to prevent and retard any existence of global staff who may witness the Israeli illegal actions.

This result agrees with Bilal (2010) who considered human resources as one of the barriers to humanitarian logistics of humanitarian organization during natural disaster; also this finding is similar to Rodman;s (2004) who outlines human resources as one of the barriers facing humanitarian logistics.

Table (4-12): Means and Test values for "Human Resources"

No	Statement	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Exploiting humanitarian workers with the required experience to give assistance in relief efforts	7.71	77.06	5.316	0.000*	1
2.	Exploiting a trained volunteers to give assistance in relief efforts	6.08	60.82	0.195	0.423	2
3.	Shifting another staff from globe to help in relief efforts	5.68	56.84	-0.598	0.277	3
	All statements of the filed	6.63	66.27	1.982	0.027*	

* The mean is significantly different from 6

4.3.3.3 In General "Resource Mobilization ":

Table (4-13) shows the following results:

- The mean of all statements of the field "Resource Mobilization" equals 6.97 (69.68%), 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 all statements of this field is significantly greater than the hypothesized value 6; this means that the majority of respondents consider their organizations as having a suitable level in the resource

mobilization step, which means in the same time that resource mobilization should be improved for better management.

Table (4-13): Means and Test values for field "Resource Mobilization"

Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)
All statements of the filed " Resource Mobilization "	6.97	69.68	3.721	0.000*

* The mean is significantly different from 6

4.3.4 Field of Procurements

Table (4-14) shows the following results:

- The mean of statement #5 "Getting procurements in a good quality" equals 7.62 (76.20%), and the mean of statement #6 "Getting procurement in a reasonable cost" equals 7.44 (74.40%), and the mean of statement #3 "getting the required procurement locally" equals 7.28 (72.80%), and the mean of statement #1 "Following a pre-described policy in all procuring activities" equals 7.10 (71.00%), and the mean of statement #7 " Getting procurements in right quantities" equals 7.04 (70.40%), and P-values for all these statements are smaller than the level of significance $\alpha = 0.05$ and the sign of the test is positive, so the mean of these statements are significantly greater than the hypothesized value 6. This means that the majority of respondents consider their organizations as having a suitable level in these statements and needs some improvements.

- The P-value for statement #4 "Getting the required procurements globally" equals 0.127 and the P-value for statement#8 "Avoiding suffering from delays in material arriving" equals 0.438 which is greater than the level of significance $\alpha = 0.05$. Then the mean of these statements are insignificantly different from the hypothesized

value 6. This means respondents are neutral and do not give concrete answers about these two statements. This may mean they have no idea about these issues.

- The mean of statement#2 "Depending on specified suppliers capable of meeting its requirements" equals 6.94(69.39%), and P-value= 0.008, 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 6. This means the majority of the respondents believe their NGOs have a suitable level in this statement and needs some improvements.

- The overall mean of the field "procurements" equals 6.89 (68.88%), 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 6. This means that the majority of respondents consider their organizations have a moderate level in the field Procurement, which means also the field procurement required development to reach a suitable level.

  The researcher noted that there is no problem with relief organizations in getting the required material with suitable cost and good quality despite the siege and all the restrictions by the Israeli governments on a lot of materials passing, and this may refer to Gaza tunnels that act as an outlet to get all good needed by the Palestinian merchants. This seems clearl in respondents answers as they have no problems with getting the materials locally.

  The researcher also noted that problems exist when the needed material was from globe; this may be a reason for the Israeli restrictions.

Table (4-14): Means and Test values for "Procurements"

No	Statement	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Following a pre-described policy in all procuring activities	7.10	71.00	3.041	0.002*	4
2.	Depending on specified suppliers capable of meeting its requirements	6.94	69.39	2.488	0.008*	6
3.	Getting the required procurements locally	7.28	72.80	3.914	0.000*	3
4.	Getting the required procurements globally	5.51	55.10	-1.153	0.127	8
5.	Getting procurements in a good quality	7.62	76.20	6.014	0.000*	1
6.	Getting procurements in a reasonable cost	7.44	74.40	5.308	0.000*	2
7.	Getting procurements in right quantities	7.04	70.41	3.663	0.000*	5
8.	Avoiding suffering from delays in material arriving	6.06	60.61	0.157	0.438	7
	All statements of the filed	6.89	68.88	4.136	0.000*	

* The mean is significantly different from 6

4.3.5 Field of local Transport

Table (4-15) shows the following results:

- The mean of statement #4 "Selecting the mode of local transportation depending on the availability" equals 7.54 (75.40%), and the mean of statement# 2 "Depending on mobile vehicles to convey aids for the needed" equals 7.36 (73.60%), and the mean of statement #1 "Planning movements for organization's drivers to identify which roads they should use" equals 7.26 (72.60%), and the mean of statement# 6 "

selecting the mode of local transportation depending on speed and time" equals 7.24 (72.35%), and the mean of statement #3 " Selecting the mode of local transportation depending on security requirements" equals 7.00(70.00%) and P-value for all the previous statements are smaller than the level of significance $\alpha = 0.05$ and the sign of the tests for all of them are positive, so the means of this statement are significantly greater than the hypothesized value 6. That means the majority of respondents believe their organizations have a suitable level in these fields but this level needs some improvements.

- The mean of statement#9 "Selecting the mode of local transportation depending on the nature of goods/products/supplies to transported" equals 6.75(67.45%), and the mean of statement#7 "Selecting the mode of local transportation depending on the distance to be covered" equals 6.71 (67.06%) and the mean of statement#14 "Facing problems in accessing the fuel sources" equals 6.61 (66.08%) and P-value for all the previous statements are smaller than the level of significance $\alpha = 0.05$ and the sign of the tests for all of them are positive, so the means of this statement are significantly greater than the hypothesized value 6. That means the majority of respondents consider their organizations as having a moderate level in these statements.

- The mean of statement# 5 "Selecting the mode of local transportation depending on cost" equals 6.34 (63.40%), and the mean of statement#11 "Exploiting commercial provider for transportation" equals 6.34 (63.40%), and the mean of statement#8 "Selecting the mode of local transportation depending on distances to be covered" equals 6.31 (63.14%), and the mean of statement#13 "Facing problems in accessing the fuel sources" equals 6.61 (66.08%), and the mean of statement#10 "Training organization's drivers to avoid risk and hijacked" equals 5.78 (57.76%) , and the mean of statement#12 "Facing problems due to poor infrastructure in the affected area" equals 5.49 (54.90%), and P-value for all the previous statements are greater than the level of significance $\alpha = 0.05$. Thus, the mean of this statement is insignificantly different from the hypothesized value 6. This means that the respondents did not give concrete answer and did not formulate a vision about these

statements, which means even they are neutral or do not know how their organization perform in these statements.

- The overall mean of the field "Transport (Local)" equals 6.64 (66.39%), and P-value=0.005 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 6. This means the majority of respondents believe their organizations have a moderate level in the field transport, so the researcher recommends taking a new managerial improvements in order to raise the organization performance in the transport field.

  This result matches the results from Bilal (2010) study, and Russel (2005) & Rodman (2004); since all of them consider problems with infrastructure as one of the biggest problems that faces transportation step in the humanitarian supply chain.

  In the researcher's opinion, the infrastructure problems in Gaza is considered as a very challenging problem, especially, no airport do exist and air transportation is not applicable at all which makes relief process very difficult in case land transportation infrastructure was destroyedif any disaster strikes. In this case, the researcher recommends focusing on the infrastructure and considering it in any disasters preparedness processes, and put flexible plans that have the ability to overcome any destruction for the infrastructure.

  From the point that saving lives have no price, then all alternatives are acceptable. The organization may use helicopters, boats, animals, motorcycles, toktoks and any other available means that may save even one life or support a person in need.

Table (4-15): Means and Test values for "Transport (Local)"

No	Statement	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Planning movements for organization's drivers to identify which roads they should use	7.26	72.60	3.932	0.000*	3
2.	Depending on mobile vehicles to convey aids for the needed	7.36	73.60	4.314	0.000*	2
3.	Selecting the mode of local transportation depending on security requirements	7.00	70.00	2.990	0.002*	5
4.	Selecting the mode of local transportation depending on the availability	7.54	75.40	4.979	0.000*	1
5.	Selecting the mode of local transportation depending on cost	6.34	63.40	0.888	0.189	10
6.	Selecting the mode of local transportation depending on speed and time	7.24	72.35	3.890	0.000*	4
7.	Selecting the mode of local transportation depending on the distances to be covered	6.71	67.06	2.063	0.022*	7
8.	Selecting the mode of local transportation depending on available infrastructure	6.31	63.14	0.932	0.178	12
9.	Selecting the mode of local transportation depending on the nature of goods/products/supplies to be transported	6.75	67.45	2.012	0.025*	6
10.	Training organization's drivers to avoid risk and hijacked	5.78	57.76	-0.513	0.305	14
11.	Exploiting commercial provider for transportation	6.34	63.40	0.847	0.201	10
12.	Facing problems due to poor	5.49	54.90	-1.419	0.081	15

	infrastructure in the affected area					
13.	Facing problems due to political barriers	6.04	60.40	0.102	0.460	13
14.	Facing problems in accessing the fuel sources	6.61	66.08	1.760	0.042*	8
15.	Facing problems in steeling vehicles and products	6.40	64.00	0.990	0.164	9
	All statements of the filed	6.64	66.39	2.674	0.005*	

* The mean is significantly different from 6

4.3.6 Field of Track and Trace

Table (4-16) shows the following results:

- The mean of statement #2 "Tracking goods and services by excel sheets" equals 7.49 (74.90%), 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 statement is significantly greater than the hypothesized value 6. This means that the majority of respondents think their organization depend on excel sheets to track goods in a suitable way.

- The mean of statement #1 "Tracking goods and services manually" equals 5.68 (56.81%) and the mean of statement#3 "Tracking goods and services by computer software" equals 5.62 (56.17%), and P-values for the both statements are greater than the level of significance $\alpha = 0.05$. Then the mean of this statement is insignificantly different from the hypothesized value 6. This means that the majority of respondents did not formulate a vision towards these issues. This means they have no idea or are neutral.

- The overall mean of the field "Track and Trace" equals 6.40 (63.99%), and P-value=0.118 which is greater than the level of significance $\alpha = 0.05$. Then the mean of this field is insignificantly different from the hypothesized value 6. This means that the majority of respondents did not formulate a vision towards tracking and tracing steps in the humanitarian logistic chain. This means they have no idea or are neutral.

It seems from respondents' answers that humanitarian organizations use excel sheets in their track & trace process.

This study findings match with Russell (2005) study who discovered in his study that 74% of the organizations trace their goods manually or by using excel spread sheets, and only 26% used designed software computers.

It also matches with Roa (2007) study, who considered using manual supply chain is one of the challenges that face humanitarian relief in China organizations.

According to Van der Laan & others (2007) study "Logistics Information and Knowledge Management Issues in Humanitarian Aid Organizations"; the researcher suggests managing relief logistics operation via information system helps to overcome the encountered obstacles.

Table (4-16): Means and Test values for "Track and Trace"

No	Statement	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Tracking goods and services manually	5.68	56.81	-0.775	0.221	2
2.	Tracking goods and services by excel sheets	7.49	74.90	3.976	0.000*	1
3.	Tracking goods and services by computer software	5.62	56.17	-0.737	0.232	3
	All statements of the filed	6.40	63.99	1.197	0.118	

* The mean is significantly different from 6

4.3.7 Field of Stock Asset Management

Table (4-17) shows the following results:

- The mean of statement #4 "Identifying the methods of receiving and issuing supplies" equals 8.12 (81.20%), 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 statement is significantly greater than the hypothesized value 6. This means that the majority of respondents see that their organizations had high level system for receiving and issuing supplies, and this system needs enhancement to sustain its effectiveness.

