



Gaza/ Palestine

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## **Early Recovery, Reconstruction, and Development of Gaza**

March 2025



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# **Table of Contents**

**First: The Report and General Context .....**  
**From Page (4) to Page (20)**

**Second: The Technical Report .....**  
**From Page (21) to Page (106)**



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# **First: The Report and General Context**

## **Table of content**

<b>General Context .....</b>	<b>(3)</b>
• <b>Political and Security Situation .....</b>	<b>(3)</b>
• <b>Humanitarian and Economic Situation .....</b>	<b>(6)</b>
<b>Methodology, Scope, and Objectives of the Plan .....</b>	<b>(8)</b>
<b>Damage, Loss, and Needs Assessment .....</b>	<b>(11)</b>
<b>Plan Implementation .....</b>	<b>(15)</b>
• <b>Temporary Housing .....</b>	<b>(15)</b>
• <b>Implementation in Various Sectors .....</b>	<b>(15)</b>
• <b>Implementation Timeline .....</b>	<b>(15)</b>
• <b>Funding Requirements and Sources .....</b>	<b>(16)</b>



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## **The General Context:**

### **First: The Political and Security Situation:**

The recent war on Gaza and the unprecedented humanitarian catastrophe that the Palestinian people have been subjected to are undeniable evidence of the need to redouble efforts to achieve a just settlement that preserves the Palestinian people's legitimate right to an independent state that exists side by side in peace with Israel. Accordingly, the need for a clear and well-defined political horizon, consistent with international law, has become an urgent necessity more than ever. The implementation of the two-state solution will address one of the most fundamental root causes of instability and conflict in the Middle East, thereby paving the way for a comprehensive and just peace, while ushering in a new era of normal relations and coexistence between the peoples of the region, including the Israeli people.

### **A- The Political Context of the Gaza Recovery, Reconstruction & Development Plan:**

- The plan is premised upon preserving the rights, dignity, and humanity of the Palestinian people and the prospect of the two-state solution. The latter continues to be recognized as the goal and optimal outcome from the viewpoint of the international community and international law. It fulfils the legitimate aspirations of the Palestinian people in securing their inalienable rights, foremost among them is the right to self-determination, as well as the right to their land, a State of their own, and to their homeland. It also achieves the aspirations of the Israeli people to live in security.
- It is only natural, and indeed a duty, to condemn the killing and targeting of civilians, whether Palestinian or Israeli. It is also incumbent upon the international community to condemn the unprecedented level of violence, the number of casualties, the destruction of homes and civilian infrastructure, and the humanitarian suffering caused by the war on Gaza. Nothing can justify the humanitarian catastrophe that has befallen more than two million civilians living in the Strip, including women and children. Of no less importance, there can be no justification for the displacement of the Palestinian people from their land after such suffering, rather, we must all support their right to remain in their homeland.



- The Gaza Strip is an integral part of Palestinian territory. Past experiences have proven, beyond any doubt, that attempts to perpetuate the geographical and political separation between Gaza and the West Bank, with the aim of preventing the establishment of a Palestinian State, will only result in destroying hopes for peace and endangering both the Palestinian and Israeli peoples. It has also been clear that attempting to strip the Palestinian people of their hopes for statehood or to seize their land will bring about nothing but further conflict and instability to the region.
- It is therefore imperative to respect the desire and legitimate right of the Palestinian people in the Gaza Strip to remain in their land, to which they have demonstrated their unwavering attachment. It is also important to avoid creating conditions that force them to leave, which will further entrench the injustice that has befallen the people of Gaza, thereby leading to further tension, an expansion of the conflict, and its transfer to other countries in the region.
- Accordingly, the Gaza Recovery, Reconstruction and Development Plan is premised upon the solidarity and concerted efforts of the international community, from a humanitarian standpoint above all else, to address the humanitarian catastrophe caused by the war, while ensuring the Palestinian people's legitimate rights, including their right to remain on their land without displacement. Ultimately, reconstruction requires arrangements for transitional governance and security arrangements in a manner that upholds and preserves the prospect of the two-state solution and prevents future conflicts.

## **B- Maintaining the Ceasefire in Gaza:**

- The international community must devote its utmost attention to supporting the efforts of Egypt, Qatar, and the United States with the ultimate aim of ensuring the full implementation of the Gaza Ceasefire agreement, while working on maintaining the current situation of de-escalation and calm, and securing the release of hostages and detainees. It must be clear that the collapse of this agreement will have further catastrophic repercussions and will hinder humanitarian efforts and reconstruction.



### **C- Managing the Gaza Strip During Reconstruction:**

- It is of paramount importance to adopt a gradual approach that ensures the Palestinian people's right to remain on their land, rebuild it, and achieve their legitimate aspirations to establish a contiguous state that includes both Gaza and the West Bank, on the basis of June 4, 1967 lines.
- It is crucial to consider options to manage the upcoming phase of early recovery in a manner that guarantees Palestinian ownership and addresses the situation in the Strip, which is an integral part of the Palestinian territory, from a political and legal standpoint and in a manner that is consistent with international legitimacy and UN Security Council resolutions.
- Accordingly, it is important for the Palestinian Authority to continue its efforts to take further steps towards developing and strengthening Palestinian institutions and agencies.
- For the purpose of managing the upcoming phase, and in accordance with a Palestinian decision, a Gaza Administration Committee will be established to manage Gaza's affairs for a transitional period of six months. This committee is an independent body comprised of technocrats and non-factional figures working under the umbrella of the Palestinian government; its establishment comes within the framework of preparations for the full return of the Palestinian National Authority to Gaza.
- The international community is currently required to support and further these efforts to ensure the success of the aforementioned Administrative Committee so that it can effectively manage the upcoming phase.

### **D- Security in the Gaza Strip:**

- On the other hand, and in order to empower the Palestinian Authority to return to Gaza to carry out its governance tasks, Egypt and Jordan have commenced a process to train Palestinian police personnel in preparation for their deployment in the Gaza Strip. This effort must be supported through mobilizing political and financial backing as well as engaging international



and regional partners, with the possibility of additional countries joining and contributing to this effort in the future.

- To further support these endeavors and ensure security for both the Palestinian and Israeli peoples, it is proposed that the UN Security Council (UNSC) commences a study concerning establishing international presence in Palestinian territories (West Bank and Gaza), including through the adoption of a UNSC resolution to deploy international protection/ peacekeeping forces with a clear mandate and terms of reference. This should take place within an integrated framework and a timeline to establish the Palestinian state and build its capacities.
- The issue of multiple armed Palestinian factions remains challenging. However, it is one that can be addressed, and even resolved permanently, only if its root causes are tackled by providing a clear political prospect and a credible process that works to establish the Palestinian State and restores the legitimate rights of the Palestinian People to their rightful owners.

#### **E- The Political Prospect:**

- The aforementioned efforts must ultimately lead to a single and clear outcome, which is the implementation of the two-state solution; there is no alternative to the establishment of a Palestinian State.
- Efforts must be redoubled to reach a medium-term truce between Israel and the Palestinian Authority for a specified period of time across all Palestinian territories. This would be considered as a transitional phase during which confidence-building measures are determined, including the cessation of all unilateral actions by both sides. It is crucial during this period that no party obstruct efforts to address the situation in Gaza, nor should these efforts be undertaken in isolation from the situation in the West Bank and East Jerusalem, where all illegal unilateral practices, including settlement activities, land annexation, house demolitions, military incursions into Palestinian cities, and attempts to alter the legal and historical status of holy sites, must be halted. What is proposed is feasible if the requisite political will exists.



- Accordingly, direct negotiations must commence between Israelis and Palestinians, with guarantors/sponsors of their choice, during this transitional period, without preconditions and based on agreed upon international parameters, with the goal of reaching an agreement(s) on final-status issues, including borders and the status of Jerusalem.
- The peace agreement(s) on final-status issues, the establishment of the Palestinian state, the end of Israeli occupation that began on June 4, 1967, and Israel's complete withdrawal from all Palestinian territory are expected to mark the end of all related Palestinian resistance activities, as well as all Palestinian and Israeli claims, and the beginning of a transitional phase for the normalization of relations, to be detailed in an agreement between both sides.

## **Second: The Humanitarian and Economic Situation:**

The most significant humanitarian and economic repercussions of the war, according to figures from the World Bank, the European Union, and the United Nations, are as follows:

- By January 2025, approximately 47,000 Palestinians had lost their lives, including at least 13,000 children, 7,200 women, and no less than 110,000 wounded, in addition to 1.9 million who were internally displaced, some of whom were displaced multiple times. More than 2 million Palestinians, constituting most of Gaza's population, have been uprooted from their land; they currently face shortages in all basic needs, leading to unprecedented losses and needs, including famine, malnutrition, disease outbreaks, and unexploded ordnances (UXOs).
- The total material losses in the Gaza Strip are estimated to be approximately \$29.9 billion, while economic and social losses amount to \$19.1 billion, bringing the total losses and needs to \$53.2 billion.
- The most affected sectors include the health sector, with total losses of \$6.3 billion; education, \$3.2 billion; trade and industry, \$2.2 billion; social protection, \$1.4 billion; and agriculture, \$1.3 billion. The most devastated and damaged sectors are as follows: the housing sector, almost in its entirety, at \$16.3 billion, trade and industry at \$8.1 billion, health at \$7.6 billion, education at \$4.1 billion, and transportation at approximately \$2.9 billion.





- Poverty rates in the sector have skyrocketed to unprecedented levels, driven by rising unemployment rates, with estimates indicating that 4 out of every 5 Gazans are now unemployed in the sector.
- It is estimated that more than 95% of the facilities related to the education sector have been almost completely destroyed, and the remaining ones are currently being used as shelters. Furthermore, 658,000 primary school students and 87,000 secondary school students have been at risk due to military operations and aerial bombardment. More than 11,000 students in primary and middle school and more than 788 high school students were killed during the war, along with 616 teachers and educational staff. Additionally, more than 17,000 students and over 2,490 teachers were injured. Those who have survived among students and teachers continue to suffer from psychological trauma at various levels.
- Concerning the health situation in Gaza, more than 350,000 individuals with chronic diseases are unable to receive treatment, whether medications or hospital access. Moreover, the overall health conditions in the sector have deteriorated due to the destruction of hospitals, the spread of epidemics, and the lack of safe and clean conditions. More than 1.8 million people have been reported to have contracted various infectious diseases, in addition to the psychological trauma suffered by nearly all of the sector's population due to relentless bombing around the clock. Estimates indicate that more than one million children in Gaza require psychological treatment, and over 17,000 children have been displaced and separated from their families.
- Nearly the entire population of Gaza suffers from food insecurity, with women, pregnant women, and children in particular risk.

## **(II) Methodology, Scope, and Objectives of the Plan:**

1. The methodology of the formulation of the plan is premised upon scientific evidence and clear, precise steps to ensure the accuracy of conclusions, review data sources and compare them. It has been developed in consultation with the pertinent Palestinian authorities.
2. The objective of the plan is to achieve early recovery and reconstruction of the Gaza Strip with Palestinian hands, alleviating their humanitarian suffering



while ensuring their continued presence on their land. The plan aims to rebuild the sector, address the extent of damage and losses at economic, humanitarian, and social levels, and propose investment projects to be implemented by the Palestinian Authority in partnership with pertinent entities through:

- Providing stakeholders with a comprehensive assessment of the conflict's impact on Gaza's population, physical assets, infrastructure, and essential services.
- Identifying the needs for reconstructing physical infrastructure, stimulating economic and social recovery, and restoring essential services across various sectors.
- Ensuring that the plan is formulated in a manner that guarantees the Palestinian people's right to remain on their land, without any displacement or resettlement outside the Strip, while preserving the right of Palestinian refugees to return.
- Emphasizing that the early recovery and reconstruction process is Palestinian owned and led.
- Drawing on past experiences and lessons from previous reconstruction efforts of a similar scale.
- Updating assessments based on developments on the ground and the possibility of reaching a permanent ceasefire.

### **3. Assessment Methodology:**

- Evaluating damage and losses resulting from the conflict based on precise scientific and operational criteria.
- Conducting needs assessments across various sectors to ensure sustainable and resilient recovery.
- Establishing a reference framework to formulate the recovery and reconstruction plan, which includes short-term planning and resource mobilization.
- Facilitating coordination among stakeholders to set priorities and arrange needs according to integrated sectoral strategies.



