

**DESIGNING POST DISASTER RECONSTRUCTION APPROACH  
USING BUILDING BACK BETTER (BBB) PRINCIPLES IN GAZA  
STRIP -PALESTINE**

BY  
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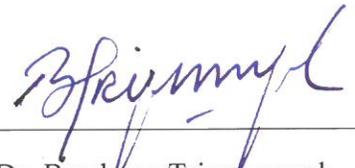


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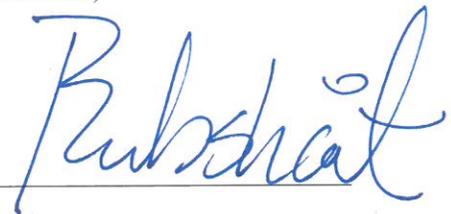
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[I dedicate this work to my Mother, my Father, my Wife, my Brother, to every Palestinian  
People to the Palestinian Case and to Gaza's People Specially ]

## ACKNOWLEDGMENTS

So, this is it

I here write not just a thesis, I'm writing another chapter of my life, I wanted to make sure that it will leave influence behind, and I wish that it will be a little something to remind you of me when I'm gone. And To give something that will serve Palestine Case.

The bath was long and thank God it was paved with good company. A company that encouraged me to keep going and finish this work, accompany like my beloved wife: Marah AL Sqour; she stood by my side in my ups and downs to let this work happen and she enlighten my life road. A company like my family that was my biggest fan and my biggest motivation specially my Father: Abdulmo'ti Abdul Hadi who show me the biggest support meaningfully and financially, I wouldn't be here standing without him. I have to thank here as well my supportive advisor Dr. Bambang who helped me finish this thesis. And I would like to thank the great support from Professors Dr. Sadi Assaf, and Dr. Abdulaziz Al Bu-Bushait through my journey. And I would like to thank all my supportive friend whom helped me in each step of this thesis: Abdul Aziz Al Qara , Abdullah Noman , Shady Ayman, Ahmed Mansour , Mohammad Al-Attari , Abdulrahman Al Saifi , Khaleel Mansi ,and Ehab Saleh. |

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## **LIST OF ABBREVIATIONS**

<b>BBB</b>	:	Build Back Better
<b>NGO</b>	:	Non-Governmental Organization
<b>UNDP</b>	:	United Nations Development Program
<b>UNRWA</b>	:	United Nations Relief and Works Agency

## ABSTRACT

Full Name : [Anas Abdulmo'ti Wasfy Abdulhadi]  
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The motivation (**Purpose**):

Chaos is what societies are left after a war, where a disorder and displacing is taking over the corrupted area; where these wars "*create large-scale human suffering, generating refugees, displacing populations, engendering psychological distress, obliterating infrastructure and transforming the economy*" (Earnest, 2015). Home is the essential and the most necessary from all the needs that an individual want in a post disaster situation, so it will be the start point for him to recover his life back together. The Process of Recovery is complex and it is entangled subject because it is affected by livelihoods, health, education, security. (Barakat, 2003)

Also the motivation for writing in such a topic was that the lack of tackling this issue and lack of resources in this area, in particular in the post man-made disaster area. So it become a need to "*improve current reconstruction and recovery practices and generate safer communities engaged*" (Wilkinson, 2014). This Study aims to develop post disaster reconstruction framework using the Build Back Better (BBB) Principles, focusing in the area affected by manmade disasters.

The (**Methodology/ Design/ approach**) by BBB

The approach used in this study was based on the frame work of Build Back Better (BBB) Principles, where these principles concluded and built upon a previous guidelines through case studies, previous learned lessons from similar situations, and previous recovery plans implemented in cases of post disaster and post conflict areas. (Wilkinson, 2014). The proposed model was tested by a case study, utilizing interviews with: the affected people, the authorities, the aid agencies, Non-Governmental Agencies, and the construction development agencies. The proposed framework was then compared to previous frameworks and reconstruction methodologies.

## ملخص الرسالة

الاسم الكامل: أنس عبدالمعطي وصفي عبدالهادي

عنوان الرسالة: تصميم طريقة لإعادة الإعمار بعد الكوارث باستخدام مبادئ البناء الجديد بشكل أفضل ، في قطاع غزة - فلسطين

التخصص: هندسة وإدارة الإنشاء

تاريخ الدرجة العلمية: فبراير / 2018

الدافع (الغرض):

الفوضى هي ما تحصل عليه المجتمعات بعد الحرب، حيث يحصل الإضطراب والتشرد على المنطقة المتأثرة بهذه الحروب ؛ " (حيث تخلق هذه الحروب معاناة إنسانية واسعة النطاق، وتولد اللاجئين، وتشرد السكان، وتولد ضائقة نفسية لديهم، وتزيل البنية التحتية وتطيح بالإقتصاد " ) إيرنست، 2015. المسكن هو الضرورة الأساسية للفرد بل وأكثر الإحتياجات ضرورة من في حالة ما بعد الكوارث، لذلك سيكون إستعادة المسكن نقطة البداية بالنسبة له لاستعادة حياته مرة أخرى. عملية التعافي والإصلاح وإعادة الإعمار معقدة وهي موضوع متشابك لأنها تتأثر بسبل العيش والصحة والتعليم والأمن. (بركات، 2003)

كما كان الدافع وراء الكتابة في هذا الموضوع هو عدم معالجة هذه المسألة وشح المصادر في هذا المجال، ولا سيما في منطقة ما بعد الكوارث التي من صنع الإنسان (الحروب) . لذلك أصبح من الضروري "تحسين ممارسات إعادة الإعمار والإنعاش الحالية وتوليد مجتمعات أكثر أماناً" ويلكنسون، 2014 . وتهدف هذه الدراسة إلى تطوير إطار إعادة الإعمار بعد الكوارث باستخدام مبادئ بناء أفضل (BBB)، مع التركيز في المنطقة المتضررة من الكوارث التي صنعها الإنسان (الحروب).

**(المنهجية / التصميم / النهج المتبع) عن طريق BBB**

استند النهج المستخدم في هذه الدراسة إلى إطار عمل مبادئ بناء أفضل (BBB)، حيث استنتجت هذه المبادئ واستندت إلى المبادئ التوجيهية السابقة من خلال دراسات الحالة والدروس المستفادة السابقة من حالات مماثلة، وخطط الانتعاش السابقة التي نفذت في حالات ما بعد الكوارث الطبيعية (الحروب) والمناطق ما بعد الصراع تلك التي من صنع

الإنسان. (ويلكنسون، 2014). تم اختبار النموذج المقترح من خلال دراسة حالة، وذلك باستخدام المقابلات مع: الأشخاص المتضررين، والسلطات، ووكالات المعونة، والوكالات الغير الحكومية، ووكالات تنمية البناء. ثم تمت مقارنة الإطار المقترح بالأطر السابقة ومنهجيات إعادة الإعمار لدراسة إمكانية تطبيق التصميم المقترح في المناطق المتأثرة.

# CHAPTER 1

## INTRODUCTION

Many countries have experienced disasters from earthquakes, tsunamis, fires, tornados, as well as man-made disasters (e.g. war). These natural and manmade disasters have one thing in common; most of them leave a devastating blow and chaos in the countries behind. Many effects resulted from disasters. However, it can't be said that losing the house is not the biggest and most effective one to the effected individual, when the home is maybe the only thing left for him to start his life normally and try to recover what he can. So it was a high demand to design a methodology for post disaster reconstruction to recover as much as possible from the mass destruction and to improve the ways of planning and constructing for future hazards.

The post disaster reconstructions or recovery are done by many methods in various aspects, and are implemented by many parties from the community side, the Governmental Authorities, Non-Governmental Organizations (NGO), Aid Agencies, and from the affected individuals. There are many criteria and methods could be set for recovery programs. One of the methods used in a previous study was managing legitimacy for post disaster reconstruction for a series of major earthquakes in Canterbury New Zealand, where they addressed the challenges for handling the vast programs of projects. It was found that *“establishing the internal and external legitimacy of this organization was a critical element that determined the effectiveness of the recovery work”* (Bernard Walker, 2016).

Studying the Resilience was another methodology for studying the post disaster reconstruction. Resilience was an important tool for the urban development key players that helped them in assessing and setting priorities for resistance and recovery for disaster risk management as (Guthrie, 2015) study indicates. Build Back Better principles (BBB) is another approach for post disaster reconstruction, where it looks at the disaster in four key aspects: risk reduction, land-use planning; community recovery, and supporting economic resuscitation. (Wilkinson, 2014). And the core of this study will be built upon this last approach.

## **1.1 What is BBB?**

As (PA D. &., 2005) stated in South Asia Disaster Report the Weakness and Vulnerabilities of the community to endure the hazards is the reason of generating the disaster. The Vulnerability could be defined as (Wilkinson, 2014):" *the lack of capacity to anticipate, cope with, resist and recover from the impact of a hazard*". Losses in human lives in 2005 Kashmir earthquake in Pakistan was because of the building materials used had not been designed for earthquake resistant (PA D. &., 2008). The losses in Mumbai floods in 2005 was due to the lack of planning and the illegal developments. The same situation was seen in Sri Lanka after the Indian Ocean Tsunami. (PA D. &., 2005) The recovery is complicated and takes long process. Meanwhile, in reconstruction projects, they try to quickly restore the affected community, which resulted the condition that was worse than the existing vulnerabilities ( (Wilkinson, 2014), (LYONS, 2009)).

To deliver the normality or at least a sense of it, it is important to quickly start the reconstruction and the long-term recovery. However, in the process, risk management should be taken into consideration, which is represented in four phases: Mitigation, Preparedness, response and recovery (Rubin, 1991). Unfortunately, these four phases are the least understood (Berke, 1993). A successful recovery should take into consideration numerous factors and elements. From the large effort done for the recovery of post Indian Ocean tsunami 2004 disaster, the phrase Build Back Better (BBB) was established. It was defined (Clinton, 2006) (Khasalamwa, 2009) & (Roberts, 2000) as "*a way to utilize the reconstruction process to improve a community's physical, social, environmental and economic conditions to create a more resilient community,*" where resilience is defined as "*the capacity to absorb stress or destructive forces through resistance or adaptation*"; or "*the capacity to manage, or maintain certain basic functions and structures during disastrous events*"; or "*the capacity to recover or 'bounce back' after an event*". (Twigg, 2007) Proposed that BBB "*is a broad holistic approach to post-disaster reconstruction in order to address the wide range of prevalent issues such as those mentioned above and ensure that the affected community is regenerated in a resilient manner for the future.*" The author's definition for BBB: is a general approach for post disaster reconstruction that covers almost all the aspects of community recovery (physical, social, environmental, and economical) to generate a resilient community

## **1.2 Research Aim & Objective**

BBB principles were applied in the reconstruction after the Indian Ocean Tsunami in Sri Lanka, and after the Victorian Bushfires in Australia in order to test these principles

(Wilkinson, 2013) and the finding in this study was that in both case studies in Sri Lanka and Australia the principles such as building codes, support for communities, long-term funding and quality assurance were applicable. Then The BBB Principles related to the structural improvements were concluded and grouped into three groups: building codes and regulations, cost and time, and quality.

Most of the case studies in the previous researches focused on Natural Hazards and disasters. In the Middle East, however, most disasters have been manmade that resulted in huge losses that similar the natural disasters or maybe more. Therefore, there is indeed a need for studies in implementing similar approaches on the post conflict (war) reconstruction projects.

This Study aims to develop a post disaster reconstruction framework, utilizing the BBB Principles, focusing in area affected by manmade disasters. |

## **CHAPTER 2**

### **LITERATURE REVIEW**

In this section of the proposal it will be talking about several previous lessons learned from previous occasion's war or disaster and some of the guidelines of previous case studies will be taken into consideration.

#### **2.1 (Wilkinson, Build Back Better principles for post-disaster structural improvements, 2013)**

In this study the principles of BBB was Defined and concluded into eight (8) points: 1 – Improvement of Structural Designs. 2 – Land-use Planning. 3 – Social Recovery and Principle. 4 – Economic Recovery. 5 – Stakeholder Management. 6 – Legislation and Regulation. 7 – Community Consultation and Principle 8 – Monitoring and Evaluation. Where these principles will lead to build back better during the reconstruction and recovery. Then these principles were tested in Australia after the Victorian Bushfires, and In Sri Lanka after the Indian Ocean Tsunami, where a qualitative data collected from the interviews. The case study was made for both countries at first. Then the results were compared to know how the BBB principles were implemented, what were their implications, and to analyze the reconstruction effort in the two countries. Finally determine the applicability of these principles in deferent environments to know if these principles should be adopted or not, also to know if these principles applicable or not. And this study was focusing on the first principle only (the structural changes).

So this principle were analyzed in this study to: Building Codes and Regulations, Cost & Time, and Quality.

### **2.1.1 In Building Codes and regulations**

In Sri Lanka the concentrating was on changing the places rather than designing in a better way, and in the recovery phase due to the quake of recovery needed codes were not followed, and the reconstruction was not successful because of the lack of supervising and regulation for guaranteeing that the reconstruction is done as per the codes. Relocating the leaving areas and lands without planning made another new places very crowded and weak. In Australia after the bushfire in short time a new Building Code was published with a strict regulation to build firefighting houses. Australia gave a good example of implementing the Structural Design Changes through the verifying of the codes after the disaster and by adding a regulations and making permits. And because Australia had a good experience in coding and regulations the reconstruction was easier for them. On the other hand Sri Lanka was a bad example for implementing the codes and regulations because they was not used to this type of order. One of the most points of views during the interviews was that to implement BBB principles in taking in consideration all risks effectively in choosing the place to build and determining the structural needs. The Success of the Structural Changes in Design could be better if the stakeholders was educated to the topic, also it could be better by training the communities to implement these changes.

### **2.1.2 In Cost & Time:**

The Biggest Problem for rejecting the structural changes was the high cost to implement it, because most of the people can't afford it. In Australia most of the people rebuilt their

homes by the insurance money for their homes, but on the other hand effected people with no insurance were suffering. In Sri Lanka most of the finance was coming from Aids and it was a lot; but the problem was that these aids are subjected to the donors' agendas and some was interfering with politics and corruption. And other problem to Aids was that is short term and not enough for containing the projects. So a long term fund is needed. The Structural Changes should be realistic and logical in cost and time wise so it could be committed.

### **2.1.3 In Quality:**

Quality of Designing and implementation is effecting the safety and it is determined by builder's skills and experience. In Australia because the disaster location was far it was hard to bring skilled builders to work there and also because the building market was up that period. A committee was established to supervise the reconstruction work is done according to the needed regulations. But in Sri Lanka the building was through the donors or the house owners and they should have built according to the standards of cods and regulations but they didn't because of the lack recognition to the importance of these regulations. The low experience of the people responsible for reconstruction.

And finally the study concluded that reconstruction could be better if BBB principles implemented effectively in the structural area. The Hazard Assessment should be taken into consideration when making the plan of the reconstruction. The codes should be supported by the Governmental authorities so it will be supervised and assure it is implemented. The responsible parties for the recovery strategy should be educated to these topics. The fund for such projects should be long term fund. The quality monitoring and supervising should be very strict.

The Principles such as multi hazard-based building codes, education and support for communities, long-term funding and quality assurance through inspections were applicable in both case studies.

## **2.2 (Wilkinson, Re-conceptualising “Building Back Better” to improve post-disaster recovery, 2014) Study:**

Literature review in this study was made to introduce and understand the key concepts of BBB. And it was shown that BBB could be achieved by four factors: risk reduction, community recovery, and implementation effectively and efficiently, and monitoring and evaluation. Then the framework was then generated upon these four factors. And that was done by a previous experiences and lessons and existing guidelines.

One of the previous lessons learned was in (Clinton, 2006) study which was in Sri Lanka post Tsunami disaster where he propose a ten lessons learned from the disaster:"

1. Governments, donors and aid agencies must recognize that families and Communities drive their own recovery.
2. Recovery must promote fairness and equity.
3. Governments must enhance preparedness for future disasters.
4. Local governments must be empowered to manage recovery efforts, and donors must devote greater resources to strengthening government recovery institutions, especially at the local level.
5. Good recovery planning and effective coordination depend on good information.
6. The UN, World Bank and other multi-lateral agencies must clarify their roles and relationships, especially in addressing the early stages of a recovery process.

7. The expanding role of NGOs and the Red Cross/Red Crescent Movement carries greater responsibilities for quality in recovery efforts.
8. From the start of recovery operations, governments and aid agencies must create the conditions for entrepreneurs to flourish.
9. Beneficiaries deserve the kind of agency partnerships that move beyond rivalry and unhealthy competition.
10. Good recovery must leave communities safer by reducing risks and building resilience. "

Also in Sri Lanka tsunami recovery a guide lines that was made by the Government was including: "needs based resource allocation and provision of locally appropriate solutions, community participation and consultation in recovery activities, equity, transparency between stakeholders, risk reduction and consideration of future sustainability and livelihood support". (GoSL, 2005a)

(Monday, 2013) Suggested in his study that enhancing the quality of life in the aspects of: community, economic, environment, risk reduction and decision making for a better recovery activities.

In (CERA, 2013) study regarding Christchurch Earthquake Recovery Authority's "Recovery Strategy" which focuses on the leadership and integration to manage recovery activities, recover the economy, recover the community, reconstruction of the environment, and recover the health sector.

The similarities in previous case studies and guidelines can conclude the so **key categories for BBB** which are: Allocation of stakeholders, community participation, risk reduction,

and the monitoring and evaluating. Analyzing the complete list of propositions of the guidelines was made to determine the core concepts of BBB.

**Risk reduction** defined" measures put in place to improve the community's physical resilience to natural hazards "

(Cross, 2010) World Disaster Report exposed that due to growth in illegal settlements, ineligible infrastructures, and building on sites exposed to hazards the risks are seen and happening.

In (Victorian Bushfires Royal Commission , 2010) recommended: Code rectifying for increasing the safety, suitable building and planning control. In Turkey earth quack 1999 the study (Baradan, 2006) recommended: the need for identifying the site hazards, updating the structural codes, reducing the tax to encourage mitigation.

And the suggestions concluded that risk reduction achieved into two ways:

- 1 –Improvement of Structural Designs and building codes; and Principle
- 2 – Land-use Planning to reduce risks.

