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Journal Objectives

Tanmia Wa E'emar (Development and Reconstruction) is a research journal that deals with human and applied research and studies on development, reconstruction, community coexistence and peace, and aims to achieve the concept of scientific research in line with the development of knowledge and the scientific and technological revolution. This concept is to embody the partnership and cooperation between the academic and institutional efforts for the various local developmental areas, reaching as well the regional and international level through the following:

1. Creating a documentary set (research, studies, papers) in the social and practical developmental sciences.
2. Building a partnership through cooperation and partnership agreements with local and international bodies sharing the same interests.
3. Publishing relevant experiences to keep pace with scientific and specialized developments in the various developmental fields and peace.
4. Presenting studies that contribute to the advancement of the functions of institutions and bodies concerned with the areas of comprehensive development
5. Publishing research and studies that meet the conditions of publication in the fields of studies and scientific research in various developmental fields and specializations in both Arabic and English languages.
6. The journal publishes summaries of university research that have been discussed and approved in the field of reconstruction, development and peace, provided that the abstract is prepared by the researcher himself/herself.



Admission Conditions (Research, study, developmental Report, scientific paper):

1. The study must be characterized by the originality of the presentation, with the respect of the scientific research methodology recognized in the fields of study, research, human sciences and administrative fields as well as the natural (developmental) sciences.
2. The research must be written in a proper language, taking into account the rules of control, and it must be free from linguistic, grammatical and typographical errors.
3. The research mustn't be published or submitted for publication in another journal.
4. The researcher must submit his/her research in a soft copy in a WORD file by e-mail.
5. The drawings, figures and graphs (if any) must be well presented, include titles and necessary explanatory data, and their dimensions and sizes should not exceed the page margins.
6. The number of the introduction words must not exceed 20 words.
7. The summary words in Arabic language must not exceed 200 words, and must not exceed 250 words in the English language.
8. The key words must vary between 2 to 5 words.
9. In the event that the researcher uses software or measurement tools such as tests, questionnaires, or other tools, he must provide a complete copy of the tools he/she used if it is not included in the body of the research or not attached to its appendices, and he/she must indicate the legal procedures that allow him/her to use them.



10. The number of pages of the research in its final form, including the abstract, references and appendices must not exceed forty pages with the following specifications:
 - The space between lines should be 1.5 cm.
 - The Arabic language writing size should be 14 written in (Simplified Arabic) and the titles in bold font style.
 - The size of the English writing should be 12 and the titles should be written in (Times New Roman) bold font style.
 - The page margins should be 2.5 cm on all sides and the page number should be at the bottom of the page in the middle.
11. The research must show all the sources and references in the reference list, so that Arab and foreign references, if any, be listed as follows:

An example of documenting a research published in a journal:

In the list of references: Kokaz, Faisal Saddam (2019): Peace, Community Coexistence and a Course in Comprehensive Development and Overcoming Crises, Issue number 7 p. 65 to 90.

In the text: (Kokaz: 2019)

Example of documenting a book:

Abu El-Nasr, Medhat (2017): Sustainable Development (Concept - Its Dimensions - Indicators), Arab Group for Training & Publishing, Cairo, Egypt.

12. The sources and references in the research are documented according to the documentation methods recognized in the human and natural sciences. Documentation is done in the text by stating the last name and year of publication. The researcher should avoid writing the name of the reference in the margin, which, by following the APA system, is taking into account that the sources and references order is listed from the newest to oldest, followed by all links to the sites at the end of the list.



Publication Conditions in Tanmia Wa E'emar Journal:

1. The topics must be compatible with the goals of the Yemen Information Center (YIC) and relevant within the context of areas of development - community coexistence and peace - areas of reconstruction.
2. The topics must adhere to the basic criterion, which is the objectivity of the scientific presentation, and the researcher's impartiality in dealing with them.
3. The researcher must adhere to what was stated in the paragraph (Conditions of accepting the subject for publication: p. 3), and in the paragraph (Types of Research and Studies, p. 4).
4. A written consent is attached to the research by the researcher or researchers to transfer the copyright to the Yemen Information Center (YIC), and the researcher has no right to publish it anywhere else.
5. The researcher bears full legal responsibility of the content of the topic, and the journal disclaims its responsibility for any rights loaded with the content that may expose the researcher to legal accountability.

Note: In the event that the research or study fulfills the conditions of publication in the journal, publication will be made free of charge, and there is a material prize for the best research or study, in addition to the medal of excellence in the annual conference of the center.



The Researches and Topics Respect the Following Methods:

Frist : Field Research

- The researcher submits a summary that includes the general objective of the research or study in which he/she mentions the main themes that have been addressed, along with a brief review of the most important conclusions, recommendations and proposals that have been reached.
- Field research should contain an introduction in which the researcher clarifies the nature of the research and the justifications for carrying it out, indicating the nature of the problem and the extent of its impact on the developmental reality and peace, and briefly clarifying what previous research has shown about this problem. This is followed by a presentation of the study questions or hypotheses through which a solution to that problem can be reached, then the researcher presents the limits of the research in which the results of the study were generalized, and then he/she mentions the semantic definitions (the concepts and terms contained in the research). Then he/she reviews the most important and most recent studies related to the topic, analyzes and discusses them, clarifying his/her comments on them. This is followed by a presentation of the research procedures and methodology followed, then a description of the research community, its sample, the type of tools used in collecting the data, and determining the extent of its validity and stability, then presenting the results of the research and discussing them and the recommendations and proposals it reached. The research concludes by listing the sources and references on which it relied.

Second: Theoretical and Interpretive Research

- The researcher gives a summary that includes the general objective of the research or study in which he mentions the main themes that have been addressed, along with a brief review of the most important conclusions, recommendations and proposals that have been reached.



- The researcher presents an introduction to the research in which he/she clarifies the nature of the problem or topic under study, with determining the importance of the research and its role in adding new to previous knowledge, followed by a presentation of the topics to be analyzed and discussed so that they are arranged in a logical manner with what precedes or follows it as topics that lead in its entirety to clarify the general idea that the researcher aims to reach, provided that it includes conclusions, recommendations and proposals to solve the problem or remove the ambiguity surrounding the topic under discussion. Finally, the researcher attaches a list of the sources and references he/she relied on.

Scientific Paper:

A brief summary must be presented in which the researcher explains the purpose of the scientific paper, the results, and the most important terms (key words), then an introduction is presented that shows the problem that is related to the developmental aspect and its role in addressing it for the topic under study and their importance, followed by a presentation of the terms of the paper in a sequential and interdependent manner. Discussing and analyzing them in a scientific and logical way in order to clarify the general goal that the researcher seeks to achieve, and the researcher can use various means such as photographs, maps or graphical figures to enrich the topic and clarify it in a better way, after that the researcher will present the results of the scientific paper, then it is discussed, analyzed, and the relationship between the findings of the paper and the theories related to the topic under study is clarified. After that, the researcher concludes the paper with a conclusion in which he/she mentions his/her findings in a clear and summarized manner, and attaches it to the list of sources and references he/she relied on.

Developmental report:

An executive summary is presented in which the researcher briefly explains the purpose of the report and his/her findings, provided that the report includes an introduction explaining the importance of the topic, then the terms of the report are presented in a logical and clear manner, and it is concluded with a comprehensive explanation of the results and what he/she can add to the field studied, then a brief conclusion with an attached list of the sources and references that have been relied upon.



Introduction

Editorial Secretary

Dr. Fathia Mohammad Mohammad

The reconstruction process appears as a lifeline in countries suffering from conflict, especially among civilians. Reconstruction represents a means of recovery for economic, social, humanitarian, educational and other areas of life that lose their role during the conflict. So, chants are risen in those countries to return to a life of security, peace and stability, end conflicts and undertake reconstruction under unified goals and clear policies in order to address the effects of the conflict and work together to build, renew and prepare for all the necessary developmental fields to build the requirements of human life in those societies that lost during the conflict many of the foundations for a safe, stable and appropriate life for people.

In Yemen, the conflict has been going on for more than five years, which has affected all areas of development. So most Yemenis are looking forward to ending the conflict and rebuilding Yemen, as the reconstruction processes include all areas of human, social, economic, and scientific life, in a way that initially achieves the minimum level for a decent life for all people in society. The remnants of the conflict are many and multiple and this takes many years for rebuilding and reconstruction. So, we seek in a systematic way to identify the issue of reconstruction and the requirements that are necessary to revive the developmental life in Yemen in all its fields and try to contribute to achieving comprehensive development.

In this issue, the first research paper dealt with the topic of reconstruction between reality and ambition. What we seek to achieve in Yemen after the conflict must be commensurate with the needs of the stage, as Yemen faces many difficulties and challenges and what we are looking for in the reconstruction and construction processes requires a lot of treatments so we seek this through the scientific proposal of the subject. Hence, the second research paper deals with the topic of urban expansion and its impact on the agricultural development of the city of Ibb. Finally, the third paper dealt with a development report on the topic of reconstruction requirements and criteria and indicated the need for community members to participate in order for the reconstruction process to be more effective.

We wish readers and those interested in the field of development and reconstruction a pleasant reading and all their comments and suggestions are warmly welcomed.



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Reconstruction Strategies in Yemen

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2021 AD/1442 H



Abstract :

This study aims to come up with reconstruction strategies in Yemen. It followed a practical methodology consisting of two parts: the first part for the office study and the second part for the field study accordingly to the methodology of qualitative study, then applying the focus group discussion (FGD) method on six groups of Aden, Sana'a and Taiz governorates taking into account the representation of female among these groups.

This study reviewed the results of the theoretical side in its first part, where four topics were presented, namely general concepts of disasters, wars and reconstruction strategies, then presented the experiences of reconstruction in Yemen, which has extended since 1974 represented by cooperatives, followed by the experience of Dhamar and Saada Reconstruction Fund and finally the executive office that was established after the incidents of 2011. Furthermore, previous studies were presented such as reports and studies, some of which dealt with reconstruction from the institutional side, another with the issue of reconstruction within a geographical framework, and there are studies that dealt with the issue of reconstruction by identifying the needs but we did not find studies that dealt with these issues from an integrated strategic and institutional side.

As for the second part, it dealt with the results of the field study, in which 6 focus groups were held during which reconstruction strategies have been discussed, where the study sample suggested establishing a higher commission for reconstruction in Yemen to adopt the strategy they have suggested. These strategies are divided into three phases in terms of implementation and have been identified as follows:

- Strategies to be adopted and implemented during the conflict phase, which are prevention, emergency and relief.
- Strategies to be implemented after the end of the conflict, called recovery strategies, which are identified and they form a basic pillar of the reconstruction strategies that will be adopted later.

Several recommendations were emphasized, the most important of which is the need to expedite the formation of the Supreme Authority for Reconstruction, which is approved by a presidential decree and also receives



a recommendation from the House of Representatives, with keenness to participate in the processes of preparing the legislations governing this body in a way that achieves its independence and effectiveness. The recommendations also indicated that the establishment of this body constitutes an urgent necessity in order to implement strategies, work to assess needs and prepare for the post-conflict phase, which will lead to achieving stability and avoid sudden and unexpected shocks for the country.

Introduction

The reconstruction processes are considered an urgent necessity for societies that have suffered from natural disasters or conflicts, which are defined as building what was demolished from the urban structure (buildings) as a result of the disaster or conflict. Thus, this definition did not take into account the reconstruction of the destroyed physical structure only and neglects the rest of the urban fabric components, of which the physical structure is a part, as it is, in fact, a reflection of people's social, economic, cultural and technological life.

The reconstruction strategies after the disasters and conflicts are known by specialists as a set of processes that are put in place in order to confront the effects of disasters and conflicts and prepare for them before their occurrence and then meet the urgent needs during the disaster, whether in the short or long term, so that these policies are comprehensive for all aspects of life and deal with rebuilding what was destroyed during disasters in all fields. Reconstruction strategies after disasters and conflicts are based on four principles, which are considered determinants of them, and work to guide them, and these principles are preventive, comprehensive, sustainable and resilient.

The aim of this study is to find the most appropriate rapid strategies for reconstruction in Yemen and the general structure of this research consists of three main parts. The first main part deals with the methodology and society of the study, the second main part with the office and field results and the third main part with discussing the findings and recommendations.



The Study Problem:

Yemen is facing severe difficulties and this is due to the difficult stage it is going through and the conflicts and devastating effects at various levels. Therefore, reconstruction work must be done. The study problem revolves around a set of fundamental questions as follows:

- What is the concept of post-disaster reconstruction strategies?
- What is the role of official and private agencies in facing disasters?
- What are the reconstruction initiatives in Yemen?
- What are the reconstruction strategies?

Objective of the Study:

The study aims to identify appropriate strategies for reconstruction in Yemen.

Study Implementation Stages:

The study was carried out over two phases; the first phase was the office study and the second was the field study.

Information Sources:

The information on which this study relies was collected from several sources, the most important of which are:

1. Office sources: It included books, references, journals, letters and scientific papers related to the subject of the study.
2. Official and non-official sources: It includes studies, documents, reports and publications issued by international and local organizations, institutions and government departments of competence, in addition to reports, publications, articles, studies, research and business papers issued by research centers, universities, civil organizations, researchers, seminars, lectures and conferences.
3. Research sources (primary): It included the information and data



gathered through field research that used a mixture of qualitative research methods.

4. Electronic references: It includes the Internet sites of international institutions interested in reconstruction after wars and disasters, in addition to press and news sites interested in the topic.

Geographical framework of the study:

The community of the office study is the Republic of Yemen in general, and three governorates were targeted in the field study, namely Aden, Taiz, and Sana'a. The following table explains the justifications for choosing the mentioned governorates.

Table 1: Justifications for Selecting the Target Governorates

#	Targeted Governorates	Justifications
1	Aden Governorate	Aden Governorate was chosen as the current temporary capital
2	Sana'a Governorate	Sana'a Governorate was chosen as the main capital of Yemen
3	Taiz Governorate	This governorate was chosen, on the one hand, due to its high population rate and the spread of its people in all Yemeni governorates and on the other hand, it is considered one of the governorates that have been severely destroyed compared to other governorates and people are still suffering because of the war.

Society and Study Sample:

The field study targeted representatives of the local authority, university cadres, members of civil society organizations, representatives of the main parties and independents. Women had a fair representation through holding two focus groups in each targeted governorate (qualitative research).



Importance of the Study and its Justifications

The importance of this study is that it deals with a fundamental issue related to Yemen, which is the strategies of rebuilding this country, which has suffered and is still suffering from the ravages of the frequent stages of conflict, the last of which was the current civil war that has raged since September 2014. Although, no signs reveal the near end, it is necessary to develop a clear strategic vision for reconstruction in Yemen after the end of the conflicts, which will happen sooner or later. Regional and international experiences have proven that it is imperative to start early in planning for reconstruction.

Theoretical Framework and Previous Studies

Disasters and Reconstruction

Disaster Definition

Disasters are defined in several ways. Many bodies have defined them, each according to its specialization, field of interest and the angle from which disasters are viewed. The disaster has been defined as a catastrophic event, natural or industrial, by men, such as war, that leads to the destruction and has impact on daily life events, the natural environment, the infrastructure and the environment built by men (Macdonald, 2003, P6).

It is a major incident that results in loss of lives and properties; it may be natural due to the act of nature (torrents, earthquakes, volcanoes) or a technical disaster, that is caused by a human action, whether voluntarily or involuntarily, intentionally or negligently and confronting it requires aid at the national or international level if its ability exceeds the national capabilities (UN-DHA, 1992, p27,).

It is defined as a tragedy that occurs suddenly, and causes great damage and destruction to properties, disrupts the daily life system and



causes unlimited and varied destruction depending on geographical location, climate, type of land surface and the extent of its vulnerability. This destruction exceeds the ability of the population to endure and therefore need help from foreign territories or countries, and it affects as well the mental, social, economic, political and cultural aspects in the area reached by the disaster (<http://karimganj.gov.in/disaster.htm> 2009).

Types of Disasters

With the increase in the occurrence of disasters and their diversity and the emergence of new types of them, disasters have been classified in several ways, either according to their cause or according to the speed of their occurrence and their impact.

First: Types of Disasters Classification according to their Cause:

- Natural disasters: the human being has no involvement in their occurrence and it's beyond the control of men, such as earthquakes, floods, volcanoes and others (Macdonald, 2003, P1).
- Natural disasters caused by man: they occur because of the imbalance in the natural system as a result of human activities on the globe, such as slips that occur due to cutting trees and forests (Aldabeek, 2007)
- Human-acted disasters: such as wars, fires and environmental pollution, and they are directly linked to human behavior, whether intentionally or unintentionally, that lead to destruction and bad effects on all aspects of life. This type of disaster can be classified into two types:
 - Unplanned (unintended) disasters: they occur as a result of negligence or lack of awareness of the negative effects that may occur.
 - Pre-planned (intentional) disasters: they are disasters that are intended to destroy and cause negative effects on the urban environment and that have specific goals with intent and prior planning (Okasha, 2004, p. 8).



Second: Classification of Disasters according to the Speed of their Occurrence and their Effects

- Sudden, highly impactful disasters: they are the ones which the person cannot know precisely when they will occur and they mainly happen as a result of natural forces beyond human control such as earthquakes, volcanoes, and storms (Okasha, 2004, p.8).
- Slow-impact disasters: are disasters that occur gradually, grow over days, months or years and continue to grow until life becomes exposed to the greatest degree of danger, and thus constitutes a disaster such as desertification or soil erosion and landslides or drought and bad agricultural seasons, agricultural diseases and disasters resulting from wrong political decisions (Aldabeek, 2007, p. 2)

Disaster Management:

Disaster management is defined as “the art of avoiding or reducing risks and conditions of uncertainty in order to achieve the greatest degree of control and oversight over potential risks facing the organization” (Steven Fink-1986)

Disaster management can be defined as “all the means, procedures and activities that are carried out continuously in the pre-disaster, during and after the disaster stages” (Gharib Abdul Hamid Hashem, 1998), through which it aims to achieve the following:

- Preventing the occurrence of the disaster whenever possible
- Confronting the disaster efficiently and effectively
- Reducing loss of life and property to a minimum
- Reducing the negative impacts on the surrounding environment
- Eliminating the psychological effects of the disaster on workers and the public
- Analyzing the disaster and learning from it to prevent the occurrence of similar disasters, or improving and developing capabilities in facing those disasters



Phases of the Disaster

A disaster occurs (whether it is a natural or man-made disaster) and is developed over three phases (McDonald, 2003, P7):

- The first stage (the presence of danger in a certain place): Whether directly or indirectly, and it leads to a threat to lives, properties, the environment and life. In the earthquake zone, the danger is direct, and there is a high probability that slips and earthquakes occur, while deforestation operations for example lead to landslides and thus an earthquake, as the danger has developed indirectly.
- The second stage (the stage of the development of the danger and the beginning of its effect): which is the moment when the disaster develops, at which time the destruction begins to affect the human being and this is usually the result of two reasons:
 - A person's lack of awareness and distinction of the danger present in the area and the continuation of normal life despite the presence of the real danger, such as continuing constructing in an area where earthquakes are frequent.
 - Weakness in confrontation by failing to take preventive measures when there are warnings and neglecting to be ready, such as not taking measures and adopting building standards to resist earthquakes.
- The third stage (the post-disaster stage): the impact of this disaster on the urban environment and the disasters that result from it, as a series of effects occur and lead to other disasters in the social and economic fabric in addition to the apparent destruction of the physical infrastructure.

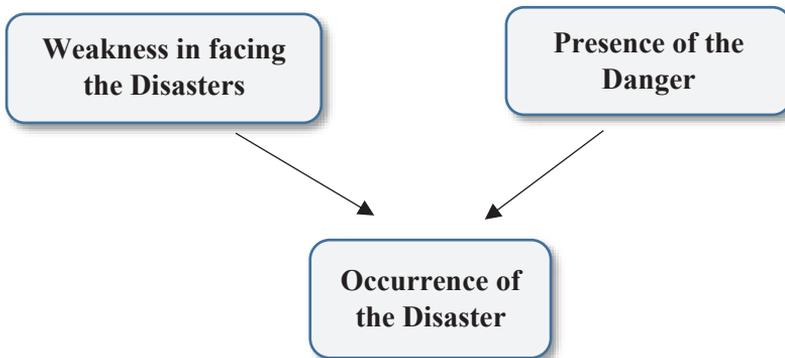


Figure 1: Disaster Development, Source: GIZ,2002

Factors on which the Magnitude of the Disaster Impact Depends

The magnitude of the disaster and the severity of its impact depend on a set of factors that lead to its increase, and these factors are (McDonald, 2003, P9):

- Its magnitude: The impact of the disaster depends on the magnitude and severity of the event, according to the approved standards.
- Its frequency: During some disasters, the event is not destructive and does not lead to a disaster, but the recurrence of a successive occurrence leads to the manifestation of the disaster.
- Its duration: The impact of a disaster greatly depends on its duration that goes from several seconds, such as earthquakes, to several days such as floods, or years such as droughts or wars, and as the duration of the disaster increases, the resulting effects increase.
- Area Covered: The greater the area exposed to the disaster is, the greater is its impact. Whether it is at the local, regional, national or even global level.
- Occurrence Pattern: The impacts of an earthquake, a hurricane, a flood or a war differ, and thus disasters differ in terms of impact according to the pattern.
- The nature of the elements affected by the disaster: The strength of these elements and whether they are fragile or strong elements,



so the greater the strength of the elements is, the less the impact of the disaster on them will be and vice versa.

- The nature of the disaster preparedness and prediction (Vulnerability): the greater the preparedness and the prior planning to address its impacts are, the less the impact of the disaster will be (Aldabeek, 2007).

Disaster Response

Responding to disasters is considered one of the most important factors to reduce its damage and protect lives and properties. Disaster response takes place in three stages (McDonald, 2003, P3):

- Disaster Preparedness: when there is a specific threat in a region, the risk and its impact must be evaluated and thus a set of measures are put in place to prevent, identify or mitigate the impact of the disaster (preparedness and prevention).
- Mitigation: the set of measures that are taken to increase the bearing capacity, thus reducing the impact of the disaster, for example by strengthening and improving the quality of buildings for better resistance to earthquakes and building dams to contain water in rivers to prevent floods and to achieve a rapid response in the event of occurring disaster and reducing its impacts as soon as possible.
- Disaster Management & loss assessment: it is a set of procedures concerned with the active response after wars and disasters and aims to assess the losses, treat the effects that may occur, and mitigate them, whether on the social, economic or urban fabric.

Impact of Disasters and Wars on the Urban Environment

- Physical Impact: The physical impact of a disaster or war on the urban environment is one of the clearest visible impacts and the most costly and urgent to rebuild, as buildings, public facilities, infrastructure and urban structure are damaged (TCG & EPG, 2004, P1, 2).
- Economic Impact: The economic fabric is affected in the after disasters and wars, as severe damages occur and sometimes lead



to total destruction of the economy, so private projects and the industry are affected and the commercial activity is damaged and disrupted, thus financing decreases at the individual and general level, at a time when the need for financing increases especially for the purpose of reconstruction (Journal of Disaster Research Vol. 2 No. 5, 2007).

- **Social Impact:** In times of disasters, social problems worsen, poverty spreads, in addition to the lack of basic needs and deterioration of living conditions, which leads to the emergence of deep social problems that must be solved and addressed very quickly and must be given the attention they deserve. It is possible that these impacts may not be revealed in a physical way, such as the demolition of buildings, but they may be invisible and their impacts on society appear in a large and profound way (TCG & EPG, 2004, P1, 2).
- **Cultural Impact:** In times of wars and disasters, cultural and historical evidence is destroyed as a result of the disaster or intentionally as in wars, whether they are material such as cultural centers, historical cities, monuments and religious symbols, or they are an ethical culture in customs and traditions, or history in books or materials taught in schools (Journal of Disaster Research Vol. 2 No. 5, 2007), with the aim of changing the visual image in the urban environment, and the falsification of history and the imposition of a new identity (Aygen, 2006).
- **Political Impact:** Disasters and wars are accompanied by a shakedown of the political situation a situation characterized by confusion, dispersion and instability, which leads to severe weakness or collapse of governments at various local, regional or national levels, and the situation differs from one government to another according to the strength of these governments, and their flexibility, readiness and ability in dealing with emergency conditions, to restore life and reconstruction, and one of the most important factors for the success of reconstruction operations is the restoration of the political stability (Goldstone, 2009).

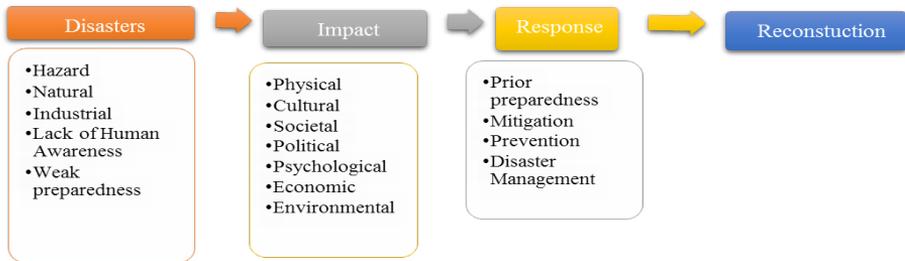


Figure 2: Disasters, their Impact and Response

Source: Medhat Al Taher, Reconstruction strategies after the war and disasters in Palestine, 2011 AD.

Hugo Framework of Action

It is a program to strengthen the capacities of nations and societies to face disasters. This framework, in addition to the Yokohama Framework for Action, is one of the most important frameworks that have been developed at the global level to define a strategy for disaster management and response.

This framework set five priorities for action, based on a careful review of past successes and failures for disaster reduction and the development of management strategies for reconstruction, by drawing lessons and moralities to ensure that this is done in the best and most efficient way (United Nations, 2005). These priorities are:

- Ensuring that reducing disaster risks of all kinds and forms is a national and local priority with a strong institutional base for implementation
- Identifying, assessing and monitoring disaster risks and developing early warning mechanisms
- Using knowledge, innovation and education to build a culture of safety and resilience at all levels
- Reducing the underlying risk factors
- Promoting disaster preparedness to ensure effective response at all levels



Attention has increased due to its importance in global peace, stability and security and because of its ramifications and overlaps in all aspects of life. These are the most important issues that the world is currently facing.

Post-wars and Post- disasters Reconstruction

Reconstruction Strategies Concept

Post-disaster reconstruction may be understood as the process of building what was demolished from the urban structure (buildings) as a result of the disaster or war, and the definition in this way is incomplete, because it only takes into account the reconstruction of what was destroyed of the physical structure, and neglects the rest of the urban fabric, of which the physical structure is a part, as the physical structure is, in fact, a reflection of people's cultural, social and economic life, history, technology and environment (Baradan, 1999).

The researcher (Baradan, 1999) defined post-disaster reconstruction strategies as a set of processes and policies designed to respond to and prepare for disasters before they occur, and then meet the urgent need during the disaster and rebuild what was damaged by the disaster after its occurrence, whether at the short or long-term level, so that these policies are comprehensive for all aspects of life and are concerned with rebuilding what was destroyed during disasters within the other contents (social, economic, cultural), and these policies are inherently different in nature from those developed under normal situations and conditions because they are concerned with meeting the needs in abnormal and unstable conditions (Baradan, 1999).

Reconstruction Strategies Principles

Any strategy for post-disaster reconstruction is based on four principles that serve as their determinants and work to guide them and these principles are (UNHABITA, 2005):

- Preventive: Not only does it put in place plans to deal with the effects of the disaster only, but also plans to avoid the disaster as



much as possible, by taking preventive measures in advance.

- Comprehensive: all effects resulting from the disaster are dealt with, at various levels and with different elements in parallel, whether they are social, cultural, economic or political.
- Part of future development plans: It is integrated into the development plans, so this strategy will be part of the urban development and development plans, as disasters are something that is bound to happen anywhere, so it must be taken into account when preparing any plans for future development.
- Sustainability: This strategy must achieve sustainability, be able to re-manage the wheel of life and its continuity on its own and work on strengthening societies in facing disasters.
- Flexible: adjustable and rapidly adaptable to new developments and variables on the ground.