#### 4. Principles of Data Analysis:

- **Flexibility and adaptability:** Designing the methodology to accommodate changes in the field situation and update data in real time.
- **Comprehensive data collection:** Relying on multiple sources for information gathering, including open-source analysis, satellite imagery, anonymized mobile phone data, social media data analysis, in addition to data from governmental entities and international organizations.
- **Collaborative approach:** Conducting the assessment in coordination with the Palestinian Authority, relevant UN and international organizations, donor entities, and considering the involvement of civil society organizations and the private sector, which will play a crucial role in reconstruction.

#### 5. Data Sources:

- Field data provided by Palestinian governmental entities and humanitarian and UN organizations operating in Gaza.
- Satellite imagery and remote sensing technologies to assess damage and estimate losses.
- Social media analysis to gauge residents' perceptions of needs and challenges.
- Local surveys to enhance the accuracy of estimates.
- Reports issued by the Palestinian Authority, the World Bank, and other international organizations.

#### 6. Gaza-specific assessment:

- **Losses:**
  - Identifying damage through more than 200 indicators and variables, including infrastructure, public facilities, and essential services.



- Developing a timeline for the recovery of each sector based on precise data.
- **Needs:**
  - Conducting unit rate analysis across multiple sources to ensure accuracy of estimates.
  - Developing a comprehensive estimate of capital expenditures, including costs of materials, labor, equipment, land, and the impact of inflation and market fluctuations.
- 7. **Data collection and verification:** Implementing monitoring processes through relevant ministries and international entities operating in the field and conducting multi-tier verification processes involving the Egyptian and Palestinian governments, international organizations, and UN agencies.
- 8. **Utilization of remote sensing and emerging technologies:** Employing high-resolution satellite imagery to verify damages, conduct enumeration, validate baseline data, classify and assess damages and losses, isolate conflict-induced damages, and analyze conflict trends, incorporating multiple sources of satellite imagery, with the possibility of leveraging artificial intelligence applications to enhance data analysis and understanding.
- 9. **Social media data analysis:** Monitoring patterns, general trends, and actual needs of the population.
- 10. **Categorization of Sectoral Damage into Three Main Areas:**
  - **Completely destroyed areas:** Requiring comprehensive reconstruction efforts, including debris removal and rebuilding homes and infrastructure.
  - **Partially destroyed areas:** Requiring restoration and rehabilitation efforts aimed at reinstating residential units and infrastructure.
  - **Less affected areas:** Requiring minimal interventions focused on restoring specific services and ensuring the sustainability of the reconstruction process.



**11. Plan timeline:** The early recovery phase (6 months) and the reconstruction phase (5 years), with an urgent focus on humanitarian aid and the restoration of essential services.

### (III) Assessment of Damage, Losses, and Needs:

#### A. Definitions:

1. **Damage:** Refers to the total or partial destruction of physical assets, calculated based on the extent of damage caused by the war compared to pre-crisis conditions. Damage is assessed in physical units (e.g., square meters of housing) and converted into monetary values based on pre-crisis replacement costs.
2. **Classification of Damaged Assets:**
  - **Completely Destroyed:** If structural damage exceeds 40% of the original asset, it is considered 100% damaged, and full replacement cost is applied. For instance, if a building suffers significant structural damage, such as wall collapse or destruction of the roof or foundation, it is classified as completely destroyed.
  - **Partially Damaged:** If the asset sustains damage between 20-40%, a 40% replacement cost is applied to reflect partial damage.
  - **Slightly Damaged:** If damage is minor (between 10-20%), such as broken windows or doors, a proportionate percentage of replacement cost is considered.
3. **Losses:** Refers to the economic losses resulting from the war, such as revenue declines in productive sectors or increased costs in service delivery. Losses are categorized into key groups:
  - **Loss of Public and Private Revenue:** Includes reduced government and private sector income (e.g., taxes and fees) due to business destruction and economic downturn.
  - **Increased Operational Costs in Public and Private Sectors:** Covers additional expenditures due to emergency service provision or operational disruptions.



- **Employment Losses:** Encompasses job losses in both public and private sectors due to the war, compared to pre-war employment levels. Direct losses include reduced productivity and declining output in key sectors such as trade, industry, services, healthcare, and education.
  - **Displacement Costs:** Wars generate indirect costs, including displacement expenses, increased unemployment, and reduced labour demand in non-affected areas.
4. **Distinction Between Public and Private Sector Damage and Losses:** Private sector damage and losses are generally not compensated, with market recovery left to economic forces, whereas financial support may be provided to the public sector depending on available resources.
5. **Needs:** Focuses on the financial resources required for early recovery and reconstruction.

## **B. Crisis Overview:**

- The conflict in Gaza since October 7, 2023, has resulted in 47,000 deaths, including 13,000 children and 7,200 women, with 111,000 injuries recorded as of January 2025.
- Over 2 million people (nearly the entire population of Gaza) have been displaced and face severe shortages in essential needs.

## **C. Damage, Losses, and Recovery Needs:**

- **Total Physical Damage in Gaza:** \$29.9 billion.
- **Economic and Social Losses:** \$19.1 billion.
- **Early Recovery Needs (6 months):** \$3 billion.
- **Total Estimated Recovery and Reconstruction Needs:** \$53 billion.

## **D. Sectoral Breakdown of Damage and Losses:**

- **Housing:** \$15.8 billion in damage (53% of total), \$545 million in losses. A total of 330,000 buildings have been affected, including 272,000 fully destroyed housing units and 58,500 partially damaged units.



- **Roads:** Satellite imagery shows 1,190 km of Gaza's streets destroyed, with 415 km severely damaged and an additional 1,440 km sustaining extensive damage.
- **Health:** \$1.3 billion in damage, \$6.3 billion in losses. Half of Gaza's hospitals (18) are completely non-operational, while the remaining 17 function at a reduced capacity, insufficient to meet Palestinian healthcare needs.
- **Education:** \$874 million in damage, \$3.2 billion in losses. 88% of schools have been destroyed, with the remaining facilities repurposed as temporary shelters for displaced families. Additionally, 51 university buildings have been destroyed.
- **Trade and Industry:** \$5.9 billion in damage, \$2.2 billion in losses.
- **Transport:** \$2.5 billion in damages, \$377 million in losses.
- **Water, Sanitation, and Hygiene (WASH):** \$1.5 billion in damage, \$64 million in losses.
- **Electricity:** Sector losses amount to \$450 million.

#### **E. Recovery and Reconstruction Needs:**

- **Housing:** Requires \$15.2 billion (largest sector requiring funding).
- **Roads:** Requires \$3.45 billion.
- **Electricity Sector:** Requires \$1.5 billion.
- **Health and Trade & Industry:** Each requires \$6.9 billion for recovery.
- **Education:** Requires \$3.8 billion.
- **Agriculture and Social Protection:** Each requires \$4.2 billion (68% of agricultural land has been damaged).
- **Transport and Water & Sanitation:** Require \$2.9 billion and \$2.7 billion, respectively.
- **Debris Removal (four phases: clearance, unexploded ordnance disposal, recycling, and transformation process):** Requires \$1.25 billion.



## F. Macroeconomic Impact:

- Gaza's economy contracted by 83% in 2024, reducing its contribution to the Palestinian economy from 17% to 3%.
- **Unemployment Rate in Gaza:** 80%.
- **Inflation:** Increased by 309.4% in October 2024 due to supply shortages.

## G. Humanitarian and Social Impacts:

- **Food Crisis:** 91% of Gaza's population (1.84 million people) faces acute food insecurity, expected to rise to 1.95 million by April 2025.
- **Healthcare Collapse:** 64% of primary health centers are non-operational, and 25% of the injured require lifelong rehabilitation.
- **Education Crisis:** 745,000 children are out of school, with most school buildings destroyed or repurposed as shelters for displaced persons.
- **Mental Health Crisis:** Over 1 million children require psychological and social support.
- **Orphans and Childcare:** Between 17,000 and 18,000 unaccompanied children in Gaza.

**H. Recovery Planning** The fundamental prerequisites for recovery include security and humanitarian access, restoration of essential services, unrestricted access and entry of construction materials and skilled labor, governance, and international financing.

## (IV) Implementation of the Plan:

### Temporary Housing:

Temporary housing will be provided for displaced persons in Gaza during the reconstruction process through the following proposal:

1. Establishing eight sites within the Gaza Strip with a total capacity of housing more than 1,526,876 million individuals, where Palestinians will be housed in temporary residential units (containers), with each unit accommodating an average of six people.





- **Site 1 (Rafah):** Capacity of approximately 213,889 individuals.
- **Site 2 (Khan Younis):** Capacity of approximately 223,685 million individuals.
- **Site 3 (Deir al-Balah):** Capacity of approximately 184,027 individuals.
- **Site 4 (Gaza):** Capacity of approximately 353,962 individuals.
- **Site 5 (North Gaz):** Capacity of approximately 197,348 individuals.
- **Site 6 (Gaza):** Capacity of approximately 176,981 individuals.
- **Site 7 (Gaza):** Capacity of approximately 176,981 individuals.

## **Timeline for Implementation:**

### **A. Early Recovery Phase:**

- Duration: Six months
- Cost: \$3 billion
- Activities:
  - Debris removal from the central axis (Salah al-Din Road) and other areas, transporting it to collection sites along the coast.
  - Preparing the Salah El-Din axis as a central route for reconstruction efforts.
  - Providing 200,000 prefabricated temporary housing units to accommodate 1.2 million individuals.
  - Commencing the renovation of 60,000 partially damaged housing units, which will eventually accommodate 360,000 individuals once renovations are completed in the next phase.

### **B. Reconstruction Phase (Two Stages):**

#### **Stage 1:**

- Duration: Two years
- Cost: \$20 billion



- Activities:
  - Completion of debris removal and renovation of 60,000 partially damaged housing units.
  - Construction of 200,000 new permanent housing units to accommodate 1.6 million individuals.
  - Reclaiming 20,000 feddans of agricultural land.
  - Development of essential infrastructure, including electricity, telecommunications, and essential service buildings.
  - Establishment of water supply, fire prevention, and sewage systems, comprising:
    - 2 desalination plants.
    - 2 drinking and fire water reservoirs.
    - 2 irrigation water reservoirs.
    - 2 wastewater treatment plants.

## **Stage 2:**

- Duration: Two and a half years
- Cost: \$30 billion
- Activities:
  - Continued construction of infrastructure, service networks, and public buildings.
  - Construction of an additional 200,000 permanent housing units to accommodate 1.2 million individuals.
  - Total permanent housing in Gaza will reach 460,000 units, capable of housing 2.75 million people.
  - Establishment of an industrial zone covering 600 feddans.
  - Development of a fishing port, commercial seaport, and Gaza International Airport.



- Implementation of the first phase of the coastal development, including a 10 km Corniche Road.

### **Financial Requirements and Sources of Funding:**

- The estimated financial requirements for the reconstruction plan total **\$53 billion**, distributed across the following phases:
  1. **Early Recovery Phase – \$3 billion:** Includes mine and unexploded ordnance removal, debris clearance, provision of temporary housing, and renovation of partially damaged buildings.
  2. **Stage 1 of Reconstruction – \$20 billion:** Extending until 2027, covering the establishment of infrastructure, service networks, permanent housing units, and reclamation of 20,000 feddans.
  3. **Stage 2 of Reconstruction – \$30 billion:** Extending until 2030, covering the completion of infrastructure, establishment of industrial zones, fishing and commercial ports, and an airport.
- The effective and rapid implementation of the early recovery and reconstruction plan requires securing the necessary financial resources, considering the extensive destruction in Gaza. This will help restore normal life, enhance economic and social stability, and support long-term sustainable development while ensuring security and stability.
- Diversifying funding sources and ensuring integration and coordination among them is crucial. Available funding sources include:
  1. The United Nations, international financial institutions, donor countries, investment funds, governmental development agencies, and development banks.
  2. Attracting foreign direct investment from multinational corporations.
  3. Civil society organizations will play a key role in mobilizing financial resources to support early recovery and reconstruction efforts.
- A trust fund will be established under international supervision as a financing mechanism. This fund will help manage financial commitments efficiently



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and ensure sustainable funding, transparency, and oversight over the use of the available resources designated to the fund.