- The mean of statement #14 "Using Governmental warehouses" equals 3.18 (31.82%), and the mean of statement#13 "Using transit warehouse destined for different locations" equals 3.18 (31.82%), and P-value = 0.000 for the previous two statement are smaller than the level of significance $\alpha = 0.05$. The sign of the tests are negative, so the mean of these statements are significantly smaller than the hypothesized value 6. This means that the majority of respondents consider their organization as not implementing this standard in stock asset management field.

- The mean of statement#11 "Using space warehouse owned by the organization" equals 6.04(60.41%), and the mean of statement#15 "Conducting a professional study in order to determine the best location for the warehouse" equals 5.91 (59.15%) and both of them have P-values more than the level of significance $\alpha = 0.05$. Then the mean of this statement is insignificantly different from the hypothesized value 6. This means that the majority of respondents did not give concrete answer towards these issues, this means even they have no idea or are neutral.

- The overall mean of the field "Stock Asset Management" equals 6.74 (67.35%), 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 field is significantly greater than the hypothesized value 6. This means that the majority of respondents consider their organizations had a moderate level, and managerial improvements should be done in order to raise the organization performance in stock asset management field.

  Despite most of their answers have the mean 70% and above, statement#13 & statement#14 affected the result in a big degree, which means that most organizations have no problems with stocks. The problems appears clearly in the

warehouses as there is a problem in selecting the warehouses place, and there is a problem in using a governmental warehouses or any other organization warehouses.

This may become as a result to insufficient cooperation between the relief organizations, and between the relief organizations and governments.

Table (4-17): Means and Test values for "Stock Asset Management"

No	Statement	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Following specific warehouse management policy and procedures guidelines	7.06	70.60	2.809	0.004*	10
2.	Defining all the activities to be adopted in the warehouse clearly and step by step	7.18	71.80	3.170	0.001*	6
3.	Providing clear visibility of the operations in the warehouse for both managers and donors	7.24	72.45	3.380	0.001*	4
4.	Identifying the methods of receiving and issuing supplies	8.12	81.20	7.751	0.000*	1
5.	Defining quality control system method	7.34	73.40	3.873	0.000*	2
6.	Identifying the way to storage goods	7.06	70.60	2.920	0.003*	10
7.	Identifying the way to control the stock movement	7.12	71.20	2.893	0.003*	8
8.	Determining how to deal with the stock losses	7.02	70.20	2.605	0.006*	12
9.	Determining how rejected material will be managed	7.16	71.63	2.840	0.003*	7
10.	Determining how to deal with unwanted material, obsolete, and scrap disposal	7.02	70.20	2.809	0.004*	13

11.	Using space warehouses owned by the organization	6.04	60.41	0.086	0.466	15
12.	Using commercial warehouses in rented building	7.00	70.00	2.173	0.017*	14
13.	Using transit warehouses destined for different locations	3.87	38.67	-4.550	0.000*	17
14.	Using Governmental warehouses	3.18	31.82	-5.737	0.000*	18
15.	Conducting a professional study in order to determine the best location for the warehouses	5.91	59.15	-0.194	0.423	16
16.	Selecting the warehouses with sufficient spaces for all the needed activities to be done	7.29	72.92	3.164	0.001*	3
17.	Selecting the warehouses which enables all the required care needed to some storage items	7.10	71.04	2.696	0.005*	9
18.	Selecting the warehouses with enough security in order to keep the required degree of safety	7.24	72.45	3.195	0.001*	4
	All statements of the filed	6.74	67.35	2.624	0.006*	

* The mean is significantly different from 6

4.3.8 Field of Extended Point of Delivery & Relief to Beneficiaries

Table (4-18) shows the following results:

- The mean of statement #5 “Monitoring the distribution method” equals 8.46 (84.60%), 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 statement is significantly greater than the hypothesized value 6. This means that the majority of respondents think their organization had a high monitor system over the aid distribution system which needs enhancement.

- The mean of statement #4 "Considering the conditions of infrastructure when selected the points of distribution" equals 6.96 (69.60%), and P-value = 0.005 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this statement is significantly greater than the hypothesized value 6. This means that the majority of respondents believe their organization put infrastructure under consideration in a suitable level but still needs some improvements to raise its effectiveness.

- The overall mean of the field "Extended Point of Delivery & Relief to Beneficiaries" equals 7.97 (79.68%), 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 6. This means that the majority of respondents consider their organization as having a high level in this field "Extended Point of Delivery & Relief to Beneficiaries" which needs enhancement.

Table (4-18): Means and Test values for "Extended Point of Delivery & Relief to Beneficiaries"

No	Statement	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Selecting suitable points for aids distribution which are far enough from the hot areas	8.22	82.20	9.076	0.000*	4
2.	Selecting suitable points for aids distribution which are safe enough for both workers and beneficiaries	8.20	82.04	8.151	0.000*	6
3.	Considering the distance to beneficiaries when selected the points of distribution	8.20	82.00	7.479	0.000*	7
4.	Considering the conditions of	6.96	69.60	2.665	0.005*	11

	infrastructure when selected the points of distribution					
5.	Monitoring the distribution method	8.46	84.60	9.799	0.000*	1
6.	Ensuring that aids didn't reach to the wrong hands or black market	8.22	82.20	8.618	0.000*	4
7.	Taking care to ensure women's and children safety during the distribution method (sexual harassment not existed)	8.32	83.20	7.250	0.000*	2
8.	Training the distribution staff to ensure neutrality, impartiality and respect for culture and beneficiaries in Gaza	8.32	83.20	8.400	0.000*	2
9.	Carrying out the distribution method in an efficient and organized matter	8.14	81.40	8.591	0.000*	8
10.	Engaging the local community in the distribution method	7.24	72.40	3.065	0.002*	10
11.	Handing over the aids via partner organization	7.38	73.83	3.329	0.001*	9
	All statements of the filed	7.97	79.68	9.560	0.000*	

* The mean is significantly different from 6

4.3.9 Field of Monitoring/Evaluation/Reporting

Table (4-19) shows the following results:

- The mean of statement #3 "Depending on an official system for reporting all activities for donors" equals 7.67 (76.67%), 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 statement is significantly greater than the hypothesized value 6. This means that the majority of respondents consider their organizations as having a suitable level in this issue and needs more improvement.

- The mean of statement #2 "Depending on an official system for the periodic assessment of the relevance, efficiency, effectiveness, impact, and sustainability of

humanitarian logistics" equals 7.00 (70.00%), and P-value = 0.002 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this statement is significantly greater than the hypothesized value 6. This means that the majority of respondents consider their organizations as having a suitable level in this issue and needs more improvement.

- The overall mean of the field "Monitoring/Evaluation/Reporting" equals 7.48 (74.82%), 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 6. This means that the majority of respondents believe their organizations have a suitable level in the field "Monitoring/Evaluation/Reporting" and needs more improvement, the researcher traces this back to the theoretical nature for this type of work, since it relates to paper work that done in offices.

Table (4-19): Means and Test values for "Monitoring/Evaluation/Reporting"

No	Statement	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Depending on an official system for collection, analysis, and utilization of information about the humanitarian logistics performance	7.59	75.88	5.239	0.000*	3
2.	Depending on an official system for the periodic assessment of the relevance, efficiency, effectiveness, impact, and sustainability of humanitarian logistics	7.00	70.00	3.073	0.002*	5
3.	Depending on an official system for reporting all activities for donors	7.67	76.67	6.022	0.000*	1

4.	Evaluating logistics performance to measure if it met the established objectives and goals	7.63	76.27	6.342	0.000*	2
5.	Succeeding in managing the information system in order to provide accountability to donors	7.53	75.29	4.802	0.000*	4
	All statements of the filed	7.48	74.82	6.066	0.000*	

* The mean is significantly different from 6

4.3.10 Field of Communication

Table (4-20) shows the following results:

- The mean of statement #1 "Selecting a suitable mode of communication and capable to meet the required needs" equals 7.90 (79.02%), 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 statement is significantly greater than the hypothesized value 6. This means that the majority of respondents think their organizations have a suitable level in this issue and needs more improvement.

- The mean of statement #7 "Equipping the vehicles with the required and needed communication methods in the operation theater" equals 6.31 (63.14%), and P-value = 0.215 which is greater than the level of significance $\alpha = 0.05$. Then the mean of this statement is insignificantly different from the hypothesized value 6.This means that the majority of respondents did not give concrete answer towards this statement. This means even they have no idea or are neutral.

- The overall mean of the field "Communication" equals 7.33 (73.33%), 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 6. This means that the majority of respondents consider their organizations as having a suitable level in this step and needs more improvement.

This finding disagrees with Rodman (2004) study since it outlines communication as one of the major barriers facing humanitarian organizations.

Table (4-20): Means and Test values for "Communication"

No	Statement	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Selecting a suitable mode of communication and capable to meet the required needs	7.90	79.02	7.629	0.000*	1
2.	Depending on the E-mail as a tool of communication	7.78	77.84	5.249	0.000*	3
3.	Depending on cellular phone as a tool of communication	7.86	78.63	5.724	0.000*	2
4.	Depending on satellite phone as a tool of communication	7.39	73.92	4.463	0.000*	4
5.	Facing problems in communication method	7.02	70.20	3.263	0.001*	6
6.	Supplying staff with the required and needed communication methods in the operation theater	7.06	70.59	3.146	0.001*	5
7.	Equipping the vehicles with the required and needed communication methods in the operation theater	6.31	63.14	0.795	0.215	7
	All statements of the filed	7.33	73.33	6.105	0.000*	

* The mean is significantly different from 6

4.3.11 Field of Collaboration and Coordination

Table (4-21) shows the following results:

- The mean of statement #1 "Working with other agencies (NGOs) in setting up humanitarian logistics" equals 7.51 (75.10%). The mean of statement#4 "Utilizing the other partner existing to develop logistic services" equals 7.40 (74.00%), and the mean of statement#2 "Working with the local community in setting up humanitarian logistics" equals 7.33 (3.333%). P-values for all these statements equal 0.000 which are smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of these statements are significantly greater than the hypothesized value 6. This means that the majority of respondents consider their organizations have a suitable level in these statements, and this level needs improvement.

- The mean of statement #3 "Working with the private sector in setting up humanitarian logistics" equals 5.65 (56.53%), and P-value = 0.220 which is greater than the level of significance $\alpha = 0.05$. Then the mean of this statement is insignificantly different from the hypothesized value 6. This means that the majority of respondents did not give concrete answers towards this statement; this means either they have no idea or they are neutral.

- The overall mean of the field "Collaboration and Coordination" equals 7.01 (70.10%), and P-value=0.001 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 6. This means that the majority of respondents consider their organizations have a suitable level in this step, and this level needs improvement.

  This disagrees with Kovacs and Spens (2009) who considered the utmost challenge of humanitarian logisticians is to find collaboration partners.

  It also disagree with Schulz (2008) who considers that an impediment exists mainly when cooperating with the private sector, and additional impediments can be

observed when cooperating with other NGOs within the following cases: conflicting mission statements and principles and a lack of available resources.

In addition, this result disagrees with Balcik and others (2009) who mention different challenges that may hinder an effective collaboration between NGOs so they suggest more additional efforts and creativity should be exerted in order to improve the coordination mechanisms in the relief sector.

Also this result disagrees with Rao's study (2007) that considered the limited coordination and collaboration and how they affect the supply chain performance negatively. Also this result disagrees with Russel's study (2005), since he considered collaboration among humanitarian organization a challenge.

The researcher refers the conflict between this study and other studies to the following:

- Special nature of Gaza, where Gaza could be considered an unstable place from a political perspective. Most of international organizations, further, had offices in Gaza even before the war, and they already have partners.
- Most of international organization had local partners, and this may be the major reason that affected the respondents' answers, since each international organization considers its work with the local organizations an accurate collaboration method.