The **recovery for the community** it should be done from the society people themselves. And their needs should be identified before any further step, where this step is very important to establish a sustainable situation for a recovered society. The sustainable recovery is generated through the economy flourish through the private sector, and through providing a job opportunities (Clinton, 2006)The economic situation could be flourished by recovering the old economic situation or by opening a new economy by making “Cash-for-Work” program (Wilkinson, 2013) and that will let the locals get work opportunities and will give them a small financial support for startup small projects. From these information's gathered the BBB principles under the category of community recovery:

3- “Social Recovery which entails supporting psycho-social recovery”

4- “Economic Recovery which looks at improving the economic climate of the impacted”

**The implementation** is the way of applying the risk reduction and the community recovery in an efficient and effective way. A big challenge could appear on the recovery process which is that it is hard to identifying the roles of the parties involved in the process where it is usually a lot especially in post disaster and post conflict recovery. And problem could lead also to the duplication of some activities could be already done before by other party. As Clinton 2006 stated that the Government should have a pre plan for the forecasted disasters to select and identify the way the of reconstruction, and to select the authorities and the organization that will be responsible in this process and how they will corporate with the national and other organizations and to identify their roles and their responsibilities. A strict regulations should be stated by the responsible authorities and followed by the responsible parties of implementation. These regulation on the same time should be simple and easy to be understandable, followed, and implemented. From the points mentioned in this section it was concluded that implementation in BBB rely on two principles:

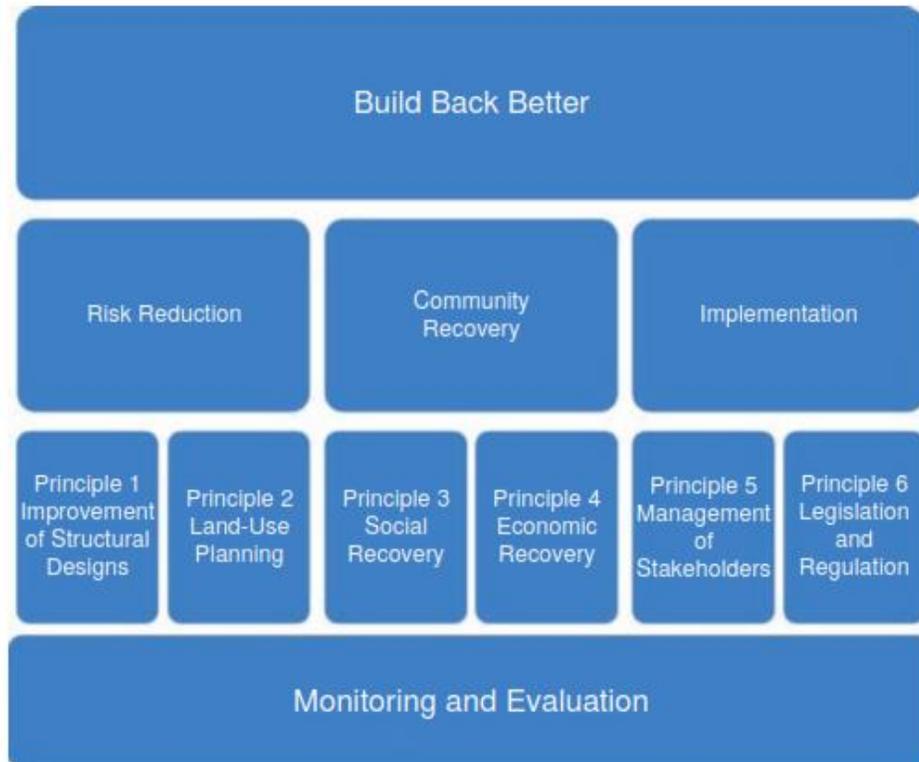
5 – Stakeholder Management which advocates coordinated stakeholder functions

6 – Legislation and Regulation to Control recovery operations

**Evaluating and monitoring:** From the previously mentioned guidelines and lessons learned from previous disasters (natural and man-made) are taken into consideration to develop programs and plans for training to be implemented in such cases in the future. It is important also to make monitoring and evaluating for these previously done recovery efforts in order to generate new plans for the future and update the existing ones.

### **The framework work establishing:**

“The establishment of core categories and principles for BBB enables the creation of a Framework that can be used to represent BBB.” (Wilkinson, 2013)



**Figure2.1 (Wilkinson, 2013) Frame Work**

### **2.3(Barakat, 2003)Study:**

In this study the author is taking into consideration the previous experiences in reconstructing home in several cases. Which gave a guide for planning the reconstruction. Which is sequencing by making **Preparation, Planning and Assessment** which include (giving an initial questions, the assessment of local needs and capacities, and Beneficiary selection) Then tackling the **approaches and technologies** which are (Housing repair,

Constructing new housing and settlements, 'Building-yard' approach, and Finance facilitation) and Ending with the **Implementation**.

In the first part of Preparation, **Planning and Assessment** which are included in:

Initial steps:

Shall the reconstruction be made? This question could be answered partially from the organization itself by knowing their capacity and their responsibility to the situation. the other part of the question is answered by knowing the conditions of the targeted area, the effect on the community, and due to the degree of normality the target area is in; in that time. The key actors is an essential in any construction process. And as defined by (Barakat, 2003) they were: (community, local authorities, private sector, national government, and external factors). Most importantly is the financing way that will be used to do this recovery and as it was defined by this study (including the advantages and the disadvantages of each way) as shown in table (1):

**Table 1 Advantages and disadvantages of various housing reconstruction finance options**

Finance Option	Description	Advantages	Disadvantages
Outright gift	Beneficiaries are given houses on the basis of meeting certain conditions of entitlement. The recipient has no obligation to repay the cost of the house	Removes the need to set up a system to recuperate costs Allows recipients to use their assets to meet other needs	Encourages dependency and undermines local coping mechanisms Bypasses and thus weakens local institutions Is often an imposed solution The assisting agency cannot recuperate money for new projects Number of houses provided is limited
Partial contribution through self-help	Beneficiaries may receive building material and/or technical advice, and/or a partial grant. They build their own house, usually on a communal basis or by contracting local builders	Removes the need to set up a system to recuperate costs Allows recipients to use their assets to meet other needs Increases involvement and participation by the recipients	As with the outright gift, this option can undermine both local capacity to cope and local institutions Materials provided may not meet the requirements or aspirations of the recipients Time spent on building may conflict with other priorities of the recipients, such as income generation, which may be a vital element in family recovery
Loans	There are many variations of loan programmes. The most common for reconstruction is the long-term loan. Some loans may be without interest, while others apply normal interest rates	People without resources are able to rebuild their homes and repay the loan over time Recipients have freedom to build a house according to their own choice Encourages independence and sustainability	May encourage renters to become owners Credit systems may not exist and so may need to be set up Loans may be a significant financial burden for recipients, especially if they have no previous experience of credit systems Loan systems are costly to administer Many financial institutions favour only the most credit-worthy people and may demand the creditor's house as a guarantee

**Table 2.1 Advantages & Disadvantages of Housing Reconstruction Finance Options****Assessment of local needs and capacities:**

Seven aspects are taken into consideration to make this assessment: land, HR, Institutional resources, community resources, building materials, technology and financial resources.

Targeting assistance and beneficiary selection: and that was studied in two cases in Philippines and Kosovo as in the two boxes below:

### Box 5

#### Identifying beneficiaries according to vulnerability

In Kosovo, beneficiaries were identified using the following criteria:

- Families whose houses were destroyed and who were living in tents, community shelters or public buildings, or who were lodging with other families.
- Families with more than eight members and with children under the age of 12.
- Families with elderly, disabled or chronically-ill members.
- Families without the means to rebuild their own home.
- Female-headed families whose husbands had died or were disabled during the conflict.
- Families at risk from their present living conditions.

The criteria were developed by Municipal Housing Committees composed of representatives from local and national government, and external agencies.<sup>15</sup>

### Box 6

#### Selecting beneficiaries: the Philippines' core shelter programme

On 25 November 1987, Typhoon Sisang hit the Philippine coastal province of Sorsogon. Almost 200,000 homes were destroyed. Between 1988 and 1991, the Department of Social Welfare and Development, supported by UN development and relief agencies and the Asian Disaster Preparedness Center (ADPC), reconstructed 22,665 typhoon-resistant core houses.

The beneficiaries of the programme had to satisfy a set of stringent requirements in order to be eligible. These included:

- having a secure land title – a guarantee of ownership or evidence of long-term occupancy of land;
- residence in an existing dwelling on the land;
- income criteria – for a family of six, monthly income could not exceed \$65 for urban dwellers, or \$55 for rural dwellers;
- the family lacked the resources to rebuild; and
- the family did not receive shelter assistance from another agency.<sup>16</sup>

Figure 2.2 Identifying Beneficiaries in Kosovo

Figure 2.3 Identifying Beneficiaries in Philippines

Also Checking the legality in (Barakat, 2003)research was taken into consideration as the below cases are shown below:

### Box 7

#### Forms of ownership

Typical forms of tenure include:

*Rental agreements.* These are made between tenants and private citizens, private companies or public bodies. Tenants are allowed access to the property for a fixed period in return for regular agreed payments. If the agreement is made with a public body, rents are often reduced or partially covered by public funding. Rented property is usually occupied by low-income families and, in developing countries, is rarely regulated. This form of tenure is least likely to lead to capital investment in the property, either by the tenant or the property owner.

*Leasehold.* Here, the tenant has access and control over the property for an agreed period. The owner has ultimate control, and when the lease expires may release it to the present tenant or reallocate it to another tenant.

*Freehold.* This form of tenure conveys the most power to the title-holder, who has complete control of the land and property and may bequeath it or use it as collateral. It is the form of tenure most associated with investment.

*Conditional freehold.* This is a form of leasehold which can be converted to freehold if certain conditions are met. However, strict terms can mean that any default in rent payments can result in all previous payments being forfeited, and the tenant must restart the payment process from the beginning.

*Collective tenure.* Collective forms of tenure ensure secure tenure on the basis of agreed shared access. The collective can be a corporate body, private company, housing association or cooperative. For such tenure to be feasible and successful, those involved must share a high level of common interest and be capable of managing the arrangement.

*Communal tenure.* This is common in communities with a long history and strong cultural identity. Access to land may be governed by custom, and may include the right to occupy, but not transfer or alienate.<sup>19</sup>

Figure 2.4 Forms of Ownership

### Box 8

#### Verifying land ownership in Kosovo

In Kosovo, municipalities were faced with the huge task of verifying ownership of the land before reconstruction/rehabilitation took place. Implementing agencies or the beneficiaries, depending on the system in the municipality, submitted a request to the cadastre (land records) department in the municipality. Ownership of the land was checked with the cadastre records. If these and any subsequent checks failed, the occupants were asked to provide proof of ownership. Disputes were usually resolved by the village council and witnesses, or in the courts at a later date.

Figure 2.5 Verifying Land Owner Ship

### Box 9

#### Land and property laws in Rwanda

Following the 1994 genocide in Rwanda, many women and girls became heads of families. However, traditional customary laws prevented women from claiming their families' or husbands' land and property. This meant that they were homeless and effectively landless. In March 2000, the Rwandan National Assembly passed a law on 'Matrimonial Regimes, Liberties and Succession'. This landmark legislation gave women and girls the right to inherit land and property, and legally recognised women as household heads.<sup>21</sup>

Figure 2.6 Land and Property laws in Rwanda

## **Approaches and Technologies:**

Providing transitional and temporary housing.

Repairing damaged housing.

Building new housing.

A 'building yard' approach, whereby communities do the rebuilding, but outside agencies make materials and skills available and affordable.

A 'finance facilitation' approach, whereby communities do the rebuilding, with financial help from outside agencies.

## **Implementation:**

For choosing the approach that will be implemented; it depend on several factors:

- "• The scale and spread of destruction and the size of the settlement. The larger the project, the greater the likelihood of employing contractors.
- Building methods in the target region and the technical complexity of construction; the more complex the scheme, the more likely it is to employ contractors.
- Whether housing prior to the disaster was generally provided by self-help construction, and whether basic construction techniques are widely known.
- Capacities of the stakeholders (technical, economic, organisational), particularly when it comes to introducing mitigation measures.

- The amount of time and effort the target population is willing to invest in the reconstruction.
- The timeframe of the project." (Barakat, 2003)

## **2.4 (Nabeel Aiad, 2015) Study:**

Some of the previous studies tackled in this study:

### **First: Reconstruction HAREK Neighbourhood – Beirut– Lebanon:**

HAREK Neighbourhood located in the North West of Al HARYRY Airport, where in **Tamuz War** 2006 the Air Forces of the Zionist Entity Demolished the houses, the commercial buildings, the authorities building's and the infrastructure of the Neighbourhood. The **effects** of the war on the neighbourhood was 265 Buildings were totally damaged, 3119 Residential Units were demolished, 1160 Commercial Units were Demolished, and 20k thousand homeless people. And for **Preparing the Plans of the reconstruction:** a document "Code" of reconstruction was made by (the work team of HAREK Neighborhood) in the American University there. And its goals were: analyzing the problems, and proposing the solutions. And it was presented in three plans; the first one showing the current situation, the second one shows an analysis for the patterns around the area, and the third one shows the proposed solution in interfering in the reconstruction process. Then after these plans are generated some Designs are made to make the reconstruction in the needed terms, conditions, and specifications. Another suggestions were there in the neighborhood that all as a total will make a bigger plan that include all the needs. So when making the final plan lots of factors should be taken into consideration like: General Safety, The Environmental & Beauty of the place, improvement of public

and private places, parking areas, traffic problem, the regulation for construction, and group of factors also (Economic, Social , legal ,and political) factors. The **Principles** of the reconstruction document submitted earlier include (1- securing the speed of redistributing the displaced inside their geographical area to keep the social weaving as it is before the war.2-develop the public areas since it is an urgent need specially for the low-income people. 3-Balance the needs for the traffic and for pedestrians. 4-providing enough light and normal ventilation to the residential units. 5-providing enough space for parking. 6- make the reconstruction an collaborative effort between the public sector, population ,and workers.

The Methodology of the work:

- The maximum speed in finishing the project.
- Taking care of general safety.
- Commitment to the laws and regulations.
- Adopting the principle of complementarity with municipalities and official authorizations.

Preparing the Plans stage:

- Preparing plans of historical analysis.
- Preparing plans of light and natural ventilation.
- Preparing the plans of interfering with the area in aspects of (traffic, landscaping, parking areas, and public areas)

The benefits and the use of HAREK study:

- Making studies include allocating the opportunities, strengths, threats and weaknesses (SWOT) analysis.
- Making plans that suites the people needs and taking the historical and future factor into consideration.
- The importance of the population to get included in the process.
- Analysing the previous problems happened and find solutions.
- Making a principles for the reconstruction methodology.
- Management of the implementation for getting the best quality in a low cost and in short time to reduce people suffering and stress

**Second: Reconstruction Jenin Camp – Jenin– Palestine:**

The camp was constructed in 1953 west of Jenin City it is area 473 Dunam and it shelters 16,446 refugee left their cities and villages in 1948. And it include 31 neighborhood. The effects of invasion the camp in 12<sup>th</sup> of April 2002 were: 10% of the camp was totally demolished, and many areas in the camp was having a huge damage such as the houses, hospitals, and schools. In this war 50 people died and more than 4,000 people was left homeless, more than 450 buildings were demolished totally and partially, around 800 residential units and 150 commercial store needed reconstruction so as a total around 1,400 units were effected. Most of the infrastructure in the camp were demolished including (water, Electricity, Drainage system, and 80 establishments that serve the social and health needs, including also the sport club of the camp and UN office were demolished.

The **reconstruction process** and helping in the camp was done by the UN were they distributed the food and drinks for the population and the homeless and 100 tent was built as a temporary solution but it was not suitable for the people because of the weather statues,

so the homeless had to go to live with their relatives in other cities or went to other villages. Then the UN rented some apartments for the homeless by the fund of Emirates Red Crescent.

The establishment of the reconstruction committee: was made by Engineers, Doctors, Teachers, Population, UN and Emirates Red Crescent in order to make connections between the effected one with the fund establishments.

### **Preparing the plan of reconstruction:**

The plan was prepared by Jordanian Engineers Association but the Zionist entity rejected it for security reasons and to hide the Identity and landmarks of the camp; so a new land beside the camp was purchased to extent the camp area and reduce some of the existing problems from traffic, low ventilation, low access of light, infrastructure problems, to the lack of public areas. The problems was solved by improving the structure of the buildings, improving the public areas, increase the width of the streets, improving the lights and ventilation.

### **Stages of reconstructing the camp:**

- Stage 1 Removing of the demolished and fixing the homes that demolished partially.
- Stage 2 Work in the demolished areas and the new purchased area in a total area of 25.41 Dunam and the total residential units that were extracted from the camp 120 unit. And this stage was planned to be in one year. And the process of construction was distributed to blocks each block contain 5 units; when these units are finished it is delivered to the owners to finish it as they want internally by the supervision

of UN and the fund of Emirates. The structure of these constructed units was done in a way that will contain four stories. And the units were sorted in aspects of the family members and area so it would help the housing problem in the camp.

The benefits of Jenin Study:

- The needs of the people in aspects of (Infrastructure, landscaping, Lighting, Ventilation, humidity, and public areas) were met in the reconstruction plan.
- Keeping the identity of the camp.
- A managerial problems were faced due to the power some people have in the reconstruction authorities.
- None taking into consideration the previous owned areas before the war created many problems.
- A very bad social feeling was experienced especially with the old ones which there were more connected to the place than the young ones.
- The random additions by locals on the streets and buildings made problem and it was not part of the reconstruction plan.

### **Third: Reconstruction in GAZA after 2008-2009 War**

Under the siege of the Zionist entity and by the many invasions that done in 2008-2009 a huge disaster was generated. The Ministry of Work and Housing proposed an alternatives for the reconstruction and for reduce the tragedy of the people. And these alternatives was relaying on two aspects:

- Protect and maintenance for the buildings effected( by Palestine authorities and donors fund)

- The reconstruction of the buildings that were demolished totally to be reconstructed by the Core Unit method.

Due and After the war the ministry calculated the demolished units totally and partiality and it was found that 3800 unit demolished totally, and 25,000 lost their homes; and because of the siege the building materials was not available. Also, due to the lack of fund neither the authorities nor the NGOs could start the reconstruction after the war. So the alternatives that was tackled by the ministry were:

1. Building by mud: and it is included a temporary solution and not flexible to extent, also it is costly in constructing and demolishing.
2. Buying apartment: the lack of fund and the lack of available units made this solution impossible.
3. Portable houses: it is included a temporary solution to move to the al permanent solution.
4. Gave the affected people ccompensation: and this solution has its benefits and disadvantages, where the building may be not as planned or not as per the regulations.
5. Building by Core Unit: there was 1550 units out of the 2800 units totally destroyed consisted of 1 story but it was ready for the vertical extent and its area was around 110 m<sup>2</sup>; so the core unit method was suggesting that these buildings will be flexible to vertical and horizontal extent. The first stage of this method was done in "Estate of Abed Rabbo" in easy way by getting the materials from the demolished homes.

The priorities of the reconstruction: First the priority for the totally demolished buildings and from one story building and it should be:

1. on private property and not Trespass of the ministry of Endowments
2. The buildings on that was Inhabited at the start of the war.
3. The building son the border to increase the Resistance of the Community,
4. The closed buildings that make block together.

After the survey was made the range of the unit's areas were found to be 110 m<sup>2</sup>. So, the proposed area of the core unit was as the photo below: it will start at the first stage as 76m<sup>2</sup> then finally it will be 132m<sup>2</sup> with the ability to extent vertically also in the future.