- In this context, the Egyptian government plans to host a high-level ministerial conference in Cairo as soon as possible, in coordination with the Palestinian Authority and the United Nations, with the participation of donor countries, international and regional financial institutions, the Palestinian and global private sectors, and civil society organizations.
  1. This conference will serve as a key platform to mobilize the necessary financial resources for early recovery and reconstruction.
  2. It will also propose investment projects to be implemented by the Palestinian Authority in partnership with relevant and interest parties.



# Technical Report

## Table of Contents

Introduction .....	(24)
1- Regional Approach and Spatial Importance of Gaza Strip .....	(27)
• 1.1 Spatial Importance of Gaza Strip	
• 1.2 Population and Residential Density of Gaza Strip	
• 1.3 Administrative Division of Gaza Strip	
• 1.4 The Pre-Destruction Housing and Services Situation in Gaza Strip	
2The Current Status of Housing and Services in Gaza Strip Before Destruction .....	(32)
• 2.1 Methodology for Assessing the Current Situation	
• 2.2 Assessment of Development Sectors in Gaza Strip	
3- Case Studies on Post-War Urban Rehabilitation .....	(38)
• 3.1 First Case Study: Hiroshima, Japan	
• 3.2 Second Case Study: Berlin, Germany	
• 3.3 Third Case Study: Beirut, Lebanon	
• 3.4 Key Lessons Learned from the Case Studies	
4- 4- Rehabilitation and reconstruction in the main sectors .....	(47)
• 4.1 Pillars for Achieving Peace	
5- Strategy for Handling Rubble .....	(51)
• 5.1 Current Situation of Rubble Volumes	
• 5.2 Monitoring and Technical Analysis for Clearing Explosives in Gaza Strip	
• 5.3 Dumping Operations in the Sea	



- 5.4 Stages of Recycling Concrete Rubble
- 5.5 Expected Workforce for the Reconstruction Program
- 5.6 Infrastructure Vision for Gaza Strip

6- General Plan Study for Gaza Strip ..... (58)

- 6.1 Proposed Vision for Gaza Strip Development
- 6.2 Planning Alternatives for Activity and Service Distribution
- 6.3 Master Plan for Land Use
- 6.4 Integrated Development Units
- 6.5 Residential Neighborhoods in the Master Plan
- 6.6 Hierarchical Service Distribution
- 6.7 Distribution of Investment Projects

7- Detailed Plan .....(75)

- 7.1 Studies and Outcomes of the Detailed Plan
  - 7.1.1 Density Distribution in Residential Areas
  - 7.1.2 Building Heights
  - 7.1.3 Green Spaces and Open Areas
  - 7.1.4 Main Axes
  - 7.1.5 Road and Transport Network
  - 7.1.6 Infrastructure Plan

7.2 Urban Identity of Gaza Strip (Architectural and Urban Analysis)  
.....(83)

- 7.2.1 Architectural Character
- 7.2.2 Urban Identity of the Residential Sector
- 7.2.3 Urban Identity of the Service Sector
- 7.2.4 Urban Identity of Government Buildings



- 7.2.5 Urban Identity of Public Buildings
- 7.2.6 Urban Identity of Industrial and Agricultural Areas

8- Early Recovery (Temporary Housing) ..... (94)

- 8.1 Temporary Housing Sites
- 8.2 Temporary Housing Models
- 8.3 Model for Temporary Housing Distribution in the Master Plan

9- Implementation Phases Until 2030 ..... (102)

- 9.1 Early Recovery Phase
- 9.2 Reconstruction (Phase One)
- 9.3 Reconstruction (Phase Two)



## **Introduction**

The study for the reconstruction of Gaza was prepared under the directives of President Abdel Fattah El-Sisi, emphasizing Egypt's historical and regional role, and its firm principles and values. The President stressed the necessity for the international community to unite in reconstructing Gaza, making it livable, restoring normal life for its residents, reaffirming the Palestinian people's right to remain on their land, and highlighting the importance of providing early recovery needs alongside the reconstruction plan. This includes creating the necessary conditions for the sustainability of reconstruction, governance, and initiating a political process to establish an independent Palestinian state to achieve regional peace.

### **New Gaza ... The Right to Peace**

All data and information provided by the Palestinian Authority were examined to assess the current situation and the extent of damage to buildings and infrastructure within the Strip. The destruction has affected 330,000 housing units, leaving approximately 1.2 million Palestinians homeless. Additionally, 61 hospitals, 491 schools, over 800 places of worship, and more than 60% of the road network have been damaged.

A thorough review of studies and reports from various entities related to the reconstruction project was conducted, including:

- Gaza Recovery and Reconstruction Plan (Part 1 & 2) – State of Palestine (February 17, 2025)
- Palestinian Ministry of Public Works report on urgent intervention needs in Gaza (February 2025)
- World Bank report on the Palestinian economic recovery and reconstruction plan



## Various proposals from Egyptian ministries, research centers, and universities for Gaza's reconstruction

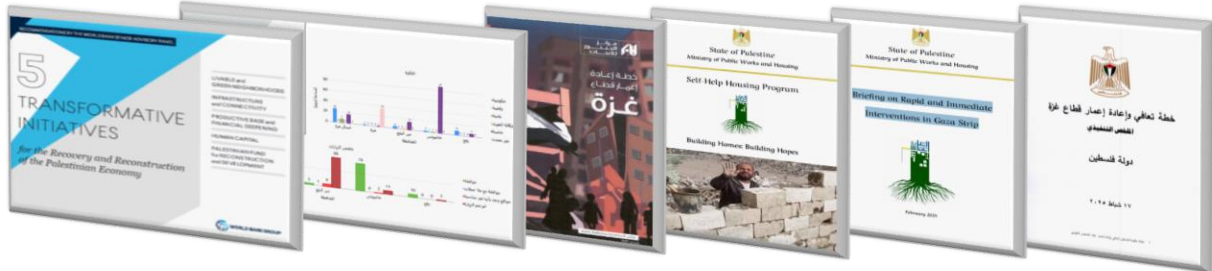


Figure 1-1 Data and Studies Provided by the Palestinian Authority and International Organizations

Which agreed on the principles that must be taken into account in the reconstruction plan, including:

- **Housing:** Establishing prosperous green residential communities that provide the necessary quality of life and provide the necessary community facilities and services.
- **Communication:** Taking advantage of the available resources in expanding the field of new and renewable energy and strengthening trade exchange agreements with neighboring countries allows taking advantage of the various economic resources.
- **Human development:** Enhancing the utilization of human capital through investment in education, health, social protection programs, women's



Figure 1-2: Gaza Strip



empowerment, and providing job opportunities through diversifying the economic base and optimal utilization of resources.

- **Financial system:** Strengthening the economy by providing financing mechanisms, modernizing the financial sector, and exploiting tourism assets to unleash the potential of the tourism sector as one of the economic activities in the sector.

**"Accordingly, a roadmap and an urgent development plan were prepared to rebuild the Gaza Strip over the next five years until 2030 to accommodate about 3 million people. This plan agreed on the necessity of establishing a sustainable, smart, humane society that is resilient to challenges, with environmentally friendly activities that work to preserve and integrate cultural and heritage identity with modern innovation to ensure sustainable urban development."**

## **1- The Regional Context Study and the spatial importance of the Gaza Strip**

### **1-1 The Spatial Importance of the Gaza Strip:**

The Gaza Strip is the southernmost part of the Palestinian coastal plain on the Mediterranean Sea; the Strip is approximately 41 kilometres long and 6 to 12 kilometres wide, with an area of 360 km<sup>2</sup>. Its population is approximately 2.5

million. It is located along the eastern shore of the Mediterranean Sea between latitudes 31'15' to 31'25' north, or ten minutes of latitude, and longitudes 34'20' to 31'25' east.

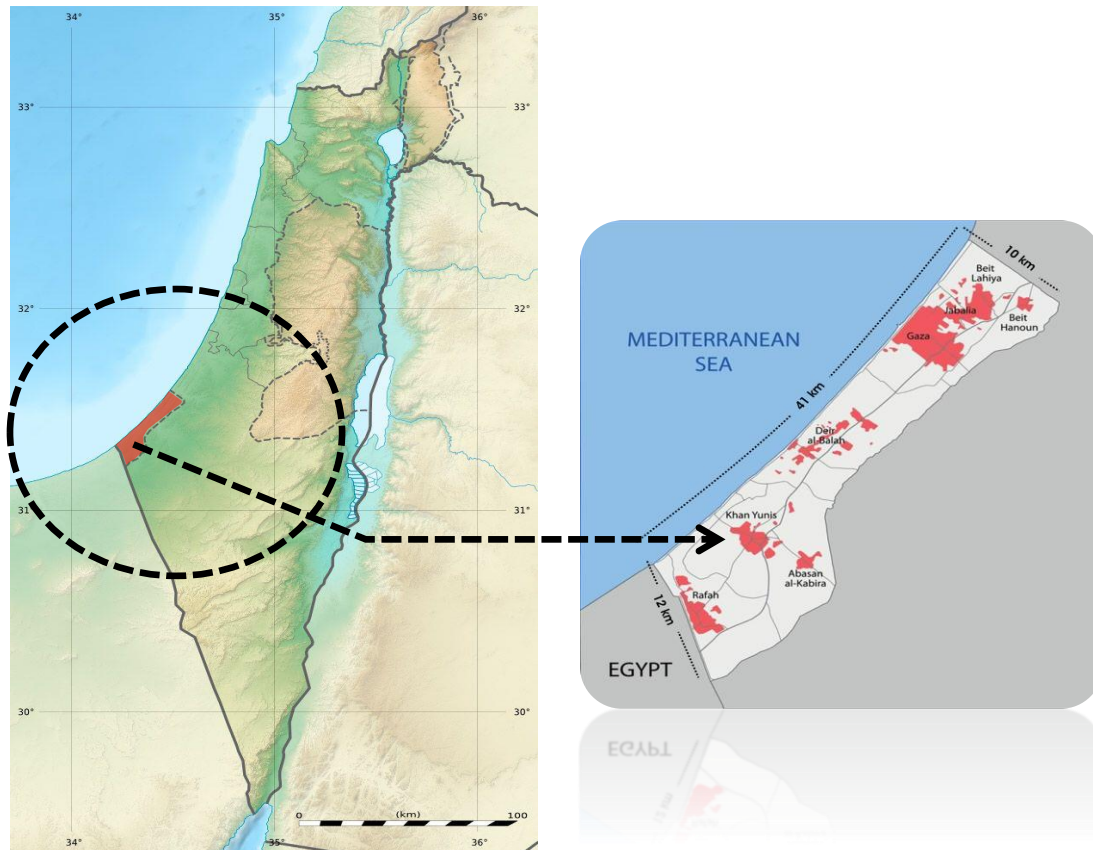


Figure 1-3: Location and spatial importance of the Gaza Strip

## 1.2 Population and Residential Density of Gaza Strip:

The population of the Strip is approximately 2.5 million people in 2024, with males representing approximately 50.8% and females representing approximately 49.2%, with a density rate of approximately 5,836 individuals/km<sup>2</sup>, or approximately (25 individuals/acre), as the average family size decreased to 5.3 individuals compared

to 6.5 individuals in 2007. The percentage of families in 2023 in Palestine reached 12% of families, with 12.4% in the West Bank and 11.8% in the Gaza Strip.

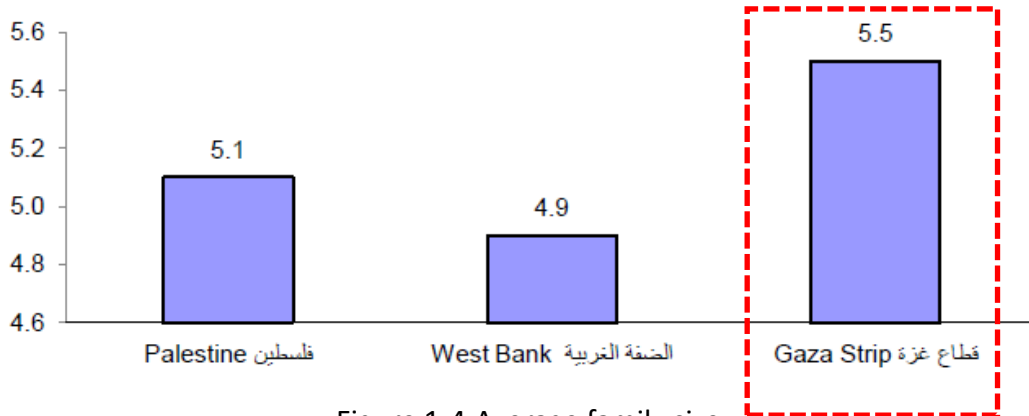


Figure 1-4: Average family size

The annual growth rate in the State of Palestine is expected to reach 2.4% in 2023, with 2.1% in the West Bank and 2.7% in the Gaza Strip.