Table (4-21): Means and Test values for "Collaboration and Coordination"

No	Statement	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Working with other agencies (NGOs) in setting up humanitarian logistics	7.51	75.10	4.583	0.000*	1
2.	Working with the local community in setting up humanitarian logistics	7.33	73.33	3.582	0.000*	3

3.	Working with the private sector in setting up humanitarian logistics	5.65	56.53	-0.779	0.220	4
4.	Utilizing the other partner existing to develop logistic services	7.40	74.00	4.436	0.000*	2
	All statements of the filed	7.01	70.10	3.326	0.001*	

* The mean is significantly different from 6

4.3.12 In General: "All Fields of Humanitarian Logistics ":

Table (4-22) shows the following results:

- The mean of all statements equals 7.05 (70.52%), 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 all statements is significantly greater than the hypothesized value 6. This means that the majority of respondents consider their organizations have a suitable level in humanitarian logistics management, but this level needs more improvements to achieve better progress.

  The researcher considers having a percent equal to 70.52% in humanitarian logistics management as generally accepted but needs necessary actions to be taken towards improving this type of work in NGOs sector in Gaza, especially for the currently unstable political situation.

  Despite accepting this level of humanitarian logistics, the researcher considers this result disappointing to her expectations, since she expected that NGOs were more mobilized to deal with situations like Operation Cast Lead (War on Gaza), especially a lot of NGOs have been working for a long time, had good experience, had a good financial status, are totally equipped with facilities and all the needed staff is available most of times.

  Accordingly, the NGOs should increase their preparedness to be ready to face any other disaster in Gaza and to perform better.

Table (4-22): Means and Test values for all statements

Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)
All statements	7.05	70.52	5.895	0.000*

*The mean is significantly different from 6

4.4 HYPOTHESIS TESTING

4.4.1 First Hypothesis

3) There is no significant statistical difference at significant level (05.0=α) in the application of humanitarian logistics management during the war on Gaza (Operation Cast Lead) due to respondents' traits (age, gender, education, experience, etc.).

A. There is no significant statistical difference at significant level (05.0=α) in the application of humanitarian logistics management during the war on Gaza (Operation Cast Lead) and the age of the respondents.

- Table (4-23) shows that the p-value (Sig.) is smaller than the level of significance α = 0.05 for the field "Preparedness", so there is significant difference in respondents' answers towards this field due to age which means that the age of the respondents has an effect on this field.
- Table (4-23) shows that the p-value (Sig.) is greater than the level of significance α = 0.05 for each field, so there is insignificant difference in respondents' answers toward these fields due to age which means that the age of the respondents has no effect on these fields.

Table (4-23): ANOVA test of the fields and their p-values for age

No	Field	Test value	P-value(Sig.)
1.	Preparedness	4.969	0.005*
2.	Assessment	1.864	0.149
3.	Resource Mobilization	1.183	0.326
4.	Procurements	0.248	0.862
5.	Transport (Local)	0.800	0.500
6.	Track and Trace	0.537	0.659
7.	Stock Asset Management	0.427	0.735
8.	Extended Point of Delivery & Relief to Beneficiaries	0.489	0.691

9.	Monitoring/Evaluation/Reporting	0.212	0.888
10.	Communication	2.046	0.120
11.	Collaboration and Coordination	1.759	0.168
	All fields together	0.898	0.449

* The mean difference is significant at 0, 05 level

- Table (4-24) shows the mean for each field for age.

  For the field "Preparedness", the mean for respondents with age of Older than 45 years is higher than other groups.

Table (4-24): Mean for each field of age

No	Fields	Means			
		Less than 25 years	25 – less than 35	35 – Less than 45	Older than 45 years
1.	Preparedness	6.07	7.04	7.70	8.31
2.	Assessment	5.83	6.23	6.51	7.71
3.	Resource Mobilization	6.45	6.57	6.99	7.78
4.	Procurements	7.14	6.94	7.01	6.55
5.	Transport (Local)	5.88	6.38	6.76	7.16
6.	Track and Trace	5.75	6.31	7.01	6.00
7.	Stock Asset Management	5.64	6.83	6.89	6.74
8.	Extended Point of Delivery & Relief to Beneficiaries	7.22	8.12	8.09	7.80
9.	Monitoring/Evaluation/Reporting	7.30	7.48	7.75	7.22
10.	Communication	5.71	7.31	7.82	7.30
11.	Collaboration and Coordination	6.50	6.25	7.58	7.73
	All fields together	6.27	6.90	7.32	7.24

B. There is no significant statistical difference at significant level (05.0=α) in the application of humanitarian logistics management during the war on Gaza (Operation Cast Lead) and the gender of the respondents.

- Table (4-25) shows that the p-value (Sig.) is greater than the level of significance α = 0.05 for each field, so there is insignificant difference in respondents' answers towards each field due to gender which means that the gender of the respondents has no effect on each field.

Table (4-25): Independent Samples T-Test of the fields and their p-values for gender

No	Field	Test value	P-value(Sig.)
1.	Preparedness	-0.173	0.863
2.	Assessment	0.154	0.878
3.	Resource Mobilization	0.038	0.970
4.	Procurements	0.524	0.602
5.	Transport (Local)	-0.236	0.815
6.	Track and Trace	-0.233	0.817
7.	Stock Asset Management	-0.327	0.745
8.	Extended Point of Delivery & Relief to Beneficiaries	-1.104	0.275
9.	Monitoring/Evaluation/Reporting	-0.052	0.959
10.	Communication	-0.061	0.951
11.	Collaboration and Coordination	-1.261	0.213
	All fields together	-0.366	0.716

C. There no significant statistical difference at significant level (05.0=α) in the application of humanitarian logistics management during the war on Gaza (Operation Cast Lead) due to the education of the respondents.

- Table (4-26) shows that the p-value (Sig.) is smaller than the level of significance α = 0.05 for the field "Assessment", so there is significant difference in respondents' answers towards this field due to education which means that the education of the respondents has effect on this field.
- Table (4-26) shows that the p-value (Sig.) is greater than the level of significance α = 0.05 for each field, so there is insignificant difference in respondents' answers toward these fields due to education which means that the education of the respondents has no effect on these fields.

Table (4-26): ANOVA test of the fields and their p-values for education

No	Field	Test value	P-value(Sig.)
1.	Preparedness	2.178	0.087
2.	Assessment	2.713	0.041*
3.	Resource Mobilization	0.196	0.939
4.	Procurements	1.132	0.354
5.	Transport (Local)	0.388	0.816
6.	Track and Trace	3.226	0.020
7.	Stock Asset Management	2.257	0.077
8.	Extended Point of Delivery & Relief to Beneficiaries	0.634	0.641
9.	Monitoring/Evaluation/Reporting	0.716	0.585
10.	Communication	0.658	0.624
11.	Collaboration and Coordination	0.749	0.564
	All fields together	1.511	0.215

* The mean difference is significant a 0, 05 level

❖ Table (4-27) shows the mean for each field for education.

For the field "Assessment", the mean for respondents with education of Bachelor is higher than other groups.

Table (4-27): Mean for each field of education

No	Fields	Means				
		Diploma	Bachelor	Master	PHD	Others
	Preparedness	5.82	7.61	7.56	6.09	8.36
2.	Assessment	4.99	7.14	6.69	4.44	7.00
3.	Resource Mobilization	6.30	7.01	7.06	7.38	6.20
4.	Procurements	5.48	7.04	7.09	6.63	5.88
5.	Transport (Local)	6.18	6.75	6.56	5.70	7.93
6.	Track and Trace	3.08	6.97	6.08	5.50	8.67
7.	Stock Asset Management	4.14	7.12	6.57	6.75	7.78
8.	Extended Point of Delivery & Relief to Beneficiaries	7.82	8.10	7.57	8.05	9.64
9.	Monitoring/Evaluation/Reporting	6.25	7.71	7.47	7.00	6.60
10.	Communication	7.14	7.45	7.43	5.79	6.29
11.	Collaboration and Coordination	5.94	6.94	7.21	7.25	10.00
	All fields together	5.77	7.27	7.00	6.38	7.72

D. There is no significant statistical difference at significant level (05.0=α) in the application of humanitarian logistics management during the war on Gaza (Operation Cast Lead) and the experience of the respondents.

- Table (4-28) shows that the p-value (Sig.) is smaller than the level of significance α = 0.05 for the field "Preparedness", so there is significant difference in respondents' answers towards this field due to experience which means that the experience of the respondents has an effect on this field.
- Table (4-28) shows that the p-value (Sig.) is greater than the level of significance α = 0.05 for each field, so there is insignificant difference in respondents' answers towards these fields due to experience which means that the experience of the respondents has no effect on these fields.

Table (4-28): ANOVA test of the fields and their p-values for experience

No	Field	Test value	P-value(Sig.)
1.	Preparedness	3.822	0.029*
2.	Assessment	0.694	0.505
3.	Resource Mobilization	2.743	0.074
4.	Procurements	0.069	0.934
5.	Transport (Local)	0.771	0.468
6.	Track and Trace	0.388	0.680
7.	Stock Asset Management	3.053	0.056
8.	Extended Point of Delivery & Relief to Beneficiaries	0.966	0.388
9.	Monitoring/Evaluation/Reporting	2.428	0.099
10.	Communication	0.700	0.501
11.	Collaboration and Coordination	1.469	0.240
	All fields together	1.322	0.276

* The mean difference is significant a 0, 05 level

❖ Table (4-29) shows the mean for each field for experience.

For the field "Preparedness", the mean for respondents with experience of 10 years and higher is higher than other groups.

Table (4-29): Mean for each field of experience

No	Fields	Means		
		Less than 5	5 – Less than 10	10 years and
1.	Preparedness	6.87	7.23	8.03
2.	Assessment	6.33	6.69	7.05
3.	Resource Mobilization	6.00	7.11	7.47
4.	Procurements	7.02	6.86	6.82
5.	Transport (Local)	6.31	6.47	7.00
6.	Track and Trace	6.04	6.78	6.29
7.	Stock Asset Management	5.81	7.53	6.62
8.	Extended Point of Delivery & Relief to Beneficiaries	7.72	8.35	7.78
9.	Monitoring/Evaluation/Reporting	6.86	8.16	7.28
10.	Communication	6.90	7.56	7.41
11.	Collaboration and Coordination	6.54	6.64	7.65
	All fields together	6.56	7.25	7.20

4.4.2 Second Hypothesis

4) **There is no significant statistical difference at significant level (α= 0.50) in the application of humanitarian logistics management during the war on Gaza (Operation Cast Lead) due to organizational traits (Age, Type of NGO)**

A. **There is no significant statistical difference at significant level (05.0=α) in the application of humanitarian logistics management during the war on Gaza (Operation Cast Lead) and the age of NGO.**

❖ Table (4-30) shows that the p-value (Sig.) is greater than the level of significance α = 0.05 for each field, so there is insignificant difference in respondents' answers towards each field due to age of NGO which means the age of the respondent NGOs has no effect on each field.

Table (4-30): ANOVA test of the fields and their p-values for age of NGO

No	Field	Test value	P-value(Sig.)
12.	Preparedness	2.772	0.052
13.	Assessment	1.031	0.387
14.	Resource Mobilization	1.476	0.233
15.	Procurements	0.938	0.430
16.	Transport (Local)	1.301	0.285
17.	Track and Trace	0.161	0.922
18.	Stock Asset Management	0.637	0.595
19.	Extended Point of Delivery & Relief to Beneficiaries	0.030	0.993
20.	Monitoring/Evaluation/Reporting	0.590	0.625
21.	Communication	0.273	0.845
22.	Collaboration and Coordination	1.315	0.281
	All fields together	0.572	0.636

B. There is no significant statistical difference at significant level (05.0=α) in the application of humanitarian logistics management during the war on Gaza (Operation Cast Lead) and the Type of NGO.

- Table (4-31) shows that the p-value (Sig.) is smaller than the level of significance α = 0.05 for the field "Collaboration and Coordination", so there is significant difference in respondents' answers towards this field due to type of NGO which means that the type of the respondent NGOs has effect on this field.
- Table (4-31) shows that the p-value (Sig.) is greater than the level of significance α = 0.05 for each field, so there is insignificant difference in respondents' answers towards these fields due to type of NGO which means the type of the respondent NGOs has no effect on these fields.