Figure 2.7 1<sup>st</sup> Phase in Core Unit Method

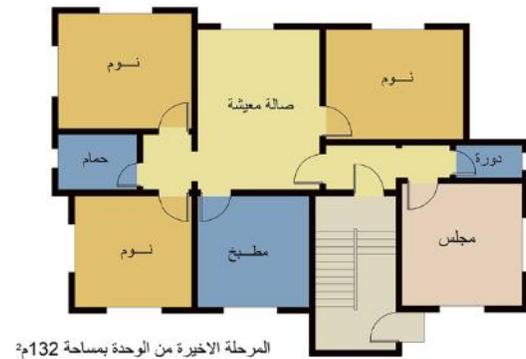
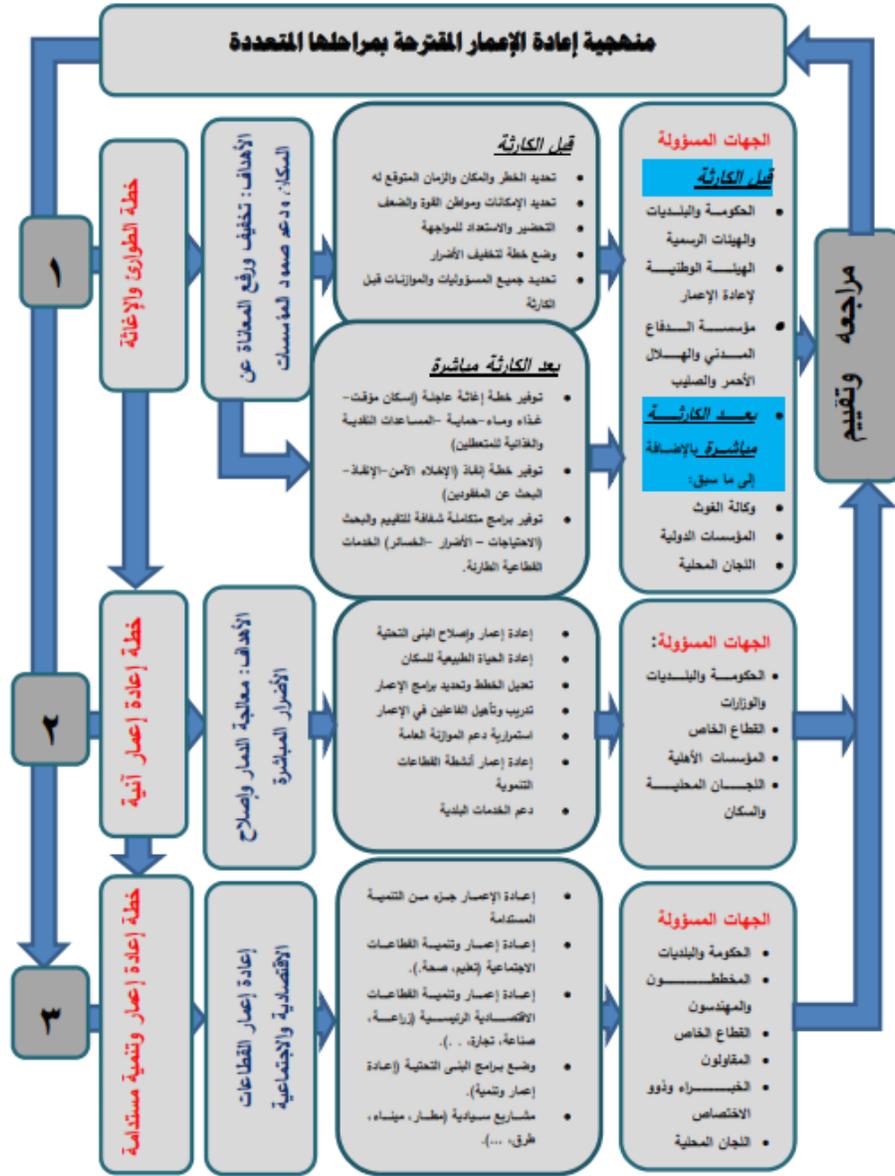


Figure 2.8 Final Phase in Core Unit Method

The Budget estimation for this unit:

for the 80m<sup>2</sup> upon the average prices of the market that year to be 300\$/m<sup>2</sup> for the construction and 800\$/m<sup>2</sup> for the Engineering Consultation and the construction period six months which mean that the unit of 80m<sup>2</sup> will cost 24,800\$.

Finally upon these previous case studies the author was proposing a methodology to be followed in the post disaster reconstruction to be as follow:



الشكل رقم ٢٥: خطة إعادة الإعمار المقترحة.

Figure 2.9 Proposed Methodology by (Nabeel Aiad, 2015)

## CHAPTER 3 Research Methodology

This study focused on the post disaster reconstruction in Gaza-Palestine; since it is one of the most effected Cities by manmade disasters, where it was attacked by the Zionist entity in the latest wars (2008-2009-2012-2014).

### 3.1 Background about Gaza

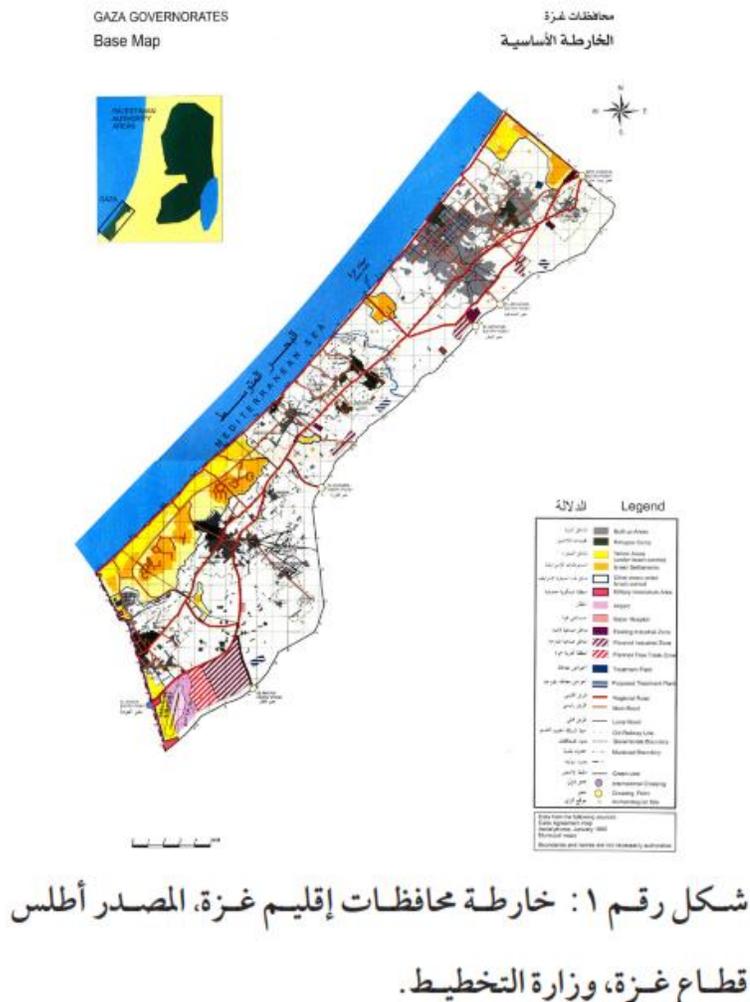


Figure 3.1 Gaza Map

It is the south of the Palestinian beach, and in the Middle of Gaza Strip there is Gaza the city, where it is one of the oldest cities in the world and it have its own Managerial and

Economical. The Area of the strip is 365 KLM which 1.33% of Palestine, on its south Egypt; and from the North and East the Zionist Entity; where in the west side of the strip is Mediterranean Sea. And as per the population statistics in 2014 there is 1.8 million people living in the strip. Also because of the siege on Gaza there is a huge effect on the economic and social aspects there. And that let Gaza under the poor line where the unemployment percentage was 50 %. The strip consist of five districts as per the photo above. Also there is only five outlets that connect Gaza to the outer world. There was an airport and marine port but both were destroyed through continues wars on Gaza.

The Zionist entity made a huge disaster to Gaza Strip on the last war 2014 especially; which left a Loses of 2147 martyr and 10,080 homes destroyed totally, and 38,000 homes were destroyed intensely. Also full destroy of the infrastructure of the strip which make the main concern for the community is to build their houses back. Lots of projects were supposed to be started but due to the Zionist activities these projects didn't see the light. But Instead a challenges where faced in the strip: (the siege including financial – Closing of The Outlets – The invasions and the incursions- three consecutive wars. And a comparison to these wars effects were made:

Description	2008 War	2012 War	2014 War
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War Duration (days)	22	8	52
Human Lose (Martyrs)	1440	175	2147
Money Loss (Million \$)	1950	65	4000

**Table 3.1 comparison between Gaza latest wars**

The Study implemented the Principles of Build Back Better (BBB), which has been implemented in other countries, as the basis to develop a framework for post disaster reconstruction. It was then tested on one of the ministry suggested projects.

### **3.2 The Mean time situation In Gaza Strip: (Nabeel Aiad, 2015)**

1. High price of reconstruction
2. The precautions of the constructing organizations due to the fluctuation of prices
3. Stop producing in all sectors.
4. The expected time for reconstruction: in the last seven months 70thousand ton of cement were supplied to the strip and if the situation will still the same 100 years needed to finish the reconstruction.
5. During to SERI plan 6000 ton of cement need to be supplied to finish in 30 years.

Literature Review was made in order to understand the BBB Principles as well as to know the meaning of BBB. And upon previous case studies a frame work was made so it will be implemented in the post disaster projects (Post Conflict & Post Natural Disasters) and this study will develop a frame work "methodology" depending upon the previously mentioned studies in a way that will suite the case in GAZA strip. After that this framework model

will be implemented in one selected project in the strip some suggestions from the Housing Ministry Website (Indeed, housing in the Gaza Strip, 2017) :

Ministry of Housing Projects						
SN	Project	Location	Area Of Project (Dunam 1000 m2)	Expected Units	Statuses	Target group
1	Al aoda Project - Al Moqawasy	GAZA	141	1000	Under Construction	Groups With incomes above average
2	Japanese project for the United Nations Development Programme	Khan Yonus	120		Done	Groups With houses demolished before 2008
3	Saudi project for the United Nations Development Programme	Rafah	302	1	Under Construction	Groups With houses demolished before 2008
4	Saudi Project (UNRWA)	Rafah	752		Done	Groups With houses demolished before 2008
5	Dutch project (UNRWA)	Khan Yonus	440	223	Done	Groups With houses demolished before 2008
6	Japanese project (UNRWA)	Khan Yonus	304		Done	Groups With houses demolished before 2008
7	UAE project (UNRWA)	Khan Yonus	151		Done	Groups With houses demolished before 2008
8	Bisan	Beet Lahya	606	4500	Under Construction	all groups
9	Paradise	Beet Lahya	179	(1200)40م	Under Construction	all groups
10	Tiberias	Beet Lahya	160		Under Planning	all groups
11	Salam District	Japalya	9		Under Planning	all groups
12	Sheikh Khalifa residential city to editors	Al Zahraa-GAZA	108		Under Planning	Released prisoners
13	Huda	Hajar Al Deek	76	1000	Under Construction	all groups
14	Chestnut	Deyr Al Balah	174	1800	Under Construction	all groups
15	Buraq	Khan Yonus	845	7600	Under Construction	all groups

16	Isra	Khan Yonus	850		Under Construction	Groups With incomes above average
17	Isra second phase	Khan Yonus	678	5200	Under Confirmation	all groups
18	Sheikh Hamad Al-Khalifa City	Khan Yonus	3660		Under Planning	all groups
19	Al Horeyah	AL Fakhary	72	900	Under Planning	all groups
20	Al Andalus	Rafah	96	1200	Under Planning	all groups
21	Taybah suburb	South GAZA(free neytsareem)	18	500	Under Planning	Investors
22	Al Majd suburb	GAZA (Qoraysh)	16	400	Under Planning	Investors
23	Al Mashtal	GAZA	21		Under Planning	all groups
<b>Rehabilitation of the slum projects</b>						
1	Al Morabeteen 1	GAZA	131		Done	Trespassers on government land
2	Al Morabeteen 2	Japalya	21		Under Planning	Trespassers on government land
3	Al Morabeteen 3	Japalya	21		Under Planning	Trespassers on government land
4	Al Esraa Random	Japalya	42		Under Planning	Trespassers on government land
5	Al Forqan	Rafah	264		Done	Trespassers on government land
6	Al Salheen	Japalya	56		Done	Trespassers on government land

**Table 3.2 Ministry of Housing Projects**

### 3.3 Designing Methodology

After comparing and analyzing previous studies and methodologies, the proposed framework for post disaster reconstruction is as follow:





**Figure 3.2 the Methodology Design**

(Barakat, 2003) And (Wilkinson, 2013) discussed the importance of the assessment. It was an essential process for Barakat, while Wilkinson stressed the importance of assessment, especially from assessing the risks. It is the starting point of the process for information gathering and for identifying the current condition.

Planning shall come after the assessment, once the situation of the destructed area is known. A plan shall be established to identify required activities. Most of the references in the literature review state the importance of Planning. (Wilkinson, 2013), for example, described that the planning for lands is essential in his framework, (Wilkinson, 2014) further discussed the importance to plan for the forecasted hazards. Planning is also

considered an essential stage for both (Barakat, 2003) (Nabeel Aiad, 2015). Therefore, it is very important to have a planning stage, to develop an action plan. Several researchers add it with the assessment like Barakat and others add it before like Wilkinson. However, good planning comes after the current situation is well understood, which means after it has been assessed.

(Wilkinson, 2013) Argued the importance of stakeholder's allocation and education, which is the main stage in his framework. (Barakat, 2003) Indicated the importance of knowing their capacities. Therefore, after the plan is established, the stakeholders involved shall be identified, in order to identify their responsibilities as well as to avoid any duplication of any activities. Knowing the involved stakeholders will let all participants know what their role will be. For example, local authorities' role will be very different from the Donor's role. It allows the key stakeholders to organize between themselves, or enables assigning a party that will be responsible for organizing the stakeholders. It also helps the participants to avoid agendas that are not accepted by many of them. It should also be mentioned here, the importance of local community involvement, which would support needs identification, and could encourage a better practice.

(Wilkinson, 2013) Discussed the role of regulations and legislations in his framework of Building Back Better (BBB), and it's important for the success of reconstruction process. Furthermore, (Wilkinson, 2014) argued about the importance of finding strict regulations from the concerned parties, while it should be easy to comply in the same time. (Nabeel Aiad, 2015) Also emphasized the importance of following the rules and regulations. Therefore, after the stakeholders knew their roles they should know the regulations and

policies that they should follow. It is argued that it should be government organizations who develop and enforce the rules and regulations, as they have the authority to do that.

The implementation should start following the stages that are previously explained. Reconstruction is a complex process, therefore it is argued that it is better to divide them into three stages, namely: emergency, real life time, the long time.

The most urgent thing to start with is the Emergency Plan. It includes providing the necessary supplies that people need to survive following a disaster, such as: food, beverages, temporary housing, safety evacuation, security for their lives and homes, and looking for the missing people.

Another stage is the reconstruction after the emergency plan is done, or in some cases, overlapping with the latest activities of the emergency plan with the real-time construction plan will take a place. This stage involves many aspects to implement: Structural Changes and Land Planning as risk reduction actions; Reconstructing Infra-structure, Residential areas, commercial areas, and Public areas, Historical & Cultural areas, and the Religion areas). The completion of this stage is expected to bring back the normal of life of the affected communities.

The last stage is the long-term plan implementation. It focuses on community recovery, by recovering both economic and cultural aspects. This stage will be implemented by reconstructing the development sector in disaster affected area. It includes: providing job opportunities by opening new projects which will flourish both the economic and social sectors; reconstructing and developing the main economic sectors (Trading, Industry, agriculture...); reconstructing and developing the main social sectors (Health &

Education). By focusing on developing Infrastructure and sovereign projects, like airport and marine port, it will help the affected area to be stronger in its region.

Finally, throughout all these stages, monitoring and evaluation should be conducted by one of the parties involved in the process, to ensure that the process is working smoothly and as planned. It is also to manage the stakeholders' activities and coordinate them. The responsibility for choosing the beneficiaries for the implemented projects will be under this party, where they will evaluate the situation of the people affected by the disaster.

### 3.4 The Case Study

The suggested project for this study will be the third project in table (3): the Saudi project for the United Nations which is consisted of 300 residential unit, where it was implemented by the UNDP and funded by Saudi Arabia by "Saudi Committee for the Relief of Palestinian People" and it was located on the south of Gaza strip in Rafah City. The main goal of this project was complying with the community needs.). (UNDP, 2012)

<b>Project Name</b>	<b>King Abdullah Bin Abdul Aziz Residential City</b>
<b>Location</b>	<b>Gaza Strip – Rafah City</b>
<b>Project Description</b>	Constructing 300 Residential units in Rafah for 300 families lost their homes on Land of 85,000 m2 along the beach. It contain 302 unit, 2 Schools, Masjed, Water Well Planet, Internal streets, infrastructures, and electricity, Water, and Wastage channels.
<b>Date of Signing the Agreement for the project</b>	20/12/2005

<b>Donor</b>	The Saudi Relief Committees & Campaigns
<b>Implementer</b>	UNDP united nations Development Program
<b>Consultant</b>	Dour Office for Engineering and Planning
<b>Starting the project</b>	30/06/2006
<b>Reasons of delay project</b>	War – Politics – Security – Siege –non Availability of Building Materials
<b>Budget of the Project</b>	16,110,929 \$ American Dollar
<b>Statues of the project</b>	93% Finished – Remaining the Masjed

**Table 3.3 identifying the project**

The goal of this project was to accommodate the affected people in Rafah city due to the demolition that was done by the Zionist entity and also to create job opportunities for the local people the goal will be achieved through three secondary goals, which are aligned with the Saudi Relief Committees & Campaigns goals. These three goals are:

1. To build 300 residential units; which will be done through making the suitable designs for the affected people needs, taking into consideration: the size of the family, the lifestyle, and the privacy. Upon that, two different designs were made to suit each case.
2. to build public places and infrastructure, which includes two High Schools (one for Boys and the other for girls), Masjed, water supply, waste drain, Streets, and electricity
3. To create job opportunities by providing 100,000 working hours through this project, which would help reducing the unemployment, and will help the poor families. This project would also help in flourishing the local industries through supply of building materials and preparing the needed services for the finishing works in the project.

The project elements were divided into packages:

- Package 1: 85,000 m2 excavation and land preparation of the project 100% finished
- Package 2: 17 building including 37 residential unit 100% Finished
- Package 3: 16 building including 36 residential unit 100% Finished
- Package 4: 17 building including 39 residential unit 100% Finished
- Package 5: 31 building including 74 residential unit 100% Finished
- Package 6: 16 building including 40 residential unit 100% Finished
- Package 7: Tal AL Sultan Male High School 100% Finished
- Package 8: Tal AL Sultan Female High School 100% Finished
- Package 9: 16 building including 40 residential unit 100% Finished
- Package 10: 16 building including 36 residential unit 100% Finished
- Package 11&12: The infrastructure contains the water supply, the waste drainage, the electricity, paving and asphaltting the streets. 100% Finished
- Package 13: Water well includes (excavation, supplying the machines, installing them, and commissioning) Bidding Finished 06/06/2016
- Package 14: Waste water treatment plant includes (excavation, supplying the machines, installing them, and commissioning)
- Package 15: the Masjed & the public parks Bidding Started 13/07/2016

#### The Reasons of the project's delay

- The siege on Gaza since 2007
- Three Wars during the project time
- Political and security instability in the Gaza strip
- The delay of receiving the due payments in the due time.
- The delay in awarding the bids due to the bidding policy of the committee.