### population estimate until 2030:

The population of the sector is approximately 2.5 million people, with a density of approximately 5,836 individuals/km<sup>2</sup>, and according to growth rates it is expected to reach 3 million people in 2030.

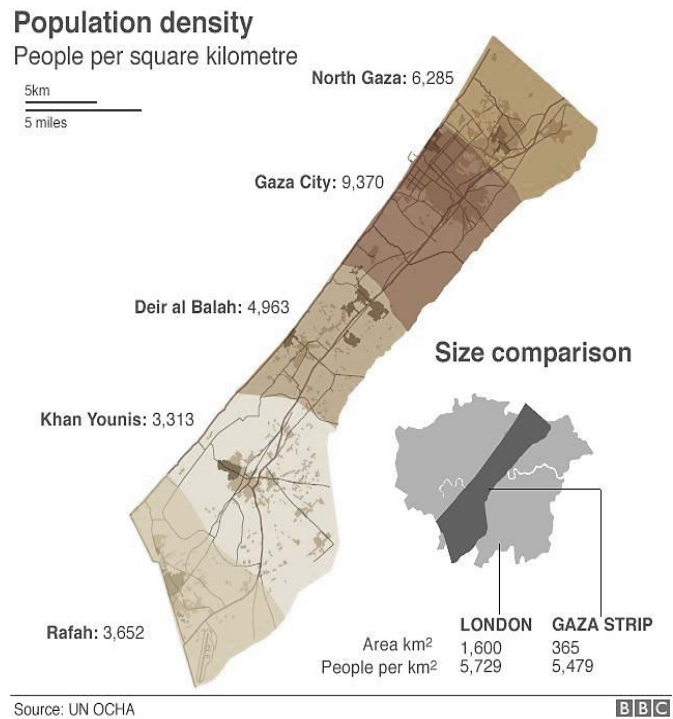


Figure 1-5: Residential densities distributed



### **1-3 Administrative division of the Gaza Strip:**

The Gaza Strip is divided into five governorates: North Gaza Governorate - Gaza Governorate - Deir al-Balah Governorate - Khan Yunis Governorate - Rafah Governorate. Khan Yunis Governorate is the largest governorate in the Strip in terms of area, while Deir al-Balah Governorate is the smallest. As for the population distribution according to the governorates, Gaza Governorate, with its only city, appears as the largest center in the Gaza Strip, while Rafah Governorate appears as the smallest population center in terms of population size. The population of each governorate is as follows:

### 1-North Gaza Governorate

489,458 A person who represents 20% of the total population of the Gaza Strip according to the latest population census.

**2-Gaza Governorate** 767167, A person who represents 34% of the total population of the Gaza Strip according to the latest population census.

### 3-Deir Al-Balah Governorate

327642, A person who represents 14% of the total population of the Gaza Strip according to the latest population census.

**4-Khan Yunis Governorate** 451 255, A person who represents 20% of the total population of the Gaza Strip according to the latest population census.

**5-Rafah Governorate** 238005, A person who represents 12% of the total population of the Gaza Strip according to the latest population census.

**Total population** is about 2,242,858 people.

**Note:** Recent estimates put the actual population at around 2.5 million.



Figure 1-6: Administrative division of the governorates of the Gaza Strip and the most

## 1.4 The Current Status of Housing and Services in Gaza Strip Before Destruction:

The report examines the situation before the destruction caused by the war, particularly in the areas of housing, healthcare, education, and religious facilities. Below is a summary of the key figures and services that Gaza Strip had before the destruction:

### Number of public buildings and housing

- The results of the general census of population, housing and establishments in the Gaza Strip showed that there were 186,103 buildings. And 403,121 homes in the Gaza Strip.

### Number of health facilities

- The number of governmental and non-governmental hospitals reached 35 hospitals with a capacity of 2614 beds.

186,103  
Buildings



403,121  
Housing Units



2614 Beds

Hospitals 35



Kindergartens 620

Schools 796



### Number of educational facilities

- Number of schools: 796 (561 primary stage + 235 secondary stage) Primary includes primary and preparatory - Number of kindergartens: 620

Churches 3



Mosques 1248



- Number of universities: 18 universities and colleges serving 87 thousand students.

### Number of religious establishments

- Number of mosques: 1248 - Number of churches: 3

## 2. Evaluation of the current situation

### 2-1 Methodology for assessing the current situation:

The global classification of the Gaza Strip was divided into three main categories, with the aim of assessing the interventions required to ensure effective and sustainable rehabilitation.

#### Supplementary evaluation elements:

A- Completely destroyed areas (without clear ownership).

B- Areas of existing ownership (destroyed – not destroyed).

C- Previously vacant areas.

D- Heritage and cultural areas. F- Sites of bloody events (mass graves | hospitals)

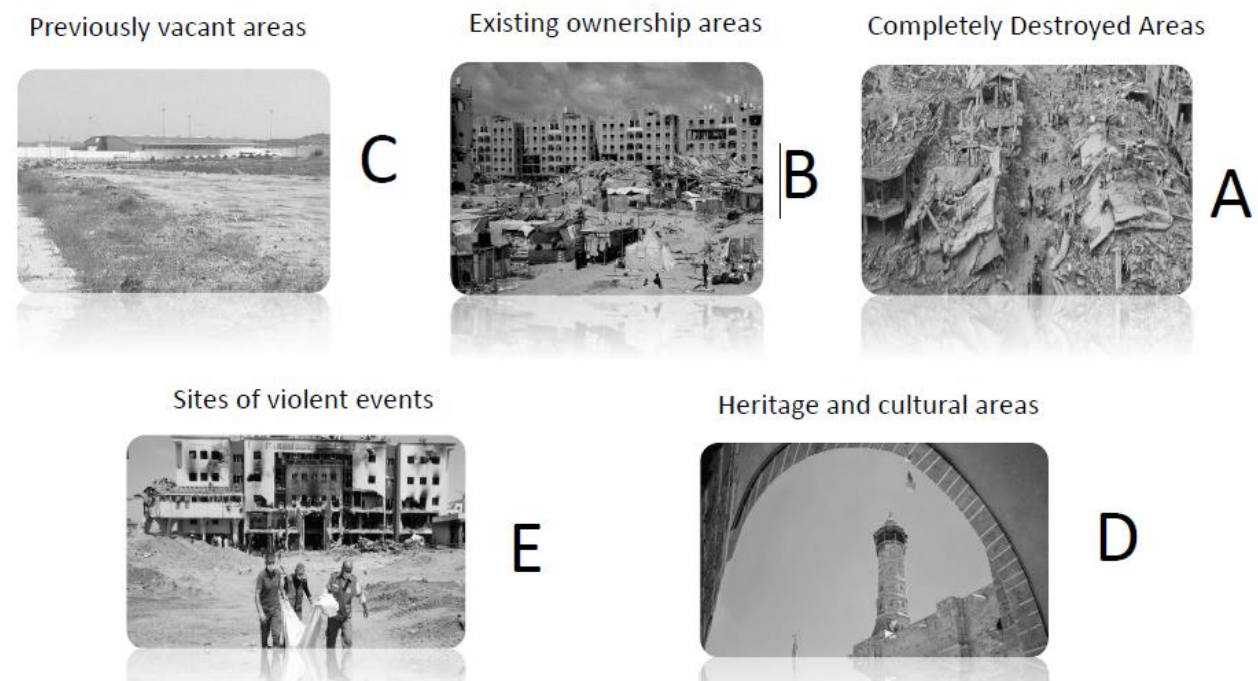


Figure 2-1: Supplementary assessment elements





**A- Completely destroyed areas:** The areas most affected by war, destruction and collapse of infrastructure, suffer from the destruction of homes and displacement of people, the disruption of public services such as water, electricity, health and education, and the loss of livelihoods as a result of the destruction of economic and commercial facilities, in addition to long-term social and economic challenges that require urgent interventions and comprehensive reconstruction efforts to ensure sustainable recovery and stability.

**B- Existing ownership areas:** These areas of clear family ownership in Gaza are areas where families clearly own land and property, often passed down through generations, with documented ownership records, strong family ties, and well-established community structures, with land use and inheritance governed by legal frameworks, customs and traditions, or a combination of the two.

**C- Previously vacant areas:** These areas in Gaza refer to lands that have not historically been inhabited for residential or commercial purposes, including open spaces, agricultural land, and buffer zones or restricted areas that have remained largely undeveloped due to environmental, political or security constraints.

**D- Heritage and cultural areas:** These cultural and heritage sites are a testament to the historical legacy that was destroyed during the war. These sites were witnesses to civilization, identity and collective memory, and have become symbols that reflect suffering and resilience, and embody the profound human and cultural cost of the conflict, making them landmarks for remembrance and revival.

**- Sites of bloody events:** This area is a living memorial to the lives lost during the war, as several sites witnessed the largest number of victims and were transformed into places that reflect suffering and resilience, embodying the profound human cost of the conflict, making them landmarks of remembrance and recovery.

## 2-2 Evaluation of the current situation of development sectors in the Gaza Strip:

### 2-2-1 Assessment of the current status of damaged buildings: -

- **First Sector | Rafah**: About 48% of the buildings in Rafah Governorate were destroyed.

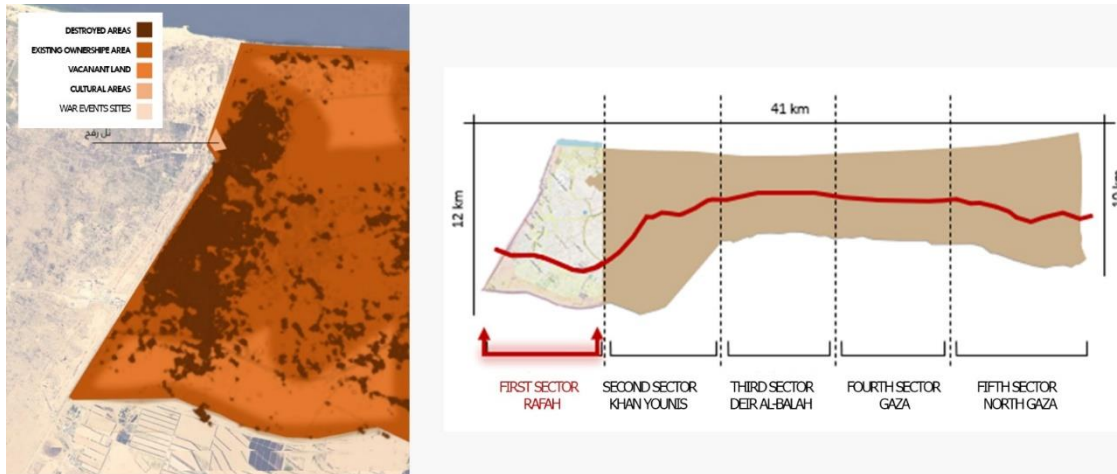


Figure 2-2: Assessment of the current situation of the Rafah Strip

- **Sector Two | Khan Yunis**: About 55% of the buildings in Khan Yunis Governorate were destroyed.

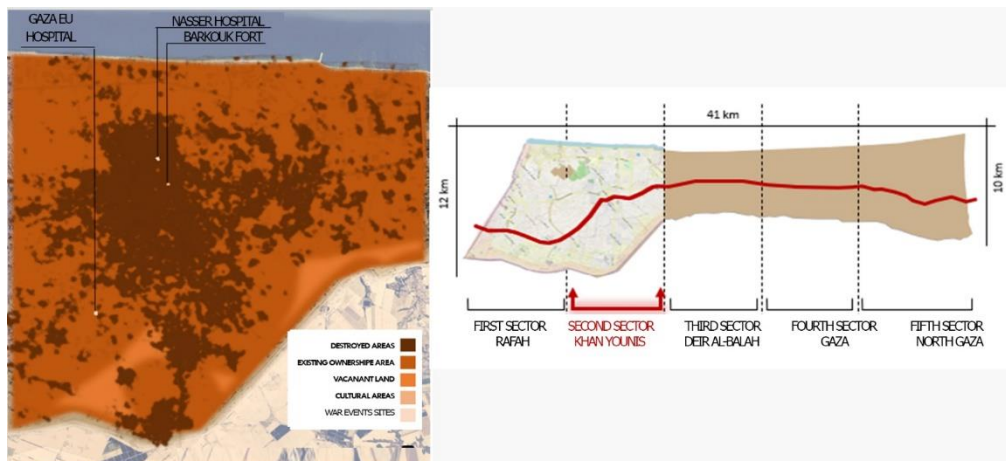


Figure 2-3: Assessment of the current situation of the Khan Yunis sector

- **Sector Three | Deir al-Balah:** About 50% of the buildings in Deir al-Balah Governorate were destroyed.