Table (4-31): Independent Samples T-Test of the fields and their p-values for Origin of NGO

No	Field	Test value	P-value(Sig.)
1.	Preparedness	-0.627	0.534
2.	Assessment	-0.955	0.344
3.	Resource Mobilization	-0.886	0.380
4.	Procurements	-0.643	0.523
5.	Transport (Local)	-0.849	0.400
6.	Track and Trace	-1.256	0.215
7.	Stock Asset Management	-1.159	0.252
8.	Extended Point of Delivery & Relief to Beneficiaries	-0.097	0.923
9.	Monitoring/Evaluation/Reporting	0.366	0.716
10.	Communication	-0.009	0.993
11.	Collaboration and Coordination	-2.472	0.017*
	All fields together	-1.056	0.296

* The mean difference is significant a 0, 05 level

❖ Table (4-32) shows the mean for each field for type of NGO.
For the field "Collaboration and Coordination", the mean for respondents with type of NGO of Local NGO is higher than International NGO.

Table (4-32): Mean for each field of Origin of NGO

No	Field	Means	
		International NGO	Local NGO
1.	Preparedness	7.35	7.58
2.	Assessment	6.56	7.02
3.	Resource Mobilization	6.78	7.26
4.	Procurements	6.78	7.07
5.	Transport (Local)	6.48	6.89
6.	Track and Trace	6.06	6.92
7.	Stock Asset Management	6.48	7.14
8.	Extended Point of Delivery & Relief to Beneficiaries	7.95	7.99
9.	Monitoring/Evaluation/Reporting	7.55	7.37
10.	Communication	7.33	7.34
11.	Collaboration and Coordination	6.44	7.90
	All fields together	6.90	7.29

CHAPTER 5

CONCLUSIONS, RECOMMENDATIONS AND FUTURE RESEARCH

5.1 Introduction

This chapter provides the main conclusions related to the field work and the appropriate recommendations to overcome the weaknesses of humanitarian logistics management application in Gaza's NGOs governance bodies.

5.2 Conclusion

After the analysis and interpretation of data, the researcher is able to conclude that Gaza NGOs applied humanitarian logistics management during Cast Lead Operation (Gaza War) by nearly 70.52%. This conclusion is expected from this study that had concentrated on the large and active NGOs working in relief programs during Cast Lead Operation (Gaza War) under the monitoring of Social Affairs Ministry of the Gaza Strip: International NGOs and Local Palestinian NGOs that have: 20 employees or more, more than 500,000$ as an average annual budget, more than 15 year of existence, and more than 10 projects implemented on annual basis.

The following is a summary of the conclusions that can be drawn from this study based on the research fields:

5.2.1. Preparedness

Gaza Strip NGOs applied Preparedness step by 74.4%. That means Gaza NGOs applied a pre-specified contingency plan which is flexible enough to deal with any unexpected scenario to suit Gaza culture and circumstances. It also means that Gaza NGOs determined the performed tasks, determined the responsible staff, and determined the needed resources and what should be acquired.

5.2.2. Assessment

Gaza Strip NGOs applied Assessment step by 67.4%. That means Gaza NGOs determined the affected areas during the war, determined the number of the needy people and the major priority needs for those people in a timely manner.

5.2.3. Resource Mobilization (financial & human resources)

Gaza Strip NGOs applied Resource Mobilization step by 69.68%. Gaza NGOs determined the needed financial resources when the response process started, and requested the required resources via appealing process. Furthermore, it means Gaza NGOs staff was professional and qualified enough to participate in relieving during war.

5.2.4. Procurement

Gaza Strip NGOs applied Procurement step by 68.88%. That means Gaza NGOs followed a pre-described policy in all procuring activities. It means that Gaza NGOs depended on local suppliers for the needed procurements in a good quality, right quantity and reasonable cost.

5.2.5. Transport

Gaza Strip NGOs applied Transport step by 66.4% which means Gaza NGOs selected the mode of transportation after considering the security requirements, the available mode, the available time, and speed.

5.2.6. Track & Trace

Gaza strip NGOs applied Track & Trace step by 63.99% which means Gaza NGOs used excel sheets to track and trace the goods during the war.

5.2.7. Stock Asset Management

Gaza Strip NGOs applied Stock Asset Management step by 67.35%. That means Gaza NGOs followed a specific warehouse management policy, and procedures guidelines, which identify the method of receiving and issuing supplies, the quality control system

method, the way to store goods, the way to control the stock movements, how to deal with the stock losses, how rejected material will be managed and how to deal with unwanted material, obsolete, and scrap disposal. In addition, this means that Gaza NGOs warehouses were spacious enough for the needed activities and secure enough to keep the goods in the required degree of safety.

5.2.8. Extended Point of Delivery & Relief to Beneficiaries

Gaza Strip NGOs applied Extended Point of Delivery & Relief to Beneficiaries step by 79.68 % which means Gaza NGOs selected the distribution points for aids far enough from the hot areas to keep the required safety for both workers and beneficiaries. It, too, means that Gaza NGOs monitored the aids distribution method and ensured women and children's safety (Sexual harassment not existed), and it means that Gaza NGOs carried out the distribution method in an efficient and organized matter ensuring neutrality, impartiality and culture respecting.

5.2.9. Monitoring/Evaluation/Reporting

Gaza Strip NGOs applied Monitoring, Evaluation & Reporting step by 74.82 %. That means Gaza NGOs adapted an official system to collect, analyze and utilize information about the humanitarian logistics performance, and adapted an official system for periodic assessment of the relevance, efficiency, effectiveness, impact and sustainability of the humanitarian logistics, and adapted an official system for reporting all humanitarian logistics activities.

5.2.10. Communication

Gaza Strip NGOs applied communication step by 73.33 % which means Gaza NGOs used different means of communication such as email, cellular phone and satellite phone and supplied their staff with the required and needed communication methods.

5.2.11. Collaboration and Coordination

Gaza Strip NGOs applied Collaboration and Coordination step by 70.1 % meanings Gaza NGOs worked with other agencies (NGOs and local community) in setting up humanitarian logistics, but it still needs to work and utilize the private sector to develop humanitarian logistics services.

5.3 Recommendation

In order to improve the humanitarian logistics management and enhance its effectivness, Gaza NGOs need to improve their performance by:

1. Developing a clear and flexible contingency plan to deal with any type of disaster to suit Gaza culture, climate and political circumstances.
2. Conducting the assessment process in a timely manner to determine all the needed resources before it is too late.
3. Determining the needed financial and human resources and how the lack should be supplied.
4. Adopting different resources for supplying procurements in good quality, right quantity and reasonable cost without any delay.
5. Using the suitable means of transport according to that nature of transported material, available time, reasonable cost and under secure conditions to guarantee safety.
6. Using computer software to control the humanitarian logistics process efficiently.
7. Establishing new policy enabling Gaza NGOs to use the governmental warehouses in case of disasters.
8. Choose the points of aids distribution to be safe, far away from the hot areas, as close as possible to the needy, and easily accessed (Practical infrastructure).
9. Depending on official system for monitoring, evaluating and reporting all humanitarian logistics activities.
10. Equip all vehicles and staff with the required and needed communication tools especially in the operation theater.
11. Develop a new policy to enable NGOs to cooperate with private sector and local community in setting up humanitarian logistics in case of disasters.

5.4 Proposed studies

1. Assessment of Humanitarian Logistics Management in the ministries of the Palestinian National Authority
2. The efficiency of using information system in humanitarian logistics management in Gaza
3. Assessment for humanitarian logistics preparedness plan in Gaza NGOs
4. Overlapping infrastructure problems in Gaza Strip in humanitarian logistics relief process during disasters.
5. Coordination in humanitarian logistics: problems and benefits.
6. Humanitarian logistics role in the management and development of the NGOs in the Gaza Strip.

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Annex # 1

الجامعة الاسلامية – غزة
عمادة الدراسات العليا
كلية التجارة – قسم إدارة أعمال

الدكتور/ .... المحترم ،،
السلام عليكم ورحمة الله وبركاته

الموضوع/ طلب تحكيم استبانة

أرجو من سيادتكم التكرم بالاطلاع على الاستبانة المرفقة والمعدة بهدف " **تقييم إدارة الدعم اللوجستي الإنساني في قطاع المؤسسات غير الحكومية في قطاع غزة خلال أحداث الحرب على غزة في الفترة ما بين [2008/12/27 إلى2009/1/18]** " وتسجيل الملاحظات الخاصة بكم بخصوص الاستبانة ، نظراً لخبرتكم المتراكمة في هذا المجال، ولما لرأيكم من أهمية واضحة في دعم و تنمية البحث العلمي .

شاكرين لكم حسن تعاونكم ،
وتقبلوا بقبول فائق الاحترام والتقدير

الباحثة/ علا الشرفا
مارس/ 2011

مرفق

- مشكلة الدراسة
- فرضيات الدراسة
- متغيرات الدراسة
- نسخة من الاستبانة

Annex # 2

قائمة المحكمين

No.	Name	Professional Position
1	Dr, Majed Al Farrah	IUG, professor in the Faculty of Commerce
2	Dr, Yousef Ashoor	IUG, professor in the Faculty of Commerce
3	Dr, Sami Abu Al roos	IUG, professor in the Faculty of Commerce
4	Dr, Samir Safi	IUG, professor in the Faculty of Commerce
5	Dr, Yousef Bahar	IUG, professor in the Faculty of Commerce
6	Hanaa Al gusseen	Logistic Assistant, WFB
7	Monzer Al Aaf	Chef Logistic officer, UNRWA
8	Ayman Al Helo	Logistic Assistant, RCRC
9	Raeed Al hamarnaa	Logistic Assistant, Uniceef

Annex # 3

بسم الله الرحمن الرحيم

الســادة / ممثلي المؤسسـة ..... حفظكم الله

السلام عليكم ورحمة الله وبركاته ،،،

تقوم الباحثة بإجراء دراسة حول : " تقييم إدارة الدعم اللوجستي الإنساني في قطاع المؤسسات غير الحكومية في قطاع غزة خلال أحداث حرب غزة في الفترة ما بين [2008/12/27 إلى2009/1/18]وذلك ضمن برنامج الدراسات العليا بالجامعة الإسلامية في قطاع غزة .

ولأغراض ذلك فقد قامت الباحثة بإعداد هذه الاستبانة التي بعنوان :

"Humanitarian Logistics Management in the NGOs Sector in Gaza strip during (2008-2009) Cast Lead Operation (Gaza war)"

وباعتباركم أحد العاملين في هذا النوع من العمل ، وتقديراً لخبرتكم المتراكمة في هذا المجال يرجى التكرم بالاستجابة لهذه الاستبانة بما يتفق مع وجهة نظركم الكريمة والأسئلة الواردة فيها .

مؤكدين لكم بأن المعلومات التي سيتم الحصول عليها سوف تعامل بسرية تامة، ولن تستخدم إلا لأغراض البحث العلمي فقط .