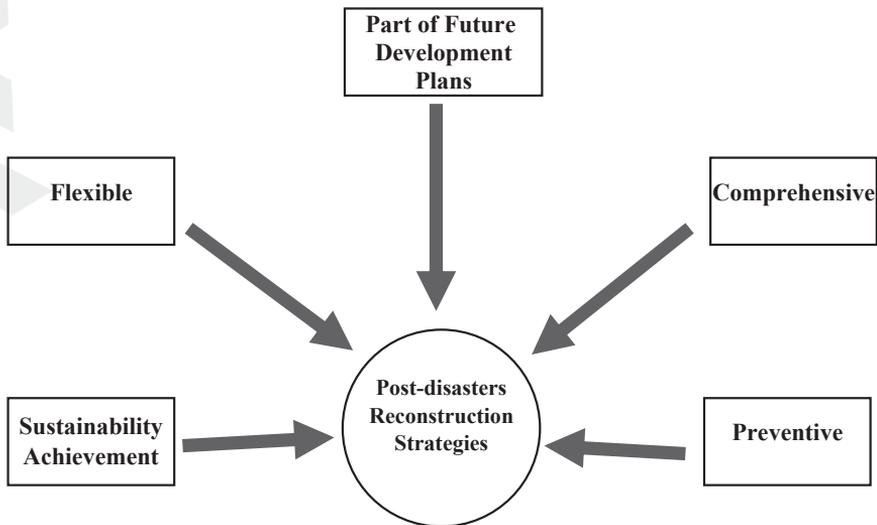


Figure 3: Basic principles of the reconstruction strategy

Preparing and Implementing a Strategy for Reconstruction

The process of preparing a strategy for reconstruction includes a set of processes that must be performed at various stages of time, with the aim of transferring the strategy from the theoretical level to the level of implementation on the ground and the most important processes are (Baradan, 1999):



- Policy making: These are prepared in the pre-disaster stage.
- Organization: These operations are also carried out in the pre-disaster period, as they are among the preparedness and prevention measures.
- Implementation & Modification: These processes take place after the disaster.
- Evaluation and Follow-up: It is a continuous process, mainly in the post-implementation phase, in which processes are evaluated and lessons and moralities taken in order to amend policies as well as avoid mistakes and improve performance.

General Timeframe for Strategy, Disaster management and Reconstruction

The disaster management and reconstruction strategy can be divided into four phases of time (www.unhabitat.org): the pre-disaster phase, the immediate relief phase, the rehabilitation phase, and the rebuilding phase (UNDRO, 1982), and these phases are viewed in an integrated manner with each other in one chain leading one another (preparation, relief, reduction, rehabilitation, reconstruction) (Jayaraj, 2002).

Pre-disaster Phase: This stage is considered the most important stage of the disaster management and reconstruction strategy, in which information are gathered, expectations and possible scenarios are set and based on these information policies, plans, strategies and roles are drawn up for preparedness, prevention and mitigation of the impact of the disaster or war with a range of responses to the disaster:

- Preventive Measures: they are measures taken to prevent a disaster. Some disasters can be prevented. As for others, men do not have the capacity to do so (Barakat and Denvins, 1997)
- Mitigation Measures: These measures are taken to reduce the impact of the disaster on humans and the environment in the event that it occurs and was unprevented, the mitigation measures are material such as designing buildings to resist earthquakes or non-material such as developing legislation and educating the population to face disasters (Jayaraj, 2002).



- Preparedness to respond: where procedures are established for a rapid and organized response in the event of disasters and these procedures are developed based on expectations, studies and benefit from previous lessons and they include effective action at the time and after the disaster (Jayaraj, 2002). These processes cover the establishment of an operation's center in emergency situations, stockpiling of essential items, preparation of plans to provide food and drink, setting up search and rescue mechanisms and assessment of damage and needs (Barakat and Denvins, 1997)

Immediate Relief Phase: It is the period immediately following the disaster, in which attention is paid to assessing and providing the basic needs of people, rescue operations, tracing missing persons, and estimating losses and damages, in which information is collected to amend policies and plans, so that they are compatible with the new data on the ground. These operations usually start by the trained local community that carries out rescue operations and rudimentary assistance after the disaster and then the trained technical teams, staff and experts arrive from the local government departments such as civil defense or firefighting agencies. These efforts may be supported by some non-governmental institutions, especially relief efforts and providing people with basic needs, and after 24 hours, international aid teams begin to arrive if needed. This stage is divided into two parts (ADRC, 2005):

- Search and Rescue: It usually continues after the end of the disaster for 48 hours and sometimes up to 7 days, depending on the circumstances.
- Urgent Relief: The rescue operations are directly tracked and may last from one to three months, depending on the nature of the disaster and the government's capabilities, in order to provide the community with basic needs until its conditions is arranged and affairs organized.

Rehabilitation Period: In this stage, the restoration of all aspects of normal life begins and this stage generally begins at the end of the relief stage and may last for several years. At this stage, some critical



decisions are taken and detailed plans are drawn up (or modified) based on real data collected from reality, unlike the first stage, in which plans were developed based on expectation and similar studies.

Rebuilding and Reconstruction Period: During this period, reconstruction projects (housing construction and physical environment repair) are implemented and applied. In this phase, a follow-up and evaluation process for all reconstruction projects is carried out and lessons and moralities are drawn, in which information is collected, strategies are modified and new plans are prepared accordingly. The reconstruction phase overlaps with the pre-preparation phase for the disaster in the future and this period requires a long period because it basically means restoring the wheel of normal life to rotate in the disaster area, and this includes the reconstruction process in the short and long term (ADRC, 2005).

Post-Disaster or Post-War Needs and Damages Evaluation

In the aftermaths of disaster, damages are assessed by conducting surveys and collecting field information in order to identify the needs and meet them as well as create an active database to start reconstruction work based on a real reality. This process is considered an evidence of the ability of the society to rapidly recover. It constitutes a part of the processes that were undertaken in the preparation period for a rapid response to the disaster (McDonald, 2003, p.15).

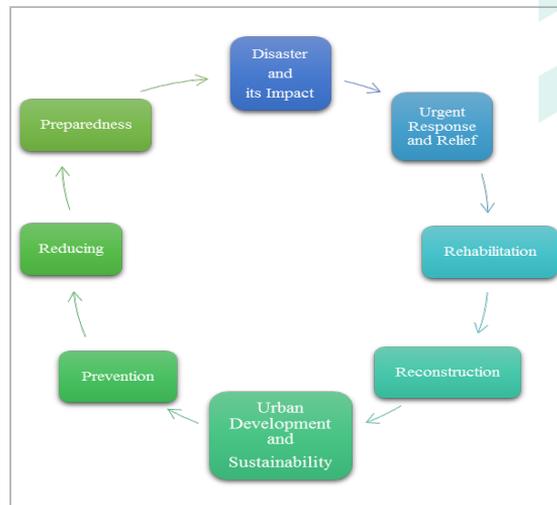


Figure 4: Disaster Cycle
(Source GTZ, 2002)



Post-Disaster Damage and Needs assessment phases

- **Immediate Post-disaster Assessment Phase (rapid assessment):** This assessment is conducted to obtain early information on the impact of the disaster and its geographical distribution. This evaluation provides a general image of the population's situation, their whereabouts, current conditions, urgent needs and the services that are still available and can be used (McDonald, 2003, P15). Hence, this survey usually gives the possibility to guide the search and rescue people and the conduct of relief operations because conditions and needs are constantly changing after the disaster, a series of rapid assessments are carried out to find out the situation and its variables on the ground. (TCG & EPG, 2004, p. 4-5)
- **Detailed Evaluation Stage (late):** This evaluation is carried out to obtain accurate and detailed information and statistics on the nature, amount and location of the losses that resulted from the disaster as well as to document objects with maps, the degree and type of objects that were attached to the physical structure and infrastructure (McDonald, 2003, p12). This information is beneficial to plan and re-adjust previous reconstruction plans and to save the information in the National Disaster Management Center for future use.

Post-Disasters Types of Assessment and Surveys:

Needs Assessment, through which the basic needs of individuals are assessed to determine the level and type of aid needed by the affected population, and the provision of these humanitarian needs. These include the basic needs of people (housing, the necessities of life such as food and drink, basic services, water, electricity, educational services and schools). The information gathered in this survey helps in providing the most appropriate, urgent and timely assistance (TCG & EPG, 2004, P3-4).

Damage and Destruction Assessment: In this type of assessments, all the information is collected to know the reality and amend reconstruction plans based on this information. Experts, in every field, carry out



assessments and surveys, and this information is (Aldabeek, 2007, p. 122):

- Damages in homes and buildings.
- Damages in the necessities of life (factories, shops, small merchants and industrial units).
- Damages in the agricultural sector, whether plant or animal (crops, fruit trees, livestock).
- Damages in the services sector (educational, health, recreational and public services) in addition to government damages.
- Damages in the infrastructure (streets, water network, electricity network, sewage network, communication network, bridges). For the assessment of building damage and the degrees of damage, refer to Appendix N^o.1

Post-disaster or Post-War Reconstruction Orientations

In post-disaster or post-war reconstruction projects, there are several directions to deal with post-war or disaster architecture. Some of these techniques focus on the practical and functional side and some are more symbolic and are concerned with collective memory and national identity. In general, each reconstruction case has its own strategy in application, particularly in the details (Okasha, 2004, p.: 29-30).

Modernization and Renewal Orientation

This direction is concerned with creating a new architecture that did not exist before and is not closely related to the history and identity of the community. This type of buildings is spread in the aftermath of wars and disasters to meet the efficient, fast, low-cost and mono-style housing needs in order to shelter the homeless (Okasha, 2004). The trend is largely due after the World War to provide shelter for the population in European countries.

Revival Orientation

This orientation is concerned with rebuilding what was destroyed by the disaster or war of historical buildings as they were in the past with the aim of preserving their existence (formal restoration of historical architecture), preserving the memory and identity of the place. This



type of reconstruction requires prior and accurate documentation of historical buildings for reconstruction as they were (Al-Aloul, 2007). This trend is mainly concentrated in the historical regions and the areas of special nominal and symbolic value.



Photo 1: The main square in the old town - Warsaw - Poland (Source: <http://www.skyscrapercity.com>)

Orientation towards a Mixture between Old and New

In this orientation, there is a two-way process in the use of old building methods. The revival of the old style, as well as the use of modern building methods, in order to preserve the historical architecture, in addition to keeping pace with the spirit of the times and being compatible with the urgent and rapid needs, the progressive development and the difficulty of using old methods and styles in absolute terms (Al-Aloul, 2007).



Photo 2: The German Parliament Building - Berlin (Source: www.flickr.com)



Symbolic Orientation Witnessing the Events

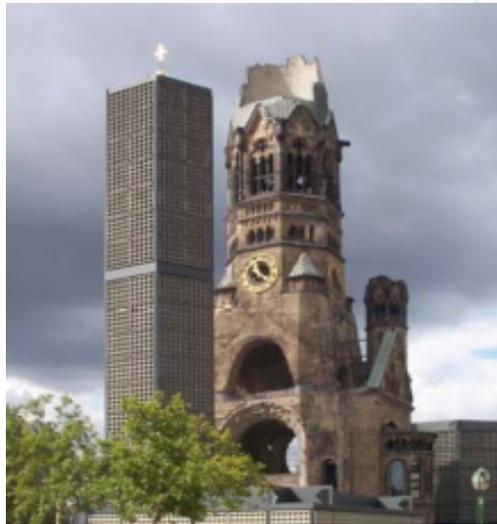
This orientation emphasizes the importance and symbolism of the event more than the building, as it works on preserving the state of the building as it witnessed the destruction that occurred, preserved the memory and showed the ugliness of what wars committed in the right of human and historical value.

This orientation is not suitable for application except in certain buildings with special symbolism and a good reason to preserve them as they are. They are chosen by many specialists and experts from various fields and orientation (Okasha, 2004).

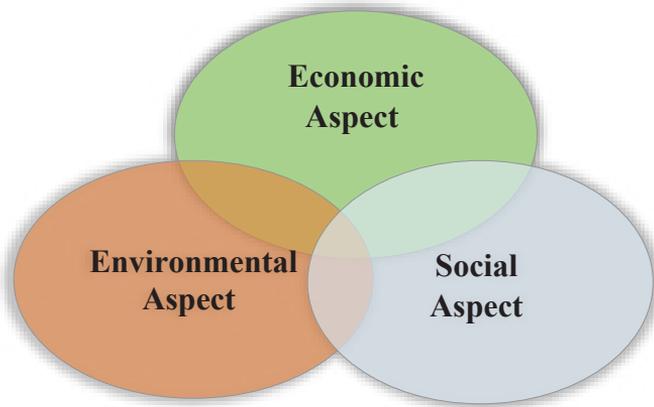
Urban Sustainability in Reconstruction Processes

Achieving urban sustainability in the post-disaster period and in reconstruction projects aims to protect lives and properties and reduce losses in future disasters, as well as preserving resources and not depleting them, preserving the right of future generations and improving the society's ability to continue.

In order to achieve this sustainability, all components of the urban environment (environmental, economic and social) must be dealt with, and the greater the overlap between these components is, the greater the society's ability to sustain will be.



*Photo 3: Al-Zekrayat Church
(Source: www.flickr.com)*



*Illustration5: Overlapping Rings of the Community's sustainability Components
(Source: NDC, 2001)*

Application Models for Post-disaster Reconstruction Projects

Once the method, way, funding sources, planning and designs for reconstruction projects are chosen, the next step will be the application and implementation processes. The best model is chosen based on studying a set of factors (such as the degree of destruction and damage, the method and techniques of construction in the target area), in addition to the community capacity (economic, technical, and social) and the time and efforts that the reconstruction process needs. Among the most important models in the reconstruction process:

Contacting Model

One of the models for the application and implementation of reconstruction projects is to contract with large local or international contracting companies. This model is used because it is considered the easiest and fastest, in order to prepare homes and buildings, bring society back to normal, avoid the increase of human suffering and creating a large number of buildings with high specifications and fast time relatively.



Self-building Model

This model focuses on empowering the community to carry out rebuilding work on their own, and this approach is considered good when labor is available and the design of houses is relatively simple, in addition to the fact that the community traditionally builds its own homes, and in which businesses are organized mainly by the family while the role of official or external bodies is limited to providing building materials, specific expertise or financial support. In these programs, external entities may deal directly with the beneficiaries, or they may be dealt with through an institution or a coordination body or official government agencies (ministries, municipalities, governorates). Hence, in some of these projects, the target group may financially contribute in a partial way to the cost of the project, in addition to labor.

Collaborative Reconstruction

This system is similar to the self-rebuilding system, but with the participation of the entire community in the reconstruction process directly. So, this means that building materials are supplied to the whole community and that the reconstruction operations are carried out by the whole community as well as the organization and follow-up from another side, whether governmental or non-governmental. This model performs to strengthen the relationships among members of society if it is managed well and helps in improving the mental health of people after the war or disaster and facilitates their reintegration into life by playing an important and effective role, in addition to helping in sharing experiences so that each individual provides his/her experience. This way, helping the poor is guaranteed because this model requires the organization of collective work and does not depend on institutions or other bodies or on family and friends. Thus, this model requires a high degree of community participation and cooperation, as it needs a high degree of organization and good relations between members of society and that agreement and understanding be reached on everything before starting the business, ensuring a fair mutual benefit for all.



Actors in Reconstruction Processes

They are the bodies responsible for carrying out the burdens of the processes of preparedness to face disasters and reduce their effects, plan and develop strategies for reconstruction and then implement and carry out the burdens of reconstruction programs. Each party has a special role and coordination and integration between these parties is one of the most important reasons for business success, as the role of these parties is an integrative role and not an individual one, as success in work depends greatly on the amount of cooperation and coordination between these bodies.

Most Important Actors in the Reconstruction Process

- **The state (the government at the national level):** it plays the primary role in preparing disaster management and reconstruction strategies and it also ensures adequate means and processes to complete these processes, both at the start-up and preparedness stage, preparing mitigation strategies, then implementation and reconstruction processes (Aldabeek, 2007, P. 45)
- **Society:** The role of society is considered one of the most important roles in the disaster preparedness and reconstruction process and the success of these projects depends on the role of society, and the more readiness the community is, the faster the disaster, the recovery after it and the speed of completion of the reconstruction will be (Aldabeek, 2007, p.: 45).
- **Private sector:** The private sector plays a very important role, especially in post-disaster or war reconstruction programs. The private sector possesses the skills, capabilities, employment and resources in addition to having a great deal of flexibility and adaptation to circumstances (Barakat, 2003).
- **Local authorities:** These authorities are represented in the municipalities, governorates, or local and village councils, and these authorities usually bear the burdens and responsibilities of preparing at the local level in order to face disasters and then implement the national strategy in coordination and cooperation with all actors, in addition to the role they play in application operations during a disaster and its management or management of reconstruction operations and programs (Barakat, 2003).



- **Non-governmental institutions and civil society institutions:** Non-governmental institutions bear, in particular, an important role in preparing for the disaster and rebuilding later, as they help and relieve the burden on official institutions, and the importance of this role increases whenever the political authority is weak or absent and these institutions play an important role in the social, economic and cultural field, providing humanitarian aid and urgent relief assistance, and carrying out field assessments and surveys. These institutions fill the gaps that may appear in the absence of a government role (Aldabeek, 2007, p. 46).
- **External bodies:** External assistance is represented by two main forms of aid, financial or technical assistance, or one of them. These entities are represented by the United Nations with its various programs, the World Bank, the European Union, regional banks, or other governments and countries (Barakat, 2003).

1. Reconstruction Experiences and Initiatives in Yemen

In this section, we will provide a brief history of five of the reconstruction initiatives in Yemen, which are the Dhamar Reconstruction Council, which was established after the 1982 earthquake, the Saada Reconstruction Fund, which was established after the third Saada War in 2007, the Al Dhafir village reconstruction initiative in 2005, and the Hadramout Provincial Reconstruction Fund. Al-Mahra, which was launched after the floods in 2009, the Abyan Reconstruction Fund, which was established after Al-Qaeda's control of Abyan in 2012, and the Executive Office, which was established after the events of 2011. All these initiatives have suffered from a lack of independence, transparency, insufficient funding, and weak coordination between Participants in the reconstruction effort in each of these initiatives.

2- Civil Cooperation Associations for Development (General Union of Civil Cooperative Authorities) (1973-1978)

“In 1973, Yemen was looking for some loaners and because of this experience, it became in 1977 one of the lending countries to the World Bank¹.”

Among the Yemeni people, it is called cooperatives and it is considered



a pioneering human experience that the peoples of the world should benefit from in the reconstruction. The pioneer of this experience was the former President of the Yemen Arab Republic, Ibrahim Al-Hamdi, and through our research we did not find real studies of this experience except for what was immortalized by the memories of the people and a number of the elites who lived during that period.

And as the writer Muhammad Saeed Zafar explained in the eleventh episode entitled “President Al-Hamdi and the Experience of Civil Cooperation”, where he began his episode with the following lines:

The first thing we learned in economics is a saying: (Greed breeds ingenuity) and it is an established fact, and this saying applies in all its meanings and details to the experience of civil cooperation for development carried out by the Yemeni people in various parts of Yemen with the support and assist of the first cooperative man, the distinguished president, the martyr Ibrahim Al-Hamdi. Whereas, at the beginning of the seventies of the twentieth century, the country lacked many of the basic requirements for construction and development, starting with the infrastructure of roads, water and electricity and public services represented in education and health and the state’s status and capabilities during that period were neither prepared nor able to implement all infrastructure and service projects at the governorate level.

The writer added that the Yemeni people, based on their complete conviction in the necessity to transcend the lived reality and move towards a better future that achieves all their aspirations for development and a happy and stable life just like the rest of the peoples on the earth, have begun to establish a unique human experience, through solidarity and cooperation in forming community frameworks called (Cooperative and Social Societies for Development) distributed at the level of administrative aspects and every citizen of the sub-district contributes as much as he/she can in cash, in kind or volunteer work. The fruits of this work appeared early on the ground by constructing dirt roads, schools, water projects, health centers and generators. Hence, honest competition emerged between these associations to provide more quantitative and better quality achievements, away from political and partisan loyalties.



The emergence of Lieutenant-Colonel Ibrahim Al-Hamdi during that period as an incubator and supporter of this experiment had a great role in developing the idea of the experiment and searching for new sources to support its financing, laying down organizational and legislative foundations for it and forming an organizational framework that includes all these societies, where the first conference of cooperatives was held in Sana'a on 5/6/1973 AD. In this conference, the General Union of Civil Cooperation Authorities for Development was established, and Judge Abdulrahman Al-Eryani was elected Honorary President and Colonel Ibrahim Al-Hamdi as President of the Union, then the second conference was held in Taiz on 10-13/11/1974 AD and the following table shows the development of the number of cooperation bodies during the period 1973-1978 A.D.

#	Year	Number of Bodies	Number of Members of Administrative Bodies
1	1973	27	0
2	1974	62	0
3	1975	111	719
4	1976	146	1061
5	1978	135	1282

Source: Annual Statistics Books for the years 1976-1977 AD / 1980-1979 AD

We will touch here on what was written by the Syrian writer Abd Al-Razzaq Farfour, a contemporary of the Yemeni experience, in his book issued by the publications of Dar Al-Murshid Al-Arabi for Press, Printing and Publishing in Syria on the occasion of the first anniversary of the Correction Movement on June 13 entitled "Al-Hamdi and the Correction March", where he said:

"[...] and the story of Ibrahim Al-Hamdi with the cooperative experience in Yemen did not start with the June 13th movement, but it rather began much earlier, for he as the "father of the cooperative movement", so to speak, and its pioneer and supporter. The Lieutenant-Colonel Ibrahim Al-Hamdi looks at the cooperation and development bodies as a worthy human experience to be added to the experiences of peoples' struggle



for life. As every population has its own experience in the way of progress, prosperity and wealth, so also the people of Yemen have the cooperative experience created by the citizens by choice and conviction. These citizens have realized that the September 26th revolution inherited the burdens and responsibilities of eliminating backwardness, and they realized at the same time, that the state inherited nothing but poverty. There are no exploited petroleum or mineral sources and no significant sources of national income. This means that the state cannot pave a road to every city. Rather, it is incapable of securing electricity, water and science for all the people of Yemen, so will the Yemenis stand idly by?”

The righteous Yemeni, Ibrahim Al-Hamdi, thought for a long time and found the idea of cooperatives. He realized as the citizens do so that the state could not put everything in conditions of poverty and geographical conditions that isolated Yemen from the world, but the Yemenis isolated themselves from each other, so the idea of cooperatives was. Citizens in every village initiated the establishment of a civil cooperative for which several goals were set, the most prominent of which are:

- Establishing schools and providing teachers and books
- Providing clean drinking water
- Providing modern lighting
- Construction of roads to ensure necessary living integration under the circumstances of the need to advertise an agricultural crop that overflows in one area and decreases in another

With the multiplicity of cooperatives, the state considered it a phenomenon that confirmed the awareness of the Yemeni people and the extent of their suffering of the ugliness of backwardness, and rewarded them by contributing to the costs of any project that is being implemented, whatever the costs.

Also, in order for there to be fair coordination regarding the distribution of the state’s contributions to the implementation of civil cooperative projects, it was necessary to establish a general union that includes representatives from all cooperatives. Indeed, the “General Union of Development Authorities” was formed, which later became the “General



Union of Civil Cooperative Authorities” and its mission was defined to achieve the goals of cooperatives in every region and to ensure that citizens in all parts of Yemen benefit from cooperative projects in a manner that meets their aspirations for a decent life for every citizen so, Brother Ibrahim Al-Hamdi was chosen as president.

The Union attached great importance to educational and health projects, encouraging the bodies to establish schools and clinics, in addition to those established by the state, while the government provided teachers, books for schools, doctors, nurses, and equipment for hospitals and dispensaries.

The Union gave priority to villages to provide clean drinking water free from germs and focused on building small dams and digging artesian wells according to the nature of the region, while road construction was given the second rank of importance, considering that most projects cannot be implemented unless there is a road that can connect experts and equipment to the village where the project is to be implemented.

The leader of the leadership council, due to the enormity of his responsibilities, tried to leave the presidency of the federation to any of his brothers, but the conference of development bodies that took place under his auspices refused his resignation, considering his presence in the presidency of the federation a guarantee for the good of the union and the country together.

Lieutenant-Colonel Al-Hamdi said about this experience: “I consider the experience of cooperatives and development agencies a human experience that deserves to be added to the experiences of people. It is an experience of human giving presented by the countryside Yemeni who is enthusiastic about the revolution and is estimated for its circumstances. Then it is a source of pride that every Yemeni deserves to be proud of because it affirms that our citizens appreciate the difficult circumstances and problems and take the initiative, with their modest capabilities, to solve them.”

A few months later, the role of these cooperatives ceased after the assassination of the pioneer of this successful experiment, the martyr Ibrahim Al-Hamdi, on October 11, 1977.



- Dhamar Reconstruction Council (1982)

On December 13th, 1982, Dhamar Governorate was hit by an earthquake with a magnitude of 6 on the Richter scale. The earthquake caused great damage and loss of life, as the number of victims reached between 1,507 to 2,500 people while the number of injured reached about 1,500 people. According to the US Agency for International Development, 42,300 homes have become uninhabitable, 11,380 of them have been completely destroyed and on the infrastructure side, 131 water projects have been damaged leading to significant losses in the rural economy. The US Agency for International Development estimated total economic and infrastructure losses at 2 billion \$.²

In January 1983, a presidential decree established a “top-down” model to address the challenges of reconstruction where the Supreme Council for Reconstruction and its Executive Office were established. The Supreme Council was headed by the Prime Minister and members of the main ministries, the head of the Central Planning Agency and the Governor of Dhamar. The main task of the Council was to plan the reconstruction policy, while the Executive Office was responsible for collecting data, conducting studies, estimating costs, proposing tenders and local supervision of work as well as preparing and implementing local education programs. The Executive Office consisted of seven main units (Design Unit, Supervision Unit, Public Relations Unit, Finance and Administration Unit, Education Reform and Construction Unit, Self-Help Unit, Seismic Unit) and all the main units were headed by the Executive Director who was a member of the Supreme Council³ (Sultan Barakat, 1993).

In order to reduce government bureaucracy and ensure rapid progress in reconstruction operations, the Executive Office enjoys financial and administrative independence from other government departments; both the Supreme Council and the Implementation Office dealt with the reconstruction as a locally led efforts, and its plan was to hire local contractors to rebuild the completely destroyed units and to contract with homeowners to repair the partially destroyed units, as the donor aid and the government’s share of the funding went directly to the budget of the Executive Office. Until the latter quickly proved ineffective as



reconstruction began, it lacked experience with large-scale housing projects, and barely had the capacity to coordinate or monitor. Signs of favoritism also appeared in the selection of beneficiaries and its budget was inflated as a result of over-employment.

Gradually, the various ministries outside the scope of the Executive Office regained the responsibility of its tasks within its ministerial scope, but this was done without establishing a coordination body, so there was widespread overlap and duplication in the reconstruction. Thus, the central government, in agreement with the World Bank and other international organizations, agreed to implement the reconstruction work through external contractors, which gave donors a pioneering role in implementing all stages of reconstruction and this ultimately led to the spread of inadequate housing shelters. In short, the post-earthquake reconstruction efforts in Dhamar were ineffective as they missed deadlines and exceeded the figures fixed in the budget and failed to achieve its housing goals (Sultan Barakat, 1993).

Saada Reconstruction Fund (2007)

Between 2004 and 2006, three rounds of the conflict caused the death of hundreds of soldiers and civilians and thousands of others were injured. Approximately 26,000 private property installations were damaged as a result of that conflict, including 21,500 housing units, 3,150 farms and other commercial projects; Not to mention the damage caused to 1,060 public institutions, including 684 mosques and 238 schools⁴ (Annual Report 2014, Saada Reconstruction Fund), the estimated cost of damage to public and private property is 600 million \$⁵ (Yemeni National Security Bureau, 2007).

In July 2007, during the fourth round of the conflict, the Saada Reconstruction Fund⁶ was established. The goals of the fund were to assess the damage of the conflict, estimate the cost of reconstruction, collect the necessary funds and manage the reconstruction process, and the budget was set at 55 million dollars to finance the emergency reconstruction, added to it any funding from national and international sources.



The reconstruction process faced great challenges, as the continuation of the conflict impeded the reconstruction work and the fund's neglect of public infrastructure, as it allocated only 12% of its funds to rebuild public infrastructure, while the rest went to rebuilding private property. Thus, the implementation was not effective as the contracted reconstruction program did not build more than 41% of the planned housing units, while only 10% of the contracts for the repair of private homes or commercial establishments were completed (Annual Report 2014, Saada Reconstruction Fund).

The fact that the reconstruction approach did not include the element of complete inclusion raised more concern regarding the prospects for long-term stability, as there were widespread accusations of "reconstruction bias" with rebuilding efforts directed to certain areas and not others based on personal loyalties and not on real needs. The lack of local confidence in the central government has often prevented residents from accessing government agencies to various areas, prompting international NGOs to rebuild these areas.

- Reconstruction of Al-Dhafir Village (2005)

Al-Dhafir village is located west of Sana'a Governorate within the Bani Matar District. The village was destroyed as a result of a mountain collapse that killed 96 people and injured dozens. According to the Yemen Press Agency, the mountain collapse led to the destruction of 25 out of the 31 houses.