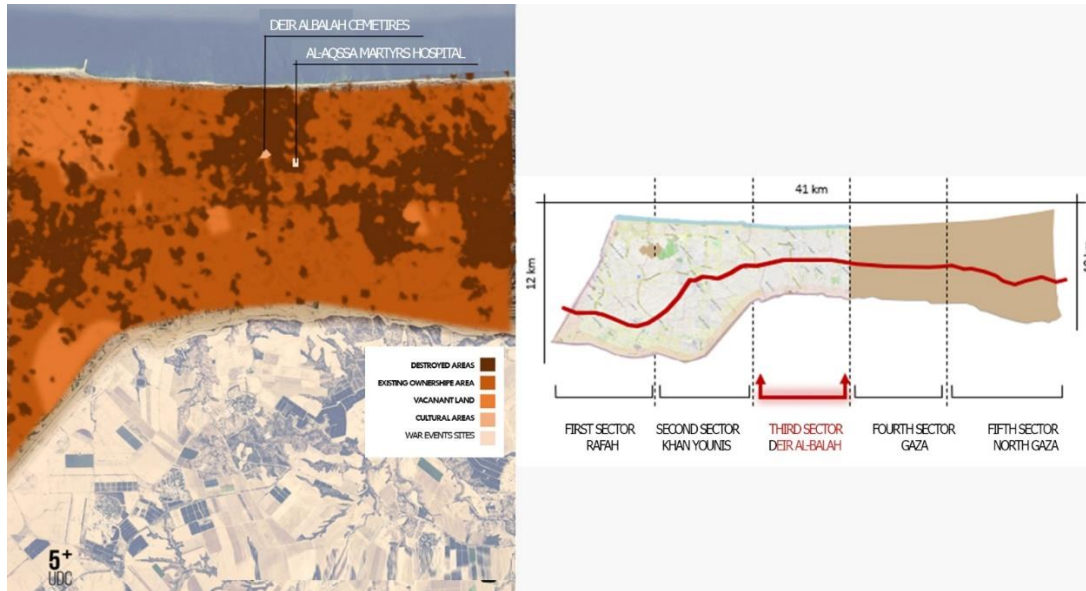


Figure 2-4: Assessment of the current situation of the Deir al-Balah sector

- **Sector Four | Gaza:** About 74% of buildings in Gaza Governorate were destroyed.

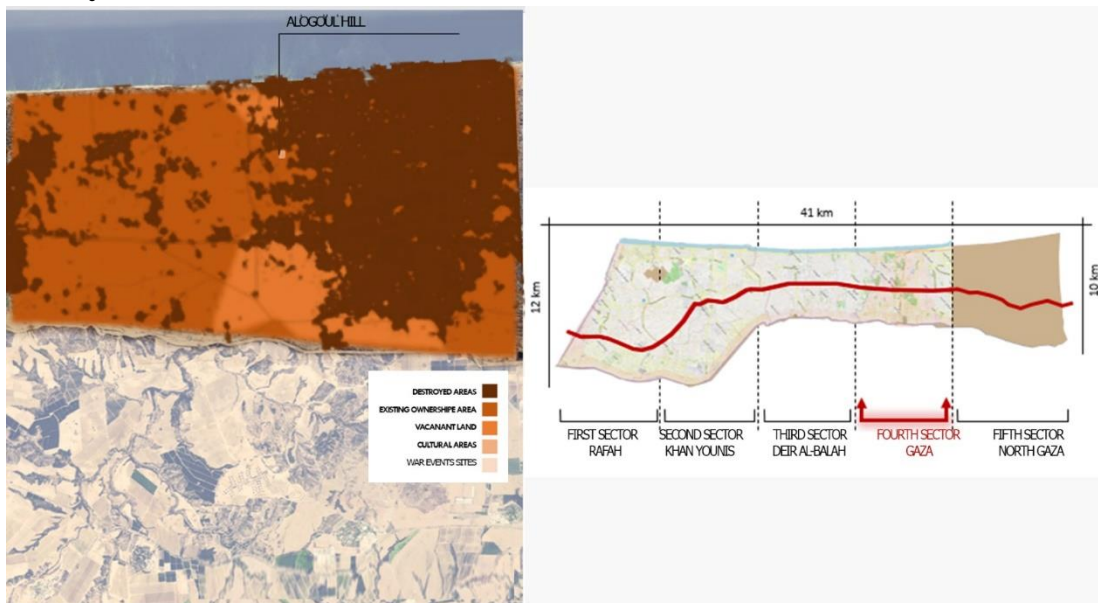


Figure 2-5: Assessment of the current situation in the Gaza Strip

- **Sector Five | North Gaza:** About 74% of the buildings in North Gaza Governorate were destroyed.