مع خالص الشكر والتقدير

الباحثة

علا الشرفا

أولاً: بيانات شخصية:

الرجاء وضع علامة (x) مقابل الإجابة الصحيحة :

العمر : ( ) أقل من 25 سنة ( ) من 25 إلى أقل من 35

( ) من 35 إلى أقل من 45 سنة ( ) أكثر من 45 سنة

الجنس : ( ) ذكر ( ) أنثى

المؤهل العلمي: ( ) دبلوم ( ) بكالوريوس

( ) ماجستير ( ) دكتوراه

( ) غير ذلك-حدد _____

المسمى الوظيفي: ( ) مدير لوجستي ( ) مساعد لوجستي

( ) مدير مشتريات ( ) مساعد مشتريات

( ) غير ذلك-حدد _____

عدد سنوات الخبرة في مجال العمل:

( ) أقل من 5 سنوات

( ) من 5 إلى 10 سنوات

( ) أكثر من 10 سنوات

ثانياً: بيانات خاصة بالمؤسسة:

اسم المؤسسة : _____

عدد سنوات العمل في غزة :

( ) أقل من 5 سنوات ( ) من 5 إلى 10 سنوات

( ) من 10 إلى أقل من 15 سنة ( ) أكثر من 15 سنة

مجالات عمل المؤسسة :

( ) زراعة وبيئة ( ) ثقافة ورياضة ( ) ديمقراطية وحقوق إنسان

( ) تنمية اقتصادية ( ) تعليم وتدريب ( ) صحة وإعادة تأهيل

( ) خدمات اجتماعية و إغاثة ( ) تنمية اجتماعية ( ) مرأة وطفل

( ) غير ذلك حدد _____

ملاحظة : (يمكن اختيار أكثر من إجابة)

نـــوع المؤسسة :

( ) مؤسسة غير حكومية دولية ( ) مؤسسة غير حكومية محلية

( ) غير ذلك-حدد_____

ثالثاً: إدارة الدعم اللوجستي :
الرجاء إعطاء درجة موافقتك على مدى تطبيق مؤسستك ما يلي خلال حرب غزة :
الدرجة تكون من 1-10 بحيث 1 يمثل الأقل موافقة و 10 هو الأكثر موافقة :

م	البنـــــد	الـدرجــة
1.	**مدى الجهوزية (Preparedness)**	
إلى أي مدى نجحت مؤسستك خلال الحرب على غزة في ما يلي ؟		
1	تطبيق خطة طوارئ مجهزة لديها بخصوص الاستجابة للكوارث	
2	تحديد وصف تفصيلي للمهام الواجب تطبيقها خلال أي كارثة	
3	تحديدالأشخاص المسؤولين عن تنفيذ هذه المهام	
4	تحديد الشخص المسؤول عن التنسيق اللوجيستي في حالة أي كارثة	
5	تحديد الموارد الضرورية في حالة اي كارثة	
6	تحديد كيف ومتى سيتم الحصول على المواد اللازمة خلال أي كارثة	
7	القدرة على التعامل مع البنية التحتية في حالة دمارها	
8	القدرة على التعامل مع الظروف السياسية غير المستقرة	
9	القدرة على التعامل مع ثقافة المجتمع في غزة	
10	القدرة على التعامل مع حالة الطقس في غزة	
11	المرونة بدرجة كافية للتعامل مع أي ظرف غير متوقع	

م	البنـــــد	الـدرجــة
2.	**تحديد احتياجات (Assessment)**	
إلى أي مدى نجحت مؤسستك خلال الحرب على غزة في ما يلي ؟		
12	حصر المناطق المتضررة والمدمرة	
13	إحصاء أعداد المتضررين	
14	تحديد احتياجات المتضررين	
15	تحديد نسبة الضرر للبنية التحتية	
16	تحديد نسبة الضرر للمنازل والمباني التجارية	
17	تحديد نسبة الضرر للزراعة والمخزون الغذائي	
18	تحديد الموارد الضرورية المتوفرة وغير المتوفرة	
19	دراسة اتجاهات مختلفة (المياه ، المأوى ، الصحية، اللوجستية، الطبية....الخ)	
20	تحديد الاحتياجات في وقت زمني مناسب (غير متأخر)	

م	البنـــــد	الـدرجــة
3.	**تعبئة الموارد (Resource Mobilization)**	
أ	**الموارد المالية (Financial Resources)**	
إلى أي مدى نجحت مؤسستك خلال الحرب على غزة في ما يلي ؟		
21	حصرالموارد المالية اللازمة لعملية الإغاثة	
22	طلب دعم مالي من خلال عملية نداء أو مناشدة (Appealing process)	

ب	الموارد البشرية (Human Resources)	
23	الاعتماد على موظفين متخصصين يمتلكون الخبرات اللازمة للمساعدة في عملية الإغاثة	
24	الاعتماد على متطوعين تم تدريبهم للحصول على الخبرات اللازمة للمساعدة في عملية الإغاثة	
25	الاستعانة بطواقم أجنبية من الخارج للمساعدة في عملية الإغاثة	

م	البنـــــد	الـدرجــة
4.	**المشتريات (Procurements)**	
إلى أي مدى نجحت مؤسستك خلال الحرب على غزة في ما يلي ؟		
26	اتباع سياسات شرائية ثابتة تحكم جميع التعاملات	
27	الاعتماد على شبكة موردين معرفين مسبقاً قادرين على تلبية الاحتياجات اللازمة	
28	الحصول على المشتريات اللازمة محلياً	
29	الحصول على المشتريات اللازمة خارجياً	
30	الحصول على المشتريات بالجودة المطلوبة	
31	الحصول على المشتريات بأسعارمقبولة	
32	الحصول على كميات كافية من المشتريات	
33	استلام المشتريات في الوقت المناسب دون المعاناة من التأخير	

م	البنـــــد	الـدرجــة
5.	**النقل الداخلي و المواصلات (Local Transport)**	
إلى أي مدى نجحت مؤسستك خلال الحرب على غزة في ما يلي ؟		
34	رسم خطة السير للسائقين وذلك بتحديد الطرق الواجب عليهم أن يسلكوها خلال عمليات النقل	
35	الاعتماد على المركبات المتحركة في توصيل المساعدات للمنكوبين	
36	اختيار وسيلة النقل تبعاً للاعتبارات الأمنية	
37	اختيار وسيلة النقل تبعاً لما هو متوفر	
38	اختيار وسيلة النقل الأقل تكلفة	
39	اختيار وسيلة النقل بناءا على السرعة والوقت	
40	اختيار وسيلة النقل بالإعتماد على المسافة	
41	اختيار وسيلة النقل حسب البنية التحتية المتوفرة	
42	اختيار وسيلة النقل بالاعتماد على طبيعة المواد الموردة المطلوب نقلها	
43	تدريب سائقي المؤسسة لتجنب المخاطر و السرقات خلال عمليات النقل	
44	الاعتماد على شركات النقل التجارية لنقل البضائع	
45	مواجهة المشاكل الناتجة عن البنية التحتية المدمرة	

46	مواجهة المشاكل الناتجة عن العوائق السياسية	
47	مواجهة المشاكل الناتجة عن نقص الوقود	
48	مواجهة المشاكل الناتجة عن عمليات السطو	

م	البنـــــد	الـدرجــة
6.	**التتبع (Track and Trace)**	
إلى أي مدى نجحت مؤسستك خلال الحرب على غزة في ما يلي ؟		
49	تتبع البضائع بطريقة يدوية (Manually)	
50	تتبع البضائع باستخدام صفحات برنامج إكسل (Excel sheets)	
51	تتبع البضائع باستخدام برامج حاسوب خاصة بذلك (Computer software)	

م	البنـــــد	الـدرجــة
7.	**إدارة المخزون (Stock Asset Management)**	
إلى أي مدى نجحت مؤسستك خلال الحرب على غزة في ما يلي ؟		
52	اتباع سياسة مسبقة لإدارة المخازن وعلى دليل عمليات للمخازن	
53	تعريف كل الأنشطة في المخازن بوضوح خطوة بخطوة	
54	إعطاء صورة واضحة عن جميع العمليات في المخازن للمدراء والممولين	
55	توضيح طريقة استلام وتسليم البضائع	
56	تعريف العملية التي من خلالها تتم مراقبة الجودة	
57	تعريف الطرق الصحيحة لتخزين البضائع	
58	تعريف الطريقة الصحيحة لمراقبة حركة المخزون	
59	تحديد كيفية التعامل مع الفاقد من المخزون	
60	تحديد كيفية إدارة المواد غير المرغوب بها (المرفوضة)	
61	تحديد آلية إتلاف المواد الهالكة وكيفية تصريف المخلفات	
62	استخدام مخازن تمتلكها المؤسسة	
63	استئجارمخازن صالحة لتخزين البضائع	
64	تركيب مخازن غير ثابتة	
65	استخدام مخازن حكومية	
66	عمل دراسة مهنية متخصصة لتحديد أفضل موقع لمخازنها	
67	اختيار مخازن ذات مساحة كافية لجميع عمليات التخزين اللازمة	
68	اختيار مخازن تمكن من القيام بالعناية اللازمة لبعض الأنواع من المخزون	
69	اختيار مخازن تشتمل على جميع الأحتياطات الأمنية التي توفر الدرجة اللازمة من الأمن والأمان	

م	البنـــــد	الـدرجــة

.8	**نقاط توزيع المساعدات وإغاثة المنكوبين (Extended Point of Delivery & Relief to Beneficiaries)**	
إلى أي مدى نجحت مؤسستك خلال الحرب على غزة في ما يلي ؟		
70	اختيار نقاط توزيع للمساعدات بعيدة عن المناطق الساخنة (Hot Areas)	
71	اختيار نقاط توزيع للمساعدات آمنة لكل من العاملين و المستفيدين	
72	اختيار نقاط توزيع للمساعدات غير بعيدة عن المستفيدين	
73	اختيار نقاط توزيع للمساعدات بعد دراسة صلاحية البنية التحتية (بنية تحتية غير مدمرة)	
74	مراقبة عملية توزيع المساعدات	
75	التأكد من أن المساعدات وصلت إلى من يستحقوها ولم تقع في الأيدي الخاطئة أو تصل للسوق السوداء	
76	ضمان سلامة النساء والأطفال خلال عملية تسليم المساعدات (عدم وجود مضايقات جنسية)	
77	تدريب العاملين للتأكد من العدالة وعدم التميز واحترام المستفيدين و ثقافة المجتمع في غزة خلال عملية توزيع المساعدات	
78	النجاح في عملية التوزيع بطريقة منظمة	
79	الاستعانة بالمجتمع المحلي في توزيع المساعدات	
80	الاستعانة بمؤسسات شريكة في توزيع المساعدات	

م	البنـــــد	الـدرجــة
.9	**المراقبة/التقييم/كتابة التقارير (Monitoring/Evaluation/Reporting)**	
إلى أي مدى نجحت مؤسستك خلال الحرب على غزة في ما يلي ؟		
81	الاعتماد على نظام رسمي في جمع وتحليل البيانات عن أداء الإغاثة اللوجستية	
82	الاعتماد على نظام رسمي لعمل تقييم دوري لقياس كفاءة اداءالنظام اللوجستي	
83	الاعتماد على نظام رسمي لتحديد الطريقة التي يتم تدوين النشاطات بها لعمل تقارير للممولين	
84	تقييم الأداء اللوجستي لقياس ما اذا تم الوصول الى الأهداف المخطط لها	
85	النجاح في إدارة أنظمة المعلومات بما يكفل الوصول الى المحاسبية والشفافية	

م	البنـــــد	الـدرجــة
.10	**الإتصالات (Communication)**	
إلى أي مدى نجحت مؤسستك خلال الحرب على غزة في ما يلي ؟		
86	إختيار وسيلة إتصال مناسبة وقادرة على تلبية كل متطلبات المرحلة	

87	الاعتماد على البريد الالكتروني كوسيلة اتصال	
88	الاعتماد على الهاتف المحمول كوسيلة اتصال	
89	الاعتماد على الهاتف الثابت كوسيلة اتصال	
90	التغلب على المشاكل في الإتصالات	
91	تجهيز طاقم عمل المؤسسة بكافة التجهيزات اللازمة لعملية الإتصال في مسرح العمليات	
92	تجهيز مركبات المؤسسة بكافة الاحتياجات اللازمة لعملية الإتصال في مسرح العمليات	

م	البنـــــد	الـدرجــة
11.	**التعاون والتنسيق (Collaboration and Coordination)**	
إلى أي مدى نجحت مؤسستك خلال الحرب على غزة في ما يلي ؟		
93	العمل مع مؤسسات أخرى في سبيل تحسين أداء الإغاثة اللوجستية	
94	العمل مع المجتمع المحلي في سبيل تحسين أداء الإغاثة اللوجستية	
95	العمل مع القطاع الخاص في سبيل تحسين أداء الإغاثة اللوجستية	
96	التعاون مع الشريك الآخر في تطوير الخدمات اللوجستية	

Annex 4

Dear NGO Representative (Respondent):

The questioner is a tool for conducting an academic research about The Role of Humanitarian Logistics in Relief Process in Gaza Strip, where the research title is:

"Humanitarian Logistics Management in the NGOs Sector in Gaza strip during (2008-2009) Cast Lead Operation (Gaza war)"

The research is a requirement for the fulfillment of the Master of Business Administration degree.