- The Electricity problem that all Gaza Strip is facing.

### 3.5 Information Gathering

An interviews shall be implemented in this project in order to see the possibility and ability of implementing this post disaster reconstruction framework model. Where this questioner should be filled by the responsible parties of this project:

1. Saudi Committee for the Relief of Palestinian People; the Donor.
2. The United Nations "UNDP" the implementer.
3. The Palestinian Authorities like Ministry of Housing Ministry of Social affairs.
4. Some of the Contractors who implemented the work.
5. Some of the End Users

So it can be known that the model is effective or not after reviewing the interviews answers.

And it will be focusing on the principles of BBB and implementing them: 1 – Improvement of Structural Designs. 2 – Land-use Planning. 3 – Social Recovery and Principle. 4 – Economic Recovery. 5 – Stakeholder Management. 6 – Legislation and Regulation. 7 – Community Consultation and Principle 8 – Monitoring and Evaluation; to see if these principles are implemented already or could be implemented in these projects.

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Economic Recovery. 5 – Stakeholder Management. 6 – Legislation and Regulation. 7 – Community Consultation and Principle 8 – Monitoring and Evaluation; to see if these principles are implemented already or could be implemented in these projects.

The questioner will be designed as following:

1- The questions on the improvement of the structural designs

- Is the Design Code sufficient to the needs?
- What is the improvements the authorities are making now?
- Is these improvements implemented?
- Can these improvements be implemented?
- Who are the authorities or the NGOs working in this issue?

2- The questions on the Land-use Planning

- What is the main hazards on the area
- How these hazards could be avoided
- Is the land able to be changed with other that have no hazard
- How the risk could be minimized on that land or at least managed.
- Who are the authorities or the NGOs working in this issue?
- Who is funding this issue?

3- Social Recovery and Principle

- Is there availability of the basic needs for people?
- Is the government making proper solutions for the committee?
- Is their Provision of emergency and temporary shelter?
- Is there a concentration on the social recovery

- What is the community general psychological statuses?
- What is the percentage of the workers vs. non-workers?
- Is there a long term sustainability in the affected people's life?
- How many people still homeless?
- How many units remaining to build to recover the disaster?
- What is the percentage of the people under the poor line?
- Who are the authorities or the NGOs working in this issue?

Also cultural questions might be included here:

- Is the Identity of the place changes?
- Did the community heritage restored?
- How many cultural and religion places were destroyed?
- Is there a concentration or a plan on reconstructing these cultural places?

#### 4- Economic Recovery

- Who are the authorities or the NGOs working in this issue?
- Who is funding the main reconstructing Activities?
- Are these donors restricting the fund with some rules?
- Is this Fund along-term fund?
- Is there a concentration on making long-term Jobs?
- What is the statuses of the basic need prices? Is it on average everyone can get?
- What is the statuses of the building material prices?

#### 5- Stakeholder Management.

- Who are the main stakeholders in the reconstruction process?
- Is the Roles Identified already for each of them?
- Are they collaborating to each other?
- Is their training programs for those stakeholders?
- Who is making these programs?
- Are they educated about the building practice and changed regulations?
- Are they educated about the risk management?
- Are they trained on these topics?
- Are these stakeholder making pre-recovery plans?
- Are they stick to their plans?
- Is there a coordination between the activities stakeholders making?

#### 6- Legislation and Regulation.

- What is the degree of empowerment of the local government?
- Did the government make new regulations after the war?
- Did the government establishes legislations and polices to facilitate the reconstruction recovery?
- How the government make the beneficiaries allocation?
- IS there policy for the beneficiary's allocation and assessment of their situation?

#### 7- Community Consultation and Principle

- Is their involvement of the community in the reconstruction recovery?
- How it is managed?

- Is their consultation for the community in the reconstruction process and in decision making?

#### 8- Monitoring and Evaluation

- Who is responsible for the doing the monitoring and evaluation on the reconstruction recovery?
- Are they following some polices?
- Is their fair and equity?

Interviews were conducted with the key stakeholders of the project in order to get a full picture of the situation. There were Eight Stakeholders were interviewed. Other information was taken from reports from these stakeholders and other sources. So the Eight stakeholders are:

- The Saudi Relief Committees & Campaigns (Donor) ((Donor), 2017)
  - Mubarak AL-Baker CEO
  - Yousef B. Rahmah Co-ordination & Implementation Manager
  - Riyadh Al-Moussa Project Coordinator
- Dour Office for Engineering and Planning (Consultant) ((Consultant), 2017)
  - Nahed Hasoneh (Office Manager)
- GAZA Reconstruction Committee (Contractor) ((Contractor), 2017)
- New Gaza Company for Contracting (Contractor) ((Contractor) N. G., 2017)
- Al Sheyah Company for Building and Construction (Contractor) ((Contractor) A. S., 2017)
- Evel Company for General Contracting (Contractor) ((Contractor, 2017)

- The Arabian Committee for Constructing GAZA (Contractor) ((Contractor) T. A., 2017)
- End Users: Kamal Abu Jalala and others. (Users, 2017)

The information gathered from the interviews and the reports given from the stakeholders are used to analyze the reconstruction methodology in Gaza according to the proposed reconstruction methodology.

## CHAPTER 4

### The Case Study Implementation

After information was gathered from the reports, articles, websites, and interviews; the data will be displayed according to the design proposed in figure (11)

#### **4.1 Assessment:**

The assessment process is defined as the evaluation of the status quo. And the current situation in Gaza is measured by the effects of the war.

Immediately and after the war is finished, there was a National Work team established, which consisted of: the United Nation (UN) like (UNDP& UNRWA), the Ministry of housing of Palestine, and the Ministry of social affairs of Palestine. They performed the assessment of the effects of the war by calculating the affected people, the number of homes demolished, etc.). They were responsible to assess the people needs.

The assessment was done through multiple stages:

1. The maasive destruction assessment
2. risk allocation
3. and seven more stages were added as it was taken from (Barakat, 2003):
  - a. Land
  - b. Human Resouces
  - c. Institutional Resources

- d. Community Resources
- e. Building Materials
- f. Technology
- g. Financial Resource

#### **4.1.1 The massive destruction assessment (The current situation)**

(Palestine, 2016) The assessment is shown below after two (2) years of the war in Gaza regarding the structural damages and the progress for reconstructing them:

##### **Houses Effected by War:**

17,800 totally destroyed or severely damaged (can't be repaired or "uninhabitable") houses because of the war. The reconstruction of 31% of these houses have been completed; 28% are under progress; 14% are funded to be reconstructed; and the remaining 27% of those houses have not yet obtained any fund.

From the latest war in 2014 , 153,200 houses were damaged but still inhabitable. The reconstruction/refurbishment of 50% of these houses have been completed; 11% under progress; 0.3% Funded to be repaired; 39% have not yet obtained any fund.

##### **Hospitals Effected by War:**

4 Hospitals were totally damaged during the war. Only 1 of those 4 was totally repaired, and the remaining 3 are still in progress for repaure. There are also 78 Hospitals that were partially damaged, which all of them have been repaired.

##### **Schools Effected by War:**

7 Schools were totally damaged during the war. Only 1 of those 4 was totally repaired, and the remaining 6 are still in progress for repair. There are also 252 Schools that were partially damaged, which all of them have been repaired.

#### **4.1.2 Risk Allocation:**

This stage of assessment identifies and allocates the risks of the war in Gaza and the consequences that follow these risks as assessed by United Nations Relief and Works Agency UNRWA (UNRWA, 2016) for reconstruction of GAZA:

- The risk of increasing the conflict & Internal Palestinian Political Division (Hazardous Risks): and the consequences for such hazard will increase the violation of human rights, problems of security due to the violence that will occur, and the Zionist entity will make more strict rules for movements to Gaza's population.
- Not Enough Funding to cover all needs (Strategic Risk) which will lead for not fulfilling the forecasted results and the plans will not be followed.
- No clear separation between the responsibilities (Operation risk) and that will lead to the misuse of the materials and assists.
- Fiduciary risks in operational implementation (Financial Risk): which will make the donors reduce their contribution, and it will effect on the financial viability of the projects compromised.
- The risk of breaching UN Rules as humanitarian actor (Sociopolitical risk): that will lead to death or injuries of the people in Gaza, the donors will reduce their support, and the UN reputation as non-natural actor will be mistrusted.

Following the first two stages in the assessment; the process continues in the following stages, as per (Barakat, 2003). The assessment here is generally for Gaza:

### 4.1.3 Land:

There should be an analysis for the lands and areas in Gaza strip, in order to know the risks of each land and how much it is liable for the reconstruction projects. The assessment of the lands includes whether it is able to build on it (not agricultural). An assessment of the accessibility to the lands should also be implemented, as well as identification of population in each area. The following map show the situation in Gaza in July 2017. (territory, 2017)

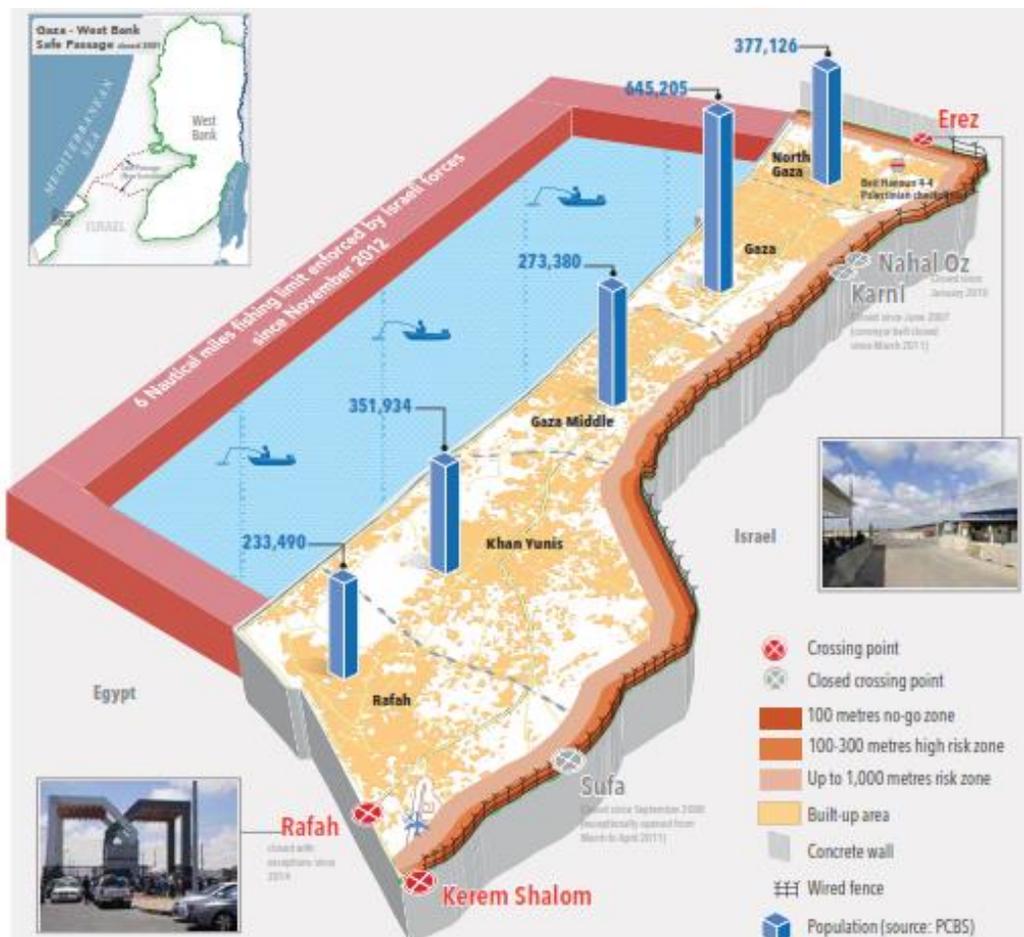


Figure 4.1 Map of Gaza Situation in July 2017

#### **4.1.4 Human Resources:**

This stage here shows the allocation of the existing roles, tasks, and resources needed for the project. The Human resources available for the reconstruction society is the community itself as well as the NGOs, Donors, and the Legal Authorities. Therefore, in Gaza, in general, the main parties involved in the reconstruction are the Palestinian authorities; the United Nations (UNDP & UNRWA); many Donors; the Contractors and suppliers; and the Palestinian population. A Further step will be taken in roles allocating to each related stakeholder in Point number three in the methodology (Responsibilities and involved stakeholders)

#### **4.1.5 Institutional resources:**

This stage shows the capacity of the institute needed to take the task? It varies from the NGOs, the UN to others, like the Donors from various countries. So, it varies upon the capacity and size of the institute.

#### **4.1.6 Community resources:**

The community's resources in Gaza basically is their education, where it is the only resource they have right now. Yet, the percentage of unemployment is still high as it reaches 43%. Over 80% of Gaza population are aid dependent. (Samhuri, 2017) Community situation was assessed by the Ministry of Social Affaires along with the help of the UN and the NGOs. This stage would help in targeting the beneficiaries

#### **4.1.7 Building Materials:**

This stage assesses the availability of and accessibility to building materials. Materials were not available most of the time, which become one of the biggest problems in building in Gaza, due to the restrictions and the siege subjected from the Zionist entity. It is important to note that the materials go into Gaza only by a precise procedure through the GAZA Reconstruction Mechanism (GRM) that was agreed between the Zionist Occupation authorities and the Palestinian authorities on 2014. According to the GRM Website the 2,537,695.965 Ton of building materials have entered Gaza strip since 2014 to date (21 Oct 2017). (UNOPS, 2017)

The regulations and the processes of this mechanism is very strict and lengthy. The maximum of allowable cement per day was also restricted to (90 Truck of Cement. Those issues are the main reason of delaying the reconstruction in Gaza.

#### **4.1.8 Technology:**

From the assessment on technologies used for reconstructing houses in Gaza are only the local construction method (i.e. building with block and concrete). There is no other

technologies adopted because of the siege and the regulations. Adopting new technologies might be financially impossible.

#### **4.1.9 Financial resources:**

It is assessing the public and the private resources of fund. As per (Sultan Barakat, 2015) a special donor's conference was organized under the auspices of Norway and Egypt in October 12<sup>th</sup> 2014 in Cairo, with the purpose to agree on the mechanism of distribution and use of the aid. The donors pledged 5.4 US Billion dollars for the reconstruction in Gaza "Even by late December 2014, officials from the Palestinian Housing Ministry claim they have received 2 percent of the \$5.4 billion pledged at the 2014 donor's conference in Cairo." According to World bank report (2015) (Bank, 2015) : the donations to Gaza according to the Pledges made at the Cairo Conference on Palestine "Reconstructing Gaza", Cairo 12th October, 2014

in USD Million

Donor	Total Pledges announced at Cairo Conference	Of which Support to Gaza
Algeria	61.40	61.40
Argentina <sup>1</sup>	2.14	2.14
Australia	83.5	13.18
Austria <sup>2</sup>	8.80	8.80
Bahrain	6.50	6.50
Belgium <sup>3</sup>	7.92	7.92
Brazil <sup>4</sup>	5.00	5.00
Bulgaria	0.06	0.06
Canada	14.66	14.66
Chile	0.25	0.25
China	1.60	1.60
Croatia	1.24	0.40
Czech Republic	3.75	0.75
Denmark	186.17	14.46
Estonia	1.27	1.27
European Investment Bank <sup>5</sup>	70.00	70.00
European Union <sup>6</sup>	348.28	348.28
Finland	29.57	9.31
France <sup>7</sup>	50.66	10.13
Germany	63.32	63.32
Greece	1.27	1.27
Hungary	0.16	0.16
India	4.00	4.00
Indonesia	1.00	1.00
Ireland	3.17	3.17
Italy <sup>8</sup>	62.90	23.68
Japan <sup>9</sup>	200.00	61.00
Kuwait	200.00	200.00
Luxembourg	37.72	8.97
Malaysia	1.45	0.10
Mexico	1.10	1.10
Norway <sup>10</sup>	362.44	144.98
Poland	0.10	0.10
Portugal	0.03	0.03
Qatar	1000.00	1000.00
Romania	0.05	0.05
Russia	10.00	10.00
Saudi Arabia	500.00	500.00
Serbia	0.05	0.05
Singapore	0.10	0.10
Slovakia	0.05	0.05
Slovenia	0.19	0.19
South Africa	1.00	1.00
South Korea	12.00	2.00
Spain	45.59	22.80
Sudan <sup>11</sup>	20.00	20.00
Sweden	410.00	10.00
Switzerland	130.00	69.88
The Netherlands	227.97	15.30
Turkey	200.00	200.00
UAE	200.00	200.00
UK	32.16	32.16
USA	414.00	277.00
World Bank	62.00	62.00
<b>TOTAL</b>	<b>5,087</b>	<b>3,512</b>

<sup>1</sup> Argentina's contribution is in the form of technical assistance agreement to support Gaza which was signed with MOPAD.

<sup>2</sup> Austria's contribution of USD8.8 million is programmed for the benefit- with some minor exceptions- of people living in Gaza.

<sup>3</sup> Belgium's contribution is its 2014 General Fund contribution to UNRWA.

<sup>4</sup> Brazil's contribution is in the form of In-Kind (6000 tons of rice and 4000 tons of beans).

<sup>5</sup> European Investment Bank contribution is in the form of a loan.

<sup>6</sup> European Union contribution includes contribution to UNRWA General Fund pro-rata Gaza for 2014-2015.

<sup>7</sup> France's contribution includes total aid for Palestinian territories for the year 2014 only.

<sup>8</sup> Italy's contribution includes a soft loan to the Palestinian National Authority of EUR 15 million.

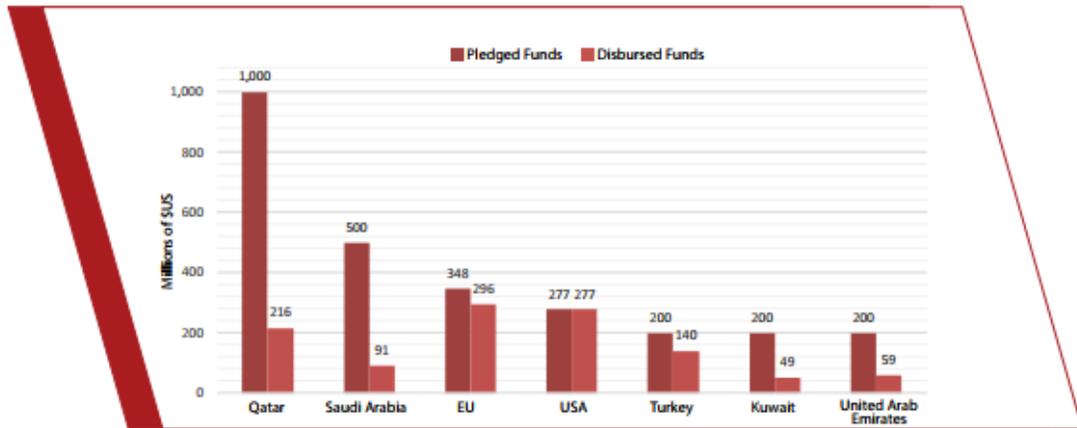
<sup>9</sup> Japan pledged USD200 million for Palestinian territories. No specific-pledged amount for Gaza reconstruction. So far, about USD199 million was disbursed of which USD61 million for projects in Gaza, 106 for West Bank and Gaza, 28 million for West Bank and 4.2 million for others.