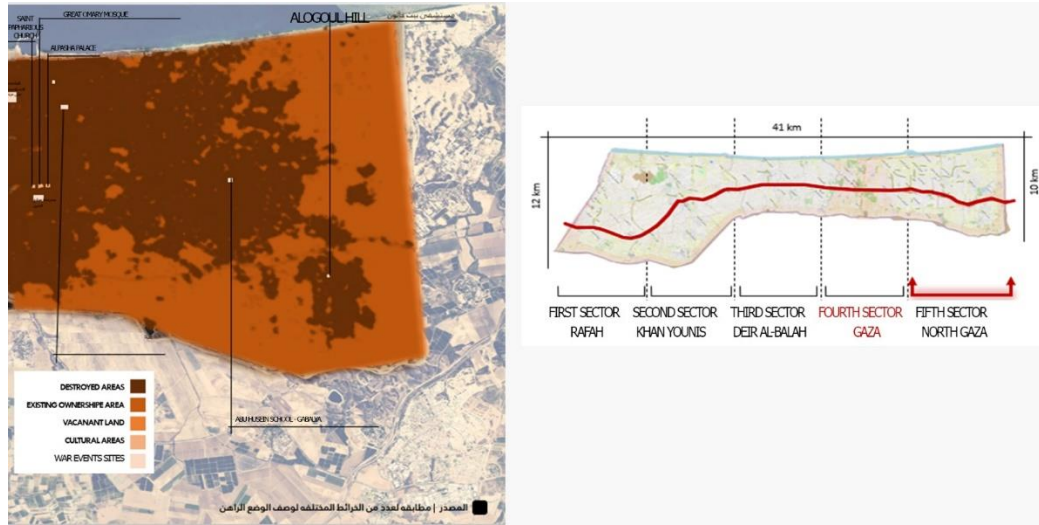


Figure 2-6: Assessment of the current

## 2-2-2 Evaluation of the current situation according to the development sectors:

### Education sector

No schools in the Gaza Strip

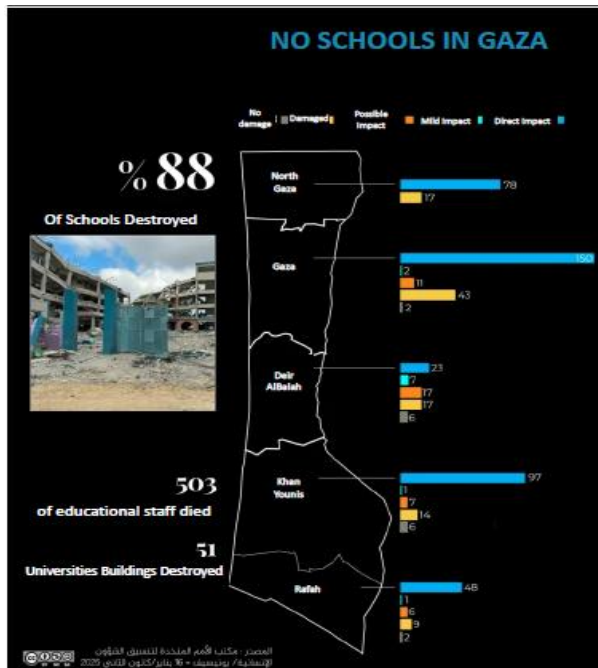


Figure 2-7: Assessment of the current status of the Education Sector sector

### Health sector

Half of Gaza Strip hospitals destroyed



Figure 2-8: Assessment of the current status of the health sector

## Highways and streets

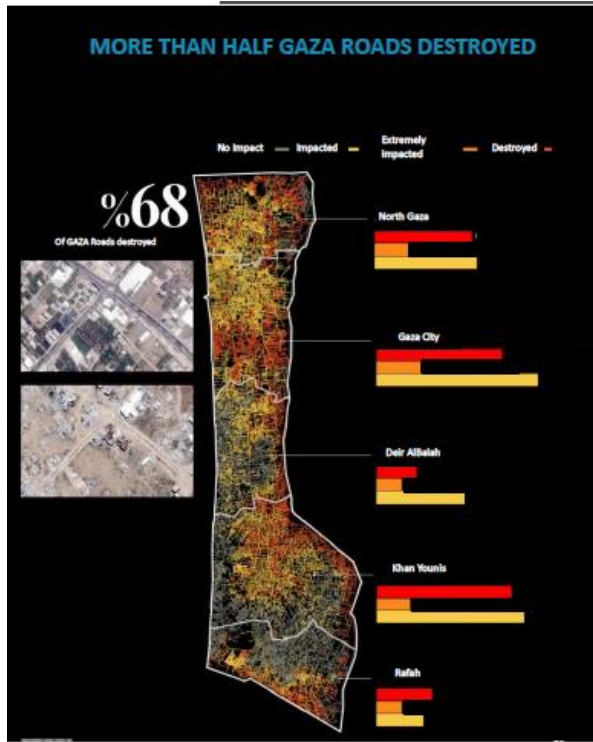


Figure 2-9: Assessment of the current condition of roads and streets

## Agricultural land sector

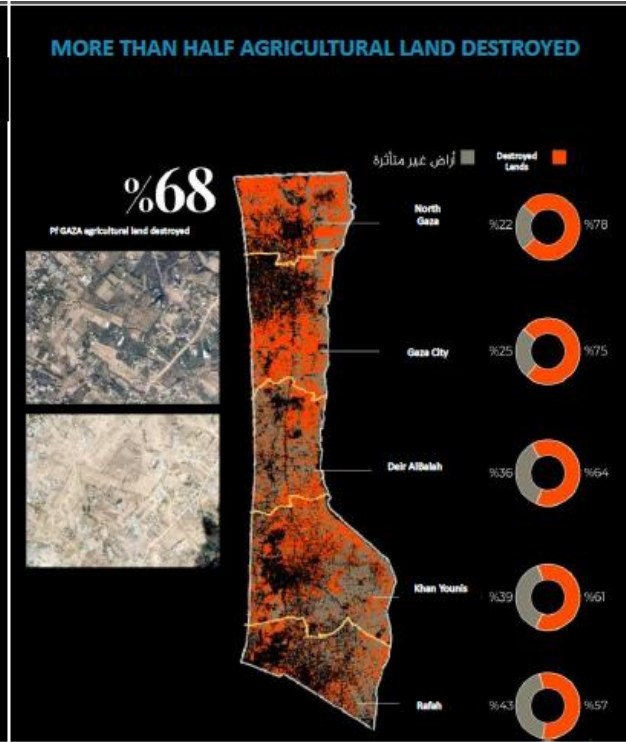


Figure 2-10: Assessment of the current status of agricultural lands

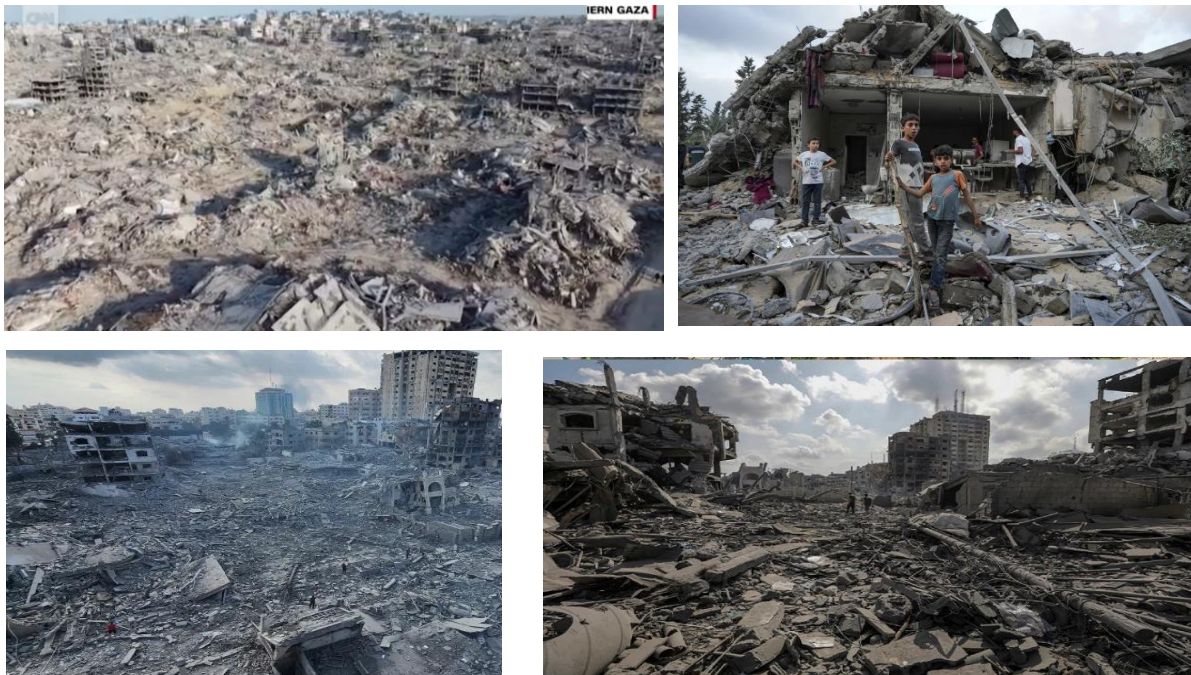


Figure 2-11: Images of the extent of destruction in the sector

### 3. Case studies of post-war urban rehabilitation

The process of urban recovery after war varies from city to city depending on the extent of destruction, available resources, and political contexts.

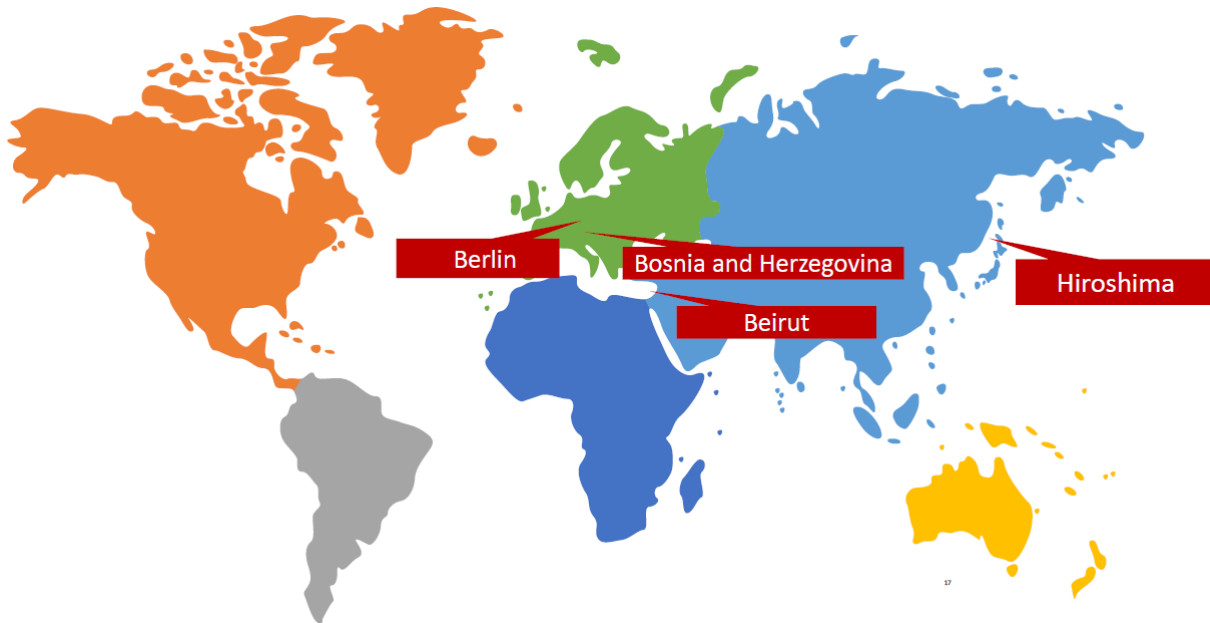


Figure 3-1 Study case sites for urban rehabilitation

#### 3-1 First Experiment: Hiroshima, Japan

##### 3-1-1 Historical background:

On August 6, 1945, Hiroshima became the first city to be attacked by an atomic bomb during World War II. The city was almost completely destroyed, with more than 90% of its buildings destroyed, killing an estimated 140,000 people.

##### 3-1-2 Urban losses:

1- Complete collapse of infrastructure - buildings, roads, bridges, and public facilities were destroyed.

2- Mass displacement - Thousands of Hiroshima residents lost their homes, and survivors suffered serious injuries and radiation illnesses.

3- Environmental impact – Radioactive contamination made reconstruction efforts a major challenge.



Figure 3-2: Firs Experiment: Hiroshima, Japan

### **3-1-3 Urban Rehabilitation Strategy**

#### **1. Damage assessment**

- Comprehensive physical damage assessments were conducted, revealing widespread destruction of infrastructure, residential and commercial areas.
- Radioactive contamination and environmental damage were immediately assessed.

#### **2. Initial Recovery Efforts**

- Emergency shelters have been established for the displaced population.
- The process of removing debris and clearing hazardous materials has begun.
- Basic services such as water and electricity supplies are gradually being restored.



### **3. Urban planning and infrastructure reconstruction**

- The Hiroshima Peace Memorial City Construction Law was enacted in 1949.
- The master plan aimed to transform Hiroshima from a site of devastation into a symbol of peace and recovery.

#### **3-2 The second experiment: Berlin, Germany**

##### **3-2-1 Historical background:**

Before World War II, Berlin was one of the most dynamic cities in Europe, known for its industrial strength, cultural influence, and modern urban planning. However, during the war, Berlin suffered massive destruction, especially due to Allied bombing campaigns and the Battle of Berlin in 1945. The city lost around 300,000 homes. Only 29 of 234 hospitals survived.

##### **3-2-2 Urban losses:**

1-Berlin was left in ruins after the intense aerial bombardment and ground battles, with approximately 50% of the city's structures destroyed or damaged.

2- In the Mitte and Kreuzberg districts, which are two of the city's central districts, up to 90% of the urban development was destroyed.



3- The city was divided into East Berlin, which was under Soviet control, and West Berlin, which was under Western occupation, with each following different urban planning ideologies.



Figure 3-2 Second Experiment: Berlin, Germany

### 3-2-3 Urban Rehabilitation Strategy

#### 1- Post-war reconstruction (1945-1950s):

Initial emergency restoration: After World War II, Berlin was in ruins. Immediate efforts focused on clearing rubble and restoring basic infrastructure such as water, electricity, and transportation. Divergent urban visions: East and West Berlin developed under different ideological influences—East Berlin followed Soviet-style central planning, while West Berlin embraced modern reconstruction.

#### 2-Different urban strategies and reconstruction (1950s-1960s):

This phase was characterized by the development of sprawling projects, with West Berlin continuing to build high-rise buildings, cultural landmarks, and business centers to enhance the image of prosperity, while East Berlin built high-rise housing in socialist neighborhoods to showcase urban industrialization and economic stability.



### **3- Urban rehabilitation and reunification (1970s-1990s):**

It shifted from outward expansion to the rehabilitation of inner-city areas. Historic city centers were preserved as integrated ensembles rather than isolated buildings. Post-unification integration - infrastructure development to reconnect separated neighborhoods. Creation of mixed-use areas (e.g. Potsdamer Platz).

**4- Conclusion:** Berlin dealt with the crisis through phased urban planning strategies, beginning with emergency reforms, then moving on to ideological rivalry, followed by large-scale urban renewal. The challenges of reunification required the integration of two contrasting urban visions, shaping the city's unique urban landscape today.

**"After World War II, Berlin was devastated, with nearly a third of the city destroyed and there was a severe housing shortage. The urban planning response to the crisis evolved through several major steps, reflecting political (the division of Berlin), economic, and ideological factors. Below is an outline of the stages and steps Berlin taking to rebuild and redevelop itself."**

### **3-3 The third experience: Beirut, Lebanon**

#### **3-3-1 Historical background:**

The Lebanese Civil War (1975–1990) was a brutal and complex 15-year conflict, driven by religious divisions, that devastated the Lebanese capital, Beirut. The war involved many factions, including Lebanese militias, Palestinian groups, Syrian forces, and Israeli military interventions. Many people were killed, with estimates ranging from 150,000 to 200,000, and millions were displaced.

### 3-3-2 Urban losses:

1-Berlin was left in ruins after the intense aerial bombardment and ground battles, with approximately 50% of the city's structures destroyed or damaged.

2- In the Mitte and Kreuzberg districts, which are two of the city's central districts, up to 90% of the urban development was destroyed.

3- The city was divided into East Berlin, which was under Soviet control, and West Berlin, which was under Western occupation, with each following different urban planning ideologies.



Figure 3-3: The third experiment: Beirut, Lebanon

### 3-3-3 Urban Rehabilitation Strategy

Beirut's post-war reconstruction was fragmented and largely private, focusing on large-scale infrastructure and redevelopment of commercial areas. The government lacked a comprehensive urban plan, leading to selective restoration and mass demolition of historic sites.



## **1. The Special Boom and Initial Recovery (1991-1994)**

Increased private real estate investment: Emergency government measures: such as financial aid, restoration of basic services. A private development company, Solidere, was given control of the Beirut Central District.

## **2. Economic slowdown and public infrastructure development**

Implementation of major infrastructure projects: Highways and roads Ports and airports Construction of highways Redevelopment of the central area by Solidere (private sector) through the creation of luxury offices, hotels, and luxury residential apartments.

## **3. Economic recession and the decline in the reconstruction process**

Severe economic crisis: Beirut's economy increasingly relied on foreign tourism rather than domestic economic recovery. Luxury developments continued. Reconstruction remained fragmented and sectoral, without a unified citywide strategy.

### **Model results**

- Property owners were given shares in Solidere in lieu of financial compensation, but these shares often lost value or were sold under pressure.
- Luxury-oriented redevelopment, targeting wealthy investors rather than displaced people, has resulted in the loss of the city's historical identity due to the neglect of the heritage preservation plan.
- Former public or community spaces have been transformed into private and commercial spaces.



### 3-4 Key Lessons Learned from the Case Studies

#### **-Sustainable urban planning**

- Focus on new urban planning that takes into account modern infrastructure, sustainability, and resilience against future disasters.
- Designing more transport- and energy-efficient neighborhoods, such as through the use of renewable energy and intelligent transport systems.
- The importance of rapid reconstruction while preserving historical memory.
- Rebuilding cities while preserving some historical monuments as a testament to the past, as happened in Berlin and Hiroshima. Balancing modernity and heritage in urban design.

#### **- Community involvement in the reconstruction process**

- Prioritize the needs of local populations and involve them in decision-making to ensure that the reconstruction process reflects the wishes of the community. Provide affordable housing, especially for displaced persons and returnees.

#### **- Strengthening the local economy and supporting innovation**

- Encouraging domestic and foreign investment to rebuild the economy, as Germany did after World War II. Supporting start-ups and productive sectors to create jobs and achieve economic stability.

#### **- Rebuilding national identity and promoting reconciliation**

- Use reconstruction as an opportunity to promote national reconciliation, especially in cities that have experienced civil conflicts such as Sarajevo (Bosnia). Focus on education and culture to promote values of tolerance and coexistence.



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### **-Improving infrastructure and basic services**

- Rebuilding roads, bridges, water and electricity networks according to the latest standards. Developing crisis and disaster management systems to ensure a better response in the future.