Please fill the questionnaire with care and accuracy being in mind that the information will be treated with utmost care and privacy. It will be only used for the purpose of academic research.

Thanks a lot for your cooperation

Researcher

Ola Al shorafa

_____

First: Personal data:

(Please put (X) on the appropriate answer)

Age in years: ( ) Less than 25 years ( ) 25 – less than 35 years

( ) 35 – Less than 45 years ( ) Older than 45 years

Gender: ( ) Male ( ) Female

Qualification: ( ) Diploma ( ) Bachelor

( ) Master degree ( ) PHD degree

( ) Others (please specify) _____

Title/ Position: ( ) Logistic officer ( ) Logistic assistant

( ) Procurement officer ( ) Procurement assistant

( ) Others (please specify) _____

Years of Experience: ( ) Less than 5 years

( ) 5 – Less than 10 years

( ) 10 years and higher

Second: organization data:

Name of organization _____

Number of working years in Gaza:

( ) Less than 5 years ( ) 5 – Less than 10 years

( ) 10 – Less than 15 years ( ) 15 years and higher

NGO Field of Work:

( ) Agriculture & Environment ( ) Culture and Sports

( ) Economic Development ( ) Democracy and Human Rights

( ) Education & Training ( ) Health & Rehabilitation

( ) Social Development ( ) Social Services & Relief

( ) Women & Child ( ) Others (please specify) _____

Note: You can choose more than one answer

Type of organization ( ) International NGO ( ) Local NGO

( ) Others (please specify) _____

Third: Humanitarian Logistic Management:

Please identify the degree of correspondence from 1 to 10 where 1 is the least correspondence and 10 is the highest correspondence:

No.	Item	Mark
1.	**Preparedness**	
To what extent your organization succeeded during Gaza war in the following?		
1	Applying an emergency a pre specified response policy or contingency plan	
2	Determining the tasks which should be performed	
3	Determining the responsible staff for accomplish these tasks	
4	Determining who will be in charge of the global coordination for the logistics system	
5	Determining the necessary resources	
6	Determining how and where the needed resources will be acquired	
7	Ability to deal with the impractical infrastructure	
8	Ability to deal with unstable political situation	
9	Ability to deal with Gaza society culture	
10	Ability to deal with the climate in Gaza	
11	flexibility to deal with any unexpected scenario	

No.	Item	Mark
2.	**Assessment**	
To what extent your organization succeeded during Gaza war in the following?		
12	Conducting an assessment to determine the affected area in Gaza war	
13	Identifying the number of the affected people needed assistance	
14	Identifying the needs of the affected people	
15	Identifying the level of damage to the local infrastructure capacity	
16	Identifying the level of damaged homes and commercial buildings	

17	Identifying the level of damaged agriculture and food supply system	
18	Determining the available and the lacking resources.	
19	Considering multidisciplinary (i.e., water needs, shelter needs, sanitation needs , logistic needs, medical needs , ……..etc)	
20	Preparing the assessment process in a timely manner (not late)	

No.	Item	Mark
3.	**Resource Mobilization**	
A.	**Financial Resources**	
To what extent your organization succeeded during Gaza war in the following?		
21	Determining the needed financial resource when the response process started	
22	Requesting additional financial resources which are unavailable via appealing process.	
B.	**Human Resources**	
To what extent your organization used the following staff during Gaza war?		
23	Exploiting humanitarian workers with the required experience to give assistance in relief efforts	
24	Exploiting a trained volunteers to give assistance in relief efforts	
25	Shifting another staff from globe to help in relief efforts	

No.	Item	Mark
4.	**Procurements**	
To what extent your organization succeeded during Gaza war in the following?		
26	Following a pre-described policy in all procuring activities	
27	Depending on specified suppliers capable of meeting its requirements	
28	Getting the required procurements locally	
29	Getting the required procurements globally	
30	Getting procurements in a good quality	

31	Getting procurements in a reasonable cost	
32	Getting procurements in right quantities	
33	Avoiding suffering from delays in material arriving	

No.	Item	Mark
5.	**Transport (Local)**	
To what extent your organization succeeded during Gaza war in the following?		
34	Planning movements for organization's drivers to identify which roads they should use	
35	Depending on mobile vehicles to convey aids for the needed	
36	Selecting the mode of local transportation depending on security requirements	
37	Selecting the mode of local transportation depending on the availability	
38	Selecting the mode of local transportation depending on cost	
39	Selecting the mode of local transportation depending on speed and time	
40	Selecting the mode of local transportation depending on the distances to be covered	
41	Selecting the mode of local transportation depending on available infrastructure	
42	Selecting the mode of local transportation depending on the nature of goods/products/supplies to be transported	
43	Training organization's drivers to avoid risk and hijacked	
44	Exploiting commercial provider for transportation	
45	Facing problems due to poor infrastructure in the affected area	
46	Facing problems due to political barriers	
47	Facing problems in accessing the fuel sources	
48	Facing problems in steeling vehicles and products	

No.	Item	Mark
6.	**Track and Trace**	
To what extent your organization succeeded during Gaza war in the following?		
49	Tracking goods and services manually	
50	Tracking goods and services by excel sheets	
51	Tracking goods and services by computer software	

No.	Item	Mark
7.	**Stock Asset Management**	
To what extent your organization succeeded during Gaza war in the following?		
52	Following specific warehouse management policy and procedures guidelines	
53	Defining all the activities to be adopted in the warehouse clearly and step by step	
54	Providing clear visibility of the operations in the warehouse for both managers and donors	
55	Identifying the methods of receiving and issuing supplies	
56	Defining quality control system method	
57	Identifying the way to storage goods	
58	Identifying the way to control the stock movement	
59	Determining how to deal with the stock losses	
60	Determining how rejected material will be managed	
61	Determining how to deal with unwanted material, obsolete, and scrap disposal	
62	Using space warehouses owned by the organization	
63	Using commercial warehouses in rented building	
64	Using transit warehouses destined for different locations	
65	Using Governmental warehouses	
66	Conducting a professional study in order to determine the best location for	

	the warehouses	
67	Selecting the warehouses with sufficient spaces for all the needed activities to be done	
68	Selecting the warehouses which enables all the required care needed to some storage items	
69	Selecting the warehouses with enough security in order to keep the required degree of safety	

No.	Item	Mark
8.	**Extended Point of Delivery & Relief to Beneficiaries**	
To what extent your organization succeeded during Gaza war in the following?		
70	Selecting suitable points for aids distribution which are far enough from the hot areas	
71	Selecting suitable points for aids distribution which are safe enough for both workers and beneficiaries	
72	Considering the distance to beneficiaries when selected the points of distribution	
73	Considering the conditions of infrastructure when selected the points of distribution	
74	Monitoring the distribution method	
75	Ensuring that aids didn't reach to the wrong hands or black market	
76	Taking care to ensure women's and children safety during the distribution method (sexual harassment not existed)	
77	Training the distribution staff to ensure neutrality, impartiality and respect for culture and beneficiaries in Gaza	
78	Carrying out the distribution method in an efficient and organized matter	
79	Engaging the local community in the distribution method	
80	Handing over the aids via partner organization	

No.	Item	Mark
9.	**Monitoring/Evaluation/Reporting**	
To what extent your organization succeeded during Gaza war in the following?		
81	Depending on an official system for collection, analysis, and utilization of information about the humanitarian logistics performance	
82	Depending on an official system for the periodic assessment of the relevance, efficiency, effectiveness, impact, and sustainability of humanitarian logistics	
83	Depending on an official system for reporting all activities for donors	
84	Evaluating logistics performance to measure if it met the established objectives and goals	
85	Succeeding in managing the information system in order to provide accountability to donors	

No.	Item	Mark
10.	**Communication**	
To what extent your organization did the following during Gaza war?		
86	Selecting a suitable mode of communication and capable to meet the required needs	
87	Depending on the E-mail as a tool of communication	
88	Depending on cellular phone as a tool of communication	
89	Depending on satellite phone as a tool of communication	
90	Facing problems in communication method	
91	Supplying staff with the required and needed communication methods in the operation theater	
92	Equipping the vehicles with the required and needed communication methods in the operation theater	

No.	Item	Mark
11.	**Collaboration and Coordination**	
To what extent your organization did the following during Gaza war?		
93	Working with other agencies (NGOs) in setting up humanitarian logistics	
94	Working with the local community in setting up humanitarian logistics	
95	Working with the private sector in setting up humanitarian logistics	
96	Utilizing the other partner existing to develop logistic services	

Annex 5: The Working NGOs During Gaza Strip War

الرقم	المؤسسة	النوع	المنطقة	العنوان	التيليفون
1	اتحاد لجان العمل الزراعي - فرع ضفة	جمعية أجنبية	غزة	غزة	
2	المرأة العاملة		غزة		
3	الإغاثة الزراعية		غزة		
4	الإغاثة الإسلامية لندن	جمعية أجنبية	غزة	الرمال ش شارل ديجول بجوار مسجد الكنز	2837889
5	الإغاثة الإسلامية فرنسا	جمعية أجنبية	غزة	دوار حيدر عبد الشافي عمار البكري الطابق الثاني	
6	الإغاثة الإنسانية	الجمعيات الإجتماعية	الوسطى	النصيرات عمارة مطر الطابق (3)	
7	جمعية خدمات الإغاثة الكاثوليكية فرع أجنبي CRS	جمعية أجنبية	غزة	الرمال ش احمد عبد العزيز بناية السلام ط الخامس	2881167
8	عطاء غزة		غزة		
9	الجمعية الفلسطينية للتنمية والتطوير معاً	الجمعيات الإجتماعية	خانيونس	بطن السمين- قرب ديوان آل زعرب	9562468
10	جمعية مجموعة غزه للثقافة والتنمية	الثقافة والفنون	غزة	غزه ش المختار توكيلات السامر سابقا	2830014
11	جمعية الصلاح الإسلامية	جمعيات إسلامية	الوسطى	دير البلح البصه	2536455
12	جمعية أرض الإسراء الخيرية	الجمعيات الإجتماعية	غزة	الشجاعية- نهاية شارع النزاز	2811166
13	جمعية شرق غزة لانماء الأسرة	الجمعيات الإجتماعية	غزة	غزة شارع صلاح الدين مقابل شعفوط	2801886
14	جمعية زاخر لتنمية قدرات المرأة الفلسطينية	الجمعيات الإجتماعية	غزة	الشجاعية شارع عبدالله	2804604
15	جمعية فلسطين الخيرية للاعمار والتنمية	الجمعيات الإجتماعية	غزة	غزة الشجاعية شارع النزاز بالقرب من محلات فنانة	2804953
16	الهيئة الأهلية لرعاية الأسرة	جمعيات الأمومة والطفولة	غزة	غزة النصر خلف السويدي	2884343
17	كرتياس القدس				