<sup>10</sup> Norway did not specify the allocation of its total support between West Bank and Gaza. The amount to Support Gaza is an estimate.

<sup>11</sup> Sudan's contribution is in the form of in kind assistance (100 thousand tons of cement and USD3 million of medical supplies).

**Table 4.1 summary of support pledged for reconstructing Gaza in Oct.12 2014**

**GAZA RECONSTRUCTION:**  
Pledges vs. Disbursements by Big Donors  
(in millions of \$US; as of December 31, 2016)



Source: World Bank, Economic Monitoring Report to the Ad Hoc Liaison Committee (May 4, 2017), Annex 2, pp. 30-33

**Figure 4.2 Gaza Reconstruction Pledges vs. Disbursements by Big Donors**

Figure (13) shows the funding committed by the countries Vs the actually received. (Samhour, 2017)

## 4.2 Planning

After the assessment of the situation is clear, then the planning start. The planning would be easier after knowing all those information's which will help implementing each step in efficient and precise way.

The planning for the reconstruction is divided into multiple phases:

1. Targeting Beneficiaries
2. Planning and choosing the location of a project
3. Execution Approaches & Techniques
4. Cost & Fund Planning

#### **4.2.1 Targeting the Beneficiaries**

The assessment in point 1&6 in the assessment is implemented to know the scale of the destruction, and the communities' situation and capacities. This will help in putting the main starting points for planning for the beneficiaries and targeting them; i.e. in knowing whom are the most needed, where each category of the beneficiaries will need projects fulfil their needs different than the others.

The NGOs were providing reports about the beneficiaries along with the ministry of social affairs. While choosing beneficiaries some establishment's vision is that the effected people shall not be taken out from their lands into new units. And the reason behind that is to save the identity of the land, to fill as much as possible from lands to make harder to the Zionist entity, and to keep the existing industries and Agriculture on these lands alive. . Other establishments says that the people in border are more important than those who are in the downtown. Others look at it from social situations. So, choosing the beneficiary depend on the donors and their agendas.

For the project under the case study, the assessment of the peoples status and there needs was made by the Palestinian authorities and given to the UNDP and they submit it to the Saudi committee. This assessment helped the committee to target their beneficiaries according to their priorities .and for this project the sequence of the committee priority was like this: the Widows, Orphans, the handicapped people, the families without a dependent person. Where the most needed families are concluded in a report and if the units are less than the families then a Lottery procedure were followed by the UNDP and under

supervision of the Representative of the committee. And due to the Situation Gaza in; the units were given for Free by the Donor.

Usually to start a project a donor shall go to the ministry of housing and proposing to them the number of families that they will make units for them. Then the ministry give the donor the situations of the families and their files to choose who is to help? And then they take them out from the data center after signing with them the contracts for these units, so they will not request later for new units and to control the needs of the people.

#### **4.2.2 Planning and choosing the location of a project:**

Reference to assessment in points 2 & 3 in the Assessment stage, knowing the risks and lands situations will help planning for choosing the right place of the project. This particular mission here is the Lands Authority's role.

For the 300 hundred housing unit's project, it was started before the Zionist military finish the invasion of 2005. Which made the location expensive because it was in a good place far from the conflict. Then after the military finished the invasion a new better places were available which gave better choices to the Saudi committee.

For a land to be granted a permit according to Palestinian Lands Authority:

- It should be enough for the 300 units
- It should be flexible to population growth
- Having the min. areas required and spacing between buildings as per the housing ministry permeation.

The land was given to the donor by the lands authority by an order from the president of Palestine. After it was given to the donor it shall be used only for the permitted reason;

which is the construction of 300 units in this case. There was also a need for coordination between the UNDP and the ministry and the municipality to fulfill the requirements of the project to get all the needed approvals. This include permits for the Water, Electricity, drainage, Firefighting, Phone....etc. The physical works could start once the required permits were obtained.

### **4.2.3 Execution Approaches & Techniques:**

According to what have been gathered of in formation in the assessment (4, 5, 6, 7, 8&9 in the assessment stage) all these things govern the technology that will be used in implementation. By knowing what are the resources available from humans, institutions, communities, materials that will help identifying the suitable techniques according to the available resources. Knowing the available technologies and the available financials will also govern the future execution techniques to be the same traditional or it could be developed.

After the techniques are selected, and all planning as well as assessment have been completed, then all the milestones and main activities will be determined and verified.

There are two approach for recovery that are implemented now in Gaza. They are:

- The Donor to hire management agency or contractors directly.
- The Housing Ministry Estimate the construction cost and the Donor compensate the affected people by money to construct by themselves and Donor pay those beneficiaries through construction stages.eg. Foundation will be the first payment. Columns will be second payment; and so on.

For the construction that was done by the beneficiaries, they are responsible for purchasing the materials and providing the manpower for their own-houses. However, the construction supervision shall be done by an engineering company. The advantage of this method is that, it gives the affected people the ability to build even more area in their land, but they will pay for the extra areas from their own pocket. This approach also gives the beneficiaries more flexibility in design and execution, which is more comfortable and controllable to them.

The 300 housing-units project in this case study is executed using the first approach, where the Saudi committee commission UNDP to manage the Design & construction works(Turnkey) The delivery system for this project was Construction Management at risk, where UNDP acts as a consultant to the Donor in the development and design phases. The Saudi Committee added a consultant (Dour Office for Engineering and Planning) as an owner representative and consultant to the project. Where the rules and policies were defined by both the donor and the construction manager at the start of the project to be followed and to work according to it. These rules and policies are defined well in stage number 4 Four (Policies & Rules)

The initiation of the project was due to a request from the United Nations Development Program UNDP because of the needs in Gaza strip to the residential projects. Also the ministries and the responsible organizations were supportive in the initiation due to the need for such residential projects. The request was given to the Saudi Relief Committee & Campaigns, and was studied by the "Engineering management team" of the Saudi Relief Committee to check the project suitability and to submit their recommendation. The

proposal of the project was then sent to the Minister of Interior in Saudi Arabia, Prince Nayef bin Abdul Aziz May God have mercy on him, who was the General Supervisor of the Saudi Relief Committee for his approval. The Saudi Relief Committee signed an agreement between them and the UNDP to start working with the program in 20/12/2005. Another agreement was also signed between the committee and a consultation office "Dour Office for Engineering and Planning", which authorize Dour as representative of the Saudi Relief Committee in this project.

#### **4.2.4 Cost & Fund Planning:**

The cost and fund planning for Gaza is generally done by the Higher Ministerial Committee for the Rehabilitation and Reconstruction of Gaza with the help of Governmental Establishments. According to the Higher Ministerial for Rehabilitation and Reconstruction, the reconstruction of GAZA is estimated to cost 4.03 Billion Dollar (Gaza, 2014) , while the UNDP estimated the cost to be 3.9 Billion dollar.

Regarding The Cost of the project itself was measured by UNDP and then Saudi Committee approve it witch was 10,954,054 US Dollars. After the changes in project and increasing of the scope it reached 16,110,929 US Dollars. After it was studied by the Engineering management team in the committee where the plans, drawings, specs and the materials that will be used are studied carefully in order to check the costs and it was compared to the square meter construction price in Palestine.

### **4.3 Involved Stakeholders & Responsibilities:**

First of all the key players in this project were:

- The Saudi Relief Committees & Campaigns (the Donor)
- UNDP United Nations Development Program (Construction Manager)
- Dour Office for Engineering and Planning (Owner Representative, Consultant)
- The Palestinian Authorities (Ministry of housing, and Ministry of Social Affairs, Lands Authority)
- The Beneficiaries

#### **4.3.1 The Saudi Relief Committees & Campaigns**

A Royal Saudi Order was made in 2000 for establishing a higher committee of Saudi Relief Committee and Campaign under the chairmanship of HRH Prince Naif Bin Abdul Aziz. He then established the rules and regulations for the collection and distribution of donations, to ensure that those donations are distributed appropriately. Under the supervision of the HRH, supervise the Saudi Relief committee collected a total of more than 800 Million Saudi Riyals

The objectives of the committee:"

- "Delivery of in kind and cash donations to the Palestinian people.
- Reminding people of their duty towards the Islamic sanctuaries and the need for supporting the Palestinian cause.
- Meeting the needs of widows, orphans, the handicapped, sick persons, the elderly and the poor in Palestine.

- Alleviating the suffering of the Palestinian people and supporting health, education, social and development programs.
- Highlighting the suffering of our Muslim brothers in Palestine as a result of the Israeli aggression.
- Forging contacts with Palestinian institutions and international humanitarian organizations to extend support to the Palestinian people. "(People, 2017) **Report of the committee**

The Committee's role in the project:

- The Committees was the Donor for the project, where they provide the financing to the implementer to implement the project as well as to the consultant to supervise the works.
- Receive the donation from the people in KSA, and make the budget estimations.
- The Works Agenda and the Policies of the procurement as well as for the project it self
- Contracting with the implementer and supervise their work
- Contracting with consultant to assure that all the work is made properly and all the rules and policies are implemented.
- Receive the tendering reports from the UNDP to approve the quotations and the suppliers.
- Receive and review the reports from the UNDP for the progress of the works
- Receive and review the reports from the Consultant for the progress of the works
- Approve and pay the UNDP Fees as per the contract

- Receive the Beneficiaries report from the UNDP and from the Palestinian authorities, and approve them after that.

Handing over the units to the Beneficiaries.

### **4.3.2 UNDP United Nations Development Program**

UNDP "United Nations Development Program" was established from United Nations General Assembly Resolution 33/147 of 20 December 1978. Where the UNDP was requested "to improve the economic and social conditions of the Palestinian people by identifying their social and economic needs and by establishing concrete projects to that end". (UNDP, 2017) And it since it is start over 1.1 billion USD in 2013 was donated to them for the Assistance Programmes that generated about 3 million working days for Palestinians.

#### **UNDP Goals:**

- "In strengthening its focus on particularly affected geographic areas and vulnerable populations (Gaza, Jerusalem and Area C), UNDP/PAPP's three-year program takes its inspiration and guidance from the Palestinian National Development Plan.
- In the **Governance sector**, emphasis is placed on the rule of law, access to justice, local governance and public administration. In addition, attention is given to the reconciliation process and the need for a strong social contract between the State and its citizens, including the large and growing youth population.
- In the **Productive Livelihoods sector**, investments are made in building the resilience of vulnerable Palestinian households. By empowering families, women and youth to graduate from abject poverty, assistance is geared at achieving economic self-reliance. This is

complemented with support to Palestinian private sector development, trade, import and export to strengthen the economic base of Palestinian statehood.

- In the **Environment sector**, assistance is provided to the Palestinian Authority to reclaim, manage and protect the environment and natural resources – all essential for the survival of communities as well as foundational for national development. Support is also provided to ensure that climate change adaptation responds to the potentially increasing scarcity of natural resources in the occupied Palestinian territory.
- Finally, the **Infrastructure sector** with interventions in the areas of Energy, Transportation, Housing, Education and Health. Through continued investment in infrastructure in these sectors, assistance aims at addressing the growing challenges faced by Palestinians in accessing basic services and social rights. " (UNDP, 2017)

#### **UNDP Role in the project:**

- The construction manager the direct supervisor to all the contractors.
- Prepare the shop drawings.
- Make the Tendering Process and contact the local construction companies for quotations through the committee policy.
- Preparing the Tendering Report and submit it to the Saudi Committee.
- Coordinating and managing the work in the site and control the contractors.
- Review and approve the contractors' invoices then submitting them for the Saudi Committee for Final Approval and payment.
- Prepare the progress reports and submit it to the committee.
- Corporate and coordinate with the consultant hired from the committee.

- Prepare the beneficiaries report with cooperating with the Palestinian authorities and submit it to the Committee.
- Coordinate with the authorities for the permits.

UNDP engage many Construction companies in order to finish the work faster. The number of packages awarded to a contractor depend on the size of the works and Contractors Capacity

### **4.3.3 Dour Office for Engineering and Planning**

Dour office is a local Palestinian Engineering office that established in 1996. Their main scope is Consultation, Planning, Design, and Supervision. They was responsible for many projects in Palestine and especially in Gaza reconstruction like Hamad City Project and King Abdullah Project "the 300 units".

They are the Consultant and Donor representative; and their role in the project:

- Dour is the upper consultant office for the project and it can be said that they are the Donor representative in Palestine.
- So they don't directly consult the contractors, they consulting the UNDP in regard to all processes in the project (procurement, beneficiaries, construction)
- Supervising the works on site.
- Reviewing the shop drawings.
- Making sure that all the rules and policies are met. (tendering , procuring , and implementing the works)
- Preparing and submitting the progress reports for the committee.

#### **4.3.4 The Palestinian Authorities and their Role:**

##### **Ministry of Work and Housing:**

- Gives the Donors the beneficiary's lists along with their statues.
- Gives the permits for the construction according to their regulations
- "Carry out research and theoretical and applied scientific studies on the continuous development of planning, production, implementation, supervision and follow-up of the various projects and activities of the Ministry.
- Preparation of plans, policies, programs and practical projects that serve the objectives of the national strategy for housing and urban and urban development in cities and rural areas.
- Preparing and updating the systems, laws and urban legislations, and setting specifications and standards for urban planning and architectural and construction design for housing, buildings, facilities and infrastructure in line with the economic, political and social realities.
- Develop programs for the development and organization of the contracting sector and the development of regulations for contractors and the participation of the private sector and qualify them to enter the various government projects and motivate them to contribute to the process of comprehensive urban development.
- Preparation and management of rehabilitation and training programs for engineers and professionals inside and outside the ministry in coordination with universities and trade unions and centers of scientific research local and international.

- Participate in the preparation of the national plan for comprehensive development and the formulation of public policies and the development of relevant national laws and legislations." (Housing, 2017)

**Ministry of social affaires :**

- Make the Assessment of the people's statues and making lists and reports for that then submit it to the needed part.
- Providing social assistance to the poorest groups under specific conditions and criteria.
- Provide training and rehabilitation for some marginalized groups in order to enable them to self-reliance, especially women, the disabled, school dropouts and delinquents.
- The registration of charities and the organization of social services provided by NGOs through administrative, financial and professional supervision of their programs, supporting these institutions through physical and material assistance, and employing professional cadres to work in them.
- Facilitating the access of members of social issues to the social services available in governmental and civil institutions through the transfer system.
- Supporting productive projects for women and the disabled, in coordination with the foundations of private lending, in addition to supporting their employment in various professional institutions.
- Protecting children and women who are subjected to violence and abuse by taking measures to intervene in order to stop harm in coordination with the police and the

Ministry of Justice, and to provide protection centers to ensure security, rehabilitation and reintegration in their natural environment after being prepared.

- Care for the elderly and persons with disabilities who lack family care.
- Study of negative social phenomena, and identify problems and needs.
- Inclusion of unknown parentage children in foster families (alternative).
- To integrate disabled people and the elderly into society and to raise awareness of their needs and rights.
- Follow-up of the situation of children in boarding houses, including orphanages, and the endeavor to integrate children into the family.
- Registration and licensing of nurseries, raising the efficiency of nurseries and supervising the services provided to the child.
- Provide psychological and social counselling for children and families living in hazardous conditions.
- To provide guidance and awareness to the family on the various political, civil and social rights that have been approved by the law and guaranteed by international conventions, while ensuring the integration of gender in all policies and programs of the ministry.
- Developing the facilities of the centers and institutions supervised by the ministry, and improving the level of its services to the best possible level.
- The application of the regulations governing the work within the Ministry, which were issued after the Minister and the Organization signed the relationship between the Ministry and other relevant institutions.

- To achieve efficiency and administrative efficiency at the Ministry at all levels and to verify this efficiency and efficiency in the administrative and financial performance of all administrative units in the ministry in accordance with plans and objectives set.
- Preserving public funds and the ministry's ability to use the wrong, and identify negative or positive deviations to control and correct the course.
- Ensure the proper application of the laws, regulations, regulations and instructions that govern the work procedures in a manner that contributes to solving problems, correcting errors and improving the level of performance
- Put the senior administrative levels in the ministry in a state of alert to overcome the obstacles that hinder the way of work.
- Achieving the objectives planned according to the general strategy of the ministry to provide the best services to the public.
- Examine and examine complaints submitted by the public and ministry staff regarding the work procedures in the ministry, which are referred to the supervision and inspection unit by the minister, and make recommendations and suggestions in this regard.
- Follow-up to address problems and correct errors discovered during the internal inspection, and those provided by the General Control Authority in their reports" (affaires, 2017)(<http://www.mosa.gov.ps/showTopic.php?id=16133>)

**Palestinian Land authority:**

- They give the lands to the donors after an official approval from the Palestinian president. (General management of Government Properties)

- General Management for the Lands and real estates
- General Management of General Areas
- (authority, 2017)

**The corporation between these parties:**

It was easy and satisfying and positive between all the parties, since the committee was doing projects in Palestine since 17 years so their relation with the UN become strong and the corporation was smooth ((Donor), 2017) Also their main consultant Dour was hired for most of their projects in Palestine so also it was a good relation and corporation where they know already the rules and polices they worked on before. Also they have a good relation with the UNDP team also since they have a long experience in previously projects with them ((Consultant), 2017) ((Donor), 2017) but on the other hand the contractors relation with the UNDP was formal and regular especially because they are not allowed to change anything on the contract and sometimes their payments delay because of the situations of Fund receiving and the situation in Gaza ((Consultant), 2017) ((Contractor) G. R., 2017) ((Contractor) N. G., 2017)

**4.4 Polices and Rules: (Legislation and Regulation)**

After the previously mentioned steps are well defined, then polices and regulations shall be defined as they are important factors for the successful implementation of the project (Wilkinson, 2013). These rules should be strict, and should be monitored by a strong legal authority, in order for these rules to be adhere to. These rules should cover all the stages of any project, from the start of bidding to the closing of the project. The main policies that

are briefly discussed here are: Bidding policy – Bid Awarding – Contractor evaluation – Beneficiaries selection and the Building Policy.

#### **4.4.1 Bidding methodology:**

##### **Bid Submission**

Bidding in the project of the 300 units was divided into a number of project packages. Some of the packages was given to more than one contractor. The rules and the instructions that enable the contractors to submit their bids as per the instructions from UNDP for one of the packages in the project are the following:

- Instructions to Bidders
- Bid Data Sheet
- Contract for Works (form)
- General Conditions of Contract for Civil Works
- Special Conditions
- Scope of Work
- Technical specifications
- Drawings
- Bill of Quantities BOQ
- Required forms
- Sample forms
- Safety Code Practice

Tendering was submitted by contractors in the official newsletters. For each work, there was 3 submission times, which were Saturday, Monday and Wednesday. Dour, as the

Donor's representative, monitored this process. There is an email address given to all the bidders by UNDP, so they can contact UNDP for any clarifications. There is also a pre-bidding meeting and site visit which were scheduled and detailed in the bidding instruction. All bidders should submit their bids before the deadline mentioned in the invitation to bid. All late bids will be rejected. The UNDP will open the bids half an hour after the bid closing.