### **-Reorienting housing policy**

Avoid slums and unregulated expansion by developing fair and sustainable housing policies. Encourage social housing and smart housing projects.

### **-Using the land redistribution method**

Management of redistribution of uses and properties within the framework of the proposed urban plan

### **-Adapting to new geopolitical circumstances**

Understand regional and international political dynamics and leverage international support for reconstruction. Ensure economic and political independence from foreign powers to ensure sustainable reconstruction.

### **-Building more resilient communities for the future**

- Using building materials and technologies that are resilient to natural and human-made disasters. Raising community awareness about sustainability and smart urban planning. These lessons learned from the experiences of Hiroshima, Berlin, Beirut, and Bosnia
- illustrate how to turn devastation into an opportunity to rebuild more modern and sustainable cities.



## 4- Rehabilitation and reconstruction in the main sectors

### **Introduction: -**

Gaza has been severely damaged by conflict, requiring a comprehensive recovery and reconstruction plan. The Gaza Recovery and Reconstruction Plan aims to provide humanitarian assistance, immediate reconstruction, and enhance basic infrastructure and services.

**By reviewing the summary of the Palestinian Authority Recovery Plan to Reconstruction in Gaza (GRRP), it is clear that the following is among the most important objectives of the reconstruction plan submitted by the Palestinian side:**

### **Main objectives:**

1. Immediate reconstruction: rebuilding damaged homes and infrastructure.
2. Providing humanitarian aid: Providing food, medical aid and clothing to affected groups.
3. Strengthening infrastructure and basic services: enhancing electricity, water and sanitation infrastructure, and providing basic services such as education and health.

### **Main areas:**

1. Reconstruction and infrastructure: Rebuilding damaged homes and infrastructure.
2. Humanitarian aid and health: Providing food, medical and clothing aid to affected groups.
3. Education and training: Providing training and empowerment to affected groups to enhance their capacity to recover.
4. Economy and Development: Strengthening the local economy by supporting small and medium enterprises.

### **Main steps:**

1. Damage assessment and prioritization: Damage assessment and prioritization for reconstruction.
2. Providing the necessary funding and resources: Providing the necessary funding and resources for reconstruction.
3. Implementation of construction and infrastructure projects: Implementation of construction and infrastructure projects.



4. Providing training and empowerment to affected groups: Providing training and empowerment to affected groups to enhance their recovery capacities.

### **Risks and Challenges:**

1. Lack of funding and resources: Lack of funding and resources for reconstruction.
2. Ongoing conflicts: Ongoing conflicts that may affect reconstruction.
3. Environmental and health challenges: Environmental and health challenges that may affect reconstruction.

### **Summary of the recovery plan submitted by the Palestinian side: -**

The recovery and reconstruction plan for Gaza requires joint efforts between governments, humanitarian organizations and the local community. Focus should be on providing humanitarian assistance, immediate reconstruction, and strengthening infrastructure and basic services. Training and empowerment should also be provided to affected groups to enhance their capacity to recover.

After reviewing all the studies and reports issued by various parties related to the reconstruction project, it became clear that there are a set of main pillars for achieving lasting peace:

#### **4-1 Pillars of achieving lasting peace: -**

- 1- The survival of the landowners.**
- 2- Centralization of the Palestinian government.**
- 3- Economic development.**



## 4- Creating pillars of peace.

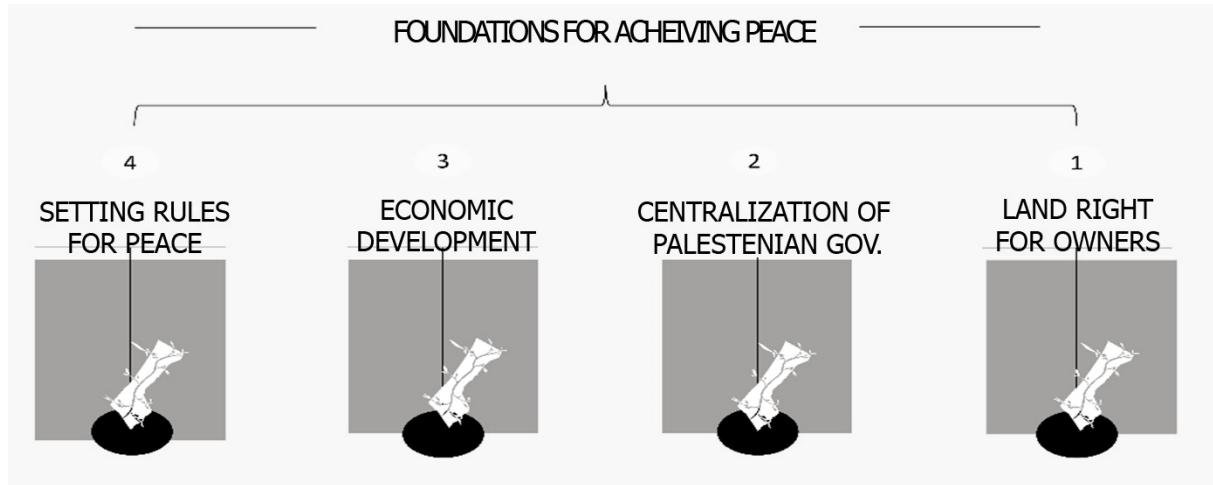


Figure 4-1: Pillars of achieving lasting

**This report will discuss these main pillars in detail as follows:**

**1- The survival of the landowners:** returning the people of Gaza to their homes is a fundamental step towards restoring their rights, enhancing their dignity and achieving stability. Providing them with housing, education, health care and basic services ensures a safe and prosperous future. There is an urgent need for immediate action to protect the two million plus people and uphold their basic human rights.



Figure 4-2: The survival of the landowners.

**2- Strengthening of the Palestinian government:** A centralized Palestinian government ensures effective governance, stability, and sustainable development. Unified administration enables equitable distribution of resources, coordinated reconstruction, and efficient service delivery—laying the foundation for security, peace, and prosperity.

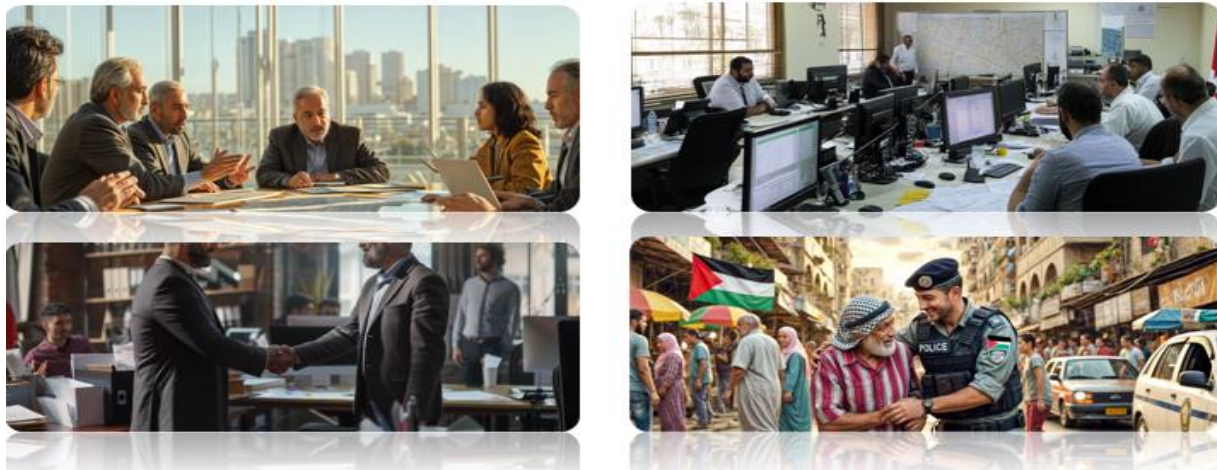


Figure 4-3: Centralization of the Palestinian

**3- Economic development:-** Economic development contributes to financial and social stability by promoting the agriculture, industry, energy and trade sectors. Stimulating production and investment creates jobs, enhances self-sufficiency and ensures a sustainable and prosperous future.

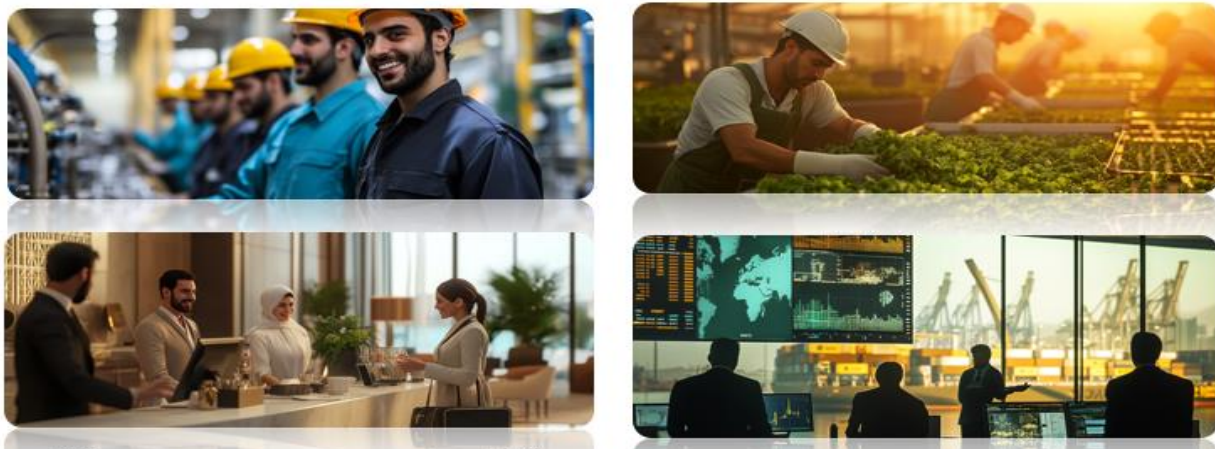


Figure 4-4: Economic development.

**4- Establishing the pillars of Peace:-** Economic development contributes to financial and social stability by promoting the agriculture, industry, energy and trade sectors. Stimulating production and investment creates jobs, enhances self-sufficiency and ensures a sustainable and prosperous future.



Figure 4-5: Creating Pillars of Peace

## 5- Strategy to address the issue of Debris

### Rising from the Ruins of Destruction..

“From the Ruins of Gaza’s Buildings, We Will Rebuild Stronger, Greater, and More Determined Than Ever. Gaza’s Future Will Not Be Erased, but Expanded and Elevated, Written in the Language of Strength and Resilience.”

#### 5-1 Current status of aggregate sizes:

- Average aggregate size: 50,000,000 tons
- One third of this debris is located in the Gaza Strip.
- The presence of unexploded ordinances (UXOs), bombs, and missiles among the debris.
- Chemicals, metals and human remains are expected to be found among the debris.