Al-Dhafir Village Reconstruction Project was established in 2009 with the opening of Al-Dhafir Residential Village reconstruction project, through which the ownership contracts for the affected people, which consist of 100 housing units, were distributed. Infrastructure projects have also been built, which include the electricity project, linked it to the main line and providing communications on an area of 88 square meters to establish a fiber-optic cabin and provide the village with fixed telephone service, main roads and internal streets have also been completed, linking the old village to the new village project with a length of one and a half kilometer of slit and asphalt, and linking the new village project to the main road, Sana'a- Shibam, with a length of five kilometers and slit and asphalt of 400 meters. Hence, the implementation



of the inner streets and the ring line of the village, a slit and asphalt of four kilometers and 200 linear meters, as well as the implementation of sidewalks next to the perimeters of houses and the central islands of an area of ten kilometers and 500 square meters, in addition to the implementation of a water and sanitation project, the implementation of an electromechanical water pumping station and the implementation of a new technology for wastewater treatment. This is represented by creating tanks for each unit, and this initiative is considered one of the most successful initiatives that have been implemented (National Information Center, 2009).

Al-Maharah and Hadramaut Reconstruction Fund (2009)

In October 2008, the remnants of a tropical cyclone arrived from the Indian Ocean to the eastern coast of Yemen. The cyclone led to heavy rains in areas that are usually arid, which caused rapid floods that affected the governorates of Hadramaut and Al-Maharah in particular. The total estimated cost of damage and losses reached 1.6 billion dollars⁸ (Global Facility for Disaster Reduction and Recovery, 2009). In response to this, the Hadramaut and Al-Mahara Reconstruction Fund was established and subordinated to the Administrative Board of the Prime Ministry. It also included main ministers, including the Minister of Planning and International Cooperation, as Vice Chairman of the Administrative Council; The Ministers of Finance, Legal Affairs, Education, Public Health, Public Works, Environment, Agriculture, Interior and Energy, in addition to the Secretary General of the Council of Ministers and the Governors of Hadramaut and Al-Mahara; representatives of non-governmental and local organizations and members of the private sector⁹ (Global Facility for Disaster Reduction and Recovery, 2008).

Hadramaut and Al-Mahara Fund undertook the task of planning and implementing reconstruction in coordination with the local authorities. In addition, the purpose of the fund was to facilitate humanitarian interventions, help revive public services and establish emergency centers in the two governorates. Fund financing came from the government, local donations, external cash and in-kind grants. The funds were not transferred directly to the Reconstruction Fund; it was rather passed through the Ministries of Planning and Finance (Annual



Report of the Hadramaut and Al-Mahara Reconstruction Fund, 2016). Hadramaut and Al-Mahra Council were supposed to achieve a high degree of financial and administrative independence, as it submitted its reports to the Council of Ministers only it did not have a direct relationship with donors in terms of funding, reporting, monitoring and evaluation.

The main reconstruction mechanism in Hadramaut and Al-Mahara Fund was the “self-help” cash transfers to homeowners or business owners affected by the floods. The fund also funded the rehabilitation and reconstruction of 226 projects, but the financial shortage impeded its ability to provide such transfers. The government provided only 42 billion Yemeni riyals 210.000000\$ according to the 2009 disbursement), and even with receiving the funding, the fund sought to fully benefit from the resources available to it. According to a report issued by the Board of Directors of the Hadramaut and Al-Mahara Fund, only 29.5 billion riyals were spent. \$137.2 million in the period between 2009 and 2013, that is, no more than 70% of the total funding made available to it. (SABA News Agency, 2009)

In general, the reconstruction efforts following the 2009 floods achieved limited success, according to the evaluation report prepared by the World Bank, as the Fund succeeded in engaging local authorities and civil society organizations in consultations through direct communication with governors and used direct cash transfers to compensate and provide job opportunities for the local population. However, the fund continued to lack a coordination mechanism or monitoring framework.

Abyan Reconstruction Fund (2010)

In 2011, Al Qaeda in the Arabian Peninsula took control of large parts of Abyan governorate and occupied the governorate for about a year, before the Yemeni army was able to regain control of it¹¹ (Sana’a Center for Strategic Studies, 2012) and the combat operations led to widespread destruction of public and private properties, in addition to the killing, injury and displacement of thousands of people. Hence, the estimated damages amounted to 125 billion riyals (581.4 million dollars)¹²



(Abyan Reconstruction Fund, 2013). To start the reconstruction process and meet the urgent humanitarian needs of the region, the government established in July 2012 the Abyan Reconstruction Fund in accordance with Presidential decree¹³ (Saba Net, 2012). It has allocated 10 billion riyals (46.5 million dollars) to the fund to establish and conduct damage assessments in cooperation with the local authorities. However, the Abyan Fund has made little efforts to enhance its ability to absorb this funding from the government and donors, despite three changes to its executive management. In the end, he did not succeed in showing any success in reconstruction as a result of mismanagement and corruption.

The Executive Office – 2013

The events of the conflict began in 2011, when there was intense pressure on the government of the president Ali Saleh, which led to his resignation and his powers were transferred through the elections to his deputy, Abd-Rabbu Mansour Hadi, to become the president of Yemen. Thus, before the formation of a national reconciliation government, this government did not have sufficient institutional influence to meet the public's expectations of political change, nor the economic resources needed to provide better public services and create income-generating employment opportunities. So, donors recognized the challenge of both the lack of funding and the limited capacity to effectively absorb external funding and pledged to provide millions of dollars to Yemen to facilitate the political transition process. However, given their previous experiences in Yemen, they called for the establishment of an executive office with the aim of ensuring the effectiveness of aid through building state capacity¹⁴ (Maria-Louise, 2016).

In 2012, the donors and the Yemeni government agreed on a framework for mutual accountability that defines the main procedures and obligations for both parties, as the two parties agreed to establish an executive office to support the implementation of the mutual accountability framework and for the World Bank to lead the administrative and financial coordination and operational needs of the office (Maria-Louise, 2016) and with the continuing disagreements over the authorities of the executive office between donors and the Yemeni government. This led



to a delay in launching the executive office, although it was supposed to provide support during the transitional period although, it hasn't been launched until December 2013 and started work until the beginning of 2014¹⁵ (BBC, 2017).

3. Previous Studies

In this part, the highlights of previous studies that dealt with the issue of reconstruction in Yemen will be addressed.

Research Paper “Post-Conflict Reconstruction Institutional Framework in Yemen, May 2018, Hamid”

This paper has sought to come up with an institutional framework for reconstruction in Yemen by drawing lessons from the experiences of reconstruction in Afghanistan, Iraq and Lebanon, in addition to previous reconstruction efforts in Yemen. The paper proposed the establishment of an institutional structure for a future reconstruction body in Yemen that is sustainable and proactive. This is because the conflict affected the provision of services and contributed to the exacerbation of regional and sectarian disintegration, which makes it impractical to rely only on the general authority for post-conflict reconstruction in all parts of Yemen. Therefore, Yemen should follow a mixed and multi-level institutional reconstruction approach with close coordination between all stakeholders. The paper refers to the following recommendations:

Yemen should establish a permanent, independent, and public reconstruction commission in advance, according to a presidential decree, whereby the following will be accomplished:

- The general reconstruction authority should have a clear mechanism to coordinate post-conflict reconstruction efforts, including strategic planning and policy design, in addition to regulation of financing and fund-raising, coordinating with central and local authorities, international organizations, donors, and local stakeholders (through a competitive process that allows public sector units and private sector companies to compete in tenders) and to continuously monitor and evaluate the level of transparency and accountability.



- The general reconstruction authority should have its own protocols for procurement, recruitment and salary payment.
- The general reconstruction authority should have the ability to set up local reconstruction offices as soon as any dispute arises.
- Fully enabling local reconstruction offices to manage projects of a specific scope within their areas of competence, including evaluation, planning, local financing, fundraising, project implementation, monitoring, reporting and coordination.
- Establishing a clear framework for working and coordinating long-term and strategic projects with all stakeholders.
- Establishing a fund for all donors, whether it is managed by the general reconstruction authority itself or jointly managed by a reconstruction commission or an international or regional development bank that acts as the trustee of the fund.
- Establishing a special unit for monitoring and evaluation, side by side with the existing official bodies, using its internal monitoring and evaluation system.
- The board of directors of the general reconstruction authority should include the following: representatives from the donor community and representatives from the cabinet, with representatives from the private sector as well as an executive director. The council should be chaired by the vice- prime minister to ensure that it receives the highest level of support.
- The responsibilities of the board of directors should be clearly stated in the decree of establishing the office and these responsibilities should be limited to directing and supervising at the strategic level, ensuring that the executive management of the reconstruction authority enjoyed the flexibility required to implement projects effectively.
- The reconstruction authority board of directors should follow a competitive, transparent and merit-based process for appointing its CEO, directors of local reconstruction offices and all staff.
- The reconstruction authority should seek to involve Yemeni professionals and citizens in all economic sectors at the central and local levels to facilitate the technical work of reconstruction.



3.3 Working Paper “Post-Conflict Analytical View of Yemen, March, 2016, Saskia van”

The analytical view from the Emirates Diplomatic Academy shed light on early economic recovery initiatives in order to help the Yemeni government, as this outlook deals with both short- and long-term trends of the Yemeni economy and then identifies a number of economic initiatives and other recovery initiatives that achieve quick, tangible and visible results. This paper came out with the following results:

- A political solution to the war must be reached in Yemen, but planning beyond this political solution is no less important and the top priorities are to provide urgent humanitarian relief, provide security and protection for the population and secure vital installations and facilities.
- Official and civil authorities should implement a number of early economic recovery initiatives that achieve rapid, tangible and positive results in order to gain the confidence of the population and maintain the momentum of progress.
- Yemen does not have sufficient financial resources or expertise to implement these initiatives. Therefore, it is likely that regional and international donors will play an important role in economic recovery and reconstruction initiatives.
- Formulating initiatives to suit the circumstances of each context and take into account the course of conflict. These initiatives must contribute to mitigating conflict and consolidating peace and pushing economic activities in every region (especially among the youth) away from reliance on combat activities.
- Working on a smooth transition from humanitarian aid to economic recovery and reconstruction initiatives. Dependence on aid should be avoided and encouraging local people to resume or start productive activities.
- Policymakers should conceive intervention measures to lay the foundations for facing long-term challenges, including population growth, an increase in the proportion of young people among them, the continuous depletion of energy reserves, scarcity of water and food, unsustainable rates of financial imbalance and external economic balance, in addition



- to weakness of local governance and administration systems and energy limited capacity of the state.
- Priority should be given to early economic recovery initiatives that focus on achieving monetary and financial stability, providing short-term job opportunities in reconstruction projects, increasing self-reliance in agricultural production and building human capital.
 - Actively working to improve monetary and financial stability, by lowering prices, providing vital imports and restoring confidence in the local currency. Among the possible means of assistance are the provision of direct support to the budget, but with the allocation of funds for specific purposes and the application of an appropriate system to follow up and monitor this support.
 - The availability of labor-intensive reconstruction projects aimed at containing all groups, such as infrastructure projects in order to provide many job opportunities for Yemeni labor.
 - Aiming at increasing job opportunities and the percentage of self-reliance in the agricultural sector, Yemen could implement an effective substitution strategy to provide incentives for agricultural crops that consume less water and do not cause similar damage to Qat.
 - Yemen is in dire need of success stories. Therefore, economic recovery initiatives should coincide with a public awareness campaign for the population aimed at giving Yemeni youths the feeling that they have a purpose in life and that they have a role in rebuilding the country.

Research Study “Vision of Continuing Economic Activity and Reconstruction,

January / 2018, Economic Reforms Team - Yemen (ERT)”

As this study was keen to highlight the vision of the private sector in the continuation of economic activity and reconstruction; it developed a number of scenarios and suggested proposed roles for the private sector in the context of each possible scenario.



The First Scenario: the Continuation of War and Conflict in the Years Ahead

This scenario represents the worst for Yemen and means more economic and human suffering day after day. As the war continues, the social losses represented by the increase in the number of dead and wounded and in the number of displaced and expellees, etc. increases. In light of this terrifying scenario, the research team proposed a number of policies and interventions as follows:

- **Neutralizing the National Economy and Enhancing Livelihoods, Through:**

- Participating in building and supporting a practical mechanism (the initiative to neutralize the economy) agreed upon by all parties to the conflict to ensure that the remaining infrastructure, installations and economic facilities are spared.
- Work to facilitate the flow of goods and services to and from Yemen by facilitating inspection procedures.
- Supporting local rural development programs to provide the minimum societal requirements, through cash for work or small income-generating projects.
- Create safe areas to reach aids and transfer them into beneficiaries.
- Involving the private sector in providing relief and humanitarian work by providing goods and entering into large tenders with international organizations.

- **Improving the Humanitarian Situation, especially for the most Affected Groups, Through:**

- Providing relief food, clean drinking water and cash assistance to those affected.
- Working to address and provide emergency needs for malnutrition.
- Securing the basic needs of goods and services for citizens, especially providing oil derivatives and domestic gas.
- Providing alternative means in the health field (such as mobile medical teams) for facilities that were previously damaged.
- Strengthening cooperation and coordination between the parties concerned with dealing with the humanitarian situation.



- Supporting the implementation of the humanitarian response plan for Yemen and enhancing coordination between local and donor efforts in this field.

- **Helping the Private Sector to Survive the War, by:**

- Working to secure the energy resources necessary for the survival of production operations and transportation, especially oil derivatives and allowing the private sector to import its needs from them in accordance with clear controls and in a manner that does not harm the reserves of foreign currencies and the value of the national currency.
- Working to ensure the stability of the national currency.
- Focusing on supporting labor-intensive projects, especially small projects, by providing funding sources.
- Assisting the private sector in managing risks during conflict by preparing a strategy to face crises.
- Facilitating commercial movement by ensuring freedom of foreign trade and keeping all ports open.

The Second Scenario: Ending the Conflict and Achieving Peace

In this scenario, it defines the priorities in the event that peace is reached and focuses on the priorities related to the restoration of the state's powers, whether economic, political or security, in addition to the priorities related to the citizen's security and basic needs of justice, employment and the availability of basic services, as well as the priorities for supporting institutional transformation (institutional reforms) necessary to achieve development again in a way that contributes to the return of Yemen to the field of development and political and **security priorities have been identified, which ensure restoring confidence in state institutions and their ability to provide public services, through:**

- Stopping the conflict and all forms of violence and violations of international humanitarian law, disengaging the armed forces, formations and other armed groups and ensuring their return to their barracks.



- Launching a new, well-defined and timed political process that begins with the formation of a national unity government and ends with the referendum on the new constitution.
 - Withdrawing medium and heavy weapons from everyone and returning them to the state while criminalizing their possession and trafficking.
 - Rehabilitating the national program for mine clearance and benefiting from its previous experiences in the aspects of training, qualification and awareness of the dangers of mines and explosives.
 - Clearing conflict areas of mines, bombs and ammunition to save human lives.
 - Reforming the institutions responsible for security and redeploying the security forces, making use of traditional social organizations to solve security problems and rehabilitating those who do not meet the conditions of service in the armed forces and security agencies.
 - Taking legislative and institutional measures and procedures to achieve transitional justice.
 - Activating the rules of good governance and governance standards in terms of defining strict anti-corruption measures.
- **Humanitarian and Reconstruction Priorities Have Been Identified Through:**
 - Accounting for and addressing humanitarian and reconstruction damage to the areas and groups affected by the events and accelerating the absorption of the available sources of funding for reconstruction.
 - Reconstructing and rehabilitating the infrastructure and public and private facilities affected by the events, with priority given to educational and health services, roads, electricity, water networks and encouraging the return of students to schools and universities.
 - Linking relief interventions with long-term goals that help to strengthen early and rapid rehabilitation of communities and individuals, as well as providing livelihoods for people who have lost their jobs.



- Establishing or enabling a supreme relief agency to provide aid (in-kind or cash) to needy groups and coordinate relief work among the various aid agencies.
- **Priorities to Stimulate Economic Growth and Revive Livelihoods, through:**
 - Restarting the stalled public economic sectors, especially the oil, gas and electricity sectors, because of their role in revitalizing the economy, achieving economic growth and providing job opportunities.
 - Diversifying sources of economic growth by achieving optimal utilization of fish wealth, developing the agricultural and food industries sector and revitalizing the tourism sector.
 - Pursuing rational macroeconomic policies (financial, monetary, and commercial) that contribute to consolidating the economic stability necessary to create an attractive economic and investment environment and to helping achieve high and sustainable economic growth rates, especially with regard to the general budget deficit, reducing inflation rates, supporting the stability of the value of the national currency, creating sufficient reserves of foreign exchange and reducing the balance of payments deficit.
 - Focusing on projects that have a clear and direct developmental impact and have significant potential to create job opportunities.
 - Involving the private sector in developing strategic policies and plans.
 - Granting credit facilities to the private sector as individuals and commercial companies, rehabilitating and repairing their destroyed properties, especially housing, industrial and service facilities, as well as working to solve the problem of delayed payment of loans to the private sector and the accumulation of interest due to the conflict.



- Mobilizing more external support to allow financing of reconstruction and new projects needed to achieve growth.
- Expanding micro-project financing programs and self-initiated initiatives for youth and women.
- **Priorities for Improving the Business Environment and Encouraging Partnership with the Private Sector, through:**
 - Providing basic services to the private sector business by improving the infrastructure and basic facilities for investment.
 - Developing small industries due to their importance in reducing poverty and unemployment, and developing innovative methods to support them
 - Issuing partnership law between the public and private sectors, creating institutional structures necessary for its implementation and supervising it.

In the first scenario, the team proposed forming a national body to coordinate humanitarian support in Yemen. It also suggested establishing a multi-partner trust fund. This fund represents the financial pool for all external support resources (loans and grants) that Yemen obtains from development partners and reallocates them to different economic sectors according to a reconstruction plan that will be determined.

Research Paper “Private Sector Participation in Post-Conflict in Yemen, August / 2018, Amal Flem”

This paper examines the experiences of some developing countries in the post-conflict period and the lessons that can be applied to the Yemeni context. It also assesses the factors that affect the development of the private sector in Yemen over time, including the challenges facing the public relations environment and attempts of reform and other topics. This paper concluded with the following recommendations:

Interventions must be conflict sensitive: the multifaceted and ongoing conflict in Yemen has weakened formal state authority and formal private sector activity, allowing new players to emerge in the conflict economy; early interventions must therefore be checked to ensure that they do not enable conflict actors and potential peace spoilers to limit



formal private sector development and threaten overall socio-economic stability. International actors intervening on the ground should establish an inclusive mechanism in which local commercial actors participate in a meaningful way in order to provide robust support in promoting peace building and enabling favorable business environments.

Building local business capacity to implement programs and create job opportunities: Stakeholders should work to ensure that local companies have the necessary tools and skills to benefit from international interventions and this should include facilitating the transfer of knowledge, especially the knowledge of using technology in business by providing education and training programs for the working forces in Yemen.

The agricultural sector should be the target of any early intervention: agriculture, which employed the bulk of the Yemeni workforce prior to the conflict, has been particularly affected by the dynamics of the conflict in Yemen and should be the target of any early intervention to boost the economy. For example, programs can be created to support small businesses in agriculture and provide training and technical assistance to farmers and everyone who hopes to create small, self-sustainable enterprises.

Targeting small and medium-sized companies and entrepreneurs: Private actors should assist official authorities and international donors in developing joint financial mechanisms to finance small and medium enterprises and business incubators and these measures should specifically target women and youth and help them start businesses due to the underrepresentation of these groups in private sector activities.

Ensuring private sector access to finance: In the short term, all relevant stakeholders should support a full return to an effective financial sector, including stabilization of the Yemen Central Bank. In the long term, efforts should be directed to lead reforms in banking regulations and to ensure that there is an appropriate platform for foreign investors to establish banks in the country, as well as to secure



the flow of remittances. In this regard, official bodies should establish a mechanism for investment guarantees to attract remittances from Yemeni expatriates to contribute to the national economic recovery.

MFIs with experience in Yemen should be a primary target for all stakeholders to drive more financial inclusion across Yemen; banks and microfinance companies should be empowered to provide financial services to individuals and cash management services to small businesses. Moreover, mobile banking services should be strengthened in Yemen to expand access to low-income borrowers.

Reforming the business environment: The official authorities should establish a suitable tax system for businesses, anti-corruption institutions and encourage investments by easing some regulations that restrict foreign investments and discourage startups, in particular. And official authorities should deal and invest in transformative sectors such as transportation, financial services and telecommunications as well as tourism, energy production, food processing and distribution.

Yemen Policy Note N°. (2) “Economic, Financial and Social Challenges during the early Post-conflict phase in Yemen, May / 2017, by Wilfried Engelke.”

This paper, entitled the “Research Policy Paper,” came out with a number of messages and recommendations represented as follows:

- Macroeconomic stability is essential to achieving peace and reaping its benefits. In the short term, the main challenges are:
 - Reconstructing the main economic assets and the central national economic institutions, especially foreign reserves and the Central Bank which are the backbones of the Yemeni financial system.
 - Restoring financial revenues.
 - Restoring the oil and gas sector.
 - Establishing the system of central institutions, especially by restoring the financial management system and its accountability mechanism during the provision of reconstruction services and the restoration of public services.
 - Restoring the minimum balance of foreign reserves is a priority to enable the private sector to recover and achieve economic



recovery. The minimum available foreign reserves balances, commensurate with the restoration of overall stability, should reach close to covering the country's imports for a period of three months, estimated at 4.5 billion \$, during the pre-conflict period.

- The immediate restoration of central bank operations is considered an indispensable condition for economic recovery and restoration of overall stability; thus, the central bank must be able to resume performing its normal financial functions, represented by the following:
 - Providing services as a lender and last resort for the Yemeni financial system.
 - Achieving balance in the national market for private and public debt.
 - Facilitating international trade.
 - Ensuring the continuity and reliability of the Yemeni financial system.
 - Restoring trade to its full potential and reviving the oil and gas sector require regularization of external debt positions to enable investors to access cash flows. The accumulated arrears on external debt obligations represent an obstacle to the resumption of normal trade activities.
 - Yemen needs to restore its fiscal revenue base. In fact, the path of reconstruction, stability and development in Yemen in the immediate, medium and long term depends on the ability of the official authorities to increase local revenues to finance the public spending program and the availability of external resources plays an important role in achieving early stability and recovery of livelihoods, as well as restoring the social and institutional fabric to achieve sustainable recovery.
- Trade and consumption taxes play an important role in the short term in recovering financial resources, as the tax system in Yemen does not previously represent an obstacle to efforts aimed at enhancing revenue collection. However, the post-conflict phase



requires some kind of initial, short-term “emergency response” to finance and support reconstruction efforts. In this regard, it will be important that the following take place:

- Arranging the appropriate re-establishment of the tax and customs administrations.
- Reducing administrative complications in order to allow official bodies to re-carry out their basic functions without hindering the primary indicators of the recovery of the private sector.
- The pace of recovery of fiscal revenues and export revenues in the medium term (6-12 months) depends on the speed and depth with which the oil and gas sector can be restored. In fact, the speed of recovery of previous production capacity revenues depends on:
 - Rapidly re-engaging investors.
 - Optimal use of the investments made.
 - The future investment conditions available for the sector, which will ultimately result in the conflict resolution agreement.
- The confidence building and the effectiveness of any spending program require restoring normal budget processes.
- There will be no trust without restoring the integrity and credibility of the budget, in order to build confidence among the concerned parties and use limited resources effectively. It will be important to ensure that basic controls are in place to prevent the leakage of funds and under the assumption that the priority of spending will be in the beginning to pay the salaries of civil servants.
- Adherence to financial transparency and applying it will be an important measure to build confidence.
- Limiting the first post-emergency budget formulation process by the extent of available capacities.



Yemen Policy Memorandum N°. (3) “The Preparedness of the Private Sector to Contribute to Reconstruction and Recovery in Yemen, May / 2017, Laurent Gunnett et al.”

This memorandum dealt with what the Yemeni private sector was exposed to, as it clarified the extent of the readiness of the private sector to contribute to the reconstruction and recovery in Yemen. The memorandum concluded with a number of recommendations that would raise the readiness of the private sector and enable it to contribute effectively to reconstruction activities and came up with a number of recommendations that would accelerate the reconstruction and recovery of the private sector under the following headings:

The Role of the Private Sector in Social and Economic Resilience and Recovery:

- The private sector in Yemen represents an important opportunity and an indispensable tool to support the recovery process, social and economic resilience and the reconstruction of Yemen.
- To some extent, the ability of Yemeni societies to recover from the impacts of the war can be measured by the vitality of local businesses that provide goods, services and jobs to society.

Short Term Recommendations (3-6 months) as follows:

- Supporting the Central Bank of Yemen to resume providing support for commercial financing and, if necessary, providing commercial financing directly to importers of basic foodstuffs for the purpose of providing temporary and emergency purchase of new food stocks from abroad.
- Restoring the linkage of the Yemeni banking system with the rest of the world.
- Supporting the process of setting up an effective system to examine and inspect vessels destined for Yemeni ports through a third party, in order to facilitate trade during the conflict period and the immediate post-conflict period.
- Supporting the construction sector to help it maintain the current level of productive capacity and employment in the construction sector and avoid inflation in building materials prices when the reconstruction process begins.



- Supporting MFIs and entrepreneurs, including agricultural and non-agricultural activities, through recovery grants.

Providing analytical economic foundations for peace: It consists in conducting analytical work without waiting until the conflict ends with the aim of contributing to an economic perspective towards the peace process and this matter acquires special importance because the sustainability of the peace settlement will partly depend on the sustainability of the economic stability on which it is based and a detailed preliminary plan for trade relations should be included as part of the sustainable peace plan.

Recommendations in the Short and Medium Term (6-26 months) are as follows:

- Providing investment guarantees to help manage the private sector capital for infrastructure projects, service delivery projects and other transactions that will not continue unless investors and lenders are protected against specific risks.
- Funding the reconstruction of commercial infrastructure to revive commercial activities and address the deteriorating food security.
- Establishing a joint institution between the public and private financial sector in order to restructure for the purpose of assisting the authorities in their efforts to restructure the banking sector, so that the terms of reference of this institution include the following:
 - Pumping capital into financial institutions (banks and microfinance institutions) that are considered viable in order to restore their liquidity and accelerate their recovery.
 - Establishing a deposit insurance system to help the Central Bank of Yemen restore citizen confidence in financial institutions.
 - Providing technical support to fragile financial institutions to facilitate their restructuring. This may also include technical assistance to the Central Bank of Yemen to facilitate complex operations such as mergers, liquidations or the establishment of a bank to collect bad debts.
 - Provide substantial banking facilities (including guarantees) to qualified financial intermediaries (banks, microfinance institutions



and investment capital) in order to inject liquidity and facilitate the resumption of capital financing for the private sector.

- Providing technical assistance to financial institutions to implement restructuring of bad loans.

Policy Paper “Reconstruction and Reform in Yemen, April / 2019, Recommendations of the Development Champions Forum”

Through the in-depth discussions carried out by the Development Champions Forum (DCF) that dealt with the needs and requirements of the reconstruction and reform process, these discussions resulted in a number of guiding principles and recommendations that can be taken to initiate the recovery and reconstruction phase in Yemen, represented by the following principles:

Meet Urgent Humanitarian Needs by Implementing the Following Recommendations:

- It is recommended that anti-inflation measures be included in any food security strategy.
- It stressed on the need for a link between meeting urgent needs and developing a plan that guarantees sustainable economic growth behind any humanitarian intervention, as the forum proposes to create this link by encouraging regional and international organizations to use the Yemeni private sector in terms of importing and delivering relief and development materials.

Confronting Financial Challenges by Implementing the Following Recommendations:

- Restarting the oil and gas sector.
- Calling for the provision of financial aid, but warns of a sudden influx of foreign aid to cover any potential financial deficit and the forum indicates that financial aid may cause turmoil in the financial market, such as inflation and sharp price hikes.
- Emphasizing the necessity of paying all salaries, including those of the military and security institutions



Providing Social Protection through the Following Recommendations:

- Ensuring that the education sector is preferred, as rebuilding damaged schools must be accompanied by plans for more comprehensive and serious investments in education.
- Establishing empowerment programs to prepare school dropouts and university students to enter the regional and local labor market.
- Establishing postgraduate programs to improve the capabilities of state officials.
- Establishing programs to train young people in the skills needed to design and implement effective development programs.
- Developing a peacebuilding program to combat negative and extremist ideologies.
- Ensuring that the local societal context in Yemen is taken into consideration in all social protection programs.