Some of the Instructions to Bidders are:

- All Bids have to be sealed
- An eligible bidder is the one who didn't work with the UNDP before in preparing anything related to the project (preparing drawings, specs, etc....)
- "The Bidder shall bear all costs associated with the preparation and submission of the Bid, and the UNDP will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the solicitation."
- The preparation of the bids shall be in English Language.
- There is also a list of documents that the bidders have to comprise in their bids: (forms, priced BOQ, Bid Security, Power of attorney for signatory, Technical information, Qualification information.)
- Submit all the documents of Eligibility and Qualifications ,and they should meet the minimum qualifying criteria mentioned in the Invitation to Bid ITB
- All the Bids shall be submitted before deadline mentioned, and all late bids shall be rejected.

**Bid opening:**

- UNDP will open all bids in the presence of Bidders' Representatives who choose to attend, at the time, on the date, and at the place specified.
- The bidders' names, bid modifications or withdrawals, bid prices, discounts, and the presence or absence of requisite bid security and such other details as the UNDP, at its discretion, may consider appropriate, will be announced at the opening. No bid shall be rejected at bid opening, except for late bids, which shall be returned unopened to the Bidder
- Bids (and modifications sent pursuant to clause 17 of Instructions to Bidders) that are not opened and read out at Bid Opening shall not be considered further for evaluation, irrespective of the circumstances. Withdrawn Bids will be returned unopened to the Bidders.
- UNDP will prepare minutes of the Bid Opening.

**Evaluation of Bids:**

A comparison for the bids will be made by UNDP. They will check whether the bids in compliance with the solicitation documents, then they will evaluate upon the following criteria as per table (5):

Evaluation Criteria	
1.1	Compliance with pricing conditions set in the ITB.
1.2	Compliance with requirements relating to technical design features or the product's ability to satisfy functional requirements.
1.3	Compliance with Special and General Conditions specified by these Solicitation Documents. (bid submission form)
1.4	Compliance with start-up, delivery or installation deadlines set by the procuring entity.
1.5	Demonstrated ability to comply with critical provisions such as execution of the Purchase Order by honouring the tax-free status of the UN.
1.6	Demonstrated ability to honour important responsibilities and liabilities allocated to Contractors in this ITB (e.g. performance guarantees, warranties, or insurance coverage, etc).
1.7	Copy of company's registration required by law and issued by authorized agency: This document is mandatory for administrative compliance and starting with technical evaluation of bids.
1.8	Organizations general and specific experience: The organizations general reliability, experience and capacity in implementing similar projects.
1.9	Adequacy of the proposed work plan: The Bidder's approach in responding to the SOW and BOQ by presenting work plan including a time schedule for all activities during the construction period and present clear work plan.
1.10	Key personnel, machinery and capacity to implement: The qualification, competence and experience of the personnel proposed for the various assignments included in this project, and capacity to deliver on time. Submit resumes (CV) for key personnel and detailed descriptions of machineries owned or intended to be purchased or leased for the purpose of executing the contract by the Bidder.
1.11	Reference list and value of project implemented in last three years: Include list of projects with similar scale, completion period and list of equipments engaged in this project. Include name of project, kind of executed works, name, telephone, email of client, value of executed work (use USD or local currency) and duration of executing work (from, month/year – to, month/year)
1.12	Reference list and value of ongoing projects contracted by bidder: Include list of projects, name of clients, value of contracted works (use USD or local currency) and dead line for construction works.(from, month/year-to month/year)
1.13	Local knowledge: Proven experience of organization and involved personnel in working in the same Province.
1.14	Price Deviation: Bidders shall quote reasonable bid prices with an acceptable margin of deviation in comparison to the real local market prices at the time of bids preparation  In case of Unbalanced pricing (i.e. despite an acceptable total evaluated price, the price of one or more BoQ line items is significantly over or understated), UNDP had the right to reject the unbalanced bid if it determines that the lack of balance does pose an unacceptable <b>Risk to UNDP</b> .

**Table 4.2 Evaluation Criteria by UNDP**

**Award Criteria:**

The UNDP awards the contract to the bidder who has offered the lowest price, and met the required technicalities as well as passed the qualification criteria. The consultant, Dour,

was supervising all the Process of the bidding and awarding along to the awarding and reporting all of that to the Saudi Committee. ((Consultant), 2017) ((Donor), 2017)

#### **4.4.2 Contracts**

The Contracts that were used in the project is FIDIC contracts, but as per **Dour and Contractor interviews** it is not negotiable contracts regarding the terms and conditions. If there is a delay in payments for example they can't say anything because it will take longer than waiting for the payment; and they don't have the right to compensate any prices changes and they also know that if they request for it; it will take forever. The contracts were unit price based and were paid in US dollar.

#### **4.4.3 Construction methodology and Code:**

The constructions were done based on the Palestinian building code. The Saudi committee is not using the Saudi code, because each country has its own building code and standard that suites its need. As per the Palestinian policy that is followed by Gaza Municipality, any citizen who wants to build should make an official request to the municipality, which shall be submitted with photo of the ID, title of the land, and the Survey report. Then, to get the license for construction, the soft copy of the drawings, along with the hard copies need, to be submitted. Delegation to Engineering Office to supervise the work shall be submitted, (Gaza M. o., 2017) ((Donor), 2017) then the services at the end of the construction can be requested regarding the Drainage, electricity, and water supply. The Palestinian code is a combination of the Britch and USA Codes, and it was not updated due to the war problems and due to the political issues in the country. All Authorities that were responsible on making it and updating it are not working any more. ((Consultant), 2017)

#### **4.4.4 Funding regulations**

The funding was regulated by the donor himself, because it is up to their agenda this money should go to the beneficiaries they choose to help. In regard to the project in the case study, the committee gets the money from the donations of the Saudi people, then it goes to the Ministry of Interior where they approve all the receiving and spending of these donations to the projects. The Engineering management team of the Saudi committee is the one who audits all the works and the amount of progress through the reports that they get from the consultant (Dour) and the UNDP. They check these reports, analyse them, summarise the results and put their opinion & notes and recommendations, then they send it to the General supervisor for the committee in the Ministry of Interior for approval. The committee can either approve the invoices or to request additional actions related to the project. ((Donor), 2017)

#### **4.4.5 Handing over**

After UNDP finished the project they gave an official inspection letter to Dour in order to hand over the project. Dour inspected the Project and Received the Project from the UNDP as representative of the Donor Initially; and they add a snag list and gave them a reasonable time in order to make the final handover of the project. A report of handing over the project initially and finally was provided to the Donor in order to add their comments if any. This process was made for each project stage. And after each stage is finished a meeting with beneficiaries was conducted in order to make lottery to distribute the units on them. ((Donor), 2017) ((Consultant), 2017)

#### **4.4.6 The rules of Beneficiary:**

Each Donor choose or target his own beneficiaries he want to help upon his agendas. Some of beneficiaries were given the units by low prices, or easy instalments, or even for free. For this project the Saudi Committee gave the residential units to the beneficiaries for free. The task of allocating them and analyzing their status is done by the UNDP in collaboration with the Ministry of Social Affairs in Palestine. They indicate the affected people, whose families are affected the most and the most needful. Then, they analyses all the needs. The committee's policy says that they rank the beneficiaries from highly needed to less needed as following:

- Widows &Orphans
- Handicapped
- Sick
- Homeless

There are documents submitted with the report for those families proving their situation. ((Consultant), 2017) ((Donor), 2017)

This report is then submitted to the Saudi committee for approval. In case there is a needful cases higher than the number of the offered units there is a lottery that should be applied in front of all the parties, including the beneficiaries, to select the winners of these units. When the project is completed there is lottery process for the places of the units for the winner beneficiaries. The following example shows how the awarding of the units through the lottery process was (Dour, 2016) :

Example of awarding 40 units:

A meeting for the lottery was conducted for 40 units that was constructed and finished and it were ready for handing over, where the meeting was conducted in the UNDP office in Gaza. The attendees of the meeting:

- Eng. Najee Sarhan (Deputy Minister of Housing Ministry)
- Mr. Ezz Al Dein Al Dahnon (Mayor of Beet Lahya Municipality)
- Eng. Nahed Hasoneh (Consultant of the Committee)
- Eng. Basel Naser (CEO of UNDP)
- Eng. Eman AL Hosainy (Projects Manager of UNDP)
- The families holders of 40 families

The lottery was divided into two parts. The first part was for the ground floor units, which was made for the families with handicapped member. The second part of the lottery, "Sweep Stacks," for the remaining cases, which are for the first second and third floors. Then, all the families were introduced to their units. The contracts of these units were signed by the Palestinian Ministry of Housing and the Beneficiaries according to the laws.

#### **4.5 Implementation and execution:**

The implementation of the post disaster reconstruction will be divided into three stages; because of the complexity of the process so it was divided upon the time frame as following:

**Emergency Plan (E):** it is the urgent and the top priority activities that shall be implemented immediately. This stage comes during finalizing the war and immediately after it stops. These top priority activities are (Urgent Health Care, Shelters, and Food)

**The Real Life time Plan (R):** it is the activities that bring the life back to the city and tries as much as possible to shift to normality. This stage comes directly after the emergency plan or in some activities are parallel or interacting the emergency activities. It includes the activities of (Construction, Providing job opportunities, Educating, infrastructure ....) but in this thesis the construction only will be taken into consideration.

**The Long Term Plan (L):** it is the activities for the long time improvements and for the future situation development. This stage comes after the real life time plan. And it includes the activities like (Sociological educating, future awaking of the war effects, risk education,) but this paper will not tackle this part, and it will be discussed later in further research. But it will just mention the list of activities related to this issue.

Following are two live examples for the reconstruction plans in Gaza, where it will be mentioned in general and after finishing explaining it, a further detailing and categorizing of the activities in the three stages will take a place.

#### **4.5.1 1st the Saudi Committee Operational Achievements:**

The Saudi Committee draw their plan during the war and while the war is about to finish so they can start as soon as possible. Their three main key factors of focus were: Food, Medicine, and shelter. The first two factors are taken care in the emergency plan, while shelter was in the real life time plan. Immediately after the war finished, the committee started the information gathering from the UN and the Palestinians authorities like the ministry of social affairs. They coordinate with each other when the work starts for distributing the Food and Medicine supplies.

Enormous efforts were taken by the committee in order to get the things back to normal in Gaza. They have made an emergency plan for the Gaza Strip. Table (6) shows the urgent relief assistance projects, where they take care of the food requirements and distributing it to the needed families, the winter requirements, the patients requirements, the medical requirements (Medicine and Equipment), and providing cash for the families who got affected through the war. Table (7) shows the most important projects that was implemented in Gaza Strip.

<b>Direct action relief assistance</b>		
This urgent relief assistance was provided by the Custodian of the Two Holy Mosques Relief Campaign for the Palestinian People inside Gaza Strip at a total cost of SR 11,250,000, including:		
<b>No</b>	<b>Name of project</b>	<b>Amount</b>
1	Importation and distribution of 200 tons of flour	2,250,000
2	Provision of flour for bread under a contract with bakeries in Gaza to distribute 1,500,000 loafs of bread at a daily rate of 50,000.	984,375
3	Importation of family food packages containing various food supplies	1,875,000
4	Urgent provision and delivery of blood test equipment to the central blood bank society in Gaza Strip in response to a request from the bank.	681,938
5	Importation of 10,000 baby milk tins	825,000
6	Provision of urgent medical supplies such as solutions products and emergency supplies	4,633,687

**Table 4.3 the urgent relief assistance projects by the Saudi Committee**

<b>Most important relief programs and humanitarian projects provided by the Custodian of the Two Holy Mosques Relief Campaign for the Palestinian People in Gaza</b>		
No	Name of project	Amount
1	Food distribution program in cooperation with UNRWA	22,500,000
2	Provision and distribution of flour and baby milk	11,250,000
3	Fuel provision program in cooperation with UNRWA	1,875,000
4	Provision of In Kind assistance	17,264,608
5	Construction of 100 housing units in cooperation with UNDP	28,500,000
6	Construction of 100 housing units in cooperation with UN-HABITAT.	28,500,000
7	Provision of medicines and medical supplies in cooperation with Medicines Sans Frontiers	11,250,000
8	Provision of food supplies in cooperation with WFP	15,000,000
9	Provision of food supplies in cooperation with UNRWA	13,125,000
10	Provision of 1900 tons of flour in cooperation with UNRWA	7,500,000
11	Provision of medical supplies in cooperation with UNRWA	5,625,000

**Table 4.4 projects implemented in Gaza Strip by the Saudi Committee**

The Saudi Committee is working on their Plans according to Five major assistance sectors:

1. Social Assistance
2. In kind Assistance
3. Education Assistance
4. Medical Assistance
5. Development projects

Since this paper is more concentrated about the construction, the following is list for the main activities in each sector except for the development of projects.

### **1<sup>st</sup> Social Assistance Program**

- Assistance for families that have lost their bread-winner
- Assisting the families of detainees
- Assisting Orphans

- Providing assistance to owners of demolished homes and bulldozed farms
- Assisting social agencies
- Employment of Palestinian workers
- Sponsorship of needy families

### **2nd In kind Assistance Programs**

- Distribution of Food Packages
- Distribution of Blankets
- Distribution of Bread Loaf
- Distribution of Clothes and in kind donations
- Packing and distribution of sacrificial meat
- Miscellaneous programs

### **3rd Education Assistance Program**

- University support
- Paying fees of male and female university students
- Assistance to patients receiving treatment in the Kingdom
- Paying the fees of MA and PhD students
- Provision of school bags for male and female students
- Construction of community development computer
- Setting up 12 libraries at Palestinian universities
- Scholarships for 129 students

#### **4th Medical Assistance Program**

- Sick and wounded persons assistance program
- Program for assisting persons with special needs
- Assistance to patients receiving treatment in the Kingdom
- Palestinian Red Crescent Support Program
- Program for supplying Palestinian hospitals with medicines
- Program for provision of measles, mumps and German measles vaccines
- Ambulance procurement program
- Provision of medicines and medical supplies for Palestinian refugee camps

#### **5th Development Projects**

- Residential cities construction project

The committee approved the following projects for the people whom their homes was demolished by the Zionist Army:

- **King Abdullah Bin Abdul Aziz Residential City (Gaza)**

The project the study are tackling.

- **King Abdullah Bin Abdul Aziz City for Charitable Housing for Widows and Poor Women, (Al-Khalil)**

"In line with the directive of HRH Prince Naïf Bin Abdul Aziz, Second Deputy Premier, Minister of Interior and supervisor General of the Saudi Relief Committee for the Palestinian People, SR 23,625,000 have been allocated for financing the construction of 100 housing units for Widows in the West Bank's city of Al-Khalil, in cooperation with the United Nations Program for Human Settlements. The project was named "King Abdullah Bin Abdul Aziz City for Charitable Housing - Al-Khalil." (People, 2017)

- **Renovation and construction of buildings in the West Bank and Gaza Strip**

The Saudi Committee executed a project for renovation 2,345 homes that were submitted by the UNRWA where 645 of them are in Gaza strip and 1,700 are in the west bank which costs a 3,821,250 SR

- **Rehabilitation of water and electricity networks in Nablus**

Due to the leakage of water and electricity the Palestinian people are suffering the committee was prompted to execute a project for the rehabilitation of the water and electricity in Nablus. Which coast 8,657,888 SR and it was with corporation with the UNDP

- **Project for construction of water desalination plants in schools and hospitals**

The polluted water in many Palestinian cities that lead to spread diseases and due shortage of drinking water this project was very urgent. So the committee implemented the construction of water treatment plants in schools and hospitals to provide a fresh water at total cost of 3,750,000 SR.

- **Prince Naïf Oncology Treatment Center in Gaza**

The committee build a modern center which was setup for the treatment of tumors. And it was supplied with the necessary equipment at a total cost of SR 19,500,000 in the first phase.

- **Provision of equipment for Prince Naïf Oncology treatment center, in Gaza**

As a development and operation of Prince Naïf Bin Abdul Aziz center for tumor diagnosis and treatment at the committee approved a total cost of SR 34,500,000 for providing the development and operation for the center from equipment also for

training programs and the daily purchasers of the center also it include the maintenance contracts for 2 years.

#### **4.5.2 2nd UNRWA Emergency plan -Operational Achievements:**

The United Nations emergency plan for Gaza was guided through four Strategic Objectives:

- **1<sup>st</sup>** Food-insecure households and those facing acute shocks have increased economic access to food through food aid/food vouchers, cash assistance and Cash-for Work.
- **2<sup>nd</sup>** Crisis-affected refugees enjoy their basic rights to services, including education; health; water, Sanitation and hygiene; and shelter repair.
- **3<sup>rd</sup>** Protection of Palestine refugees from the effects of the conflict and violence through access to services, advocacy, awareness-raising and the provision of Mental health assistance.
- **4<sup>th</sup>** Effective management and coordination of emergency response, To improve the effectiveness and efficiency of program delivery.