الرقم	المؤسسة	النوع	المنطقة	العنوان	التيليفون
18	الهلال الأحمر	الجمعيات الطبية	غزة	غزة شارع جمال عبد الناصر	2864750
19	جمعية الرحمة العالمية		غزة		
20	قطر الخيرية	الجمعيات الأجنبية	غزة	شارع الثوره مقابل شركة شارب	2847338
21	مؤسسة كير		الشمال		
22	الإغاثة و التنمية الدولية IRD	الجمعيات الأجنبية	غزة	غزه شارع النصر بالقرب من فندق المارنا هاوس	2822767
23	هيئة الإغاثة الدولية - فرع أجنبي IR	الجمعيات الأجنبية	غزة	غزه الميناء عمارة ابو غليون	
24	الجمعية الأرثودكسية IOCC		الشمال		
25	منتدى شارك الشبابي		الشمال		
26	جمعية مؤسسة CHF الدولية- فرع أجنبي	الجمعيات الأجنبية	غزة	غزه شارع سعيد الوقاص قرب مدرسة العائلة المقدسة	2883357
27	مؤسسة Oxfam		الشمال		
28	الرؤية العالمية		الشمال		
29	جمعية مؤسسة التعاون فرع أجنبي	الجمعيات الأجنبية	غزة	غزه الشفاء الولادة عمارة الصوراني	2869881
30	مؤسسة إنقاذ الطفل - أمريكا		الشمال		
31	جمعية مؤسسة إنقاذ الطفل - فلسطين	جمعيات الأمومة والطفولة	غزة	غزة الرمال شارع مصطفى حافظ بناية محمد رجب	2848705
32	مؤسسة إنقاذ الطفل - UK		الشمال		
33	مؤسسة إنقاذ الطفل - السويد		الشمال		
34	هيئة أصاله للتراث الشعبي الفلسطيني والتنمية	الثقافة والفنون	غزة	غزة شارع النصر عمارة حبوب الطابق الرابع	2857572
35	جمعية الحياة والأمل	الجمعيات الطبية	الشمال	معسكر جباليا _ساحة الشهداء مقابل بركة ابو راشد	2476275

الرقم	المؤسسة	النوع	المنطقة	العنوان	التيليفون
36	جمعية جباليا للتأهيل	جمعيات المعاقين	الشمال	معسكر جباليا الشارع العام مقابل البريد	2458807
37	جمعية عطاء بيت حانون		الشمال		
38	جمعية تطوير بيت لاهيا	الجمعيات الإجتماعية	الشمال	بيت لاهيا شارع الشيماء	2479853
39	جمعية إتحاد المزارعين الخيرية	الجمعيات الزراعية	الشمال	بيت لاهيا شارع عباس كيلاني	2474160
40	جمعية تطوير الأسرة الخيرية	الجمعيات الإجتماعية	الشمال	بيت حانون شارع الفرمان مقابل مسجد عمر بن عبد العزيز	2459360
41	جمعية بناة فلسطين للتنمية المجتمعية	جمعيات الأمومة والطفولة	الشمال	جباليا البلد شارع القدس	2476755
42	الجمعية الإسلامية	جمعيات إسلامية	غزة	معسكر الشاطئ الشمالي المسجد الشمالي ص ب 99	2851552
43	الجمعية الخيرية لتنمية وإعمار القرية البدوية	الجمعيات الإجتماعية	الشمال	شمال بيت لاهيا مقابل أبراج العوده	
44	جمعية الفلاح الخيرية	الجمعيات الإجتماعية	الشمال	جباليا النزله مفترق الصفطاوي	2888980
45	جمعية النهضة للتطوير والتنمية	الجمعيات الإجتماعية	الشمال	بيت لاهيا- شارع المنشيه- منزل ناصر أبو شدق	2480349
46	هيئة المستقبل للتنمية	جمعيات الشباب والرياضة	الشمال	بيت لاهي شارع الشيماء	2480370
47	الجمعية الفلسطينية للتنمية وحماية التراث	الثقافة والفنون	الشمال	بيت لاهيا شارع المنشية بجوار جامعة القدس	2475210
48	جمعية مؤسسة أنيرا فرع أجنبي غزه	الجمعيات الأجنبية	الوسطى	الرمال شارع الثوره	2820329
49	MAP		الوسطى		
50	جمعية الهلال الأحمر التركي		الوسطى		
51	هيئة الأعمال الخيرية فرع أجنبي	الجمعيات الأجنبية	غزة	الرمال ش الثورة عمارة الزهراء الطابق السابق	2882288
52	اليونيسيف		الوسطى		

الرقم	المؤسسة	النوع	المنطقة	العنوان	التيليفون
53	Mercy Core		الوسطى		
54	جمعية المساعدات الشعبية النرويجية NPA	الجمعيات الأجنبية	غزة	ش الشهداء عمارة جبر قرب السفارة النرويجية	2820063
55	يابانية JTA		الوسطى		
56	جمعية دير البلح لتأهيل المعاقين	جمعيات المعاقين	الوسطى	معسكر دير البلح الشارع العام	2534192
57	جمعية صناع الإرادة الخيرية	الجمعيات الإجتماعية	الوسطى	دير البلح- جوار مستشفى شهداء الأقصى	2533597
58	جمعية الطفل الجريح الخيرية	الجمعيات الطبية	الوسطى	دير البلح وادي السقا	2531429
59	جمعية التنمية الزراعية- فرع ضفه	الجمعيات الزراعية	غزة	مقابل محطة أبو جبه للبترول ص ب 225 .	2805039
60	جمعية الدعم النفسي الاجتماعى للشباب	الجمعيات الإجتماعية	غزة	غزة الرمال ش الشهداء بناية كحيل	82880135
61	جمعية شراكة		الوسطى		
62	جمعية براعم الأمل والمحبة	جمعيات الأمومة والطفولة	الوسطى	المغازي الشارع العام شرق عيادة الوكاله	2557786
63	جمعية المغازي لتأهيل المعاقين		الشمال		
64	جمعية المجلس العلمي للدعوة السلفية	جمعيات إسلامية	خانيونس	خانيونس	2070844
65	جمعية أصدقاء بلا حدود للتنمية المجتمعية	الثقافة والفنون	الوسطى	البريج ش صلاح الدين عمارة ياسين	2560240
66	جمعية تنمية قدرات المرأة الريفية	جمعيات الأمومة والطفولة	الوسطى	الزوايدة بجوار مسجد السنة	2552494
67	جمعية البريج للتأهيل المجتمعي	الجمعيات الإجتماعية	الوسطى	البريج الدوار العام	2561180
68	جمعية الثروة الحيوانية الخيرية	الجمعيات الزراعية	الشمال	بيت لاهيا دوار حموده ش صلاح الدين عمارة مسلم	67856764
69	جمعية مساندة الطفل الفلسطيني	جمعيات الأمومة والطفولة	الوسطى	البريج بلوك 9	2553101

الرقم	المؤسسة	النوع	المنطقة	العنوان	التيليفون
70	جمعية الزهراء التنموية	الجمعيات الإجتماعية	غزة	الشجاعية شارع الرياض بجوار سوبر ماركت قنديل	2885905
71	جمعية التكافل للتنمية المجتمعية	جمعيات إسلامية	غزة	شارع المزنر النصر عمارة النوري ص ب 5215	2856980
72	جمعية الندى الخيرية		الوسطى		
73	جمعيةأهل الخير للإغاثة والتنمية	جمعيات الشباب والرياضة	غزة	المغراقة	2820223
74	الهيئة الفلسطينية للتنمية والتثقيف	الثقافة والفنون	الوسطى	البصة اخر شارع جمعية الصلاح	2531380
75	جمعية دار الكتاب و السنة	جمعيات إسلامية	خانيونس	خانيونس شارع مسجد أهل السنة ص ب 4	2053150
76	الهيدرولوجيين الفلسطينيين		حانيونس		
77	جمعية الهواء والنور التنموية الزراعية	الجمعيات الزراعية	حانيونس	بنى سهيلا الشارع العام	9792202
78	جمعية مؤسسة الثقافة والفكر الحر	الجمعيات الإجتماعية	حانيونس	ش البحر عمارة جاسر خانيونس	2051299
79	جمعية الوداد للتأهيل المجتمعي	الجمعيات الإجتماعية	غزة	مقابل وزارة الأسرى تل الهوى شارع بيروت عمارة حبوب	2825513
80	جمعية الكرمل الثقافية بالنصيرات	الثقافة والفنون	الوسطى	النصيرات ارض مطر شارع عكا	2551022
81	جمعية المجتمع السعيد للتنمية	الجمعيات الإجتماعية	حانيونس	حي المحطة	2083085
82	جمعية النهضة للتنمية الريفية	الجمعيات الإجتماعية	حانيونس	خانيونس تقاطع شارع جمال عبد الناصر	8270688
83	جمعية جهود غزة التطوعية للاغاثة السريعة	الجمعيات الإجتماعية	غزة	غزه الرمال حبوش عمارة حجي	
84	جمعية الحق والعدالة الفلسطيني	الجمعيات الإجتماعية	حانيونس	خانيونس - خلف البلدية القديمة	2079411
85	جمعية إعمار	الجمعيات الإجتماعية	حانيونس	شارع جلال- قرب عمارة الفرا	2079740
86	جمعية الهدى التنموية	جمعيات الأمومة والطفولة	حانيونس	خانيونس بني سهيلا جوار الجندي المجهول	2071950

الرقم	المؤسسة	النوع	المنطقة	العنوان	التيليفون
87	جمعية خانيونس للتأهيل والتدريب	الجمعيات الإجتماعية	حانيونس	خانيونس شارع البحر مقابل مسجد بلال	2061920
88	جمعية عيون الأمل		حانيونس		
89	جمعية بيادر للبيئة والتنميه	الجمعيات الإجتماعية	حانيونس	خانيونس بني سهيلا الشارع العام الشهداء عمارة ابو لحيه	9603698
90	جمعية العطاء الخيرية	جمعيات الأمومة والطفولة	الشمال	شارع الزيتون -قرب البلدية	2482130
91	جمعية مزارعي البيوت البلاستيكية	الجمعيات الزراعية	حانيونس	السطر الشرقي بالقرب من مركز اوقاف خانيونس	2067773
92	جمعية النجدة الاجتماعية	جمعيات الأمومة والطفولة	غزة	غزه بالقرب مركز الصم والبكم	2862559
93	جمعية المستقبل للثقافة والتنمية	الجمعيات الإجتماعية	رفح	رفح الدوار الشرقي عمارة قشطه ط 3	2135442
94	جمعية التكافل للعامل الفلسطيني	الجمعيات الإجتماعية	خانيونس	خان يونس البلد- مقابل بنك القاهرة عمان	9601621
95	جمعية مريم العذراء	الجمعيات الإجتماعية	رفح	الشوكة - شارع المطارمبنة محمد جاداالله	2155176
96	جمعية ابن باز الخيرية الإسلامية	جمعيات إسلامية	رفح	رفح - البلد - غرب السوق المركزي - الطابق الثالث	2141414
97	جمعية الخدمةالعامة لحي كندا	الجمعيات الإجتماعية	رفح	حي كندا تل السلطان- بالقرب من مدرسة القادسية	2150020
98	جمعية رعاية الأسرة الريفية الخيرية	الجمعيات الإجتماعية	رفح	حي السلام بجوار المقبره الشرقية	2139059
99	الوكالة السويسرية للتنمية		رفح		
100	جمعية الأيدي المسلمة - فرع اجنبي	الجمعيات الأجنبية	غزة	غزه برج الجلاء الطابق الثالث	286331
101	الوطنية للديمقراطية و القانون	جمعيات الخريجين	رفح	رفح وسط البلد - المركز التجاري	599993141
102	جمعية تطوير المرأة و الطفل		رفح		
103	جمعية يبوس الخيرية	الجمعيات الإجتماعية	رفح	رفح شارع طه حسين	2149101
104	النهضة الريفية	الجمعيات الإجتماعية	الوسطى	دير البلح المحطة مقابل بنك فلسطين	2539889
105	جمعية عطاء بلا حدود للإغاثة وتنمية المجتمع	الجمعيات الإجتماعية	رفح	رفح تل السلطان عمارة البوجي	2146213
106	USAID		رفح		