The Role of the Private Sector and Local Institutions in Re-Establishing the Most Important Aspects of the Infrastructure, through the following Recommendations:

- Completing rehabilitation of Yemeni ports, including Mocha (called also Mokha), Socotra and Al-Mahara.
- Granting the private sector in Yemen a fundamental role in rebuilding the infrastructure, and stresses not to overlook the local contribution to the recovery process and the empowerment of local stakeholders.
- Involving the Yemeni private sector in reconstruction projects.
- Being keen on reconstruction, especially renewable electrical energy sources.
- Improving the ICT sector in Yemen
- Dividing the operations of rehabilitating Yemen's airports into stages, the first of which is the short-term reforms that enable the airports to function. These reforms must be implemented immediately.



The Social Welfare Fund (SWF) and the Public Works Project (PWP) have not neglected to work on evaluating and improving them on the basis of their engagement as implementing partners and creating jobs through the following recommendations:

- Enforcing the rule of law will help stimulate the private sector to invest in the reconstruction and reform process, which will create new job opportunities.
- Seeing the reconstruction efforts as one of the mechanisms to support economic growth in Yemen.
- Attempting to encourage foreign investment to open job markets for Yemeni workers.
- Rebuilding the damaged factories is a priority, in order to revive the role of the industrial sector in Yemen.
- Supporting the agricultural sector, since this sector used to absorb 30% of the workforce before the conflict.

Involving local Yemeni institutions and activating their role, through the following recommendations:

- Consulting the local Yemeni segment during the early stages of reconstruction planning and working to accommodate everyone.
- The importance of decentralizing the recovery and reconstruction process and activating the role of local authorities in needs assessments, planning and implementation.
- Dividing the reconstruction efforts on the basis of the geographical area and the type of intervention. The intervention is classified on a national or local basis or the type of this intervention, whether it is relief, reform or development.
- Working to provide electricity services for reconstruction.
- Giving local authorities the responsibility for designing and leading their own reconstruction projects.



Rebuilding state institutions and the rule of law, through the following recommendations:

- The need for reconstruction and reform efforts to give priority to rebuilding public service institutions, improving public administration and financial management and rehabilitating the security and judicial apparatus.
- The reconstruction process should include political reforms that coincide with the existence of binding legal determinants in order to build confidence in this process and stresses the need to implement robust measures and institutional arrangements to reduce corrupt practices during reform and reconstruction efforts.
- Providing a practical framework to ensure that they are properly designed, adopted and implemented for reconstruction operations.
- Drawing up plans that do not overlook the specificity of the conflict to avoid tensions that would complicate the matter.
- Establishing an office to supervise recovery and reconstruction efforts and to manage funding and coordinate the various policies among donors. By establishing this office, the roles of Yemeni participants and international donors are defined precisely and clearly.
- Establishing a supervisory and anti-corruption mechanism in parallel with the recovery and reconstruction process.

Study in the Journal of “Economic Recovery, Reconstruction, and Sustainable Peacebuilding in Yemen, August / 2020, Ministry of Planning and International Cooperation”

This publication dealt with the subject of the study through five axes. The first axis dealt with the economic and social cost of war and conflict (estimating losses and damages), the second dealt with recovery and social recovery, the third dealt with recovery and economic recovery and the fourth dealt with the priorities of recovery and reconstruction for the infrastructure sectors. As for the fifth axis, it dealt with institutional reconstruction and peace and social building. The focus has been on the recovery and recovery phase, as it precedes the reconstruction phase



and the results of this study will be presented according to its axes, starting from the second axis:

Social Recovery and Restoration

Social recovery and restoration took place through

First: Reducing poverty, enhancing livelihoods and facing food insecurity and malnutrition. The goals of recovery and restoration are to reduce poverty through:

- Supporting institutional and strategic work, through the priorities of supporting the establishment of a comprehensive database based on the socio-economic survey of the family budget. Supporting national efforts in preparing and implementing a comprehensive national strategy for poverty alleviation in Yemen, establishing a sustainable system to confront poverty and its future prospects and comprehensive systems for monitoring and finally, assessing poverty and preparing for the effects of climate change.
- Promoting pro-poor multisector policies by supporting social protection, agriculture and fishing to break the cycle of poverty, as well as building a comprehensive and nutrition-sensitive social protection system, supporting decent job creation programs and initiatives, focusing on small farmers and fishermen and responding to district priorities. In addition to supporting young entrepreneurs in the field of agriculture to promote economic growth to support and invest in jobs and develop skills.

Goals of Restoration and Recovery to Enhance Livelihoods Are Represented by:

- Providing livelihoods, opportunities for economic empowerment and multisector services for all population groups.
- Improving community livelihoods, productive assets and food security to enhance resilience and self-reliance.
- Supporting vulnerable communities with solar energy for sustainable livelihood opportunities and enhancing social service delivery.



- Rehabilitating and resorting the social and economic infrastructure, with the support of local community development committees.
- Creating temporary job opportunities through community development projects.
- Establishing facilities in various sub-sectors through community development committees.
- Improving livelihood opportunities for women and youth through cash-for-work programs.
- Creating job opportunities through labor market studies and skills training, especially among women.
- Establishing small enterprises through business training and providing the requirements for their establishment.

The Goals of Restoration and Recovery to Address Food Insecurity and Malnutrition Are Represented through:

- Reducing the direct factors of the continued exacerbation of food insecurity, by supporting the resumption of salary payments to service personnel in a sustainable manner throughout the country in accordance with the Stockholm Agreement, supporting the provision of access to food and the expansion of cash-for-work programs and food aid-for-asset development programs.
- Enhancing the areas of food security and food production, by supporting programs to assist the groups that are the most affected by the ongoing conflict, supporting sustainable fuel savings, restoring electric power and supporting affordable solar energy systems for agricultural irrigation systems. Supporting as well the recovery of inputs, agricultural and livestock products and fishing markets, providing the necessary services and raw materials and supporting the areas of marketing and investment support, in addition to continuing to support the displaced, working to provide remedies for their return and building assets and production.



Second: rehabilitation and recovery in the sectors of human development and social services (health - education - social protection).

The goals of rehabilitation and recovery in the health sector are:

- Working to continue and expanding efforts to deepen emergency interventions in the field of reproductive, maternal and child health through national health institutions and in partnership with international organizations, preventing and controlling the spread of cholera, diphtheria, and transmitted diseases as well as providing basic primary care services at the level of primary health care centers.
- Setting up a quick and appropriate mechanism to pay salaries to workers in the health sector and provide remunerative financial incentives.
- Ensuring the provision of funding to cover operating expenses for health services and working to raise the capacity of health workers.
- Supporting the rehabilitation of health facilities.
- Providing medical supplies, medicines and mobile health services to the displaced.

The Goals of Rehabilitation and Recovery in the Educational Sector Are Represented through:

Ensuring that schools remain open to the continuation of the educational process, by providing allowances to teachers who have lost their salaries, providing school meals for boys and girls, establishing temporary learning classrooms for displaced children, distributing hygiene materials, furniture, books and supplies to the targeted schools, as well as providing specialized child-centered programs in hard-hit areas, offering assistance in financing textbook printing and national examinations and providing psychological and emotional support to students, which requires building the capacity of teachers to provide such support.

Rehabilitation of damaged and destroyed schools through the restoration of buildings, including water, sanitation and hygiene facilities, training of specialized education staff in emergency data collection and analysis as well as providing technical and financial support to develop institutional capacities for schools and educational facilities.



The Goals of Restoration and Recovery to Achieve Social Protection Are Represented as follows:

- Focusing on establishing a comprehensive and sustainable social protection system.
- Strengthening the capacities of the Social Welfare Fund.
- Establishing priority interventions in the short term to support resilience and the resumption and expansion of social programs.
- Designing and implementing a social protection program that strengthens programs and institutions to finance small and micro enterprises.
- Enhancing social protection for poor families with productive capacities in the fields of agriculture and fishing.
- Supporting social protection programs for disadvantaged families.

Economic Restoration and Recovery

First: Macroeconomic Stability: Fiscal Stability, Monetary Stability (Exchange Rate, Prices)

The Goals of Rehabilitation and Recovery are Represented in the Public Finances, through the following:

- Developing public revenues, especially taxation, in a way that reduces dependence on inflationary and oil revenues financing in the long term.
- Controlling the public budget deficit at the economically acceptable limits.
- Raising the efficiency of the allocation of public spending, in order to ensure an increase in the proportion of investment spending.
- Financing the general budget deficit from non-inflationary sources and choosing the lowest economic, financial and social cost.

The Objectives of Restoration and Recovery in Monetary Stability Are Represented, through:

Stability of the exchange rate and the national currency recovery through: Supporting sustainable peace efforts leading to permanent security and political stability and the return to normal life. Hence,



working according to a specific mechanism that would achieve coordination and complementarity between economic policies, preparing a plan or strategy to develop and diversify non-oil exports and enhance their competitiveness, attracting inwardly the savings of Yemeni expatriates, negotiating with the international community to support the national currency, whether through deposits in the central bank, exemption from previous debts or their interest, or postponement of payment with no interest calculated for the next period.

Price stability through: studying the bottlenecks causing high commodity prices and addressing them, encouraging competition, fighting monopoly and controlling the prices of basic commodities, implementing tax exemptions on agricultural inputs, renewable energy and small and micro enterprises, developing mechanisms to reach the governorates with high dynamism and following up to ensure the delivery of basic foodstuffs to them. In addition to that, securing an increase in the percentage of strategic commodity stocks of wheat and flour in each governorate separately, activating periodic activities in consumer protection and rationing and price control of commodities, reducing the budget deficit to safe limits and financing it from real sources.

Employment, Providing Job Opportunities and Reducing Unemployment.

Stimulating Growth in the Productive Sectors (the oil sector, the non-oil sectors, the agriculture and fishing sector, the industrial and services sectors).

The Priorities for Recovery and Reconstruction of the Infrastructure Sectors Represented by the following Sectors:

- Communications and Information Technology sector
- Energy sector
- Transportation sector
- Water and sanitation sector
- Housing sector.



Institutional Reconstruction and Social Peace Building

First: The basic elements of institutional building as a necessary condition to embark on rebuilding the infrastructure, productivity and service, as follows:

- Drafting a new social, economic and institutional contract (constitution) that focuses in its institutional and economic dimension on strengthening the confidence of citizens in the state and its institutions, protecting the most vulnerable groups in society and creating an investment climate that is appropriate for the orientations of the private sector and supportive in a way that contributes to strengthening the partnership with the private sector and civil society organizations and increasing their economic and social role.
- Inclusiveness in institutional reconstruction, in the sense of focusing on rebuilding governmental institutions, in both their physical and human aspects and focusing on rebuilding capacities.
- Overcoming the failures of previous experiences of reconstruction in Yemen.

Second: The supportive requirements of institutional reconstruction and building social peace represented as follows:

- Reaching a comprehensive and sustainable peace agreement that ends the state of conflict and war, restores matters to normalcy, sets solutions for all challenges and problems, especially resulting from the repercussions of the conflict and eliminates all armed manifestations, in a manner that makes medium and heavy weapons exclusively in the hands of the state, while regulating the possession and carrying of personal weapons.
- Taking legislative and institutional measures and procedures to achieve transitional justice and ensure the protection of freedom of human rights.
- Promoting social cohesion through behind equitable economic opportunities for all Yemeni regions and in a way that contributes to creating decent work opportunities for all and focusing on the



- most affected and vulnerable people, groups and regions, helping to reduce poverty and marginalization of groups or regions as they will represent new hotbeds of conflict.
- Working to improve the public administration and rebuild and reconstruct all service and productive institutions in order to meet the requirements of the stage.
 - The need to adopt an agenda for political and economic reform to address the imbalances in the structure of the Yemeni state and to agree on the economic priorities of future governments, especially in the aspect of macroeconomic policies that enhance economic growth and provide basic goods and services.

Field Study

4. Results of the Field Study:

After analyzing the results of the study sample responses in the focus groups on the main concepts of disasters and reconstruction, experiences and reconstruction initiatives in Yemen, in addition to reviewing the most prominent findings of previous studies on the topic of reconstruction in Yemen, the response of the research sample on reconstruction strategies in Yemen was divided into three stages in terms of implementation, represented by the strategies of the pre-conflict stage (the current stage), which will continue until the conflict ends, followed by the strategies of the immediate post-conflict phase (recovery strategies) and the implementation phase extends from 6 months to a year at most, and the reconstruction phase (reconstruction strategies), and their implementation begins immediately after the recovery phase, i.e. immediately after the end of the conflict, and before entering into the listing of these strategies. We review the results of the research sample's discussion of the institutional and legal frameworks for the reconstruction operations management within its three phases in Yemen, which are as follows:



The Supreme Authority for the Management of Reconstruction Operations in Yemen

The goal of establishing this body is to prepare reconstruction strategies and supervise their implementation in various stages of time. It is concerned with preparing strategies and organizing, supervising the implementation and modification of these strategies and is also responsible for evaluation, follow-up, and local, national and international mobilization for the implementation of these strategies and financing them. This commission must enjoy the following characteristics:

- To be established by presidential decree and with administrative and institutional independence.
- The powers of this body should be clearly defined and the House of Representatives approved of its powers.
- This commission consists of sub-units represented by the Planning and Strategy Development Unit, the Public Relations Coordination Unit, the Monitoring and Evaluation Unit, the Legal Affairs Unit and the Financial Management Unit.
- The Supreme Authority should have clear, flexible and encouraging protocols with partners and donors.
- A central fund for reconstruction should be established in Yemen, to be managed in partnership with donors according to the agreements and interventions concluded with these bodies and the financial department shall supervise the fund in accordance with the regulations and laws that control and ensure integrity and transparency.
- The supreme body for reconstruction management must have flexibility and a series of procedures away from the radical complexities of government institutions.
- The implementation of reconstruction operations shall be carried out by independent bodies spread throughout Yemen, which have the approval of the Supreme Authority for Reconstruction, in accordance with the controlling and guaranteeing laws and regulations that confirm the ability of these bodies to carry out the operations assigned to them.
- The Supreme Reconstruction Authority is not concerned with



- providing the salaries of the branch office employees approved by it.
- Local councils are linked to the Supreme Authority for Reconstruction through local reconstruction offices or units that are approved through the approval of the council and the supreme authority alike. It shall be within the jurisdiction of the legislation in force for the Supreme Authority. It enjoys administrative independence and powers in force within the framework of its competence far from the influence of the local council.
 - In order to encourage civil cooperation, independent local financial funds are created and supported by the Supreme Authority for Reconstruction and are subject to laws and legislations that guarantee integrity and transparency, which will encourage initiatives at the widest level in villages and rural areas.
 - International donors have the right to establish independent local bodies for reconstruction in Yemen, authorized and licensed by the Supreme Authority for Reconstruction in Yemen and to operate in accordance with clear legal frameworks in a manner that preserves state sovereignty and preserving social peace. Hence, their funds should pass through the Central Fund of the Reconstruction Authority in Yemen, and the partner who owns the local authority should contribute by no less than 50% to financing the projects of the Supreme Authority for Reconstruction in general, unless there is an exception in accordance with the contract concluded with the Supreme Authority for Reconstruction.
 - The Supreme Reconstruction Authority creates an updated weekly report on the progress of reconstruction activities in Yemen and it participates at the local and international levels for community monitoring, mobilization and the creation of models of success.
 - The Supreme Authority detects any corruption with documents and evidence and refers cases to local civil courts in the governorates or districts that fall within the jurisdiction, in a manner that ensures the creation of confidence among people, which will make them a strong and effective supporter in self-reconstruction.
 - Field results according to the aim of the study: determining the appropriate strategies for reconstruction in Yemen.



Reconstruction Suggested Strategies for Yemen:

Yemen needs reconstruction strategies that include a set of principles, namely: to be preventive, comprehensive, to represent part of future developmental plans, to be flexible, and achieve sustainability. The results of the study reached the need to work in three phases, namely:

The first phase includes strategies of the pre-conflict phase (the current phase):

This is the stage of collecting information and setting expectations and potential scenarios, and based on this information, policies, plans, strategies and the distribution of roles will be developed for preparation, prevention and mitigation of the impact of the disaster or conflict, as well as strategies will be distributed according to these procedures as follows:

Preventive Strategies:

They are strategies concerned with preventing the emergence of new hotbeds of conflict or disasters, while at the same time seeking to achieve peacebuilding support and ending conflict, as follows:

Strategy to enhance social peace: by adopting activities that encourage peace initiatives, coexistence and acceptance of others. Sensitive and societal tension areas are targeted, enhancing the conviction of society and its elites about the risks of continuing conflict and reducing gender-based violence and bullying against vulnerable and marginalized groups.

Peacebuilding Strategy: It is carried out by supporting reconciliation initiatives between the various conflicting parties and seeking to find a common ground in which everyone lives, and at the same time it seeks the role of the judiciary and the justice system in Yemen.

Coping strategy: by equipping communities that are expected to be exposed to environmental or health disasters or other disasters or even conflict with the necessary means that enable the population to face these threats and achieve safety and survival for them.



Stability support strategy: by achieving stability in its various economic, security, environmental and political aspects through controlling currency rates, supporting the continuation of the activities of the central bank, the return of the government and the practice of its activities, maintaining the continuation of operational services and preventing them from stopping, as well as ensuring that the situation does not deteriorate and in the worst cases keep the situation as it is, in case of failure of making progress.

Food security strategy: by ensuring the provision of a commodity stock of basic foodstuffs that meet the needs of the population for a period of at least three months. The private sector should be encouraged and given facilities and incentives.

Community Engagement in Security Strategy: This is done by encouraging the community advocacy initiative in combating crime and that the citizen is a partner, and an essential maker of security.

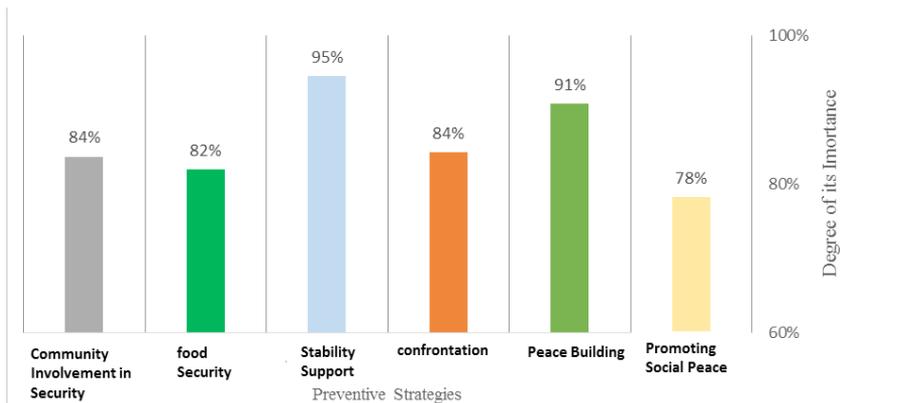


Figure 6: The relative importance of preventive strategies

In the adjacent figure, we find that the relative importance of the strategy of “the degree of importance of this strategy” to support stability is equal to 95% and in the second place the peace building strategy came with a relative importance of 91%, while the strategy of confrontation and the strategy of community involvement in security represented 84% for each, while the relative importance reached 82% for the food security



strategy. Moreover, the strategy for promoting social peace got 78% in terms of its relative importance, on the one hand, and on the other hand, we note from the figure below that all preventive strategies fall within the limits of the response period is very important, except for the strategy of strengthening social peace, which falls within the response period importance according to the consensus of all focus rings.

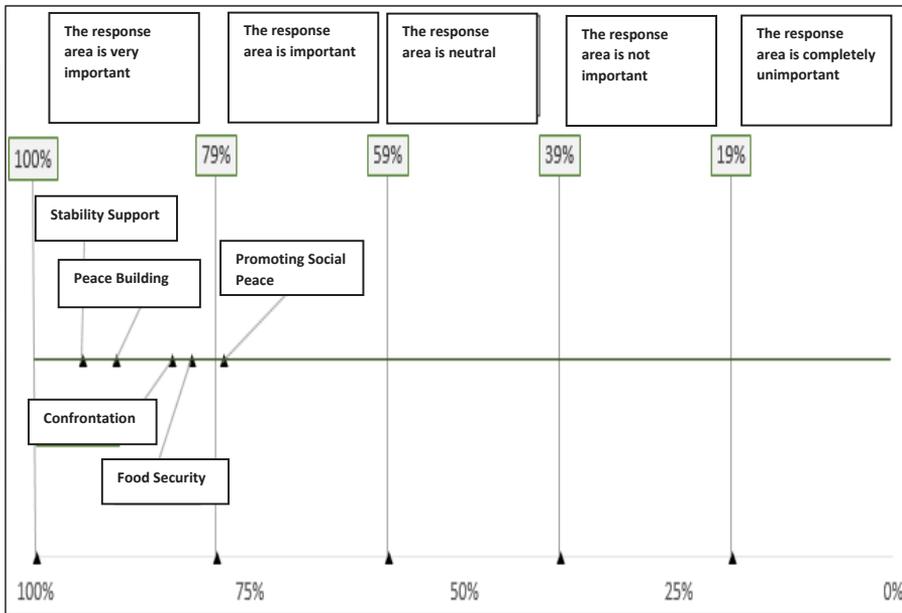


Figure 7: The degree of importance of preventive strategies according to the alternatives for responding to the study sample

The following table reviews the relative importance of preventive strategies according to the governorates in which they are applied.



Table 2: The relative importance of preventive strategies by governorates

#	Preventive Strategies	Relative Importance			Relative Importance to the Whole Community
		Sana'a	Aden	Taiz	
1	Promoting Social Peace	75%	78%	81%	78%
2	Peace Building	85%	95%	92%	91%
3	Confrontation	87%	82%	84%	84%
4	Stability Support	93%	95%	95%	95%
5	Food Security	82%	75%	89%	82%
6	Community Involvement in Security	72%	90%	89%	84%

Mitigation Strategies:

They are strategies concerned with minimizing the impact of conflict or disasters on citizens, society, and the state in general and they are as follows:

Relief strategy: by mobilizing humanitarian efforts in supporting the affected, weak and vulnerable communities, and the displaced in the nutritional, social, educational, health and environmental aspects.

Strategy to enhance confidence: It consists in mobilizing efforts and partnership with international organizations and influential personalities to carry out initiatives that neutralize civilians, initiatives of prisoners release and exchange and initiatives to create common principles that all parties believe in not targeting citizens and infrastructure in accordance with international humanitarian law (the Geneva Conventions).

Strategy to activate state institutions: by harnessing capabilities and enabling government institutions to return to the homeland. If the government, with its institutions, is unstable, it cannot achieve stability for its citizens and this includes the return of the House of Representatives, as well as enabling the state to export oil and gas and collect various resources.

Emergency reconstruction strategy: It will be implemented in stable areas and the necessary facilities, which are an urgent priority and being rehabilitated, they will have a positive, direct, and quick effect.



Strategy to stimulate the private sector: This is done by adopting initiatives aimed at encouraging the private sector, such as facilitating the flow of goods and flexibility for internal transport. These initiatives are adopted by all parties to the conflict, as well as opening and rehabilitating ports.

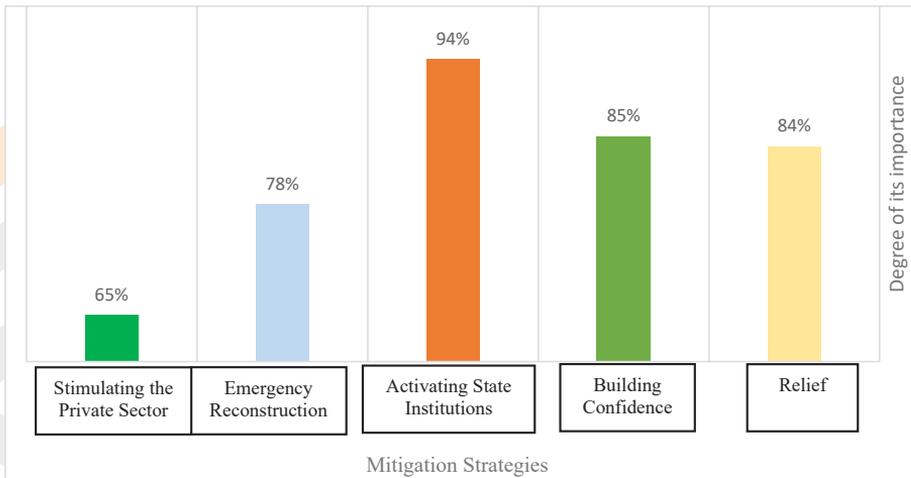


Figure 8: The Relative Importance of Mitigation Strategies

In the adjacent figure, we find that the relative importance of the strategy of “the degree of this strategy importance” supporting the activation of state institutions is 94% and the strategy of building confidence came in second place with a relative importance of 85%, while the relief strategy came to 84%, while the relative importance of the emergency reconstruction strategy reached 78%. Finally, the sector stimulating strategy came with a relative importance of 65%. On the other hand, we note from the figure below that the relief strategy, the confidence-enhancing strategy, and the strategy for activating state institutions are very important within the response, while the emergency reconstruction strategy and the private sector stimulus strategy fall within the important response according to the consensus of all focus groups.

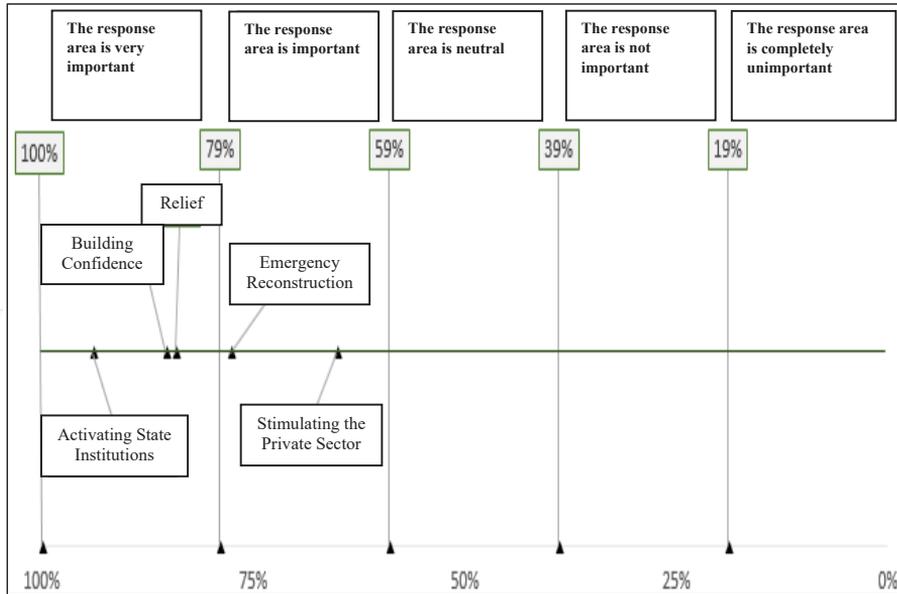


Figure 9: The degree of importance of mitigation strategies according to the alternatives' response study sample

The following table shows the relative importance of mitigation strategies according to the governorates in which they were implemented.

Table 3: The Relative Importance of Mitigation Strategies by Governorates

#	Mitigation Strategies	Relative Importance			Relative Importance to the Whole Community
		Sana'a	Aden	Taiz	
1	Relief	87%	82%	84%	84%
2	Confidence Enhancing	83%	88%	84%	85%
3	Activating State Institutions	97%	95%	91%	94%
4	Emergency Reconstruction	85%	77%	72%	78%
5	Private Sector Stimulus	63%	63%	69%	65%



Emergency Response Strategies:

They are strategies concerned with a rapid and organized response in the event of emergency disasters and sudden unexpected events or emergencies, including:

Emergency Relief Strategy:

According to this strategy, intervention is made for the purposes of emergency relief for bad events that may happen suddenly and work with it is activated in the event of an earthquake, floods or epidemics in a water area or fires, and accordingly, the Supreme Authority for Reconstruction should have the capabilities and the necessary financial resources, as well as the powers to initiate direct and rapid rescue and aid procedures.

As we can see from the figure below that the relative importance of this strategy is 74% and it is within the limits of the important response according to the consensus of all focus groups.