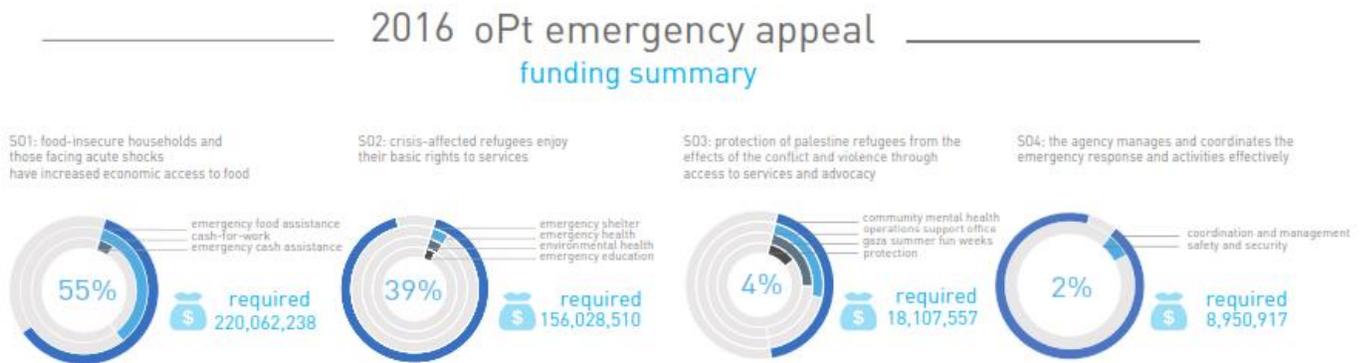
The following is the Budget requirements that UNRWA need for this plan in table (8):

## budget requirements

Programme Interventions	Gaza	West Bank	Headquarters	Total
emergency food assistance	109,782,925	23,264,326		133,047,251
emergency cash assistance	10,000,000			10,000,000
emergency cash-for-work	60,444,588	15,970,405		76,414,993
livelihoods	599,994			599,994
emergency health/mobile health clinics	4,470,324	1,264,128		5,734,452
education in emergencies	3,189,088			3,189,088
emergency environmental health	4,708,620			4,708,620
emergency shelter and shelter repair	142,396,350			142,396,350
operations support officers	1,669,234	2,699,894		4,369,128
community mental health	7,399,999	436,778		7,836,777
protection	499,651	1,449,294		1,948,945
explosive remnants of war risk education	122,582			122,582
gaza summer fun weeks	3,830,125			3,830,125
coordination and management	6,277,386	1,455,405	657,787	8,390,578
safety and security	560,339			560,339
<b>Total (US\$)</b>	<b>355,951,205</b>	<b>46,540,230</b>	<b>657,787</b>	<b>403,149,222</b>

**Table 4.5 Budget requirements in UNRWA 2016 oPt emergency appeal**

And then they summarized the funding requirements for each strategy as follow:

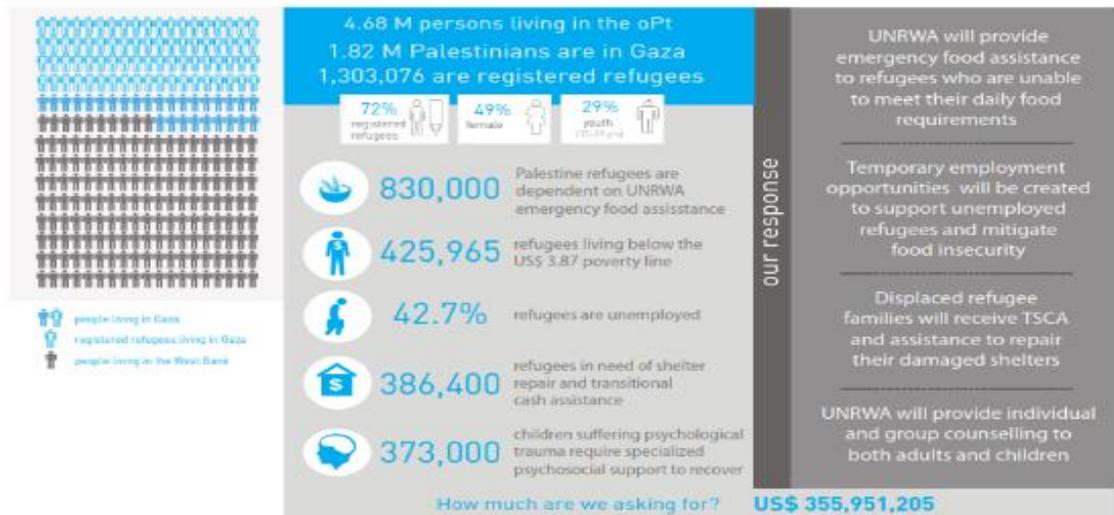


**Figure 4.3 Funding Summary in UNRWA 2016 oPt emergency appeal**

Figure number (14) shows that 55% of the fund is going for food insurance, 39% of the fund goes to the basic emergency rights (Shelter, health, and education), 4% of the funding is going for the protection of the effects from the conflict (like mental health, operation support office, and summer fun weeks for kids), and the remaining 2% of funding goes for the cooperation and management. It has to be mentioned here that the plan made by the

UN includes all Palestine, but this paper will study the GAZA alone, and only the first three Strategic Objectives will be discussed briefly because the main focus here is for the construction methodology.

OPT Emergency Appeal:



[Figure 4.4 summary of the OPT Emergency Appeal proposed by UNRWA in 2016]

### 1<sup>st</sup> Strategic Objective: Food Insurance

The food insurance is done through four Projects:

- Emergency Food Assistance
- Emergency Cash Assistance
- Emergency Cash for Work
- Support for resilient livelihoods

### 2<sup>nd</sup> Strategic Objective: The Basic Rights & Services

It is done through four Projects:

- Emergency Health

- Education in Emergencies
- Emergency Shelter & Repair
- Emergency Water & Sanitation

### **3<sup>rd</sup> Strategic Objective: Protection from the effects of the conflict**

It is done through five projects:

- Protection
- Operations support office
- Psychosocial support
- Gaza summer fun weeks
- Erw risk education

After these two plans were explained briefly; the following is a list of the previously mentioned activities into each of the timeframe plans (Emergency, Real Life, and long terms plans.)

#### **Emergency Plan:**

Immediately and after the Catastrophe in Gaza, there were many entities were involved. Some of them were working independently, and other entities were coordinating their works with the Palestinian authorities like the (Ministry of Social Affairs & Ministry of Housing) and as it was defined before: it is the urgent and the top priority activities that shall be implemented first and before anything in the stage of the finalizing the conflict and immediately after it stops. These top priority activities are Urgent Health Care, Shelters, and Food. It could be defined also as the mandatory needs for the affected people. In the previous section, two plans were discussed in general and in this section the activities from

the previous plans will be categorized in order to allocate the stages of each activity and to clarify the plans into more suitable plan that is easy to understand and implement.

From the Saudi Committee plan the emergency activities and projects are:

1. Assistance for families that have lost their bread-winner
2. Assisting the families of detainees
3. Assisting Orphans
4. Assisting social agencies
5. Distribution of Food Packages
6. Distribution of Blankets
7. Distribution of Bread Loaf
8. Distribution of Clothes and in kind donations
9. Packing and distribution of sacrificial meat
10. miscellaneous programs
11. Sick and wounded persons assistance program
12. Program for assisting persons with special needs
13. Assistance to patients receiving treatment in the Kingdom
14. Palestinian Red Crescent Support Program:
15. Program for supplying Palestinian hospitals with medicines
16. Ambulance procurement program
17. Provision of medicines and medical supplies for Palestinian refugee camps

From the UNURWA plan the emergency activities and projects are:

1. Emergency food assistance
2. Emergency cash assistance
3. Emergency Health

#### 4. Emergency Shelter and Repair

### **Real Life Time Plan**

As defined before, the real-life time plan is the Activities that bring the life back to the city and tries as much as possible to shift to normality. This stage come directly after the emergency plan or in some activities are parallel or interacting the emergency activities. It includes the activities of providing job opportunities, Educating, infrastructure etc. The activities from the previous plans will be categorized in order to allocate the stages of each activity and to clarify the plans into more suitable plan that is easy to understand and implement.

From the Saudi Committee plan the real-life activities and projects are:

1. providing assistance to owners of demolished homes and bulldozed farms
2. Employment of Palestinian workers
3. Paying fees of male and female university students
4. Assistance to patients receiving treatment in the Kingdom
5. Paying the fees of MA and PhD students
6. Provision of school bags for male and female students
7. Program for provision of measles, mumps and German measles vaccines
8. Residential cities construction project
  - i. King Abdullah Bin Abdul Aziz Residential City, in Riyadh
  - ii. King Abdullah Bin Abdul Aziz City for Charitable Housing for Widows and Poor Women, in Al-Khalil
9. Renovation and construction of buildings in the West

10. Bank and Gaza Strip
11. Rehabilitation of water and electricity networks in Nablus
12. Project for construction of water desalination plants in schools and hospitals
13. Prince Naïf Oncology Treatment Centre in Gaza
14. Provision of equipment for Prince Naif Oncology treatment center, in Gaza

From the UNURWA plan the real-life activities and projects are:

1. Emergency cash-for-work
2. Support for resilient livelihoods
3. Education in Emergency
4. Emergency water & sanitation
5. Protection
6. Erw risk reduction

After this list of activities is defined, the only activity that was discussed is the construction of houses which is the main essential need for the people in Gaza, more specifically the 300 unit's project. As this study already argued about the assessment for the project, the stakeholders, the rules, and the planning, this section will talk about the execution of the project that was done through:

- Directing and managing the project was through dour.
- Perform quality assurance by dour
- Human Recourses management by UNDP for contractors and for the main stakeholders was by the committee and for the gov. HR was by the Palestinian authorities

- Manage the communications by Dour
- Conduct procurements by UNDP through the bidding policy introduced before.
- Manage stakeholder's engagement by Dour.

Resource all Interviews: ((Consultant), 2017) ((Contractor) A. S., 2017)

((Contractor) G. R., 2017) ((Contractor) N. G., 2017) ((Contractor) T. A., 2017)

((Contractor, 2017) ((Donor), 2017)

### **Long Term Plan**

As defined, the long-term plan is the activities for the long-time improvements and for the future situation development. This stage comes after the real-life time plan. Which includes the activities like **Sociological educating, future awaking of the war effects, risk education**.

It could be also defined as the Future needs for the development of the current situation.

The activities from the previous plans will be categorized in order to allocate the stages of each activity and to clarify the plans into more suitable plan that is easy to understand and implement.

From the Saudi Committee plan, the long-term activities and projects are:

1. University support
2. Construction of community development computer
3. Scholarships for 129 students
4. Setting up 12 libraries at Palestinian universities

From the UNURWA plan the, long-term activities and projects are:

1. Operations support office

2. Psychosocial support
3. Gaza Fun Weeks
4. Coordination, Safety, Security and Management

#### **4.6 Monitoring and Evaluation:**

The 300 unit's project was all monitored by Dour Consultant office on behalf of the Saudi Committee. For the other projects, each donor is hiring his own supervision or consultation company. Regarding the Governmental Monitoring was not clear to the author. An evaluation was made in each stage of the project. The last evaluation provided by Dour about the project was saying that the project is 93% complete, and what is remaining is small touches and the project is considered as it is finished.

## CHAPTER 5

### Discussion

#### 5.1 Design Discussion

The aim of this thesis is to develop a framework that will help in building back the community better in all aspects. The proposed framework that was designed helped establishing the main stages the reconstruction needs after a conflict. It could be the benchmark for Build Back a Better Place. The design of the proposed framework was comprehensive, integrating the most needed parts of the reconstruction of the community.

The proposed framework started with **assessment** due to its importance in the first steps of information gathering. (Barakat, 2003) And (Wilkinson, 2013) showed the importance of the assessment in their frameworks. It was an essential process for Barakat, while Wilkinson stressed the importance of assessment, especially from assessing the risks. It is the starting point of the process for information gathering. This stage of the methodology shall be implemented under the supervision of one organization; and it is preferred to be a governmental one. Because that will enforce the collaboration between the stakeholders and will prevent the activities to be duplicated. The process of the assessment should be clear and simply identified to make it easy for implementation. Unfortunately according to the general case study about Gaza; each stakeholder was working in his own and upon his agendas. The assessment in Gaza was done by many agencies and authorities. Some of them were responsible of assessing the people's situation, some were assessing the massive destruction, and others were doing both. This assessments like this will surely

lead to repeat the same activities by more than one agency. Because there was no coordination between them.

It was found that most of the focus in the assessment went on the demolished buildings rather than the infrastructure or public places. The most efforts were concentrated on the food, shelter and medicine. Also, there was not much of focus on the Land distributing apart from the hazards or studying the lands carefully. It was just given by the Palestinian lands Authority, where the only consideration was to keep the projects away from the border of GAZA. The Human Resources involved in the reconstruction implementation were not clear, and there was no master plan showing them all in one picture. There was no assessment on the institutional resources it just that each company or organization come and identify itself without any Pre-evaluation. The involvement of the community is not clear. The assessment of the building materials is controlled by the Zionist entity on the entrances of Gaza. They put many restrictions that lead to decrease the speed of the reconstruction, and almost stopping it, which make the building materials is one of the major reasons behind the delay of reconstruction in Gaza (Palestine, 2016) regarding the used technologies, it is the traditional technologies since the siege is not giving any other option. From the assessment of the financial resources it is found that each organization is financing the projects in Gaza upon their agendas and there is no governmental umbrella that includes Donors to direct them through a master plan.

Implementing the assessment stage in the recommended way will give an accurate information gathering and will simplify the next stages of the process. Also, it will give an accurate information's that will lead to right decisions and actions. Assessment of the massive destruction as an example will help determining the physical effects on the

construction; which will help in evaluating the real cost of reconstruction. Where these costs were shown differently between the reports of the UN and the Palestinian government. Also the physical damages were differ from reference to another. And all these deference's says that activities were made more than one time by different stakeholders. Lands Assessment effectively will help choosing the right place for the project "away from hazards, and with reasonable cost". Accurate assessment for the community situation will help targeting the beneficiaries effectively and knowing who have the priority between them. And that will help ensuring the fairness and equity. Also, knowing the resources and the abilities will make directing and allocating them to the right direction easier and more efficient.

It should be done through collaborative efforts and under governmental umbrella, such as the Ministry of Housing, or under an Expert Organization like the UN but also with supervision of the governmental. NGOs and Gov. Organizations should work side by side, and each one to be assigned to different activity preventing any duplication of work. Each organization shall know their role and the other organizations role also. The leader/coordinator of this process should assign the tasks to the organization with equal distribution to the efforts, locations, and beneficiaries to assure that all locations and beneficiaries were taken into consideration while assessing the situations, and to ensure that all the organizations are working collaboratively and with the same number of activities as much as possible. So the Assessment process will be more productive by assigning the activities mentioned in the Designed methodology to each organization with their specialty for example the Land Assessment process shall go to the Lands Authority. The assessment shall not be short only on the housing but it shall be more

general and include more aspects. The HR shall be identified from the very beginning and their roles shall be known to all. There shall be master plan for the assessment to be followed. There shall be evaluation applied on all players attending the process of the reconstruction and done by a professional well experienced party. The community shall be involved more. The building Materials shall have more easy ways to get into Gaza; because it is the main heart to the construction process. There shall be more technologies available for faster construction like steel structure or precast buildings. The Assessment of the Funding have to be done through but this thing should go to a specialized entity.

**Planning** is the main stage that determine the crossroad and any road the recovery going to take. The planning is one of the most important factors of success in the recovery process where all the previously mentioned resources rely on it. (Wilkinson, 2013), argued that the planning for lands is essential in his framework, (Wilkinson, 2014) further discussed the importance to plan for the forecasted hazards. Planning is also considered an essential stage for both (Barakat, 2003) (Nabeel Aiad, 2015). Therefore, the planning draws the master plan of how the recovery would look like. However, good planning comes after good assessment. The Planning was divided into four stages (Targeting beneficiaries, Planning and choosing the Location, Used Technologies, and Planning for Fund).

Each stakeholder planned and worked upon its own agenda as well as upon its beneficiary's requirements, and in the locations required by Donors. This may lead to the unfairness of distributing the donations and supplies, or the opportunities. From the

Approaches and Techniques used for rebuilding in Gaza, it was found that the most organized approach was the building by donors. However, the building by the beneficiaries themselves was more flexible. The lands preparation and giving away to the donors is planned only by the Lands Authority, which is good thing that can be used when making a master plan. The planning of funding was done through the UNDP for the 300 Units project where they arranged that with the Saudi Committee. The Planning of fund that was done to Gaza generally was made through the Higher Ministerial Committee for Rehabilitation and Reconstruction in Gaza (Gaza, 2014) where they found that reconstruction of Gaza will cost 4.03 Billion USD. On the other hand, the United Nations assessed that the reconstruction in Gaza will cost 3.9 Billion USD. Which clearly show the duplication of the work that happened, and if they coordinated together an accurate number of the reconstruction cost would be generated.

The accurate planning that is built on good assessment will give a clear plan for choosing the beneficiaries with guaranteeing that they are the most needed. And that was applied on the case study of the 300 units where the priority was given to the Widows, Orphans, the handicapped people, and the families without a dependent person respectively.

Planning for a good location will guarantee risk allocation to avoid it. As shown in the UN plan the figure (12) was showing the hazard areas in Gaza. Also the planning for the 300 unit's project shows an example of how the planning was made, where they choose a location before the conflict was finished, then they change it after they found a better places when the conflict at that period was done. After knowing the resources well planning for techniques, Approaches, and fund allocation will be more accurate and more directed to the required goal. But what was found from the study the resources where

allocated randomly as per each agenda of the donors. There was no Master Plan that collaborates the efforts and the resources. To make this stage easy there should Fund Facilitating, exclude the taxes, provide new technologies, and facilitate the building materials transportation.

The Beneficiaries selection shall not be subjected to the donor's agenda; it shall be subjected to local authorities which will identify the most needed beneficiaries and will give the worst case situations the priority, also in the planning for the locations the local authorities shall distribute the Donors efforts and donations equally to the affected locations and make sure that the location and projects distribution goes as their Plan of reconstructing the city. Regarding the Approaches it can't be fixed to all the organizations so it will depend on the organization's capacity and ability, and also it will be governed by the fund available. There should be a Master Plan and the donors and organizations should stick to it where this plan helps the most needed first instead of helping according to each agenda. Take advantage of Land authority's services in a good way that centralize the land planning in the master plan. The Plan of Fund shall not be through NGOs it shall be done through Government that supervise the whole process.

From the study presented earlier, it was shown the importance of the **Responsibilities** and Roles allocating to the stakeholders. (Wilkinson, 2013) Argued the importance of stakeholder's allocation and education, which is the main stage in his framework. (Barakat, 2003) Indicated the importance of knowing their capacities. And it was clear that in some of the stages there was no collaboration; like in the assessment where the

activities was duplicated and in the implementation plans where each organization was having their own plan. So, from here the importance of the stakeholder's management shown. And it is important to have since the start of the whole recovery plan or the master plan if there will be. It will be better and more effectively powerful if the stakeholder management was under a governmental supervision or a well-known experienced organization like the UN.

It was found that most of the stakeholders in the reconstruction are working separated for their own projects in Gaza without having a master plan for the whole reconstruction of Gaza. Most of the stakeholders were not aware of other stakeholders, or their projects, or their agendas. Each of them working upon his own agenda. There is no centralization that collects all the key players. It is an open invitation for work, where any one can just go to the ministry of housing and take the names of the beneficiaries he want, then start his project. Some of the responsibilities may interfere or conflict with each other. There was also no strong power shown that controls overall the reconstruction process. The Palestinian authority's main concentration was on the assessing and counting the beneficiaries as well as lands awarding. Regarding the collaboration inside the project was clear and strong; but not clear out the projects in the master plan if any.

All the involved parties shall know each other's and their roles shall be identified by the local authorities upon their master plan. For example if one donor is coming for making housing units they will give him the right place upon their master plan, and will introduce him to the other key players in the reconstruction as well as giving him the main roles that he will be responsible of. All the responsibilities shall be known from first to all the parties. A Governmental umbrella shall organize and manage all the responsibilities. The

power of the Gov. Authorities shall be higher and more appearing on the real land. So, organizing the whole process carefully and precisely between the stakeholders is the key factor of the success in the process.

(Wilkinson, 2013) Added the role of **regulations and legislations** in his framework of Building Back Better (BBB), and augured how much it is important to success the recovery process. (Wilkinson, 2014) As well argued the importance strict regulations and easy complying regulations at the same time. (Nabeel Aiad, 2015) Also emphasized the importance of following the rules and regulations. It is argued that it should be government organizations who develop and enforce the rules and regulations, as they have the authority to do that. The importance of this stage lays between writing the rules and establishing polices at the very start of the recovery process; which will help avoiding a lot of mistakes that could happen. This stage included most of the required polices in the reconstruction process (Building Code, Bidding and Awarding, Contracting, Beneficiaries choosing, and Funding regulations). As per the case study the building code was not taken into consideration of development or renewal due to the several conflicts the City is suffering ((Consultant), 2017). On the other hand the bidding and awarding of the works was taking a lot of interest from the donors and government; but these rules were different from Donor to another upon their own projects. The Beneficiaries targeting and choosing was subjected to the same criteria that it was also upon the Donor's own project and agenda. Funding as well got the most interest from the Palestinian authorities, the UN, the World Bank, and the NGOs, unfortunately without collaboration between the parties. That is clearly show in the difference between the cost assessed by the Palestinian authorities compared to the one estimated by the UN.