Source: Ministry of Social Affairs

Annex 6: The Top 50 Local NGOs in Gaza Strip

الرقم	اسم المؤسسة	عدد الموظفين	المنطقة	تليفون
1	جمعية الصلاح الإسلامي	314	منطقة البصة - دير البلح	2531081
2	الجمعية الاسلامية غزة	309	شارع المشتل - النصر -غزة	2851552
3	اتحاد لجان العمل الصحي غزة	279	شارع اليرموك-بناية المغربي -غزة	2824272
4	جمعية الشابات المسلمات غزة	255	شارع الوحدة - بناية معهد الأمل -غزة	2823188
5	جمعية الوفاء الخيرية غزة	213	الخط الشرقي - غزة	2801188
6	برنامج غزة للصحة النفسية غزة	160	الشيخ عجلين -مقابل النادي البحري-غزة	2825700
7	جمعية دار الهدي الرعاية الأطفال غزة	158	شارع المحكمة القديمة -بناية سكيك- غزة	2882818
8	جمعية أطفالنا للصم غزة	154	شارع فلسطين -مسجد فلسطين -غزة	2865468
9	المجمع الإسلامي غزة	135	شارع الوحدة- مقابل مصنع ابو ليلة للزيوت -غزة	2847955
10	جمعية الحق في الحياة للأطفال المنغوليين غزة	113	شارع الكرامة - الخط الشرقي - غزة	2803888
11	جمعية الهلال الأحمر لقطاع غزة	112	شاع جمال عبد الناصر -مقابل جامعة الأزهر	2864750
12	مؤسسة برامج التربية للطفولة المبكرة الفلسطينية غزة	93	شارع عمر المختار- بجوار مستفي الخدمة العامة	2860062
13	مؤسسة فلسطين المستقبل للطفولة غزة	90	أرض الكتيبة - غزة	2841509
14	جمعية الخدمة العامة لإحياء مدينة غزة	80	شارع علي بن أبي طالب -الصبرة -غزة	2847883
15	جمعية اتحاد الكنائس غزة	71	شارع سعيد العاص - الرمال - غزة	2860146
16	جمعية أرض الإنسان الفلسطينية الخيرية غزة	64	شارع النصر - غزة	2868138
17	جمعية مؤسسة الثقافة والفكر الحر خانيونس	62	حي الأمل - خلف الهلال الأحمر الفلسطيني - خانيونس	2051299
18	جمعية النجدة الاجتماعية غزة	61	شارع فلسطين -مسجد فلسطين -غزة	2862559
19	جمعية رعاية المعوقين في قطاع غزة	61	شارع سعيد العاص - الرمال - غزة	2823212
21	المركز الوطني للتأهل المجتمعي غزة	56	شارع اللبابيدي - النصر - غزة	2873490
21	لجمعية الفلسطينية لتأهل المعاقين غزة	54	شارع المشتل - النصر - خلف مدرسة ابن سينا- غزة	2874911
22	جمعية الإغاثة الطبية الفلسطينية غزة	52	شارع عز الدين القسام - الرمال - غزة	2835990
23	المركز الفلسطيني لحقوق الإنسان غزة	50	شارع عمر المختار- الرمال - غزة	2844299
24	اتحاد لجان الرعاية الصحية غزة	47	برج الشفاء - الرمال - غزة	2841406
25	جمعية دير البلح للتأهل دير البلح	45	الشارع لعام - موقف السيارات - مخيم دير البلح	2534192
26	جمعية مركز الإرشاد التربوي	40	شارع الجوازات - غزة	2457785

	اسم المؤسسة	عدد الموظفين	المنطقة	تليفون
27	لمركز الفلسطيني للديموقراطية وحل النزاعات	38	دوار حيدر عبد الشافي	2847488
28	جمعية الشهيد محمد أبوشباك جباليا	36	شارع مسعود - جباليا - المنطقة الشمالية	2459848
29	الجمعية التعاونية الزراعية :بيت حانون	35	شارع السكة - بيت حانون	2452090
30	اتحاد لجان كفاح المرأة الفلسطني غزة	35	شارع اليرموك -غزة	2824669
31	جمعية الهدي التنموية بني سهيلا خانيونس	34	شارع زيد بن حارثة - بني سهيلا - خانيونس	2071950
32	جمعية الأمل لتأهيل المعاقين رفح	34	شارع مصبح - خلف محطة العبادلة - رفح	2136779
33	جمعية الأقصي الخيرية خانيونس	34	شارع الشهداء - بني سهيلا - خانيونس	2071525
34	طاقم شؤون المرأة غزة ١٩٩٣ نادية أبونحلة ٢٧	32	شارع الأزهر - بناية الجاروشة - غزة	2844322
35	مركز القطان للطفل غزة	30	شارع الوحدة - معلب اليرموك - غزة	2839949
36	الجمعية الوطنية لتأهل المعوقين بقطاع غزة	30	شارع سعيد العاص - الرمال الشمالي - غزة	2861266
37	الأتحاد النسائي الفلسطيني غزة	30	شارع الثورة - الرمال - غزة	2862586
38	مركز العمل التنموي " معا" غزة	27	بناية الحشام - غزة	2823712
39	اتحاد لجان العمل الزراعي غزة	27	شارع النصر - غرب مستشفي النصر للأطفال - غزة	2879959
40	مركز الميزان لحقوق الإنسان غزة	27	شارع عز الدين القسام - عمارة الصوراني- غزة	2820442
41	جمعية المغازي للتأهيل الاجتماعي المغازي	27	مقابل بلدية المغازي - المغازي - الوسطي	2555244
42	مؤسسة الامانة الخيرية -غزة	27	شارع الثلاثيني - عمارة أبو غزالة - غزة	2846111
43	جمعية الخدمات العامة لحي كندا رفح	27	تل السلطان - حي كندا - رفح	2140020
44	جمعية جباليا للتأهيل جباليا	26	الشارع العام - مخيم جباليا	2458807
45	الفلسطينية الإفراض والتنمية فاتن غزة	25	شارع الجلاء - بناية سلامة بسيسو -غزة	2847068
46	الوداد للتأهيل الاجتماعي غزة	25	شارع بيروت تل الهوا مقابل وزارة الاسرى	2825513
47	جمعية التضامن للعمل الاجتماعي غزة	25	شارع الوحدة - بناية رجب - الرمال - غزة	2838004
48	جمعية التنمية الزراعية (الإغاثة الزراعية) غزة	23	شارع صلاح الدين - مقابل محطة ابو جبة للبترول	2805040
49	جمعية الطفولة الخيرية غزة	23	الشارع الرئيسى - تل الزعتر - مخيم جباليا	2455294
50	جمعية الامة الخيرية للعمل الاجتماعي والثقافي غزة	23	شارع عمر المختار -بناية الحرازين - الرمال - غزة	599619613

Source: (UNSCO, 2007)

Annex 7: List of International NGOs

الرقم	المؤسسة	النوع	المنطقة
1	العمل ضد الجوع ACF	جمعية أجنبية	
2	Action Aid	جمعية أجنبية	
3	Acted	جمعية أجنبية	
4	أرض الإنسان	جمعية أجنبية	
5	الإيطالية COOPI	جمعية أجنبية	
6	اتحاد لجان العمل الزراعي - فرع ضفة	جمعية أجنبية	غزة
7	الإغاثة الإسلامية لندن	جمعية أجنبية	غزة
8	الإغاثة الإسلامية فرنسا	جمعية أجنبية	غزة
9	جمعية خدمات الإغاثة الكاثوليكية فرع أجنبي CRS	جمعية أجنبية	غزة
10	قطر الخيرية	جمعية أجنبية	غزة
11	مؤسسة كير	جمعية أجنبية	
12	الإغاثة و التنمية الدولية IRD	جمعية أجنبية	غزة
13	هيئة الإغاثة الدولية - فرع أجنبي IR	جمعية أجنبية	غزة
14	الجمعية الأرثودكسية IOCC	جمعية أجنبية	
15	جمعية مؤسسة CHF الدولية- فرع أجنبي	جمعية أجنبية	غزة
16	مؤسسة Oxfam	جمعية أجنبية	
17	الرؤية العالمية	جمعية أجنبية	
18	جمعية مؤسسة التعاون فرع أجنبي	جمعية أجنبية	غزة
19	مؤسسة إنقاذ الطفل - أمريكا	جمعية أجنبية	
21	مؤسسة إنقاذ الطفل - فلسطين	جمعية أجنبية	غزة
21	مؤسسة إنقاذ الطفل - UK	جمعية أجنبية	
22	مؤسسة إنقاذ الطفل - السويد	جمعية أجنبية	
23	جمعية الرحمة العالمية	جمعية أجنبية	غزة
24	جمعية مؤسسة أنيرا فرع أجنبي غزه	جمعية أجنبية	غزة
25	MAP	جمعية أجنبية	
26	جمعية الهلال الأحمر التركي	جمعية أجنبية	
27	هيئة الأعمال الخيرية فرع أجنبي	جمعية أجنبية	غزة
28	Mercy Corps	جمعية أجنبية	
29	جمعية المساعدات الشعبية النرويجية NPA	جمعية أجنبية	غزة
30	الوكالة السويسرية للتنمية SDC	جمعية أجنبية	
31	جمعية الأيدي المسلمة - فرع اجنبي	جمعية أجنبية	غزة

Source: Researcher

Annex 8: List of Local NGOs

الرقم	المؤسسة	النوع	المنطقة
1	الجمعية الفلسطينية للتنمية والتطوير معاً	جمعيات إجتماعية	خانيونس
2	جمعية الصلاح الإسلامية	جمعيات إسلامية	الوسطى
3	الهلال الأحمر	جمعيات طبية	غزة
4	جمعية جباليا للتأهيل	جمعيات معاقين	الشمال
5	الجمعية الإسلامية	جمعيات إسلامية	غزة
6	جمعية دير البلح لتأهيل المعاقين	جمعيات معاقين	الوسطى
7	جمعية التنمية الزراعية (الإغاثة الزراعية)- فرع ضفه	جمعيات زراعية	غزة
8	جمعية المغازي لتأهيل المعاقين	جمعيات معاقين	الوسطى
9	جمعية مؤسسة الثقافة والفكر الحر	جمعيات إجتماعية	خانيونس
10	جمعية الوداد للتأهيل المجتمعي	جمعيات إجتماعية	غزة
11	جمعية النجدة الاجتماعية	جمعيات الأمومة والطفولة	غزة

Source: Researcher

Annex # 9

كشف بأسماء وأرقام جوالات اللجنة التنسيقية العليا

م	الاسم	الصفة	الجوال
1	جابر محمد عياش	رئيس اللجنة	0599419180
2	زكريا مصطفى الهور	عضو	0599369128
3	ثروت البيك	عضو	0599446203
4	صلاح البطة	عضو	0598887292
5	توفيق بكر قنيطة	عضو	
6	كمال أبو سلمية	عضو	0598936674

اللجان الفرعية للطوارئ و الاغاثة

المحافظة	ممثل لجنة الطوارئ	الصفة	الجوال
غزة	محمد ناهض السبع	رئيس اللجنة	0599422419
	أحمد عاشور صبيح	عضو	0599607117
	عماد الدين العمصي	عضو	0599990528
	توفيق بكر قنيطة	عضو	0598883644
	عبد الغني سعيد الرنتيسي	عضو	0599402870
	عادل عايش	عضو	0599866242
الشمال	غسان سمير فلفل	رئيس اللجنة	0599953808
	تيسير حلمي صيام	عضو	0599724216
	عبد الباسط ديب حميد	عضو	059929470
	عرفان عبد الباسط أبو خوصة	عضو	0599990188
	عبد الله سعيد الكردي	عضو	0599414359
	يحيى شحادة	عضو	0599736271
خان يونس	عدنان عبد الله أبو يوسف	رئيس اللجنة	0598887141
	أنور علي أبو عبيد	عضو	0598924024
	غسان فؤاد شعث	جبهة النضال	0598054604
	حسام محمد الرقب	عضو	0599719815
	محمد إسماعيل المصري	عضو	0598890006
	فؤاد السر	عضو	0599157590
الوسطى	سمير خميس الحولي	رئيس اللجنة	059936903
	أحمد العصار	عضو	0599412405
	محمد البابا	عضو	0599827027
	مصطفى البحيصي	المؤسسات	0599419191
	محمد شقورة	عضو	0599718004
رفح	وائل يحيى السيد	رئيس اللجنة	0599805573
	عادل حرغون	عضو	0599897216
	وسام سلطان	عضو	0599223684
	ناصر برهوم	عضو	0599346860
	زياد أبو ندى	عضو	0599454710