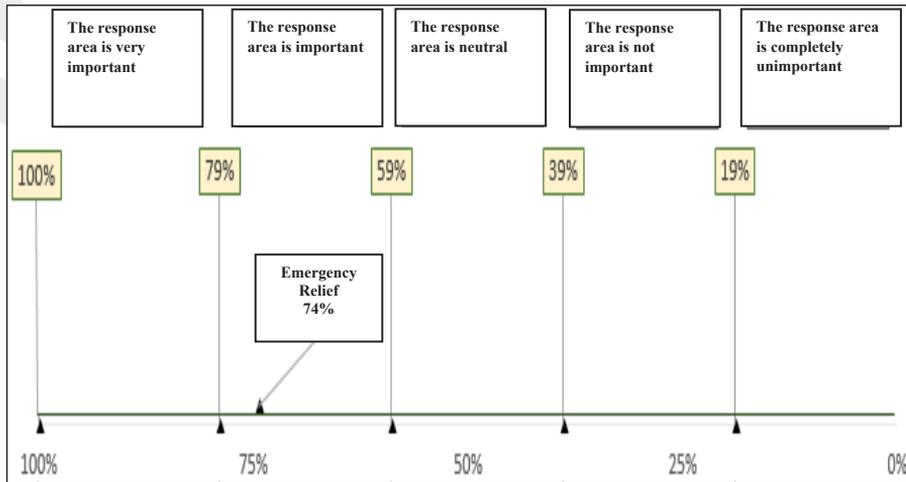


Figure 10: The degree of importance of emergency strategies according to the study sample response alternatives



The following table shows the relative importance of mitigation strategies according to the governorates in which they were implemented.

Table 4: The relative importance of emergency strategies by governorates

#	Emergency Strategies	Relative Importance			Relative Importance to the Whole Community
		Sana'a	Aden	Taiz	
1	Emergency Relief Strategies	75%	72%	77%	74%

Immediate Post-conflict Strategies (recovery phase):

These strategies seek to achieve recovery, which is the stage that precedes the reconstruction process, during which the displaced people return, the hostilities cease, the roads are opened and the prisoners are released, etc. The strategies of this stage represent a basic pillar for entering the reconstruction process, namely:

Peacebuilding Strategy:

This strategy begins immediately after the end of the conflict and through it various initiatives are implemented that make people aware of the importance of peace and accept the other and explain to them the ugliness of war and its effects. This strategy also seeks to support the state in creating legal frameworks that criminalize acts of violence and initiatives that encourage people to get rid of arms.

Social justice strategy:

During this stage, reconciliation initiatives of all kinds must be adopted, satisfying the oppressed and making them happy and considering their sacrifices for the sake of the homeland and being honored and compensated, working to alleviate differences and creating common ground, as well as encouraging comprehensive media initiatives that reinforce this stage, confront and criminalize every action that would provoke hatred or individual, group or sectarian bullying.

Return to home strategy:

This strategy seeks to end all displacement camps and various shelters, such as schools or government facilities, by counting all



displaced persons' gatherings and providing them with the necessary needs (compensation, building and rehabilitating their destroyed homes, and financial incentives to adapt upon return) that enable them to return to their villages, and their cities from which they came before the conflict.

Emergency reconstruction strategy:

Through this strategy, contracts are made by following the approach of contractors and after determining the needs according to emergency priorities. Initiation of reconstruction by large companies whether local or international, and vital roads, schools, ports, airports and basic infrastructure sectors like electricity, water, health, etc. are targeted. In fact, the reconstruction of these sectors will be considered an essential pillar of the comprehensive reconstruction phase.

No hunger, no disease strategy:

Through this strategy, food relief activities for vulnerable and impoverished communities continue, expand the spread of mobile health services, create labor-intensive projects and adopt a cash-for-work strategy, and in the case of vulnerable groups, the role of the Social Security Fund is activated.

Early economic recovery strategy:

This strategy seeks to strengthen the local currency, reduce prices to the level it was before the outbreak of the war, strengthen the role of the central bank, enable the state's public finances to carry out its functions, operate ports and airports, export gas and oil derivatives and pay employees' salaries on a permanent basis without interruption.

Strategy to support the private sector and small projects:

This strategy aims to stimulate the private sector and provide the necessary guarantees to carry out its tasks easily without risk. This strategy also aims to expand the activities of lending and microfinance



institutions that create small projects that create many labors and direct lending incentives in specific directions and areas such as the agricultural, livestock or fish sector (productive sectors).

The strategy of returning to normal life:

where these strategies are aimed at ending all informal military formations that were involved in combat operations during the period of conflict, as these fighters are absorbed either to engage within the state's army institutions, or within other institutions, or according to a study prepared to determine desires and providing rewards for giving up weapons, qualifying them to be owners of small projects, reintegrating them into society and working on their return to normal life away from conflict.

The security strategy is a collective responsibility:

This strategy aims to adopt community-based initiatives in support of security, as the latter is considered a motivating ground for investors and a fundamental pillar guaranteeing the sustainability of all reconstruction activities. This includes spreading a sense of safety among the people and reviving the noble values in Yemeni society, as well as encouraging demining and protection initiatives for vulnerable groups, strengthening the partnership of police departments with society and the role of courts and the judiciary.

Constructive media strategy:

This strategy seeks to adopt initiatives and a social media contract that limits the destructive media that provokes conflicts and litigation and that the work of the media is based on evidence and argument. Otherwise, it will be a platform for sectarian or regional mobilization, on the one hand, and on the other hand, all constructive media initiatives and awareness are adopted in the field of peace building, reconstruction, social accountability, and institutional transparency.



Strategy for the restoration of state institutions:

The presence of the state is considered essential in creating stability and this strategy will adopt the initiative to build the institutions of the modern Yemeni state, starting with the referendum on the constitution, forming regions and localities and strengthening the form of government agreed upon by the Yemenis.

The following figure shows the relative importance of these strategies, as the strategy of restoring state institutions is of absolute relative importance, reaching 100% and also the relative importance of the strategy to return to normal life and the early economic recovery strategy reached 98% each. As we note, the rest of the strategies have obtained a relative importance of not less than 80% except for the strategy to support the private sector and small enterprises, with a relative importance of about 70%.

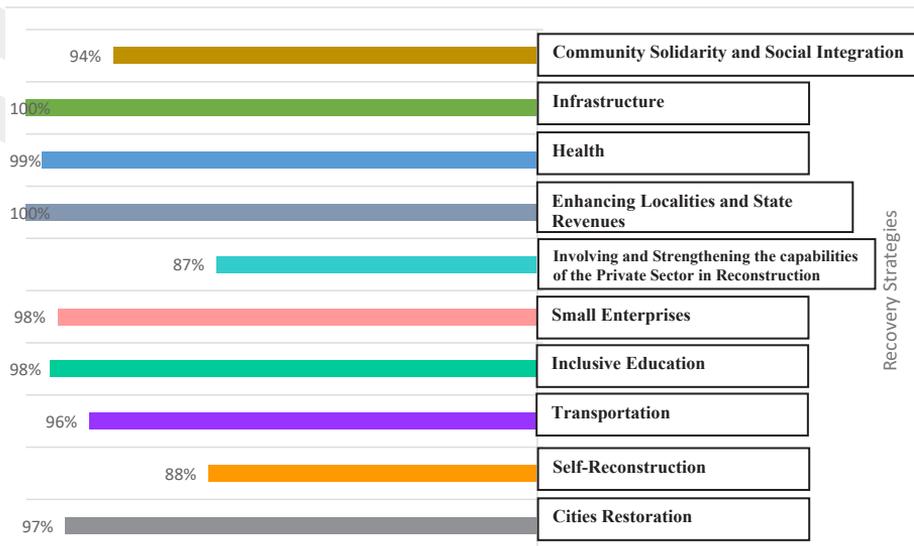


Figure 11: The Relative Importance of Recovery Strategies

Also, by looking at the following figure, we notice that all strategies fall within the response area of very important, except for the strategy to support the private sector and small projects, as they fall within the



important response area, according to the consensus of the members and members of the focus group discussions that have been applied in the concerned governorates.

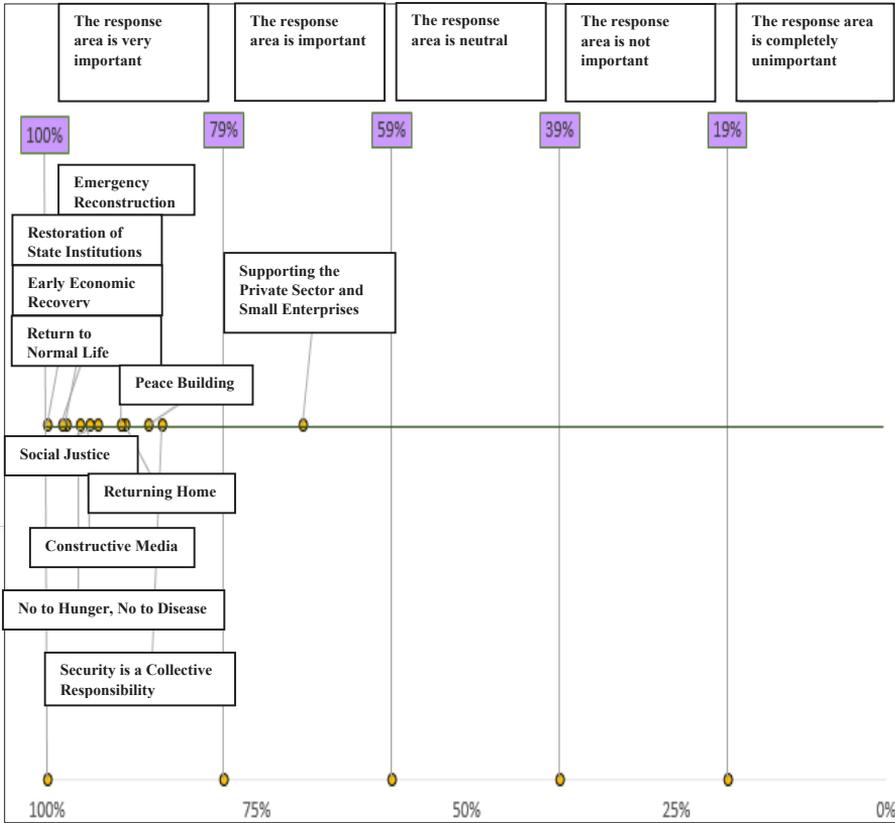


Figure 12: Recovery strategies according to the responses of the sample members

The following table presents the relative importance of recovery strategies according to the governorates in which they were implemented¹⁹



Table 5: The relative importance of recovery strategies by governorates

#	Recovery Strategies	Relative Importance			Relative Importance for the Whole Community
		Sana'a	Aden	Taiz	
1	Peace Building	87%	83%	94%	88%
2	Social Justice	93%	90%	98%	94%
3	Returning Home	85%	90%	97%	91%
4	Emergency Reconstruction	82%	92%	100%	91%
5	No to Hunger, No to disease	95%	95%	98%	96%
6	Early Economic Recovery	97%	98%	98%	98%
7	Supporting the Private Sector and Small Projects	68%	68%	72%	70%
8	Returning to Normal Life	95%	100%	100%	98%
9	Security is a Collective Responsibility	82%	82%	95%	86%
10	Constructive Media	93%	92%	100%	95%
11	Restoration of State Institution	100%	100%	100%	100%

Reconstruction Phase Strategies: After the recovery phase is completed and the people feel peace, and the diplomatic attachés and embassies become active in their activities, the implementation of these strategies is initiated:

Cities restoration strategy: This strategy extends to five years at most, and through this strategy, the buildings, streets and service facilities destroyed by the conflict in the main cities are reconstructed, and in this aspect the modernization and development approach is followed. In fact, this strategy will create many business opportunities.

Self-reconstruction strategy: This strategy aims to adopt local community initiatives in reconstruction, as the strategy will encourage local communities to form their own offices or bodies for reconstruction with independent funds funded by donations and grants from local or expatriate residents and these units operate under the supervision of the Supreme Authority for Reconstruction, which, in turn, will provide incentives and participate in certain percentages for projects of these



units and create a competitive environment between communities in reconstruction activities.

Transportation strategy: This strategy seeks to mobilize support, initiatives and grants for the implementation of strategic roads, bridges and tunnels across the country.

Inclusive Education Strategy: This strategy seeks to provide educational projects for the entire population by building schools commensurate with the population and likewise building large universities and vocational and technical institutes capable of absorbing all basic education outcomes, and criminalizing girls' deprivation of education.

Small Enterprises Strategy: This strategy aims to eliminate unemployment by encouraging initiatives of microfinance institutions in qualifying and enabling young people to own their own enterprises.

Strategy of Engaging and Enhancing the Capabilities of the Private Sector in Reconstruction: This strategy seeks to encourage the private sector and its participation in the implementation of some projects in partnership with external or international contractors.

Strategy for Enhancing Localities and State Revenues: These strategies will encourage local administrations in various regions to expand and enhance their revenues by encouraging them and enabling them to take advantage of the opportunities available to them, which will benefit these directorates.

Health strategy: This strategy seeks to adopt reconstruction initiatives in the health sector. In fact, the involvement of the private sector is considered essential in this sector.

Infrastructure Strategy: This strategy seeks to encourage initiatives aimed at providing the necessary infrastructure in the electricity, energy and communications sectors.



Community solidarity and integration strategy: The conflict has left hundreds of thousands of affected cases in addition to tens of thousands of families who lost breadwinners and hundreds of thousands of widowed women. This strategy seeks to encourage community solidarity initiatives and social integration for vulnerable and weak groups and women and to enhance the role of the community in adopting this segment and stand by it.

The following figure shows the relative importance of these strategies, as the infrastructure strategy and the strategy for enhancing localities' and state revenues are of absolute relative importance of 100%, and as we note that the rest of the strategies obtained a relative importance of not less than 90% except for the self-reconstruction strategies and the strategy of engaging and enhancing the capabilities of the private sector in the reconstruction, where the relative importance of each reached 88% and 87%, respectively, according to the response of all focus group members

The following figure shows that all the strategies fall within the very important response area

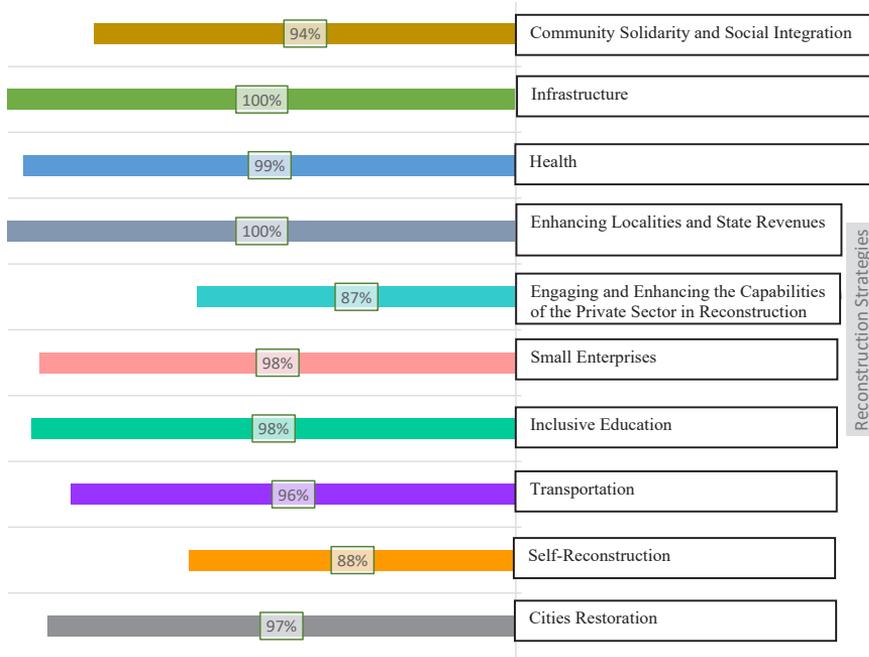


Figure 13: The relative importance of reconstruction strategies

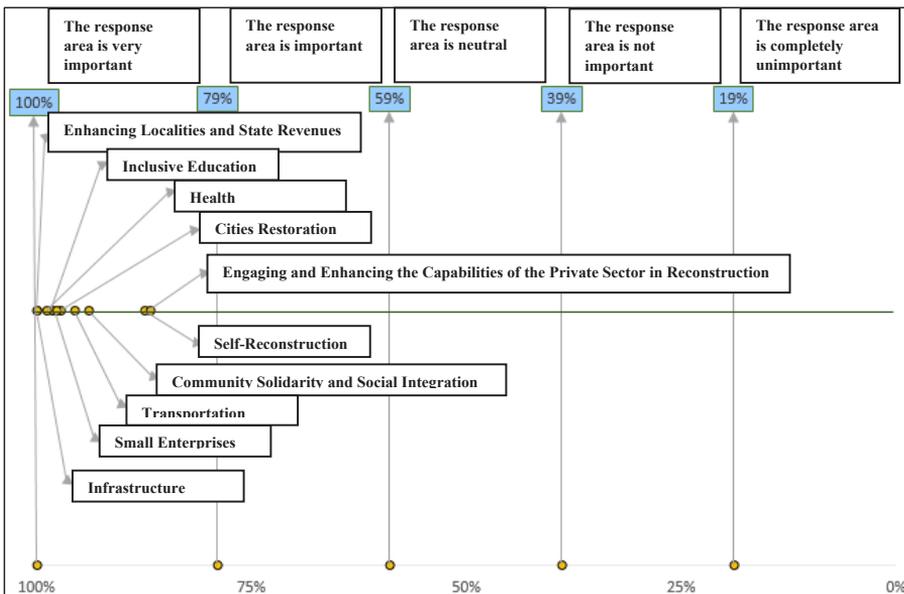


Figure 14: Reconstruction strategies according to the response of the study sample



The following table displays the relative importance of reconstruction strategies according to the governorates in which they were implemented:

Table 6: The relative importance of reconstruction strategies by governorates

#	Reconstruction Strategies	Relative Importance			Relative Importance for the Whole Community
		Sana'a	Aden	Taiz	
1	Cities Restoration	93%	98%	100%	97%
2	Self-Reconstruction	87%	83%	92%	88%
3	Transportation	95%	92%	100%	96%
4	Inclusive Education	98%	100%	97%	98%
5	Small Enterprises	98%	100%	95%	98%
6	Engaging and Enhancing the Capabilities of the Private Sector in Reconstruction	83%	87%	91%	87%
7	Enhancing Localities and State Revenues	100%	100%	100%	100%
8	Health	97%	100%	100%	99%
9	Infrastructure	100%	100%	100%	100%
10	Community Solidarity and Social Integration	90%	92%	100%	94%



Recommendations:

The study came out with a number of recommendations that would prepare for the reconstruction operations in Yemen:

1. The official authorities should create a Supreme Authority for Reconstruction, to be established by presidential decree, and work on:
 - Embrace the humanitarian needs according to the UN report within its current strategies and intervene through the Supreme Authority Fund.
 - Adopting the strategies presented in this study.
2. The House of Representatives must prepare a draft law that organizes the work of this commission and guarantees independence and effectiveness.
3. Supporting recommendations for organizations:
 - Adopting reconstruction activities within a unified national and institutional framework that preserves the sovereignty of the country without operating in a separate and individual framework.
 - Involving donors and international organizations in preparing the legal and administrative frameworks for the Supreme Authority for Reconstruction to enhance their confidence in them and consolidate the partnership with them.
 - Supporting international organizations and official bodies for such studies.
 - Encouraging and supporting reconstruction studies at the regions and districts levels, so that they give clearer and deeper pictures.



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وثيقة المناقشات البؤرية

معلومات عن الجلسة أو المقابلة	
Time :	Researcher Name:.....
..... المحافظة: Governorate:	Date:
..... العزلة: Region المديرية: Directorate :
..... مدة الجلسة: Session Duration القرية: the village:
..... مساعد الباحث: Research assistant:	تم تضيغ المقابلة: لا <input type="checkbox"/> نعم <input type="checkbox"/>
	Interview taped: No <input type="checkbox"/> Yes <input type="checkbox"/>

مع أنه لا دلائل على نهاية وشيكة للنزاع إلا ان من الملح البدء في وضع الاستراتيجيات السريعة لإعادة الاعمار في اعقاب العمليات القتالية التي ستنتهي عاجلاً ام آجلاً وقد اثبتت التجارب الدولية ضرورة البدء المبكر في التخطيط لإعادة الاعمار

Although there are no signs of an imminent end to the conflict, it is urgent to start developing rapid strategies for reconstruction in the wake of the combat operations that will end sooner or later. International experiences have proven the necessity of early start planning for reconstruction

هل يتوفر الامن والاستقرار في حده الأدنى لإعادة الاعمار في منطقتك؟ نعم <input type="checkbox"/> ، لا <input type="checkbox"/> .	١
Is there minimum security and stability for reconstruction in your area? No <input type="checkbox"/> Yes <input type="checkbox"/>	



٢	<p>إذا كانت الإجابة في الفقرة السابقة ب لا اجب على السؤال التالي:</p> <p>if the answer to the previous question is no, answer the following question :</p> <p>وضح أسباب عدم توفر الحد الأدنى من الامن والاستقرار؟</p> <p>Explain the reasons for the lack of a minimum level of security and stability?</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>ما لذي ينبغي عمله لتوفير الحد الأدنى من الامن والاستقرار اللازم من اجل الشروع بعمليات إعادة الاعمار؟</p> <p>B. What should be done to provide the minimum level of security and stability necessary to start the reconstruction operations?</p> <p>.....</p> <p>.....</p> <p>.....</p>
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٣	<p>هل يتوفر لديكم خطط لإعادة الاعمار في المناطق او الدوائر الخاصة بكم؟</p> <p>Do you have plans for reconstruction in your regions or departments?</p> <p>No <input type="checkbox"/> Yes <input type="checkbox"/></p> <p>إذا كانت الإجابة ب نعم اجب على الاتي :</p> <p>If the answer is yes, answer the following:</p> <p>يرجى ذكر ابرز مضمين هذه الخطط؟</p> <p>Please mention the most prominent contents of these plans?</p> <p>.....</p>
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<p>من وجهة نظرك من يجب ان يدير ملف إعادة الاعمار في اليمن؟</p> <p>From your point of view, who should manage the reconstruction ?operations file in Yemen</p>	٤
<p>لقد مر اليمن بعدد من تجارب إعادة الاعمار وكانت على مستوى المحافظات وتبلورت هذه...التجارب على هيئة صناديق ومجالس</p> <p>Yemen has gone through a number of reconstruction experiences, and they were at the governorate level. These experiences crystallized in the form of funds and councils</p> <p>ما الذي ينبغي عمله من اجل عدم تكرار الفشل في مبادرات إعادة الاعمار من وجهة نظرك؟</p> <p>What should be done in order not to repeat the failure of the ?reconstruction initiatives from your point of view</p>	٥
<p>شهدت التجارب السابقة في إعادة الاعمار في اليمن اختلالات ما الذي ينبغي عمله في الأوضاع التالية:</p> <p>Previous experiences in the reconstruction in Yemen witnessed imbalances. What should be done in the following situations:</p>	٦
<p>عدم وجود خطط لإعادة الاعمار؟</p> <p>a. No plans for reconstruction?</p> <p>استمرار العمليات الحربية؟</p> <p>B. Continuing hostilities?</p> <p>ماهي ابرز الاسباب في فشل المبادرات السابقة ؟</p> <p>c. What are the main reasons for the failure of previous initiatives?</p>	



<p>٧ وضع مدى قدرة هذه الوكالات على القيام بمهام إعادة الاعمار؟ هل تحتاج الى هيكلية إدارية، ام هناك حاجة الى انشاء هيئات ووحدات جديدة؟</p> <p>Explain the extent of the ability of these agencies to carry out reconstruction tasks? Do you need an administrative restructuring, or is there a need to create new bodies and units?</p>	٧
<p>٨ .. كما ذكرنا سابقا ان آخر مبادرات إعادة الاعمار كانت ممثلة بال مكتب التنفيذي (ديسمبر ٢٠١٣م): شرح التجربة</p> <p>As we mentioned earlier, the last reconstruction initiatives were represented by the Executive Office (December 2013 AD): Explanation of the experience...</p>	٨
<p>هل انت مع فكرة انشاء مكتب مشابه لمكتب ٢٠١٣م للاضطلاع بعمليات وانشطة إعادة الاعمار؟ <input type="checkbox"/> لا <input type="checkbox"/> نعم،</p> <p>Are you with the idea of establishing an office similar to the office of 2013 AD to carry out reconstruction activities and operations? No <input type="checkbox"/> Yes <input type="checkbox"/></p> <p>إذا كانت الإجابة ب لا ماهي البدائل التي تراها مناسبة</p> <p>If the answer is no, what alternatives do you see fit?</p>	
<p>٩ هل انت مع انشاء هيئة عامة مستقلة ودائمة لإعادة الاعمار ولديها سياسات خاصة بها لشراء الخدمات وتوظيف الافراد؟ من وجهة نظرك ماهي الاشتراطات المهمة والضرورية لهذه الهيئة؟</p> <p>Are you with the establishment of an independent and permanent public authority for reconstruction and has its own policies for the purchase of services and the employment of individuals? In your opinion, what are the important and necessary requirements for this body?</p>	٩
<p>١٠ هل يجب أن تحتوي هيئة إعادة الاعمار على أعضاء ممثلين من مجتمع المانحين</p> <p>Should the reconstruction body have representative members of the donor community</p>	١٠



<p>كيف تقترح اشراك أصحاب المصلحة في أنشطة إعادة الإعمار؟</p> <p>How do you propose to involve stakeholders in the reconstruction activities?</p>	١١
<p>بغض النظر عن توقيت انتهاء النزاع الحالي، مباشرة بعد انتهاء النزاع، ستحتاج جهود التعمير الى التركيز على تحقيق الاستقرار الاقتصادي بسرعة لمساعدة اليمنيين على تلبية احتياجاتهم الأساسية ووضع الأساس للذهاب ابعد من تلقي المساعدات المباشرة ... من وجهة نظرك وضح كيف يمكن القيام بذلك</p> <p>Regardless of when the current conflict ends, immediately after the conflict ends, reconstruction efforts will need to focus on quickly achieving economic stability to help Yemenis meet their basic needs and lay the groundwork for going beyond receiving direct aid... In your view, explain how this can be done</p>	١٢

الاستبيان

هيئة إعادة الاعمار

موافق تماماً Strong agree	موافق الى حد ما agree	محايد neutral	غير موافق disagree	غير موافق اطلاقاً Strong disagree	الفقرة Vertebra- clause	
					<p>على اليمن ان يقوم استباقيا بإنشاء هيئة مستقلة وعامه للتعمير ؟</p> <p>Should Yemen preemptively establish an independent and public authority for reconstruction?</p>	1
					<p>يجب ان تتمتع هيئة إعادة الاعمار بولاية واضحة لتنسيق جهود إعادة الاعمار ؟</p> <p>Should the reconstruction authority have a clear mandate to coordinate reconstruction efforts?</p>	2



موافق تماماً Strong agree	موافق الى حد ما agree	محايد neutral	غير موافق disagree	غير موافق اطلاقاً Strong disagree	الفقرة Vertebra- clause	
					على هيئة إعادة الاعمار القيام بالتخطيط الاستراتيجي وتصميم السياسات وتنظيم التمويل The Reconstruction Authority should carry out strategic planning, design policies, and organize financing	3
					على هيئة إعادة الاعمار جمع الأموال To raise funds for reconstruction	4
					على هيئة إعادة الاعمار التنسيق مع السلطات المركزية والمحلية والمنظمات الدولية والجهات المانحة وأصحاب المصلحة المحليين The reconstruction authority should coordinate with central and local authorities, international organizations, donors, and local stakeholders	5
					على هيئة الاعمار وضع اليات واضحة لإجراءات الرقابة والتقييم لضمان الشفافية والمساءلة The Reconstruction Authority should establish clear mechanisms for monitoring and evaluation procedures to ensure transparency and accountability	6
					يجب على هيئة إعادة الاعمار عمل بروتوكولات خاصة بها للتوريد والتوظيف ودفع الرواتب The Reconstruction Authority must make its own protocols for the supply, employment and payment of salaries	7



موافق تماما Strong agree	موافق الى حد ما agree	محايد neutral	غير موافق disagree	غير موافق اطلاق Strong disagree	الفقرة Vertebra- clause	
					<p>يجب أن يكون هناك مكاتب لإعادة الاعمار في المناطق المتضررة تتبع الهيئة العامة لإعادة الاعمار</p> <p>There must be reconstruction offices in the affected areas that follow the General Authority for Reconstruction.</p>	8
					<p>يتم تمكين مكاتب إعادة الاعمار المحلية بشكل كامل من إدارة مشاريع ذات نطاق معين ضمن مجالات اختصاصها</p> <p>Local reconstruction offices have the full authority to manage projects of a certain scope within their areas of competence.</p>	9
					<p>يجب ان يشترك أصحاب المصلحة في أنشطة مكاتب إعادة الاعمار المحلية بحسب القدرات والكفاءة</p> <p>Stakeholders should participate in the activities of the local reconstruction offices according to capacity and competence</p>	10
					<p>على الهيئة العامة ان تضع اطار عمل واضح للعمل مع جميع أصحاب المصلحة، بما في ذلك تنسيق المشاريع طويلة الأجل والاستراتيجية مع الحكومة اليمنية</p> <p>The General Assembly should establish a clear framework for working with all stakeholders, including coordinating long-term and strategic projects with the Yemeni government</p>	11