The Policies mainly were made by each stakeholder in their project; so, there were no Policies and rules for the reconstruction as a whole for all Gaza, except the Palestinian building code which was not updated since decades. It was found that the bidding and awarding rules are taking the most attention of the stakeholder's interest. On the other hand, the building code was getting no interest from the stakeholder's. The contracts applied in Gaza generally with the donors are FIDIC contracts. However, they were not really applied because most of the contractors afraid to go to the Arbitration that takes a lot of time. The Funding regulations were also governed by the stakeholders in their projects; in aspects of: Advance payments, retention payment releasing, payments timing, approving the change orders, and fund end users "the beneficiaries". Selecting and targeting the beneficiaries as mentioned before it is ruled by the Donors; where they choose whom shall have benefit of the project. So, the Palestinian authorities is not giving priorities to the most needed of the beneficiaries.

The Building Code should get a real attention and efforts shall be assigned to this task; for example the consulting and engineering offices can do this task, so a part of the donations as well shall be assigned this task. And Regarding the FIDIC contracts the authorities' supervision on the contracts may solve this issue. The Palestinian Gov. shall supervise and make all polices.

Due to the complexity of the recovery process it was designed into **three different stages** according to the time frame of each one. Where each one of these stages were including activities different than the other which were specific for that stage. They Were

Emergency, Real life time, and Long Term Plans. (Nabeel Aiad, 2015) Included these stages in his methodology of reconstruction in the same time frame. (Wilkinson, 2014) Emphasized the importance of the community recovery in his frame work where he looked at it from two principles: the Economic recovery, and the Social recovery. Both of these principles were included in the Real life Time Plan, and the Long Term Plan of the designed methodology. The Stage of Implementation clarify the activities required in each stage which help making the recovery process smooth by knowing each activities goes under who's responsibility. This will also paves to the relationships between the stakeholders. The study was showing that the E, R, & L plans was identified differently from organization to another. And that's why there should be a master plan that clarify everything to the key players.

The implementation to the three different plans differ from one organization to another, depending on the way they define the (E,R,L) plans, which include some activities and neglect others. The Thesis did not go into much details of these stages because the main concentration is about the reconstruction, rather than the social and medical.

**Emergency Plan:** The Activities that were done in the E plan were implemented by many parties from Donors, NGOs, UN programs, and the authorities. What is found is that each party managed their work separately most of the times. So, some of the activities may be duplicated. Most Donors' interest in this stage was to provide the medical and food needs rather than the shelter needs. Because it is swifter in helping and it is not a long-term commitment to them.

**Real life time Plan:** Activities in the R plan is the most important where it brings back the life to Gaza. And it would have been faster and better if it was coordinated in a master plan.

**Long Terms Plan:** Making a long-term plan is the important factor that will keep Gaza settled and firm, so the efforts in the R plan will not go in vain. Many stakeholders did not show much interest of this case.

The centralized authority responsible for the master plan and to identify all the activities and categorizes them in the emergency, real life time, and long terms plans. And a fair distribution of fund and resources shall be applied in all of the three plans.

**Monitoring was** is done by private consultants to each project. There shall be a higher level of monitoring by the Gov., or their representative, to ensure that a master plan will go according to plan.

The private monitoring and consultation shall stay for each project as it is , but there shall be a higher committee or authority that monitor all the process and makes sure it goes as planned.

## **5.2 Comparing the Methodology:**

The Second Aim of the thesis is applying the methodology due to the BBB principles. And that will be clearly displayed in the table (9):

Stages of Reconstruction Methodology	Anas Abdulhadi	Clinton 2006	Wilkinson 2013 & 2014	Barakat 2003	Nabeel 2015
	Methodology 2017				
	Availability	Availability	Availability	Availability	Availability
<b>Assessment</b>	✓	✓	✓	✓	✓
destruction assessment	✓	✗	✗	✗	✗
Risk Allocation:	✓	✓	✓	✗	✓
Land	✓	✗	✓	✓	✗
Human Resources	✓	✗	✗	✓	✗
Institutional resources	✓	✗	✗	✓	✗
Community resources	✓	✓	✗	✓	✗
Building Materials	✓	✗	✗	✓	✗
Technology	✓	✗	✗	✓	✗
Financial resources	✓	✗	✗	✓	✗
<b>Planning</b>	✓	✓	✓	✓	✓
Targeting Beneficiaries	✓	✗	✗	✓	✗
Planning and choosing the	✓	✗	✓	✓	✗
Execution Approaches &	✓	✗	✗	✓	✗
Cost & Fund Planning	✓	✗	✗	✓	✗
<b>Stakeholders Management</b>	✓	✓	✓	✓	✓
<b>Polices &amp; Rules</b>	✓	✓	✓	✓	✓
Bidding methodology	✓	✗	✗	✗	✗
Contracts	✓	✗	✗	✗	✗
Construction methodology	✓	✗	✓	✓	✓
Funding regulations	✓	✗	✗	✓	✓
Handing over	✓	✗	✗	✗	✗
The rules of Beneficiary	✓	✗	✗	✓	✓
<b>Implementation</b>	✓	✓	✓	✓	✓
Emergency Plan	✓	✗	✗	✗	✓
Real Life time Plan	✓	✓	✓	✗	✓
Long Term Plan	✓	✓	✓	✗	✓

Monitoring and Evaluation	✓	✗	✓	✗	✓
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**Table 5.1 Comparison Sheet of the Reconstruction Methodology**

Development of the previously mentioned methodologies is what made the new designed methodology in the first place. Comparing the Designed methodology to the previously mentioned Frameworks, Lessons, and Methodologies will surely show the implementation and the application of them in the current design. Comparing the Designed Methodology to (Clinton, 2006) Study shows how that the ten lessons are learned:

Lesson#1 was taken into consideration in the stage of community resources assessment; where this stage helps to know if the families are willing to drive their own delivery.

Lesson#2 the compliance to the rules and polices established in the designed methodology, as well as honouring them by stakeholders will ensure that a higher percentage of fairness could be achieved.

Lesson#3 Long Term Plan Defined in the designed methodology can help the government enhance preparedness for future disasters.

Lesson#4 In the Stage of Stakeholders Management and in the stage of establishing the rules and polices the local government shall be strong enough to take those responsibilities in charge.

Lesson#5 good recovery planning have to be implemented in the planning stage of the designed methodology; which will surely come from the good information's gathered in

the assessment stage. Also, the effective coordination can be managed due to the stakeholder's management stage.

Lesson#6 the roles of the UN, World Bank, and other multi-lateral agencies can be clarified very well in the stakeholder's management stage.

Lesson#7 The expanding role of NGOs and the Red Cross/Red Crescent Movement carries greater responsibilities can be handled in the stage of stakeholder management for a higher quality in the recovery process.

Lesson#8 This Lesson should be taught well to the Government and donors in all of the following stages (Planning, Real life time plan, and long term plan) from the start of recovery operations, for helping the entrepreneurs to flourish.

Lesson#9 Beneficiaries deserve good agencies, and that's should be ensured in the stakeholders management stage when involving any new payers.

Lesson10# good recovery should leave the communities safer; and that will be accomplished by a well implemented risk assessment.

From Clinton's study most of his concentration was toward the stakeholder management mainly that will lead to a successful recovery.

By Comparing the Designed methodology to (Wilkinson, 2014) Frame work, the designed methodology covered the first part of Wilkinson study which included the structural changes and the land use planning in the stage of establishing polices and rules and in the Assessment for Lands stages. The second part of Wilkinson study was arguing the community recovery due to social and economic recovery. These two principals were covered in the long Term plan and Real life time plans. The Third part of Wilkinson study was emphasizing the implementation through Stakeholders management and legislations

and regulations and these two principles are applied in different stages in the designed methodology. From comparing the designed methodology to Wilkinson frame work it was proved that the designed methodology is applied to BBB Principles which are the same principles of Wilkinson framework.

By Comparing the Designed methodology to (Barakat, 2003) methodology; he started the methodology with the preparation of the recovery that was consisted of the planning and the assessment, not like the designed methodology where each one of these stages were separated. Then Barakat's methodology talked about the Technologies and so did the designed methodology in the assessment of the technologies stage and in the planning for the approaches and techniques stage as well. Barakat's stages ended with the implementation stage and so did the designed stage.

(Nabeel Aiad, 2015) Methodology compared the Designed methodology including only the latest stages of the proposed methodology which are the Emergency plan, the Real life time plane, and the long term plan.

So the Finale Shape of the Methodology will look like this:

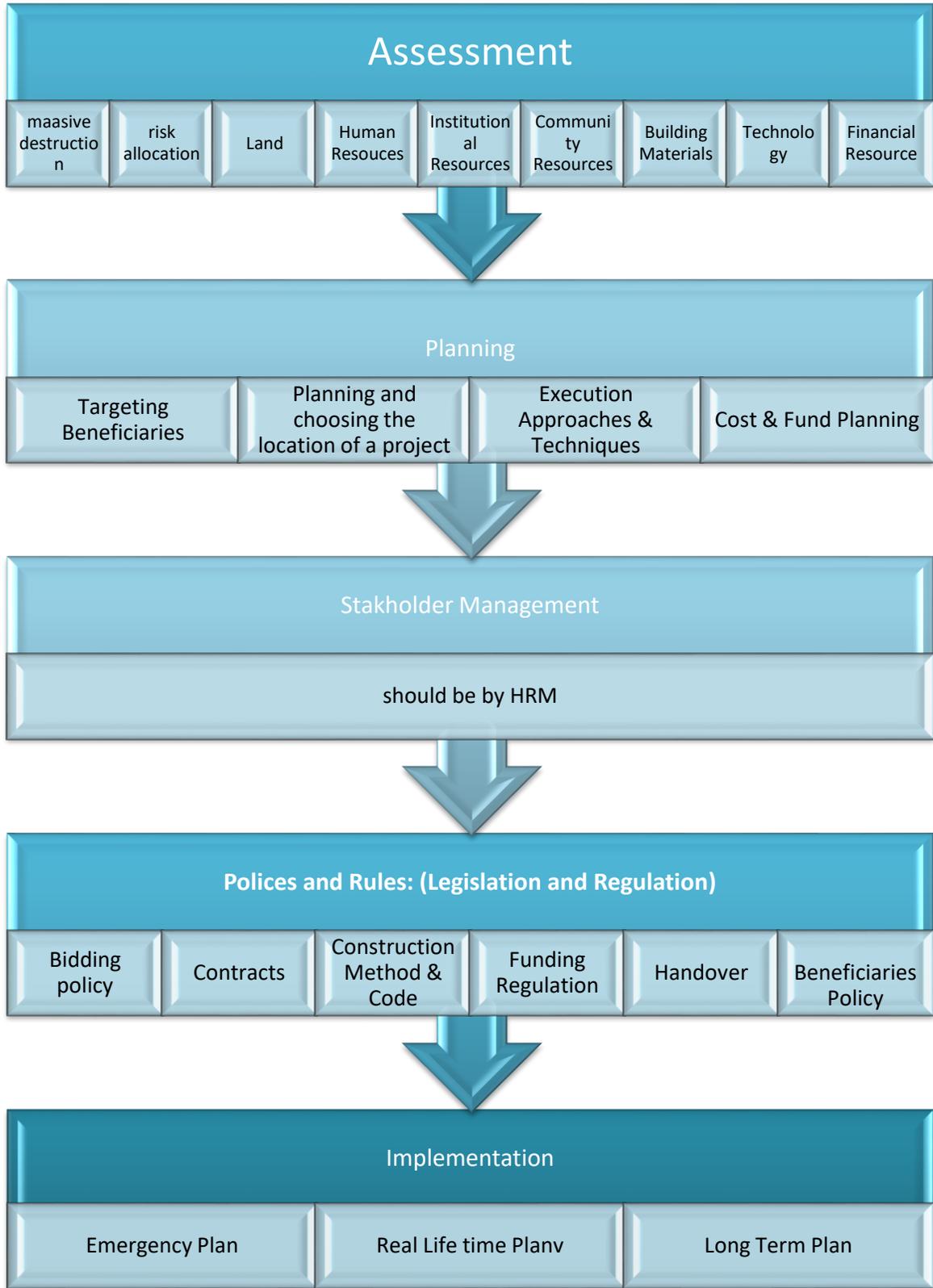


Figure 5.1 Final shape of the proposed methodology

And the authority matrix for the work procedure is proposed as follow:

### Framework Stakeholders Responsibility Matrix

Stages of Reconstruction Framework	Supervised by	Implemented by
<b>Assessment</b>	Higher ministerial committee of the rehabilitation of GAZA "HMCRG"	
destruction assessment	Housing Ministry	UN , Private Sector , local committees
Institutional resources		
Building Materials		
Technology		
Risk Allocation:	Lands Authority	Lands Authority, UN
Land		
Human Resources	Ministry of Social Affaires	Ministry of Social Affairs , UN , Community
Community resources		
Financial resources	Finance Ministry	Finance , Housing Ministry, UN, World Bank
<b>Planning</b>	Higher ministerial committee of the rehabilitation of GAZA "HMCRG"	
Targeting Beneficiaries	Ministry of Social Affaires	Ministry of Social Affairs , UN , Community
Planning and choosing the location of a project	Lands Authority	Lands Authority, UN
Execution Approaches & Techniques	Housing Ministry	Palestinian Engineers Association, Housing Ministry
Cost & Fund Planning	Finance Ministry	Finance , Housing Ministry, UN, World Bank
<b>Stakeholders Management</b>	Higher ministerial committee of the rehabilitation of GAZA	
<b>Polices &amp; Rules</b>	Higher ministerial committee of the rehabilitation of GAZA	
Bidding methodology	Housing Ministry	Palestinian Engineers Association, Housing Ministry
Contracts		

Construction methodology and Code		
Funding regulations	Finance Ministry	Finance , Housing Ministry, UN, World Bank
The rules of Beneficiary	Ministry of Social Affaires & Housing Ministry	Ministry of Social Affairs , UN , Community
<b>Implementation</b>	Higher ministerial committee of the rehabilitation of GAZA	
Emergency Plan	Housing Ministry	Housing Ministry, Ministry of social affairs, Red Crescent , Civil Defence, UN, Donors , NGOs
Real Life time Plan		Housing Ministry, Private Sector, Local Committee , UN, Donors
Long Term Plan		Housing Ministry, Private Sector, Local committees , UN, Donors , Experts and Planners
<b>Monitoring and Evaluation</b>	Higher ministerial committee of the rehabilitation of GAZA	Higher ministerial committee of the rehabilitation of GAZA & UN & NGOs

Table 5.2 the authority Matrix

## **CHAPTER 6**

### **Conclusion**

The research aimed to develop a post disaster reconstruction framework, utilizing the BBB Principles, focusing in area affected by manmade disasters. This aim was met by developing the previous studies and merged and concluded in one framework that was applied on the manmade disaster in GAZA. Where it included all the main stages of the previous frameworks as shown in table (9).

The research tackled the previous studies from manmade and natural disaster. And it was trying to take the lessons learned from these studies. Then Assessment for the situation in the targeted area "Gaza" took a place. Where the information was gathered from interviews and reports from the stakeholders. Then the framework was designed, and finally the results of applying the framework in the current situation of Gaza were discussed. And the designed framework was compared to the previously proposed frameworks. And the final shape of the reconstruction framework was concluded.

Also the possibility of meeting the principles of BBB were met in the designed methodology where it covered the main key factors of it of the (risk reduction, community recovery, implementation effectively and efficiently, and monitoring and evaluation)

At the end the designed methodology was developed upon the previous studies that were implemented in both conflicts and natural disasters scenarios. From the applied case study it was showed that both of them can be implemented on Gaza. Also, from the study it was proved the designed framework is already applicable; where all the designed were already being made but not in the designed sequence neither with the designed management process. So the Designed Framework needs good supervision, powerful management, and surely a future development in order to be implemented effectively and efficiently.

Finally this designed framework could be as a bench mark for further development in the field of post disaster reconstruction. A future development to the framework could be applied. For example studying the building materials closely in order to make the process of this framework faster. Or finding new ways of construction that will open new opportunities than the traditional techniques. Also comparing the Framework to SIRI plan or the GRM will be a good idea for developing the framework. And studying the Funding deeply will also open the eyes in new horizons of solutions to the post disasters reconstruction.

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Academic Background: **KFUPM – Dhahran - KSA** **2014 – 2018**

Master of Construction Engineering Management GPA3.33  
Thesis Topic: Design post disaster reconstruction approach using  
BBB Principles in GAZA

**Hashemite University – Zarqa - Jordan** **2009 –2013**

Civil Engineering with GPA 3  
Graduation Project: Masjed Design

**Al-Faisaliah High School – Riyadh** **2004 –2009**

Scientific High School Graduated With GPA 99.89/100

### **Educational Projects & Researches:**

- Post Disaster Reconstruction Methodology "my thesis".
- Liquidated Damages Assessments.
- Enhancement Invoices progress: using Six Sigma tool DMAIC
- Demolishing Estimating and Pricing
- Safety Improvement by Zero Injury Techniques in Construction
- Comparing DB and DBB Delivery Systems
- Preparing Annual Financial Report
- Design Masjed
- Design steel hanger.
- Design of a 2km railway.
- Design a dam sluice gates and its stilling basin.
- Design wastewater treatment channel.
- Design a traffic light collaborating with electrical graduation project.

Work Experience: **Retal Urban Development Co. (AL Fozan Group) -Khobar**  
November 2015 – Present

**Contracts & Procurement Advisor**  
**Contracts & Procurement Manager (Acting)**

Projects:

- Ewan Al Nawras (78 Villa)
- Eawn Al Qayrawan (160 Villa)
- Retal Square (96 Apartment)
- Ewan Al Ma'ali (76 Villa)

**Fare Construction (Fawaz Al-Hokair Group) -Khobar**  
November 2013 – November 2015

**Contracts & Planning Engineer**

**Site Engineer**

Projects:

- KFUPM Students Mall
- Dharan Boulevard
- A-loft Hotel
- Dammam Mall
- Mall of Dahran Renovation

**AL Hakeem Engineering Center - Amman**  
May 2013 – August 2013

**Site Engineer (Training)**

Projects: 4 residential projects (2 Buildings (13 flat each) and 2 Villas)

It was part of the graduation plan in the university

Positions Fulfilled:

- Procurement & Contract Manager (Acting)
- Contracts and Procurement Advisor
- Contracts Engineer
- Planning Engineer
- Site Engineer
- ACI member
- Activity coordinator of IEEE Student branch
- Vice president of the Cultural Club of HU
- Founder and Vice President of Shabab Steps (voluntary group)
- Leader & ideas consultant of SWS (voluntary group)
- Activity coordinator of Civillitee Club of HU