موافق تماماً Strong agree	موافق الى حد ما agree	محايد neutral	غير موافق disagree	غير موافق اطلاقاً Strong disagree	الفقرة Vertebra- clause	
					<p>على الهيئة العامة لإعادة الاعمار انشاء صندوق جماعي لجميع المانحين، سواء أكان يدار من قبل الهيئة العامة لإعادة الاعمار نفسها او تشترك في إدارته هيئة إعادة الاعمار.</p> <p>The General Authority for Reconstruction must establish a collective fund for all donors, whether it is managed by the General Authority for Reconstruction itself or jointly managed by the Reconstruction Authority</p>	12
					<p>يجب عمل مصرف انمائي دولي او إقليمي يشرف على صندوق إعادة الاعمار</p> <p>An international or regional development bank must be established to supervise the reconstruction fund</p>	13
					<p>على هيئة إعادة الاعمار ان تنشئ وحدة للرقابة والتقييم جنباً الى جنب مع الكيانات الحكومية القائمة</p> <p>The Reconstruction Authority should establish a monitoring and evaluation unit along with the existing government entities</p>	14
					<p>ينبغي ان يشمل مجلس إدارة الهيئة العامة لإعادة الاعمار ممثلين من مجتمع المانحين</p> <p>The board of directors of the General Authority for Reconstruction should include representatives from the donor community.</p>	15



موافق تماما Strong agree	موافق الى حد ما agree	محايد neutral	غير موافق disagree	غير موافق اطلاق Strong disagree	الفقرة Vertebra- clause	
					ينبغي ان يشمل مجلس إدارة الهيئة العامة لإعادة الاعمار ممثلين من مجلس الوزراء The board of directors of the General Authority for Reconstruction should include representatives from the Council of Ministers.	16
					ينبغي ان يشمل مجلس إدارة الهيئة العامة لإعادة الاعمار ممثلين من القطاع الخاص The board of directors of the General Authority for Reconstruction should include representatives from the private sector.	17
					ينبغي ان يرأس مجلس إدارة الهيئة نائب رئيس الوزراء لضمان حصوله على اعلى مستوى من الدعم. The board of directors of the authority should be chaired by the Deputy Prime Minister to ensure that it receives the highest level of support.	18
					ينبغي ان يكون لإدارة الهيئة العامة مدير تنفيذي يعين بالتوافق من قبل جميع الأعضاء The management of the general body should have an executive director appointed by consensus by all members	19



موافق تماماً Strong agree	موافق الى حد ما agree	محايد neutral	غير موافق disagree	غير موافق اطلاقاً Strong disagree	الفقرة Vertebra- clause	
					<p>يجب ان تكون مسؤوليات مجلس الإدارة منصوص عليها بوضوح في المرسوم المنشئ للمكتب؟</p> <p>Should the responsibilities of the board of directors be clearly stated in the decree establishing the office?</p>	20
					<p>يجب ان تقتصر مسؤوليات مجلس إدارة هيئة الاعمار على التوجيه والاشراف على المستوى الاستراتيجي فقط؟</p> <p>Should the responsibilities of the Board of Directors of the Reconstruction Authority be limited to directing and supervising at the strategic level only?</p>	21
					<p>يجب ضمان امتلاك الإدارة التنفيذية لهيئة إعادة الاعمار المرونة المطلوبة لتنفيذ المشاريع بشكل فعال؟</p> <p>Is it necessary to ensure that the executive management of the Reconstruction Authority has the flexibility required to implement projects effectively?</p>	22



موافق تماما Strong agree	موافق الى حد ما agree	محايد neutral	غير موافق disagree	غير موافق اطلاق Strong disagree	الفقرة Vertebra- clause	
					<p>يجب ان يتبع مجلس إدارة هيئة الاعمار عملية تنافسية وشفافة وقائمة على الجدارة لتعيين مديره التنفيذي ومديري مكاتب إعادة الإعمار المحلية وجميع الموظفين</p> <p>The board of directors of the reconstruction authority should follow a competitive, transparent and merit-based process for appointing its CEO, directors of local reconstruction offices and all staff</p>	23
					<p>على هيئة إعادة الأعمار ان تسعى الى اشراك المهنيين والمواطنين اليمنيين في جميع القطاعات الاقتصادية على المستويات المركزية والمحلية لتسهيل الأعمال الفنية لإعادة الأعمار؟</p> <p>Should the reconstruction authority seek to involve Yemeni professionals and citizens in all economic sectors at the central and local levels to facilitate the technical work of reconstruction?</p>	24
					<p>على هيئة إعادة الأعمار اشراك منظمات المجتمع المدني في تقييم المشاريع المنفذة من قبل مكاتب إعادة الأعمار المحلية</p> <p>The Reconstruction Authority should involve civil society organizations in evaluating the projects implemented by the local reconstruction offices</p>	25



موافق تماما Strong agree	موافق الى حد ما agree	محايد neutral	غير موافق disagree	غير موافق اطلاق Strong disagree	الفقرة Vertebra- clause	
					على مكاتب الاعمار المحلية اشراك أصحاب المصلحة في تحديد الاحتياجات ورفعها الى الهيئة العامة لإعادة الاعمار Local reconstruction offices should involve stakeholders in identifying needs and submit them to the General Authority for Reconstruction	26



The Impact of Expansion of Urban Area on the Agricultural Development

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2021 AD/ 1442 H



Abstract :

The study aimed to monitor agricultural lands due to urbanization and to know the role of agricultural lands reduction on the developmental side in the study area, through the production of digital maps representing the urban expansion, agricultural lands, and wastelands during the time period from 1984 AD to 2017 AD in the study area, which surface is 361 km². Several methods were used in the study, in addition to the questionnaire, satellite images, topographic maps, and statistical and spatial download, with the aim of coming up with a number of maps showing the reduction of agricultural land during various stages. The study reached a number of important results where it found that the surface of urban area increased from 3,80 km² in 1984 AD to 115,5km² in 2017 AD, which was accompanied by the reduction of the agricultural lands from 238,2km² to 92,15 km² during the same period while the wasteland area increased from 119 km² to 153,6 km².

The study revealed that the reduction of agricultural lands affected the developmental aspects, including agricultural development in terms of lack of agricultural production and agricultural areas reduction. It also affected the environmental development represented by a reduction in green spaces, distorting the aesthetic view of mountains, and its effect on the local climate as a result of green spaces reduction and the expansion that affected the temperature and relative humidity, and in the movement of winds. This change varies from one region to another, as the local climate is more stable in the outskirts and more extreme in the center, where urbanization and areas of high population density are located.

The study found that the change that occurred in the mountain areas and distorted the aesthetic view has affected tourism development, and it showed that the most important factors that caused the deterioration of agricultural lands are roads and the increase in population size. The most prominent recommendation of the study was to establish laws that would prevent building on agricultural land as well as direct urban development towards non-agricultural wasteland, enacting laws and legislations, and continuing to modernize them whenever the need arises in order to preserve agricultural lands, which represent the most important pillars of agricultural, environmental and tourism development.



Introduction:

The urbanization of agricultural lands is one of the most important modern and applied studies that has been the focus of much research and studies at the global, regional and local levels, because of its great role in achieving and improving development, especially since urban expansion is the result of misuse of the land, and this led to a decrease in vegetation cover, and a change in the ecosystem of the earth and the environment. This is evident in cities and various population groups that currently occupy more than 2% of the earth's surface (Lester R. Brown et al., 1985 AD, p. 220).

In addition, the various human activities that have contributed to meeting the continuous and urgent human need, to create the greatest possible luxury on the surface of the earth, have led to a growing demand for land ownership in an ill-considered and random manner far from developmental plans, which led to serious changes in agricultural land fertile. And these human activities have directly affected the developmental aspects that aim to achieve the well-being and social progress of many countries that suffer from the phenomenon of urban expansion on agricultural lands, without serious monitoring, causing many losses and developmental obstacles, including the deterioration of the agricultural sector, food security, in addition to the presence of natural disasters that led to droughts and floods, which caused an increase in the proportion of malnutrition in countries characterized by high population density dependent on agriculture, rain or irrigation as a result of periodic droughts, which took the lives of more than 3 and a half million people annually, and consequently causing ecosystem fluctuation, loss of moisture, desertification and soil drought.

The study of (El-Hafiane, 2001 AD, p. 18) indicated that developing countries suffer from an increase in the size of the population that has worked on the deterioration of agricultural lands, the destruction of the environmental milieu of a number of living creatures, the change of their natural habitat, and forcing them to leave it and move to a new environment, and then the death of these living creatures and not only that, but the emergence of pollution, and the spread of toxic substances, which led to a deterioration in environmental development.



The Republic of Yemen, like other countries in the world, suffers from urbanization on agricultural lands in most urban cities, which coincided with the entry of Yemen into the stage of renaissance and development since the beginning of the eighties and accelerated with the achievement of unity between the two parts. It contributed to the speed of linking the governorates together through road construction and cities expansion associated with urban and economic development, which resulted in high and irregular internal migration to urban areas, and the rapid and indiscriminate construction of cities, leaving environmental impacts as a result of urban expansion for residential, commercial and industrial purposes at the expense of fertile lands.

This has had a negative impact on the developmental side, including the reduction of agricultural areas, especially on valleys, and urban expansion on the outskirts of roads has produced environmental problems with far-reaching effects on the developmental side as well, including reducing agricultural productivity, destroying vegetation and soil erosion, and diverting watercourses and rock slides.

Hence, the topic of urban expansion on agricultural lands and its impact on the developmental aspect in Ibb city was chosen as a subject of study, especially since such a study is considered one of the modern applied geographic studies that has a role in supporting the developmental aspects, whether in economic or environmental development.

Remote sensing techniques, geographic information systems, data use, statistics and satellite images for the 7-TM-ETM + Landsat satellite have been used in order to monitor the ground changes during different time periods, draw the boundaries of that change and calculate the difference in areas shown to the extent of the deterioration that the study showed during the field landing and its matching with the satellite visuals, then come up with results, recommendations and future expectations that help planners in decision-making aimed at solving problems and preserving what remains of agricultural lands and achieving sustainable development.



The problem of the study:

The urban expansion has led to a reduction of agricultural lands, which has affected the developmental side in its various fields, whether in the agricultural, tourist or environmental side, and the study came to answer the following questions:

- Is there an urban expansion on agricultural lands during the time period from 1984 AD to 2017 AD?
- What are the factors that have contributed to the increase of urban expansion?
- How has urban expansion affected agricultural lands in terms of development?
- What is the role of geographic information systems and remote sensing in achieving development?

The objectives of the study:

The main objectives of this study can be summarized as follows:

- Production of digital maps showing urban expansion on agricultural lands during the time period from 1984 AD to 2017 AD using geographic information systems and remote sensing.
- Knowing the factors that contributed to the reduction of agricultural lands.



Study Area:

Spatial Boundaries

The study area is located in the governorate of Ibb in the south-central region of the Republic of Yemen, as shown in map (1) between two latitudes of $13^{\circ} 55'$ and $14^{\circ} 50'$ and two longitudes of $15^{\circ} 44'$ and $44^{\circ} 50'$ E, and it is bounded to the north by the two districts of Al-Makhadir and Hubaysh, and from the south the districts of As-Sabra and Dhi As-Sufal, Al-Siyani, and from the east are the districts of Ba'dan and As-Sabrah, and from the west are the districts of Al-Udayn and Al-Mudhaykhirah. The study area is characterized by being the most prolific region in Yemen in terms of the amount of rain that reaches about 1200 mm annually (Central Statistical Organization, 2004, p.23). The study area is also distinguished by the presence of fertile agricultural lands that are subject to deterioration and need serious attention to preserve them, in addition to what is characterized by its study area, from a relatively warm climate, and the source of a number of valleys, where the area of the study area is 361 km^2 , and is also characterized by the diversity of its topography and heights ranging from 600m to 3350m.

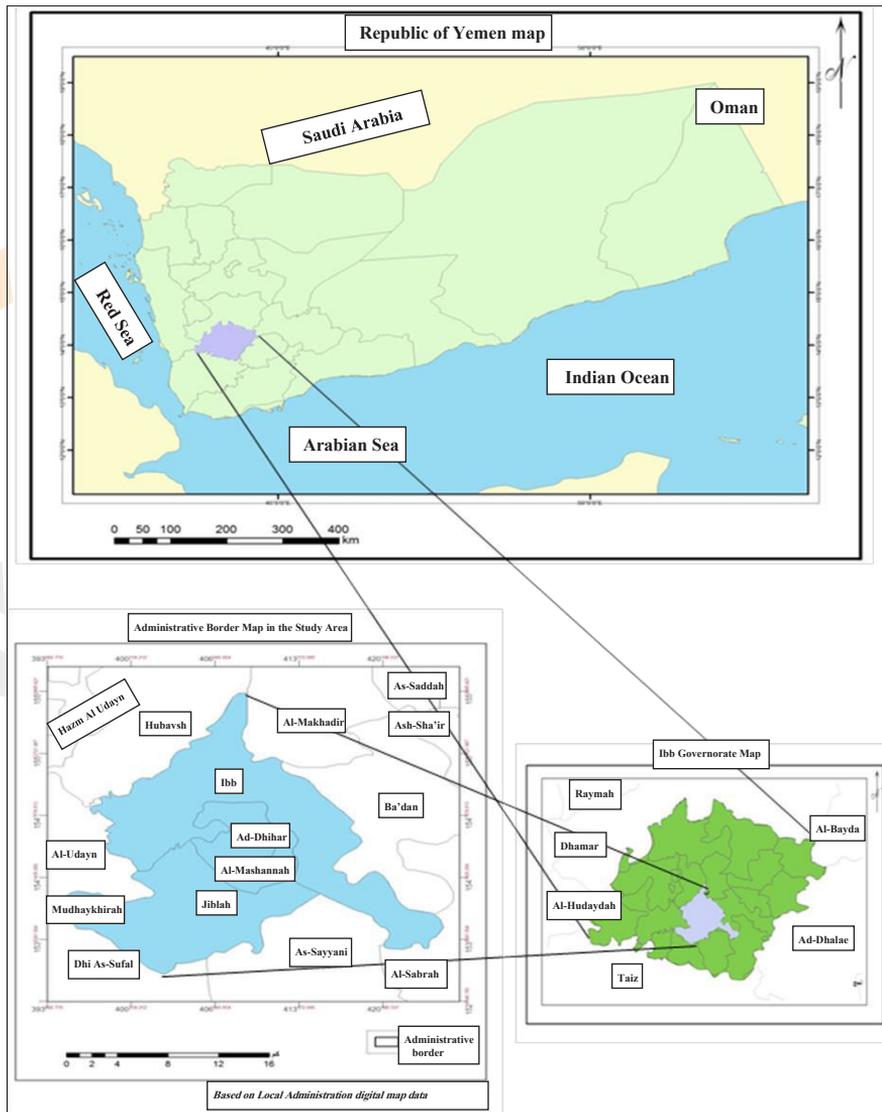
Time Frame

The study examines the urbanization of agricultural lands and its impact on the accompanying developmental aspect during the time period from 1984 AD to 2017 AD.

Methodology:

This study is based on the analytical method by studying the change that occurred in the agricultural lands due to the urban expansion in the study area and by following the following steps:

- Studying the temporal change in agricultural lands through a practical comparison of time for urban expansion.
- Using a Geographic Information System (GIS) program to create layers, add information, correct images, number information, calculate areas for land cover types, and classify land cover using the Gustilo Anderson classification.





Data Used:

This is represented in collecting and uploading data in this research through two steps, namely office work and field work.

Office work:

- A- Data collection and input
 - Non-spatial data by taking references and reports on the subject in particular or in general.
 - Spatial data represented by relying on the following satellite maps and visuals:
 - Topographic map
 - Ibb City map, scale of 1:50,000, for the year 1973 AD, and plate No 1544, issued by the Survey Authority and Land Registry.
 - Satellite visuals to study the phases of land cover change, and it was relied on the following images as in table (1):



Table (1): The Satellite Visuals that were relied upon in the Land Cover Study

Objectives	Procedures for Data Extraction	Number of Bands	Date Data	Spatial Data Accuracy	Type of Artificial Satellite	Type of Sensor	Years	M
Determine the types and surface of land cover represented by agricultural lands, wastelands and urban expansion	Using Supervised Classifications to classify land cover using Erdas Imagine Software	7	30/9/1984 AD	30	Landsat 5	Tm	1984	1
Determine the types and surface of land cover represented by agricultural lands, wastelands and urban expansion	Using Supervised Classifications to classify land cover using Erdas Imagine Software	7	30/9/1990 AD	30	Landsat 5	Tm	1990	2
Determine the types and surface of land cover represented by agricultural lands, wastelands and urban expansion	Using Supervised Classifications to classify land cover using Erdas Imagine Software	7	5/5/1995 AD	30	Landsat 5	Tm	1995	3
Determine the types and surface of land cover represented by agricultural lands, wastelands and urban expansion	Using Supervised Classifications to classify land cover using Erdas Imagine Software	7	23/12/2000 AD	30	Landsat 5	Tm	2000	4
Determine the types and surface of land cover represented by agricultural lands, wastelands and urban expansion	Using Supervised Classifications to classify land cover using Erdas Imagine Software	11	26/10/2010 AD	30	Landsat 8	Etm	2010	5
Determine the types and surface of land cover represented by agricultural lands, wastelands and urban expansion	Using Supervised Classifications to classify land cover using Erdas Imagine Software	11	24/10/2017 AD	30	Landsat 8	Etm	2017	6

Source: www.usgs earth explore



B- Satellite Image Processing

The process of satellite visuals processing is important in order to build a high-resolution information base to study the urban expansion on agricultural lands, especially that the image is usually in its raw form and is not suitable for studying, in addition to the fact that it precedes the download and classification process.

Several programs were used, most notably the ERDAS Imagine 2014 program in processing, and the information processing went through the following stages:

- Radiometric correction
- Geometric correction
- Special processing

C- Determining the Study Area

D- Creating Data Base

Land Cover Classification:

The study was prepared by following the other classification, which is the supervised classification, which is the selection of prior models by the researcher based on experience through prior knowledge of the study area, or the researcher's experience of the types of land cover. This study was identical to the study of (Al-Ani et al. 2011AD).

The following steps were relied upon in supervised classification, such as combining supervised and unsupervised classification in order to come out with the first-level land cover map for classification at first, then relying on the unsupervised classification in order to come up with the second level map for land cover classification and clarifying the area of each class with its spatial distribution and where it is concentrated in the study area.

E- Data Modeling and Analysis

It is monitoring the changes in agricultural lands due to the urban expansion of the study area, making comparisons and creating several layers in order to know the changes and determine its quality negative whether negative or positive.



Field Work:

It represents the most important measures followed in the course of the study, on an ongoing basis with the aim of observing and monitoring changes in the study area, the extent of its approval in the satellite visuals and maps, and noting the direction of urban expansion, and its impact on the change of agricultural land areas, valleys and mountainous regions. In addition to that, the field visit to the study area is of great importance in obtaining new and updated information.

During the field study, the following methods were used:

- **Topographic maps on the scale of 1.50000:** The purpose of this is to establish the topographic areas such as the plain areas, and specify their exact names, mountainous areas, and their locations, as well as the degree of slope of the urban expansion areas on agricultural lands.
- **An old and new satellite hardcopy image:** its purpose is to determine what is in the image and match it on the ground, especially agricultural lands with a large and clear area, while the transitional and small areas are difficult to distinguish, so an image will be taken from the Google Earth program and its purpose is to know the transitional areas, in the types of cover land, which is a small, indistinguishable transitional area, that is confirmed and identified.
- **Digital Camera:** To take pictures which show the extent of urban expansion on agricultural lands in the study area.
- **GPS (Global Positioning System):** To determine the latitude and longitude of agricultural lands, mountainous areas, and the extension of urban expansion.
- **Defining training areas:** The preparation of training areas represents a good prior knowledge of the study area, so that the satellite image is completely compatible on the ground, especially since field work represents the most important practical steps to



know and describe the types and varieties of land cover. And in order to determine the accuracy of the classification, the data and prior reference information must be provided to define the training areas, through the work of GPS points to determine the training areas, and the types of land cover for the study area. Then the correspondence between the supervised classification in the satellite imagery visuals, with the reality on the ground in the study area, making an inventory of the studied items, uploading the visuals taken, and determining the land cover patterns and areas that really need field descent, as the items are visible through the satellite imagery, especially fixed use, such as urban expansion, agricultural lands, mountainous areas, thus some varieties are unclear so, they are ascertained during field visits.

According to the research objectives set for this training, areas were defined, in order to provide more accurate details, which are to select small sites and make more than thirty ground control points to represent the different areas in the ground cover, and then study the relationship between the numerical values and the studied varieties. Hence, the method of studying during field visits was consistent with the study of (Al-Sheikh, 2012 AD, p. 321) in selecting the number of points during field visits. Then the stage of identifying and monitoring the change in agricultural lands arises, especially since agricultural lands are characterized by continuous change, so the researcher must be fully aware of the type of change that occurred and it can only happen by investigation, and field enquiry.

- Conducting interviews

By conducting an interview with farmers and individuals of the study area through the questionnaires that were used and obtaining a statistical download in the study of urban expansion on the agricultural lands of the study area, in addition to allowing questions to officials in the offices of the study area, and knowing the extent of the environmental deterioration resulting from this change, in addition to allow questions to officials in the offices of the study area and to know the extent of the environmental degradation resulting from this change, adding the



researcher's observation of the study area which has two phases; the first phase at the time of drought and the other at the time of rain, in order to know the cultivated agricultural lands and the uncultivated lands.

- Data output extract

through several maps, including:

1. Creating surprised classification based on the field study of each satellite imagery visual of the land cover in the study area.
2. Changing detection, which is a comparative work to detect change during the time period of 1984 AD – 2017 AD, based on the results of the supervised classification.
3. Building a model to detect land cover change and integrating digital maps.
4. Converting data from Raster to vector, then moving to ARC MAP program, in order to calculate the areas of land cover varieties for several stages and then come up with several maps to compare and know the extent of change and the impact of that change on the developmental side of the study area, and accordingly the following maps were made:
 - Maps of the types of land cover at the level of the study area during the time period from 1984 AD to 2017 AD

First: Exposing the urban expansion on agricultural lands using the means of geographic information systems and remote sensing during the time period from 1984 AD to 2017 AD:

1. Urban expansion on the agricultural lands of the study area prior to the 1984 AD period

As a result of downloading the Landsat satellite image for the year 1984 AD, Map (2) shows that the urban expansion was not in a great way, as it still represents the least area in the land cover by about 3.80 km² at a rate of 1.05% Table (2) of the total area of the study area, as shown in Figure (1), and the urban expansion extended on the side of



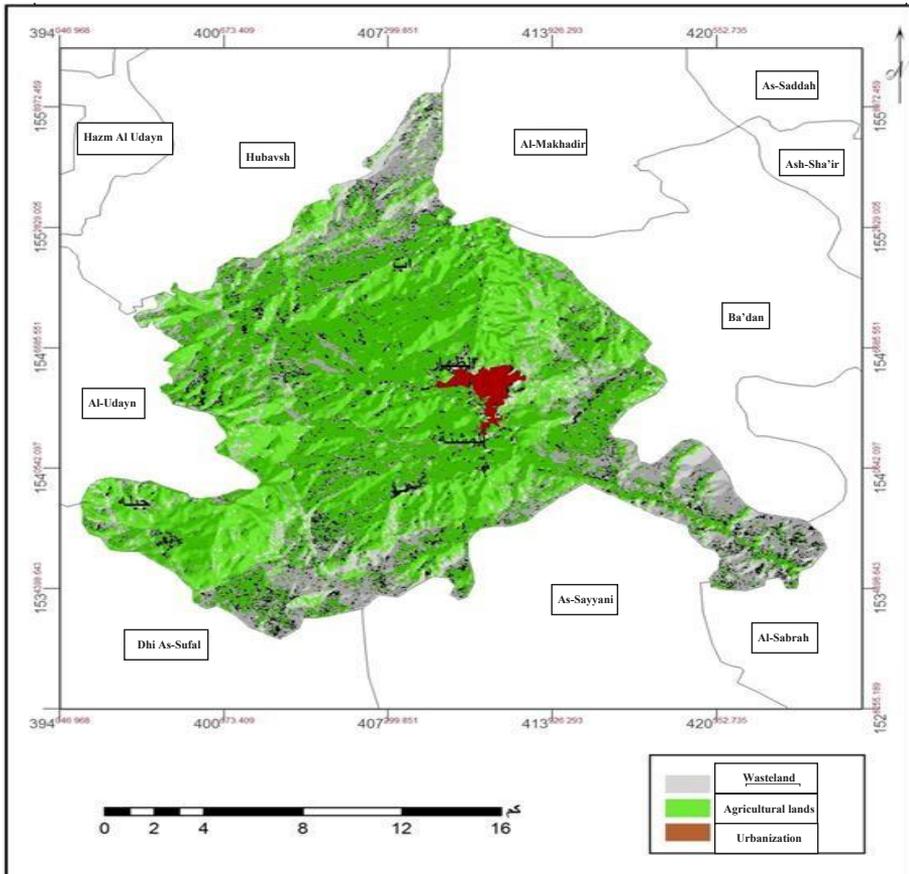
the Taiz-Sana'a road towards the south of the study area, and Al-Udayn road towards the west.

In addition to that, there are many uses that were beneficial to the study area, but they changed due to urban expansion, including the surfaces of space. At this stage, the uses of the land entered and mixed, along the roads, including industrial uses, where the mixed side is concentrated, which consists of one building with different uses including commercial, residential, and industrial land. As for agricultural lands, they lost 1.4% of its area in favor of urban expansion, with an area of 238.2 km², or 65.98% of the total area of the study area.

Consequently, agricultural lands have not noticed significant changes in them, as there is still attention to the land, and therefore the agricultural development process based on preserving agricultural lands still exists, and has an impact on the presence of a balance in the environmental and natural aspects, as no change has occurred in the wastelands, which are mountainous areas characterized by the presence of forests and grass, which occupy an area estimated at 119 km², or 32.97% of the total area of the study area.



Map (2): Land Cover Classification for the Study Area during the time period from 1974 AD to 1984 AD



Source: The researcher based on the land-sat satellite visuals for the year 1984 issued by the United States Geological Survey



1. Urban expansion on the agricultural lands of the study area during the time period from 2011 AD to 2017 AD

The interest in studying the current urban expansion on the agricultural lands of the study area represents one of the most important pillars that have been researched in knowing and detecting changes in the study area on the one hand, and knowing the extent of their impact on the developmental aspects associated with this urban expansion on the other hand, especially since the previous stages had determined what it was in its natural state, but this stage confirmed the occurrence of continuous change due to various human activities, most notably urban expansion, as we find that its area reached 115.15 km², with a percentage of 32% of the total area of the study area as shown in Figure (2). This means that the expansion increased by a difference of 35.1 km², during seven years, and this expansion was on the western side, on the Al-Udayn road, with a distance of 9.96 km² to reach the last border in the Dar Al-Marjum area in Bani Madsam in the north of the Jiblah district and the far southwest of the city of Ibb. As on the southern side, the urban expansion was on the road to Taiz and Sana'a, and to a lesser extent than Al-Udayn Road in the west, and this is due to the presence of the treatment plant, which affected the limited expansion in this region, so we find that the urban expansion on it is 8.6 km², while the southwestern side has reached building and reconstruction to the Al-Awtalia area in the Jiblah district, as the expansion was not limited to the main streets only, but extended greatly between Al-Udayn Street and Taiz Street. And this great expansion in this area is mainly due to the absence of prominent natural determinants that prevent the expansion in this area, but we also find that the urban expansion in the study area was initially planned, but the current expansion of the buildings is noticeable in a very random manner, especially in the southwestern part of the Akma Al-Saafani area, and this is what was found during the study from a map (3).

As for the level of the districts, it was noticed that there is a weakness in the agricultural development side, including the Ibb district, where the area of urban expansion increased from 7.6% to 27% in 1990 AD and 2017 AD respectively, which affected Agricultural Wadi Suhul, as the



area of fallow land in Ibb district increased from 33% to 42% during the time period from 1990 till 2017. This has affected the weakness of the agricultural development process. In addition to that, there is a weakness in the developmental aspect in the Jiblah district, as the urban expansion increased from 7.4% to 30.3% during the period of 1990 AD to 2017 AD respectively, and the area of agricultural land from has reduced from 68.6% to 25.76% in 1990 AD and 2017 AD respectively, while the area of fallow land increased from 23.9% in 1990 AD to 43.94% in 2017 AD.

As for Ad-Dhihar district, the weakness of environmental development is more evident than other directorates of the study area, as it is located in the center of the study area, where the area of urban expansion increased from 10.7% in 1990 AD to 52% in 2017AD , and this led to the deterioration of agricultural land and its shrinkage from 83% in 1990 AD to 3% in 2017 AD, and this shows that the Directorate of Ad-Dhihar represented the most directorates in the deterioration of agricultural lands at the level of the district of Al-Dhahar, and as Wadi Ad-Dhihar, which was famous for the agriculture during that period, almost completely disappeared, while the area of fallow land increased from 6.3% in 1990 AD to 45% in 2017 AD.

As for the Al-Mashannah district located in the center of Ibb city, it suffers from a severe weakness in the noticeable environmental development aspect due to the change of the land cover, as it is evident that the area of urban expansion increased from 13.51% to 50% in 1990 AD and 2017 AD, respectively, and this led to the deterioration of agricultural lands in the Al-Mashannah district, where it was 72.98% in 1990 AD, which decreased in 2017 AD to 14%, due to the large population concentration and the fact that it represents the center of the study area.

Hence, what accelerated the pace of urban expansion on agricultural land was the construction of roads without an environmental planning study and without concern for preserving the environment, and a very large population increase, especially during the war on Yemen due to the increase in the number of refugees to the study area being one of the safe and remote areas of armed conflict (Ash-Sharafi, 2019 AD, p. 132-152).

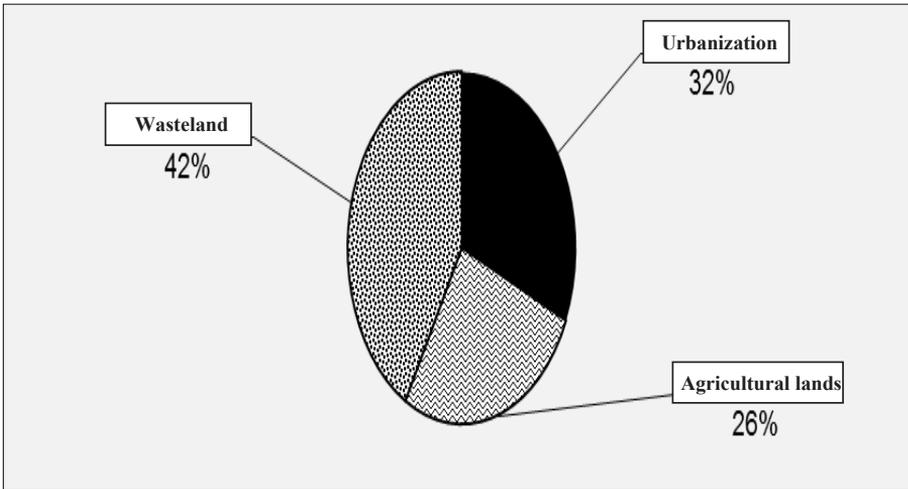


Figure (1): Land Cover for the Study Area during the time period before 1984 AD.

Source: The researcher based on Table (2)

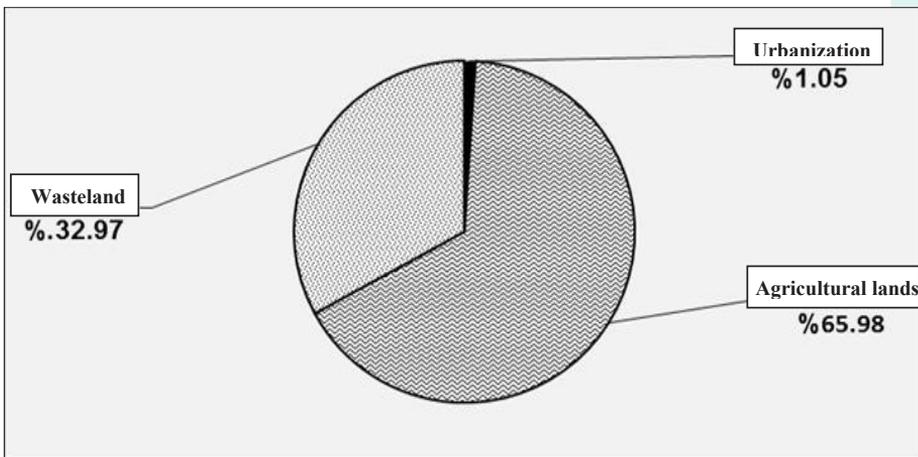
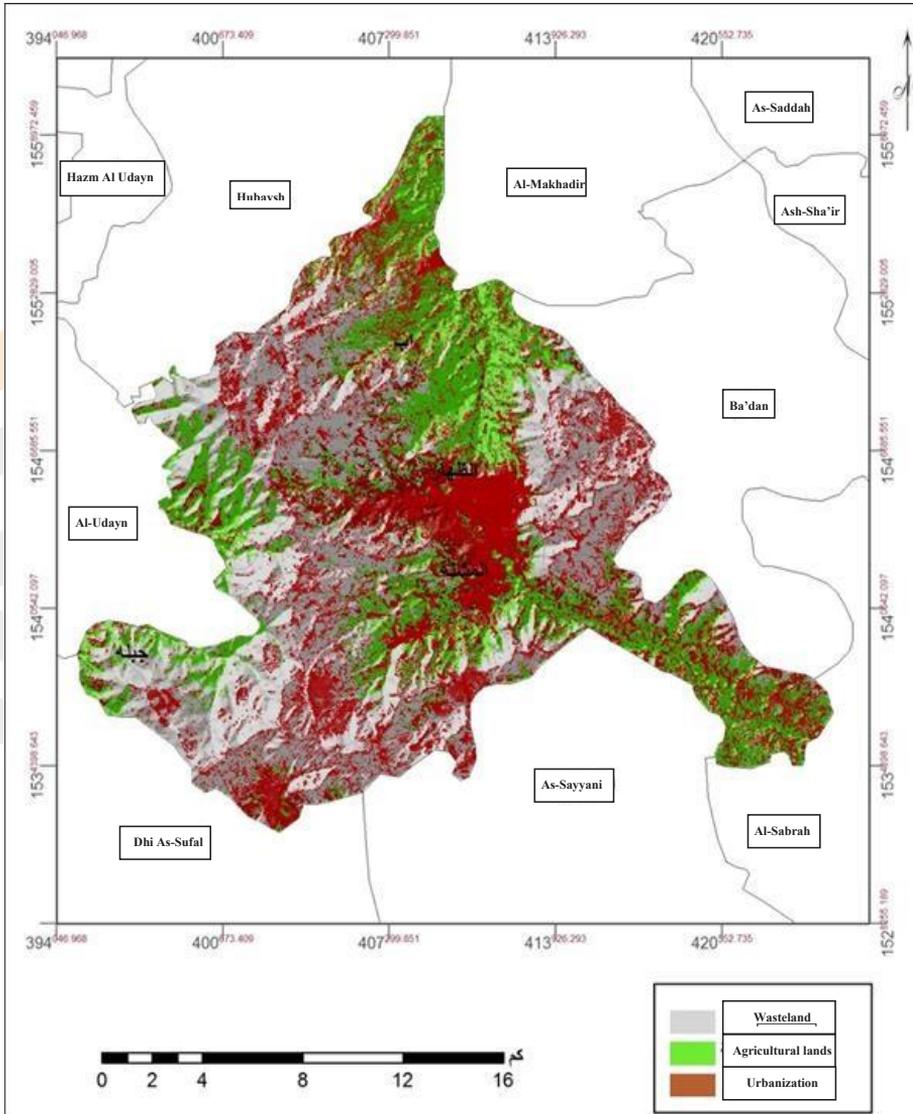


Figure (2): Land Cover for the Study Area during the time period from 2011 to 2017.

Source: The researcher based on Table (2)

Map (3): Land Cover Classification for the Study Area during the time period
from 2011 AD to 2017 AD



*Source: The researcher based on the land-sat satellite visuals
for the year 2017*

issued by the United States Geological Survey

The modern houses in the study area are random areas that lack planning, and this was at the expense of agricultural lands, as well as in the Jiblah region, which was a village surrounded by agricultural



lands in the seventies and eighties. In addition to that, the area includes a passage of valleys such as Wadi As-Sabt, which used to nourish the agricultural lands to a very large extent, and thus the agricultural lands area amounted to 92.15 km², representing 26% of the total area of the study area. So, the difference in the change and loss of agricultural lands is 224.22 km² during the time period from 2011 AD to 2017 AD, due to the urban expansion.

All of the above-mentioned had a negative impact on the developmental side, especially the destruction of soil, its deterioration and removal due to many changes and modifications for the sake of building and reconstruction, in addition to the increase in the amount of garbage and solid waste polluting the environment, which affects the environmental development, as wastes spread in all lanes and neighborhoods of the study region, and the spread of sanitation near residential areas, which affected the environmental development side. This has emerged greatly at this stage, which is due to many factors, most notably the dense population growth in the study area, in addition to the political factor, and the conditions of war that the country went through, which had the greatest impact on the occurrence of drastic changes in terms of population movement and stability, as well as the suspension of the competent official and protected authorities from carrying out their duties.

Consequently, we find remarkable clarity in the urban expansion and the change of agricultural lands that have completely disappeared where only areas beyond the population concentration remain. In addition to that, we see the presence of many changes in mountainous areas and hills and even removed them completely, as in the Al-Jawazat area, where we find that there is clearance of soil which is characterized by the study area, which is very fertile agricultural soil, and a natural resource that is difficult to regenerate, as it took thousands of years to form, and it was changed, removed and replaced by urban expansion as we find that in Ring Road.



Consequently, this tremendous sweep of buildings during the period from 2011 AD to 2017 AD map (3) in a striking and noticeable way was not limited to changing agricultural lands, but extended to the natural vegetation cover. As for the northern side of the study area, we notice that there is an increase of urban expansion in an accelerated and frightening manner, and this is due to the limited land space, and the search for other lands, obviously with large areas, such as Kaa Sahul now, which represents a new model in the direction of unplanned construction towards it, which is famous for its fertility agricultural land and abundant water, which was the true aspect of agricultural development on the one hand, and a great example of the natural environmental aspect and a permanent outlet that the study area was famous for on the other hand. This is due to many factors, the most prominent of which is the war, as large numbers of displaced people began to live in it, in addition to the difficult economic conditions that the country is going through, and this led to the lack of control and strict laws that tend to the sale of land, according to well-thought-out plans and determining the path of building and reconstruction, so the role of planning was weak, rather it is clearly absent from the developmental side, which no longer has any interest either from the government side or by individuals who contributed to the excessive buying and selling of agricultural lands to achieve quick profits at the expense of a rare natural resource in which the loss was from the vast areas clearly, which was supposed to be preserved to achieve part of self-sufficiency and food security for a number of agricultural crops, at least at the individual level.

3. The role of geographic information systems and remote sensing in achieving development

Geographic information systems and remote sensing play a major role in achieving development and even stabilizing development in all economic fields, because of their role in guiding decision-makers and choosing the most appropriate places for urban expansion, or for economic projects so that their location is appropriate and economically feasible for a long period of time in addition to the fact that monitoring ground changes directly contributes to reducing the size of economic



losses to achieve development. By monitoring agricultural lands that are subject to deterioration, it is possible to make recommendations to prevent construction in it and to identify other suitable places for construction as well as flood line areas. So, we can by satellite imagery prevent the construction in these places, because they constitute a major disaster and thus increase the losses which affect the developmental side. Therefore, it is necessary to take advantage of previous studies as well as modern means such as geographic information systems and remote sensing to reduce or at least mitigate the risks and impacts of natural disasters.

Table (2): Urban expansion on agricultural lands in the study area during the time period from 1973 AD to 2017 AD

%	2011 - 2017	%	2001- 2010	%	1996- 2000	%	1991- 1995	%	1985- 1990	%	1974- 1984	%	1973	Land cover varieties
32	115.15	22.2	80.05	19	68	9.4	34	8.3	29.8	1.05	3.80	0.4	1.27	Urban Expansion
26	92.15	31.7	114.39	40	146.14	49.6	179	65.8	237.7	65.98	238.2	3	240	Agricultural lands
42	153.6	46.1	166.56	41	146.86	41	148	25.9	93.5	32.97	119	33.2	119.73	Fallow grounds
100	361	100	361	100	361	100	361	100	361	100	361	100	361	Total

Source: - Researcher measurements based on Land-sat satellite visuals for the year 1973, 1984, 1990, 1995, 2000, 2010, 2017 using ARC MAP 10.5

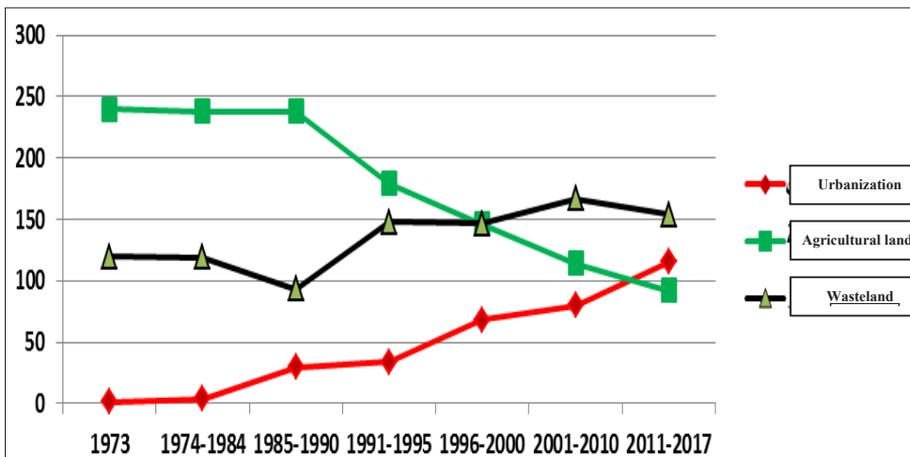


Figure (3): Land cover area (km²) in the study area during the time period from 1973 AD to 2017 AD
Source: Table (2)



Second - Factors that Affect the Agricultural Lands reduction:

Table 3 and figure 3 illustrate the results of the questionnaire for the factors that affect the agricultural lands reduction, where we find that roads represent the first important factor affecting agricultural land with an average of 3.35, this means that the sample confirms with a high degree that the roads factor participated in the destruction of agricultural land that represent the most important ground coverings in the study area. This goes back to poor environmental planning in preserving agricultural land which had a negative impact on environmental development, in addition to factors like population size and rising land prices that affect agricultural land with an average of 3.15 , 3.01 respectively, while expatriate revenues occupied the last factor in affecting agricultural land with an average of 2.1, and this means that the study sample confirms that expatriate revenues contribute to the decrease in agricultural land indirectly via urbanization at the cost of agricultural land in the study area. While the overall average for the factors that affect the agricultural land is 2.91 and this indicates that the study sample agrees on average on the factors that play a role in the deterioration of agricultural land.

Table (3): Factors Affecting the Reduction of Agricultural Lands in the Study Area

Factors affecting the change of agricultural lands	Simple Moving (Average (SMA	Degree	Rank
Roads	3.35	Strongly	1
Population size	3.15	Moderate	2
Land prices increase	3.01	Moderate	3
Urban planning	2.97	Moderate	4
Climatic factors	2.96	Moderate	5
Endowment lands	2.90	Moderate	6
Individual Private Property	2.86	Moderate	7
Land uses	2.85	Moderate	8
Economic investments	2.68	Moderate	9
Expatriate revenues	2.10	Weak	10
Average	2.91	-	-

Source: the researcher's work based on the field survey questionnaire

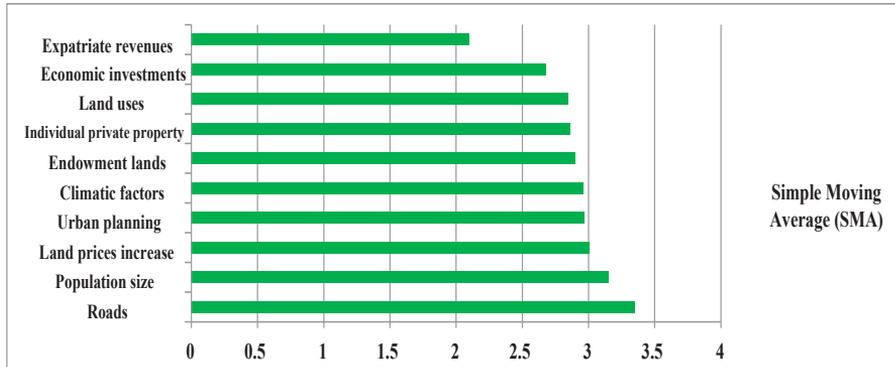


Figure (3): Factors affecting the reduction of agricultural lands in the study area
Source: the researcher, based on Table (3)

Third: - Reduction of Agricultural Lands and their Impact on Development:

The development is the upgrading of society, and its transition from a situation to a better one, not in economic conditions, but in various aspects of life, in order to achieve the goals and improve the standard of living, which represents one of the most important stages of stability and development in the field of development (Medhat et al. p. 65, 2017 AD)

However, the reduction of agricultural lands in the study area as a result of urban expansion has hindered the development process and played a fundamental role in reducing agricultural areas that had an important role in improving the various developmental aspects due to mismanagement and failure of development plans, and this certainly has affected the various developmental aspects as follows:

First: Agricultural Development:

Preserving agricultural land is one of the most important aspects of contribution to the development, but the increase in the unexamined urban expansion on the most fertile agricultural lands has reduced the



agricultural areas that the study area had, so by monitoring the land cover for different years, it was found that there is a severe reduction in agricultural lands which was in 1984 AD at an estimated rate of 65.98% of the total of the study area, which is now only about 26% of the total of the study area and thus played a big role in increasing the food gap and decreasing the agricultural crops that the study area had in terms of grains of all kinds and fruits which affected the agricultural development in the study area.

This was demonstrated by field studies, where the results of the field questionnaire showed that the reduction of agricultural lands affected the developmental side that appears in table (4) and figure (4) and that the agricultural development has been affected by the lack of agricultural production which has taken first place as the largest result on SMA 3.63. This means that the study sample highly agrees on the fact that the lack of agricultural production is the result of the degradation and erosion of agricultural lands, owing to the fact that these lands in the study area contributed to the self-efficiency of the inhabitants of the study area, for it was known for growing different types of crops such as Kaa Sahul region and the vast agricultural Wadi Al-Dhihar.

Second: Environmental Development:

Environmental development means preserving natural resources and protecting them from pollution and working to achieve balance and continuity and satisfy the needs of current generations while preserving the needs of future generations (Medhat et al. pp. 96, 2017 AD). However, the existence of the phenomenon of urban expansion has directly affected the environment and hindered the process of environmental development in the study area, due to the great sweep of many natural areas and the natural plants for which they were famous, such as the spread of some natural trees like teak and *Cordia Africana*, which used to cover large areas, especially some of the hills scattered in the city of Ibb, in addition to the increase in buildings and road construction, which increased the temperature and pollution, which can be noticed in the early morning times by observing the spread of polluted air accumulation over the city, in addition to the increase in



traffic congestion, which increased with the expansion of urbanization and population growth.

And through the questionnaire, it was found that there is a weakness in environmental development resulting from a reduction of agricultural lands, which received a high score in results, including reduction of green areas, distortion of the aesthetic view of the mountains and destruction of agricultural terraces.

While the section on the result of the high temperature in the study area was ranked last with an average of 2.89, this means that the sample moderately agrees that the high temperature is one of the effects resulting from the deterioration of agricultural lands and this is due to the presence of other reasons that contribute to the rise in temperature, such as global climate change, the fluctuation of the annual rainfall and the deterioration of land cover. In general, the average year for the results of the deterioration of agricultural lands reached 3.26, and this indicates that the study sample highly agrees with regard to the effects resulting from the deterioration of agricultural lands, and this indicates the size of the deterioration that resulted from the reduction of agricultural lands, which were identified through field visits.

Third: Tourist Development:

The reduction of the agricultural areas in which the study area was popular of, and observed by the satellite images for different years, has shown that there is an increase in concrete blocks, especially in the areas that were famous for tourist attractions such as Rabi Mountain, which in turn represents a tourist development aspect that must be preserved. However, this tourist attraction has been subjected to distortions due to random urban expansion, especially since the city suffers from very few green spaces due to the narrow area of the city on the one hand and the weakness of the planning factor on the other hand. Therefore, most of those who come for tourism go to the neighboring tourist areas, such as Al-Udayn region famous for Wadi Anah, Ba'dan District, Wadi Bena and other areas that have not been spared from environmental degradation as a result of urban expansion on agricultural lands, which affected the tourist development.



Table (4): The Reduction of Agricultural Lands in the Study Area and its Impact on the Developmental Side

Environmental degradation resulting from agricultural lands change	Simple Moving Average (SMA)	Degree	Rank
Lack of agricultural production	3.63	Strongly	1
Reduction of the agricultural lands area	3.60	Strongly	2
Reduction of green spaces	3.47	Strongly	3
Distortion of the aesthetic view of the mountainous regions	3.36	Strongly	4
Degradation of the agricultural terraces	3.30	Strongly	5
Increase in the noise level	3.24	Moderate	6
Soil erosion	3.23	Moderate	7
Increase in air pollutants	3.17	Moderate	8
Decrease in groundwater	3.05	Moderate	9
Increase of temperature level	2.97	Moderate	10
Average	3.26		

Source: the researcher's work based on the field survey questionnaire

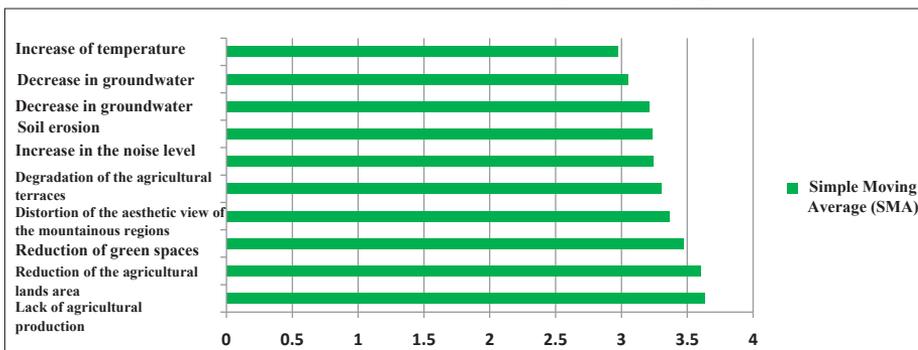


Figure (4): The Reduction of Agricultural Lands in the Study Area and its Impact on the Developmental Side

The researcher's work based on Table (5-7)



Results and Discussion:

The results of the study showed that there is a reduction in agricultural lands due to the random urban expansion observed in the study area. The area of urban expansion in the study area increased from 3.80 km² by 1.05% in 1984 AD to 115.15 km², which is 32% of the study area.

- The study revealed that the reduction of agricultural lands has mainly affected the agricultural development represented by the lack of agricultural production and the reduction of agricultural areas, and it has also affected the environmental development such as the reduction of green spaces and the distortion of the aesthetic view of the mountains through the random expansion of urbanization.
- The agricultural lands area decreased from 238.2 km² by 65.98% in 1984 AD to 92.15 km² by 26% of the total area of the study area, due to the increase and rise in the area of urban expansion.
- The study revealed that wastelands increased in size, as in 1984 AD they represented about 119 km², or 32.97%, so the area increased in 2017 AD to 153.7 km², by 42%, which means a neglect of agricultural lands.
- The means of geographic information systems and remote sensing have played an effective role in monitoring agricultural land areas during different years and indicated that there is a decrease in agricultural areas.
- The study revealed that there is a weakness in the agricultural development side at the level of the study area directorates, including the Ibb district, as the area of urban expansion increased from 7.6% to 27% in 1990 AD and 2017 AD respectively, which affected the agricultural Wadi Suhul, as the area of wastelands increased in size in Ibb district from 33% to 42% for the year 1990 AD and 2017 AD respectively.



- The study also revealed that there is a weakness in the developmental aspect in Jiblah district, as urban expansion increased from 7.4% to 30.3% during the time period from 1990 AD to 2017 AD respectively, and the area of agricultural lands decreased from 68.6% to 25.76% in 1990 AD and 2017 AD respectively, and the area of wastelands has also increased from 23.9% in 1990 AD to 43.94% in 2017 AD.
- As for Al-Dhihar district, the weakness of environmental development is more evident than other districts of the study area, as it is located in the center of the study area, where the area of urban expansion increased from 10.7% in 1990 AD to 52% in 2017 AD. This led to the deterioration of agricultural lands and their reduction from 83% in 1990 AD to 3% in 2017 AD which shows that Al-Dhihar district represented the most districts of which agricultural lands were deteriorated at the level of Al-Dhihar district, the disappearance of Wadi Dhihar (a large agricultural valley), which was famous during that period with agriculture, as well as the increase of the wastelands area from 6.3% in 1990 to 45% in 2017 AD.
- The results of the study showed that Al-Mashannah district suffers from a marked environmental weakness due to the change of land cover, as it is evident that the area of urban expansion increased from 13.51% to 50% in 1990 AD and 2017 AD respectively, and this led to the deterioration of agricultural lands in Al-Mashannah district, where it was 72.98% in 1990 and decreased in 2017 AD to 14%, due to the large population concentration and the fact that it represents the center of the study area.
- The study revealed that the most prominent factors that helped the urbanization increase on agricultural lands are roads and the population growth.



Recommendations

- 1- Working on the development and enactment of the following legislation:
 - A. Preventing construction on agricultural lands, and directing urban development towards non-agricultural lands.
 - B. Modernizing laws in order to preserve agricultural lands, which represent the most important pillars of agricultural, environmental and tourist development.
 - C. Amending environmental management systems and establishing natural reserves for the purpose of preserving the environment and plant species from extinction and increasing financial funds for the environmental preservation and development work.
 - D. Organizing housing construction in cities and urban centers and reducing the flow of migration from the countryside to the city through the continuous development of integrated development programs for rural areas.
- 2- Involving governmental and supervisory agencies, civil society organizations, parties and political forces in working on afforestation around the city to reduce pollution and preserve the city's borders.
- 3- Adopting a comprehensive national plan aiming at preserving vegetation cover, especially around urban centers, and it is called the Comprehensive National Development Plan to protect the environment in areas of environmental sensitivity.
- 4- Introducing geographic information systems and remote sensing methods in all state agencies and the private sector because of their effective role in supporting and developing the development process and reducing time and effort for the process of inventorying natural resources in the smallest details.



Suggestions:

- Conducting similar studies to find out the level of agricultural land decline versus urban expansion in the various Yemeni governorates and their impact on the developmental side.
- Working on classifying the cultivated and non-cultivable agricultural lands in order to develop solutions for them, organizing and exploiting them for other uses in order to preserve them or rehabilitate them in ecotourism.
- Encouraging the provision of agricultural loans so that the individual's income increases and helps to preserve agricultural lands so that he does not tend to sell lands and exploit them in the real estate side, which contributes to agricultural development.
- Extrapolating the experiences of countries that were suffering from the same problem, to benefit from it and extract practical solutions.

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On The Reconstruction Requirements In Yemen

Developmental Report

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*Yemen Information Centre
2021 AD/ 1442 H*



Content

- *A glance on reconstruction*
- *Reconstruction Requirements*
- *Reconstruction Criteria*
- *Active Partners*



Abstract :

The development report deals with the issue of reconstruction. Yemen is in a critical phase since 2011, a situation of real danger and overlooked the abyss of famine after nearly six years of ongoing conflicts that resulted in a humanitarian catastrophe. Among its results are the inflation, the collapse of the economy and the country's infrastructure, so the reconstruction process has become an urgent necessity to rebuild the economy, establish the State institutions, rehabilitate all infrastructure facilities and rebuild the social fabric. The report dealt with the requirements of reconstruction in Yemen and summarized them in meeting emergency humanitarian aid, providing security and stability pillars, rebuilding infrastructure facilities, engaging the private sector, investing revenues from ports and waterways in supporting the reconstruction in Yemen, activating the role of local institutions and involving them in the reconstruction process, finding solutions to face the economic challenges, developing the political system, activating the concept of citizenship and consolidating its standards, human capital reconstruction, foreign partnership and trade openness. The report also dealt with the most important criteria for the reconstruction process, including comprehensiveness, developmental outlook, sustainability, and transparency. The most important actors in the reconstruction process, including civil society organizations and institutions, international community organizations, local authorities, the private sector, and members of society, have been touched upon, and they have an integrative relationship that aims to make the reconstruction process a success. The reconstruction is a dynamic, comprehensive, multi-domain process. The reconstruction process includes the element of respect to the human rights, the justice achievement in terms of the fair application of the law, and the provision of frameworks to protect the rights of individuals alike as a necessity for societies suffering from individual, collective and national conflicts. This is consistent with the World Bank's definition of reconstruction, and therefore we can say that the reconstruction is providing support of all kinds to the process of transition from a state of conflict to a state of peace, through working on rebuilding the country in various socio-economic and humanitarian fields. The reconstruction is an important variable in



the field of political and economic sciences, specifically related to the local and international administration. It is a necessary process in those countries suffering from the conflict, or which have emerged from it, and the United Nations plays a fundamental role in this regard, as it is the main international organization calling in its charter to achieve international security and peace, in addition to local and regional actors. The reconstruction procedures in Yemen since 2015 are considered very weak, if not non-existent. So far, the official announcement of the launching of a reconstruction process has not yet been made, which is supposed to be led by the efforts of local institutions with the support of international and regional organizations to ensure the inclusiveness and effectiveness of the recovery and reconstruction process and achieving a positive impact on the long term.



Introduction:

The reconstruction process includes many axes, the most important of which may be engineering, economic, institutional, societal and human construction.

The success of any project that revolves around reconstruction requires that all axes proceed in parallel. Yemen is unique in its peculiarity stemming from the political and economic conditions in which it has lived and still, as well as the historical accumulations. And Yemen is one of the developing countries that suffers from many problems, obstacles and challenges facing the reconstruction process in it, such as the continuation of conflicts, the increase in the population, the lack of an attractive environment for investment, the absence of innovative planning, dependency, high indebtedness, technical weakness, lack of production, scarcity of manufacturing, poor interest in the human cadre and corruption. All these pitfalls necessitate those interested in reconstruction to proceed within the urban axis, taking into account not to overlook the rest of the axes.

The Republic of Yemen is going through a period which is a decisive transitional period in which it mobilizes all its technical and intellectual capabilities, in order to raise the standard of living for the people, and at the same time the problem of the mechanism for activating reconstruction has become the main focus of the economic policy, as the economic renaissance requires defining problems and goals as well as requirements and the correct scientific methods for implementing reconstruction plans.

The reconstruction process is directly related to the establishment of stability and peace in Yemen, which is an urgent necessity, in addition to the importance of civil society organizations and the local authority to join hands with the international community and coordination to work on financing and implementing reconstruction programs to stop the conflicts.



It is worth noting that some interested people deal with the concept of reconstruction from the standpoint that it is a process limited to the restoration of the urban side that has been affected by conflicts, while in the folds of this paper, the concept of reconstruction will be dealt with as a comprehensive process that takes into account the physical aspect in addition to everything related to the social, texture and all that aims at recovery efforts for all members of society, including women, youth, children, elders and all segments of society at various cultural, economic and structural levels from the perspective of a participatory framework that includes each of the national levels represented by the local authorities, the private sector, civil society and the international side which includes all regional and international organizations as a strategic goal to direct the plans of reconstruction projects towards the restoration of what was demolished as a result of conflicts or what was already vulnerable and weak, with a multi-dimensional view concerned with the aspect of urban and institutional reconstruction while not neglecting other aspects such as the psychological, social, political, and anthropological field. This holistic view is consistent with the definition of the United Nations supplement to the international peace agenda, which indicated that the reconstruction is a process that aims to make comprehensive efforts to identify and support institutions that would promote peace as well as increase the feeling of confidence in achieving the well-being of individuals and groups. This can be achieved through treaties to end wars, which include: the disarmament of formerly conflicting parties; restoring order, returning refugees, ruling of law and institutional building.

It is possible to refer here to one of the World Bank reports on the effects of the conflict and the war on Yemen, as this impact included covering the negative delusion on all aspects of the Yemeni life. It rather described the inability of individuals to obtain basic food and medicine materials, and consequently the spread of poverty and school dropout for millions of students, and the wounding of more than 30 thousand Yemenis, the death of more than 7 thousand people and 15% of the population either displaced or fled their country. In addition, a group of international organizations' reports, which indicated the destruction of Yemen's infrastructure and the deterioration of most of its facilities and official and civil institutions.



In order to achieve the reconstruction process in Yemen, it must be made into an inclusive national project around which all Yemeni components are gathered around, and civil society, civil society organizations, official political authorities and regional and international community organizations and bodies must reinforce the principle of partnership and work on the national ranks of the various internal bodies of Yemen in a way that enables everyone to respond to the internal and external changes within the framework of giving priority to the supreme national interest and immediate action to provide an accurate information base on the reality and prospects of the Yemeni economy in preparation for the implementation of reconstruction programs.

There is a set of pillars upon which the reconstruction process is based on as primary requirements and they are represented in the following points:

1- Meeting the Emergency Humanitarian Aid:

It is a set of integrated measures aiming to protect the lives of individuals and reviving economic and social activity, integrating and rehabilitating refugees, since because of the conflict, the phenomenon of food insecurity has spread, which is one of the most pressing humanitarian challenges in Yemen, and the specter of famine threatens 12 million Yemenis according to a group of international community organizations reports, in addition to the spread of epidemics, such as Dengue, Cirrhosis and Cholera, not to mention the destruction of infrastructure facilities, which disrupted the services of health facilities.

Therefore, pressing and urgent needs must be assessed through a careful survey of all affected areas in order to determine the basic needs, the level and type of assistance needed by the population affected by the catastrophe of ongoing conflicts, so that the concerned authorities can provide these humanitarian needs, and the basic needs include the components of life such as food, water and medicine, housing needs and basic services, electricity and transportation, educational services, schools and health facilities. The information collected must be accurate and impartial, away



from politicization and engagement with any political party to help provide the appropriate and most urgent and effective aid to all members of the society alike.

2- Providing Security and Stability Pillars:

- The conflict has reduced the quality of services for all facilities, including security, which contributed to the spread of a group of negative phenomena that threaten the social protection of individuals. Therefore, it is imperative to work to provide legal frameworks to protect the rights of individuals and create a stable environment, which supports the path of promoting stability and enhancing the reconstruction process through the reorganization of state institutions, as all security facilities activities are based on the concept of human security, and therefore the countries in the conflict square or out of it must observe the following procedures:
- Working on the restoration of the rule of law to ensure the stability of the state by bridging the gap between the state of emergency and the means to achieve development and reconstruction.
- Re-establishing the capacity of security institutions, including defense, police, supervisory agencies, border control points and customs, and rebuilding the human resource capacity of the security sector.
- Formulating strict security-related policies and procedures.

3- Infrastructure Reconstruction:

The infrastructure facilities in Yemen have been extensively damaged, as hospitals, schools, and sewage buildings have been affected, in addition to roads, bridges, and most of the buildings of government and civil institutions. So, it has become necessary to work on the reconstruction of these facilities, taking into account not only restoring them to what they used to be but making the reconstruction process an opportunity to enable Yemenis to develop their state's facilities with their own capabilities in the future.



In this regard, it is imperative to work on assessing the damage and destruction, collecting accurate information to know the reality, and formulating reconstruction plans based on this information, so that specialists and experts, each in his field, review the evaluation processes and surveys, including:

- Limiting the damages to houses, government and civil buildings.
- Limiting the damages to the infrastructure, the electricity and water network, the streets, the sewage and communication networks.
- Limiting the damages to bridges, roads, waterways and ports.
- Limiting the damages to the health, educational, recreational and public services sectors.
- Limiting the damages to civilian housing.
- Limiting the damages to the elements of life, shops, factories and stores.
- Limiting the damages to the agricultural sector, whether animal or vegetable, crops and fruit trees.

4- Investing Revenues from Ports and Waterways in Support to the Reconstruction Process in Yemen:

The framers of the strategic plans for reconstruction must take into account the existence of a number of ports that need full rehabilitation, including Mocha, Socotra, Al Mahrah, Hudaydah and others. This is essential, since Yemeni ports and waterways are among the most important infrastructures that, if properly invested in the interest of the country and its citizens, would have made Yemen a central point for regional and international trade, as it also links Yemen's economy to the regional and global economy, in addition to being the lifeblood through which Yemen's revenues from global markets for basic commodities, including food, fuel and all goods. And if done, it will change the situation of Yemen and advance the reconstruction in a record period of time.



5- Engaging the Private Sector:

It is necessary to involve the private sector in Yemen in the reconstruction process, which will be pivotal in the stage of Yemen's transformation rather than just rebuilding it, given the importance of the role that the private sector can play in building a Yemeni economy, through policies and arrangements, creating an environment for projects and establishing a stable financial sector.

In order to involve the private sector in the reconstruction process, it is primarily essential as a basic step, to work on building and developing its structures and institutions to provide job opportunities, rebuilding the infrastructure and proposing quick solutions to inflation through reviving the Yemeni economy. And here, the role of civil society organizations with the support of international community organizations in Yemen emerges from the importance of directing its current development programs and plans in building the capabilities and skills of the private and government sectors, creating job opportunities, and ensuring that private and government agencies enjoy the skills, tools and capabilities necessary to contribute to the reconstruction process effectively. Donors must activate a monitoring system to ensure the real impact of development programs and plans, and create a healthy work environment.

Here, the importance of focusing administrative and control policies on supporting Microfinance Institutions (MFIs) with experience in Yemen is to enhance the inclusiveness of financial institutions on a wider scale throughout Yemen, and banks and microfinance institutions with expertise in managing financial services must be enabled to provide financial services to the companies in that matter. The actors are also supposed to work on supporting the private sector to be able to develop its joint financial mechanisms to finance small and medium enterprises and to create an incubating environment for businesses and small and medium enterprises with a healthy structure that complies with the standards of governance besides the necessity to give youth and women the necessary importance and involve them in building and implementing reconstruction programs.



6- Activating the Role of Local Institutions and Involving them in the Reconstruction Process:

For the reconstruction process to be more beneficial and sustainable, there must be a role for Yemeni local institutions and authorities at all stages, starting from working to rehabilitate them and develop the capabilities and skills of their members through their involvement in the planning, implementation and monitoring stages of the reconstruction processes, so the formation of the national partnership is central to the success of reconstruction planning, especially since local institutions are among the most important local actors responsible for the ultimate implementation of plans taking into account the establishment of an effective oversight body to limit the rampant corruption in it.

It is also considered necessary for the place of work to form a supreme body for reconstruction that will work under international and local supervision that is concerned with reconstruction and development issues and which efforts focus on identifying priorities for reconstruction without any political employment, and it includes the following departments:

- Department of Human Reconstruction (focusing on the human capital of the country, because they are the ones who will advance reconstruction and development).
- Department of Inventory and Assessment of Material and Institutional Damages.
- Infrastructure Department (health, educational, service facilities besides focusing on ports, waterways, bridges, roads, ports, airports and islands).
- Department of Planning and Finance.

7- Finding Solutions to face Economic Challenges

As a result of the ongoing conflicts, severe damages occurred on the economic side. So, private and public projects were affected as well as the commercial movement, consequently, the lack of funds directed to financing at the individual level and the public



level. Not to mention that **the reconstruction and developmental reality of Yemen** before the war is characterized by delays and weak macroeconomic indicators, as Yemen's share of global trade is weak and almost negligible. The Yemeni society also lives at an income level of less than 100\$ per month, and a large segment of individuals suffer from extreme poverty and the salary payments of employees is disrupted in different regions due to the conflict, so the economy suffers from deterioration and instability that negatively affects the development, as the external debt has doubled, as well as the absence of actual international aid, as the population of Yemen suffers most in light of the ongoing conflicts that are triggered by inflation, the collapse of the economy, the high rates of unemployment, especially among youth and women and the weak environment for business activities in the private sector. The crisis also led to a decrease in the volume of public revenues and government services and to the freezing of the salaries of state employees, especially civilians. In addition to a set of challenges, including:

- Political instability and ongoing conflict
- Problems of the phenomenon of illiteracy
- The heavy foreign indebtedness and its negative effects on the economy
- Poverty and the deterioration of the living, health and nutritional conditions of individuals, which reduce the level of life of the workforce
- Failure to provide equity in income distribution
- Financial and administrative corruption and poor governance
- The ongoing armed conflicts and struggles
- Risks of macroeconomic policies and their poor performance
- Poor conduct of economic activities, including production and exportation



- Weak saving and investment due to low per capita income levels, which reduce the incentive to save and invest
- Insufficient production infrastructure
- The lack of infrastructure, including roads, means of communication, electricity, and public facilities necessary for development
- Low per capita income level which was reflected in various areas of life, such as a decrease in the level of education, nutrition and health care
- Lack of economic rationalization, misallocation of resources, widespread bribery and tax evasion
- Lack of enforcement of the law
- The weakness of the administrative apparatus to keep pace with development policies
- The deterioration of the educational system, which is the starting point for any society and the main support upon which the renaissance of peoples was based, foremost of which is Japan, Malaysia, Indonesia, and Korea, where education creates a new system of evolutionary values and helps to create a generation with the qualifications to keep pace with the times

All these factors have combined to cause devastating effects on the wheel of development and reconstruction projects, as well as not to commencing the actual planning and implementation of reforms at the micro-economic level to create a better environment for the activities of the government and private sector.

Therefore, it is imperative to work on formulating strategic programs and policies by the concerned authorities with the support of regional and international bodies in order to improve the economic activity in accordance with rules that are prepared according to organized standards that include the foundations of institutional reform and seeking to activate the role of the private sector and civil society organizations and



their participation in all reconstruction programs that aim at blending efforts of the public and private sectors to achieve the principle of efficiency which enhances effective participation in the implementation of the reconstruction process.

8- Development of the Political System

As a result of the indications of the current situation, it is necessary to work on changing the system of exercising power by shifting from the central level to the decentralized level, to reinforce the democratic system as well as to apply legal justice equally in its various standards to all individuals, as the success of the reconstruction process depends on the existence of a legal political system which includes wise leadership that is a vital driving force to consolidate peace and facilitate the transition from emergency to stability and development.

The reconstruction for societies falling under or emerging from conflicts entails the importance of providing an accountable institutional base that exploits resources with transparency and responsibility, that is working on setting the policy associated with the adoption of appropriate legislation to confront corruption at all levels, in addition to ensuring a civil space free from negative influences. Not to mention the need to pay attention to the capabilities and skills of the government and civil apparatus, to facilitate societal transformation in a way that reflects interest in different groups and meets all needs.

It is possible to start with the following procedures:

- Working to rehabilitate productive or service governmental institutions and bodies, improving their performance and developing their competitive capabilities in order to be able to contribute to reconstruction programs.
- Giving attention to introducing technical strategies and automating corporate systems to develop their services.
- Providing a safe environment for a legally and organizationally appropriate investment environment, and providing all facilitative measures to serve the nation's supreme interest.



9- Activating the Concept of Citizenship and Consolidating its Standards

Citizenship is a package of values, behavior, upbringing, morals, and civilized flair linked to values and constants based on the great love of the nation and the unity of human belonging to it. The concept of citizenship is linked to the establishment of the civil state and the stabilization of its system. It is also represented in the right to participate in political decision-making and the exercise of power and gradually expanding its area towards the transformation of power in decision-making from the hand of one person through middle levels to the hands of the all citizens according to democratic mechanisms. In the simplest sense of citizenship, the human identity and the rights of individuals on the land of their homeland by working to overcome all narrow, regional, ethnic, sectarian, and partisan in favor of human national loyalty that is based on the recognition of others and respect for their rights, whatever their affiliations are, which means achieving national tolerance and rejecting all kinds of violence, intolerance and extremism based on narrow loyalties, which reinforces national peace and security as a primary basis for reconstruction.

The basic pillar of citizenship is the achievement of social or civil justices, by establishing a socio-economic system aimed at eliminating economic and social differences between the classes of one society, as well as providing fair treatment and a participatory share of the wealth of the country's resources equally to all its members, which is represented in the economic expediency and redistributing the national income and equal opportunities to form in the end the so-called qualified civil society which is capable of advancing the needs of building its country and working to raise it.

The behavior of citizenship towards civil society, regardless of their races or beliefs, is unanimous in defending unified human issues and values such as the rights of the citizen, women, children, the democracy and environment issues, that is, issues of human identity and their perspective includes three basic criteria:



- Tolerance and acceptance as a factor of enrichment and commitment to managing the dispute with others or the state by peaceful means, taking into account the integrity of the state and its supreme interests.
- Free administrative action based on a unified law that protects the rights of individuals and groups alike.
- Just collective organization, as civil society is a group of organizations that transparently organize the relationship of individuals with each other and their relationship with the state.

10- Rebuilding the Human Capital:

The deterioration of the Yemeni economy during the conflict resulted in a distorted social situation represented in a deteriorating financial and educational system and an irregular human capital characterized by a shortage of skilled workers, teachers, professionals, doctors and others who fled the country or became internally displaced. It is not easy to motivate displaced people to return to their places of origin and what is more difficult is to create job opportunities for those who left the labor market years ago.

An enormous number of resources and sustainable policies are required to encourage the displaced to return and help them to reintegrate into society. This poses a major challenge both to the post-conflict government and the various institutions, because some refugees, especially skilled workers, may prefer to remain in host communities due to insecurity and inaccessibility to basic services and jobs in their home country. Unlike refugees who fled the country, the return of IDPs is more likely, which requires adequate support for their reintegration.

There are many obstacles to reintegrating returnees into society. Returnees often choose not to return to the communities in which they lived before the war for fear of discrimination against them, exposure to violence or harassment and a lack of economic opportunities. This may increase competition for job opportunities, education and health services in cities where there is a strong demand for them such as Sana'a and Aden.



11- Foreign Partnership and Commercial Openness:

Despite Yemen's possession of enormous natural resources and strategic waterways in particular located on the Red Sea, it suffers from problems and deficits in the financial and banking institutions, knowing that the financial system is the backbone of the economy of any country and a mechanism that supports the success and failure of the policies for financing development and reconstruction operations. Based on this, it is necessary to think about how to invest all of this to contribute to financing the reconstruction through self-financing, preparing plans for that and finding alternatives and bounties that fit the specificity of the Yemeni situation while preserving in the architectural plans and the reconstruction projects should preserve the Yemeni identity and culture and not obliterate its cultural features in the architectural, cultural and historical aspect. So, in this regard, it is necessary to use the old construction methods and revive the old style with modern construction methods in order to preserve Yemeni architect art while keeping pace with the times in order to meet the quick urgent needs and go along with developments and taking into account the benefit from the experiences of the past and other countries. This can be achieved by concerting efforts and taking the necessary measures, including:

- Concluding international legal agreements and treaties to invest the Yemeni waterways for the benefit of the reconstruction of Yemen.
- Seeking to attract direct foreign investment with clear agreements in a way that does not nullify the sovereignty of the national decision.
- Activating the mechanisms of government policies to attract foreign direct investment for reconstruction.
- Trade openness and activation of international exchange.
- Enacting a legislative package to cover the legal aspects of reconstruction projects in a way that primarily serves the supreme national interest of Yemen and takes into account the interests of the supporting parties in the second degree in a manner that does



not harm the interests of the country.

- Establishing a special fund for reconstruction, which tasks are focused on rehabilitating buildings, houses and areas damaged by military operations and its basic resources depend on international grants or from local revenues, such as the returns of the country's oil wealth, waterways, agriculture and others in addition to foreign investment returns.

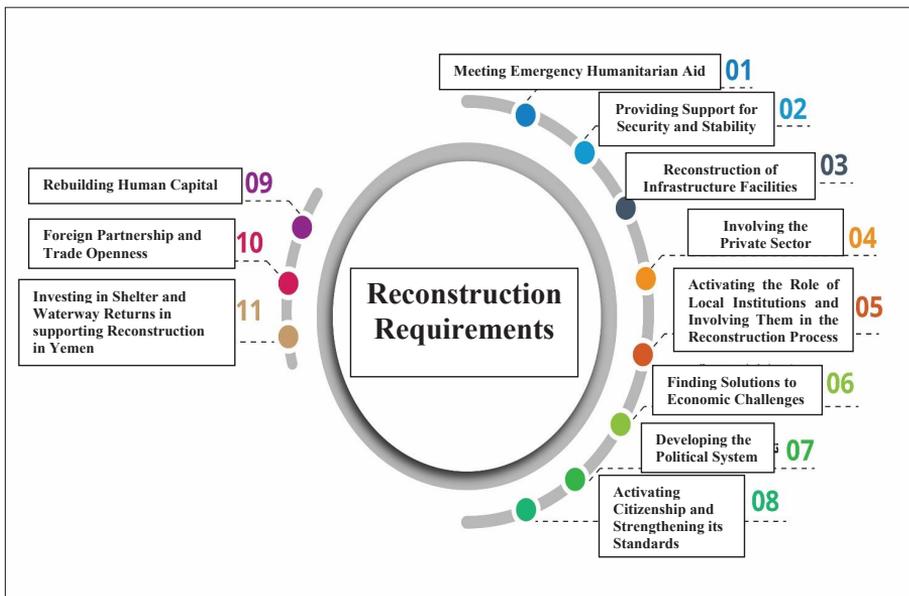


Figure N° 1- Reconstruction Requirements

Source: the researcher, according to the analysis of the theoretical frameworks for reconstruction and linking them to the principles of sustainable development

As shown in figure (1) which clarifies the requirements of the reconstruction process for Yemen, and as the figure shows according to the requirements, those interested, planners and implementers of reconstruction projects, whether they are from the local, regional or international side, must take into account providing individuals and institutions with science and skills in the developmental aspects on



the socio-economic, agricultural, industrial and organizational levels, more precisely, the creation of reconstruction projects that achieve self-sufficiency in the long run, not immediate remedies that end with the end of assistance or aid.

Sustainability is guaranteed through the conscious action of the developmental parties in linking planning and action in the immediate term, as well as in the medium and long term, within an advanced forward-looking vision. Reconstruction is not a temporary and local achievement in a sector or place which impact soon disappears in the face of continuous decline and deterioration but it is rather necessary to work to achieve the reconstruction goal and to achieve steady and stable progress that goes beyond the effects of the immediate place and time to generate positivity in the community and self-progresses and expands to include its positive impact on other fields.

For reconstruction, there is a set of criteria for repairing the effects of the conflict both on the short and the long term, and it includes the following:

1. **Comprehensiveness:** so that the effects resulting from conflicts and litigation on various fields are addressed, whether architectural or institutional structure in its various dimensions, as well as human restoration. Conflicts have led to the spread of psychological diseases resulting from panic and fear or direct injuries due to the conflicts and the treatments expand to include various levels, considering the areas are complementary, and none of them can be overlooked, whether it is related to individuals or to the infrastructure of society or bodies and institutions or the economic aspect related to the wheel of development that is directly disrupted by the conflict.
2. **The development outlook:** that is, being within a strategic developmental planning that deals with the various areas of urban and architectural development and having concrete realistic goals.
3. **Sustainability:** it has the ability to re-manage the wheel of development in its various aspects and to ensure sustainability,



as sustainability is the cornerstone of the lasting and continuous development of society with changes for the better.

4. **Transparency:** the bodies' actions, goals and objectives and their system with employees, clients and target groups which apply to the work of governmental or private bodies and institutions or civil society organizations, are clearly reflected.
5. **Flexibility:** It has the ability to quickly adapt to developments and accelerating changes on the ground.
6. **Prevention:** not only does it develop plans to address the effects resulting from conflicts, but goes beyond them providing expanded strategic plans to work on avoiding the occurrence of other crises.

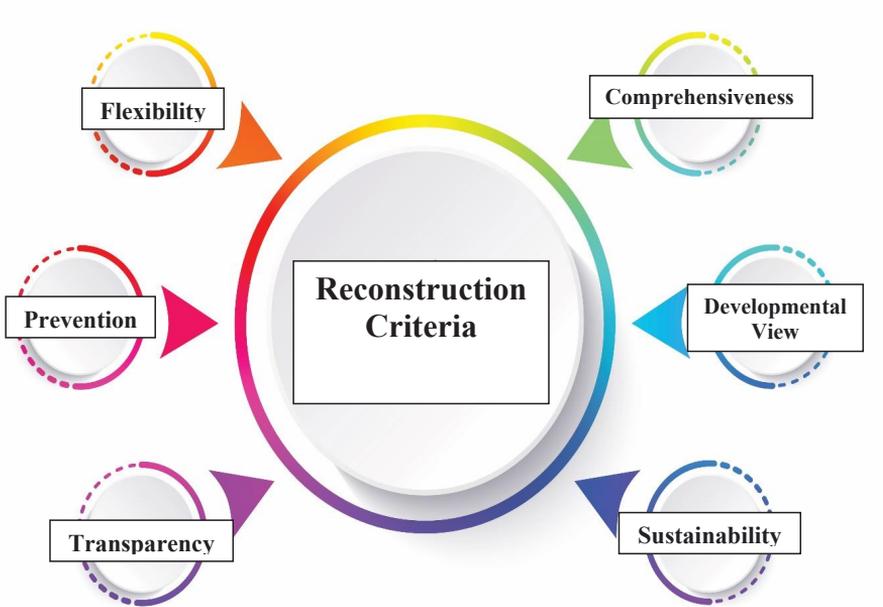


Figure N° 2 - Criteria for the Reconstruction Process

Source: the researcher, according to the analysis of the theoretical framework for reconstruction

As shown in Figure (2), comprehensiveness, the integrative view, transparency, sustainability, flexibility and prevention are basic criteria associated with the reconstruction process.

Active Partners in Reconstruction Operations:

Civil Society Bodies and Institutions:

Civil society institutions bear an important role in preparing to face the reconstruction challenges. They help and relieve the burden on official institutions and this role increases in importance whenever the political authority is weak or absent. These institutions also play an important role in the social, economic and developmental fields.



International Community Organizations:

A group of institutions and bodies that make up the international community and participate in activating the will of the international community, has an administrative and executive structure and is based on the will of a group of legal persons that consists of countries such as the United Nations, the European Union, the World Bank, the European Bank for Reconstruction and Development, the German Agency, The Canadian International Development Agency, the Danish Agency for International Development, the Netherlands Agency, the Organization of Arab Petroleum Exporting Countries, the Organization for Economic Cooperation and Development, UNESCO, the Food and Agriculture Organization, the World Health Organization, the International Food Organization, the Swedish International Agency for Cooperation and Development, the European Commission, the International Rescue Committee, Oxfam, and other organizations.

It is worth noting that foreign aid occurs in two main areas of aids: the direct aid which is monetary, technical or both.

Local Authorities:

These authorities are represented by governmental entities, whether legislative, executive, service or governorates and bear the burdens and responsibilities of preparing at the local level in order to face conflict disasters, Thereby implementing the national strategy in coordination and cooperation with all actors, in addition to their role in supervising the results of reconstruction programs.

Private Sector:

The private sector is represented by commercial and industrial non-governmental entities, and plays a very important role, especially in post-conflict reconstruction programs. The private sector possesses the skills, capabilities, labor, and resources as well as a great deal of flexibility and adaptation to circumstances and can meet the requirements of different stages.



Members of the Society:

The role of community members is considered one of the most important roles in preparing for the reconstruction process. The more conscious the members of the society are, the faster and smoother the reconstruction process takes place.

The field of human resource development, which treats individuals as a resource (human capital) like any other productive resource in the development and reconstruction process and not just as beneficiaries, sees the need to improve the productivity of this resource through training, education and development of various skills in a way that meets the requirements of the multiple stages, i.e. investment in (individuals) is more important and higher than investment in trade, education, health and the economy, because it is reflected positively in all other areas.

Long-term reconstruction focuses on the key role of human capital in increasing and improving the country's productivity. It assesses investment in individuals through its impact on their capabilities in all areas of development and architecture, meaning individuals are seen as both a means and goal for reconstruction.



Figure N° 3 - Active Partners in the Reconstruction Process

Source: the researcher, according to the analysis of the theoretical framework

Based on Figure (3), it is evident that the parties concerned with the reconstruction process are: Civil Society Bodies and Institutions, Civil Society Organizations, Local Authorities, the Private Sector, Community Members, and the relationship between them is an integrative relationship for the success of the reconstruction process.



Conclusion:

The reconstruction process represents a set of measures aimed at meeting the requirements of countries emerging from conflicts, including securing the needs of the affected population, preventing the escalation and exacerbation of conflicts, addressing the root causes and enhancing community coexistence to advance development and lasting peace.

Therefore, it is imperative to accelerate the adoption of mechanisms to confront the flagrant challenges impeding the reconstruction process in Yemen, whether they are food, economic, social, architectural or rehabilitative for the various infrastructure and institutional facilities and giving attention to promoting citizenship rights for all equally, in addition to facilitating the requirements and foundations of reconstruction of all local, regional and international bodies. The importance of strengthening and activating the rule of law and involving the people in the reconstruction process at all stages, from the identification of reconstruction priorities, passing through the implementation of the reconstruction plans to the assessment of the positive impact of reconstruction or lack thereof is essential to support the reconstruction process in all its aspects.



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