Source: Minister of Public Works and Housing in the Palestinian Government | Ahed Bseiso - 02/09/2025

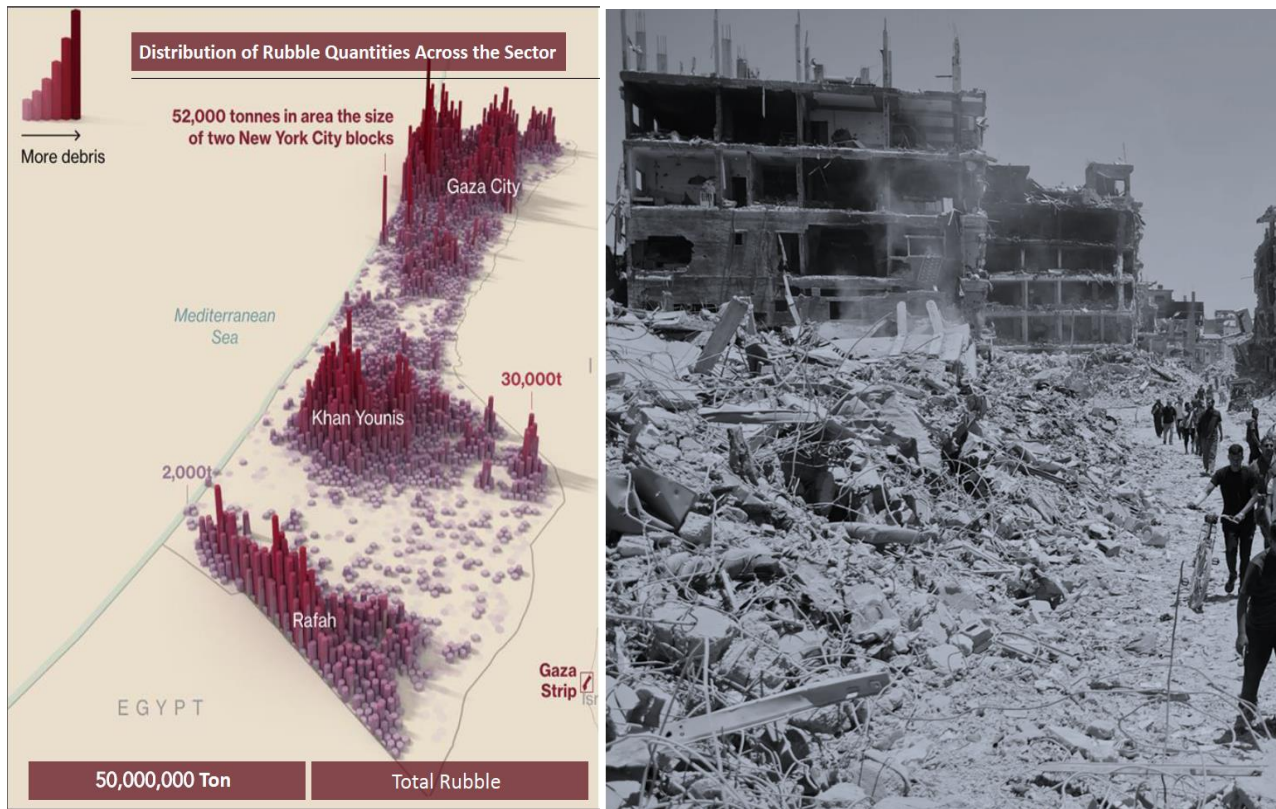


Figure 5-1: Current status of aggregate sizes.

## 5-2 Monitoring and technical analysis of ammunition clearance in the Gaza Strip

- Huge numbers of different types of munitions (airborne - ground armament systems) have been used, estimated to weigh about (75-85) thousand tons since the start of operations in October 2023, with the continued presence of about (8000) tons of unexploded ordnance (equivalent to "32-40" thousand unexploded objects) spread across various parts of the Strip [unexploded ordnance at a total rate of about (10%) of the total munitions dropped/launched towards Gaza and as a direct result of their failure to explode]



- The difficulty of determining the locations of unexploded ordnances, in connection with the targeting of all facilities and infrastructure in the sector, which led to their demolition and the accumulation of debris (cement - bricks - wood - composite materials - metals - plastic - asphalt), with a total weight estimated at about (50) million tons, and what the debris contains (remnants of explosive ordnance / unexploded ordnance) is difficult to detect, in addition to the debris containing a total weight of about (800) thousand tons of asbestos (mineral fibers) and contaminated building and construction materials.

**The total estimated cost of the disinfection works is about 100 million USD.**

### **5-3 Reclamation works in the sea**

- The aggregates present in the sector, in addition to backfill sand from outside the sector, are used to form the acquired land with an area of 14 km<sup>2</sup> (about 2% of the sector's area). It is planned to preserve, develop and upgrade the old port.
- The amount of sand required is about 200 million m<sup>3</sup>.

Estimated cost is (4.5) billion dollars

The average cost per square meter is (350) dollars, approximately (17.5) thousand Egyptian pounds/m<sup>2</sup>, without utilities.

Estimated cost according to the offer of the Belgian company (DEMI)

In case of commencing the marine study work, the cost will be audited.

The required amount of sand is (180-200) million cubic meters.

- From the rubble of destroyed facilities in Gaza City (10) million cubic meters 5%
- Of the territorial waters in front of Gaza City (10) million cubic meters 5%
- Management of the Egyptian coast (180) million cubic meters 90%

The amount of coated stones for marine protection (3 million cubic meters) from Egyptian land quarries and (2 million cubic meters) of concrete sections



### 5-4 Stages of concrete aggregate recycling: -

Phase 1: Removal of explosives/mines/unexploded missiles.

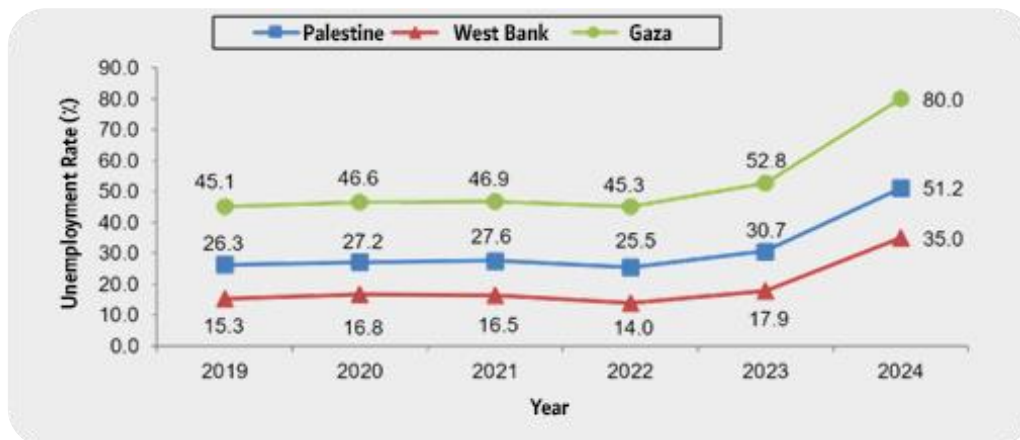
Second stage: separation and extraction of minerals/chemicals/remains.

The third stage: recycling pure aggregate.

The fourth stage: the conversion process of aggregates.

### 5-5 Expected employment for the reconstruction program

- The number of unemployed in the sector reached approximately 90% of the total workforce.
- **It is important for the people of Gaza to contribute**, including those who are unemployed, to all stages of the reconstruction process, whether in decision-making or implementation, to foster a sense of ownership and ensure that the needs of the local community are met.



Source: State of Palestine, Palestinian Central Bureau of

Figure 5-3: Unemployment

### Number of people able to rebuild

- Given that approximately 53% of the population of the Gaza Strip are adults (approximately 1.1 million people), we can estimate that a significant portion of these people may be of working age. However, given the high

unemployment rate, which has reached approximately 79% at times due to the current circumstances, the actual number of people able to work in the reconstruction of Gaza could be much lower.

- Assuming that only about 20% of adults (about 220,000 people) are able to find jobs in the construction and reconstruction sector, this may be the number who can initially participate in these efforts. Of course, this number changes depending on the job opportunities available, the training of individuals, and international cooperation in financing reconstruction programs.

## 5-5 Gaza Strip Infrastructure (Vision)

### 5-5-1 Gaza Strip Infrastructure Principles



**Smart - Eco-Friendly - Sustainable - Humane**

Figure 5-4 Sustainable Development Goals





□ **Green City:**

Expanding green spaces, parks, and tree-lined streets to improve air quality, enhance environmental diversity, and enrich the urban character.

□ **Sustainable City:**

Integrating renewable energy, efficient buildings, and smart waste management to reduce the environmental footprint.

□ **Walkable City:**

Developing pedestrian-friendly streets and multi-use spaces to enhance social interaction and encourage walking.

□ **Livable City:**

Ensuring high-quality housing, healthcare, and cultural spaces while preserving Gaza's heritage.

□ **Connected City:**

Strengthening public transportation, smart infrastructure, and seamless mobility to improve accessibility.

□ **Smart City:**

Implementing digital governance, smart networks, and AI-powered services to achieve efficiency and flexibility.

□ **Economic Hub:**

Supporting entrepreneurship, investment, and local industries to create job opportunities and enhance economic growth



## **6- Study of the general plan for the Gaza Strip**

### **6-1 Proposed Vision for the Development of the Gaza Strip**

The Gaza reconstruction project is a crucial step towards building a new future that reflects the resilience of the Palestinian people and their ability to transform hardships into opportunities. This project is not limited to rebuilding what was destroyed by wars and disasters, but rather aims to establish the foundations for sustainable and comprehensive development that reshapes the urban landscape and provides an integrated urban environment that meets the needs of current and future generations.

This project comes at a time of increasing economic and humanitarian challenges, which calls for a forward-looking vision based on precise scientific planning and the use of the latest technologies in reconstruction and smart construction. By rehabilitating the infrastructure, developing basic facilities, and stimulating investment, this vision seeks to achieve a qualitative leap in various sectors, ensuring an improvement in the quality of life for the population, and enhancing Gaza's position as a vital center at the local and regional levels.

#### **"Steadfast as an olive tree, unshakable, everlasting."**

This vision statement represents a comprehensive vision that combines Palestinian heritage with modern urban planning to ensure that reconstruction is not just a temporary solution but a foundation for a true renaissance that will last for future generations.

#### **"Steadfast as an Olive Tree" – Strength and Deep Roots**

The olive tree is not just a plant; it is a symbol of resilience and heritage in Palestinian culture. Its roots extend deep into the earth, firmly holding on despite all hardships, reflecting the strength of Palestinian identity and its deep connection to the land.



Reconstruction is not merely about erecting new structures but about establishing a solid infrastructure that serves future generations.

### **"Unshakable" – Stability and Resilience Against Challenges**

The reconstruction of Gaza is not a temporary initiative but a long-term strategic vision based on:

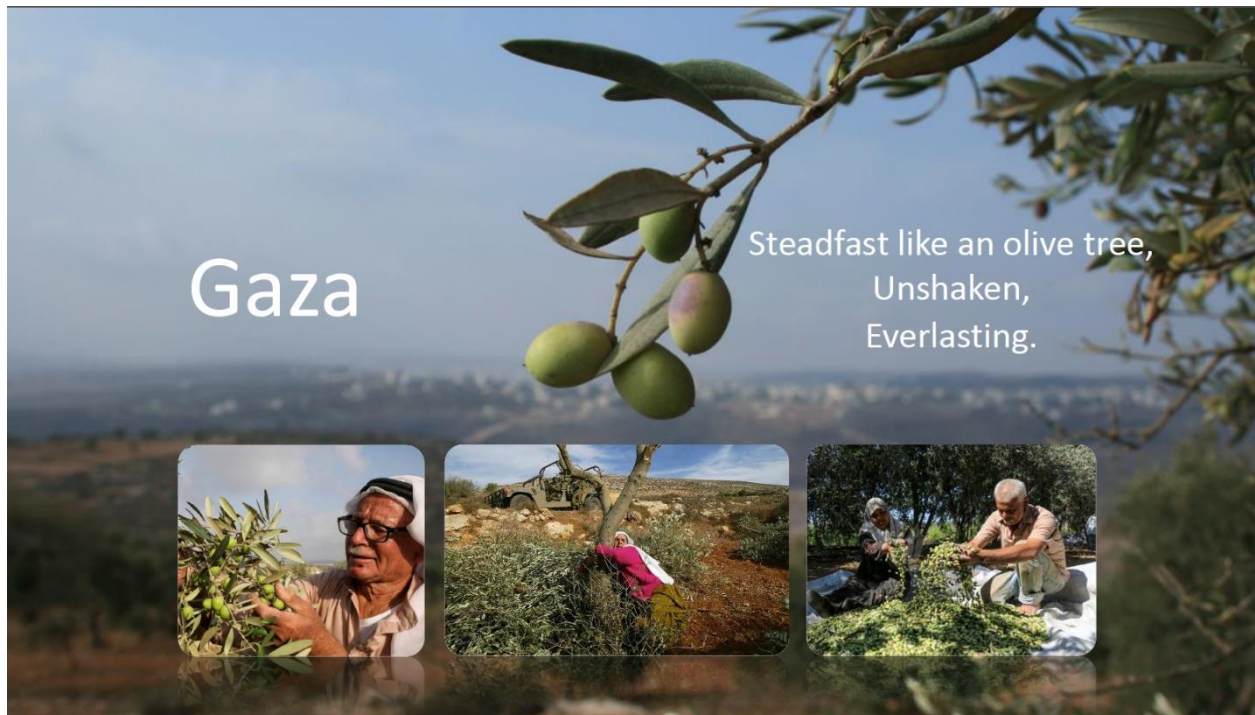
- Sustainable urban planning that ensures the stability of cities and public facilities.
- Strengthening economic and social resilience through productive and investment projects that reduce dependence on foreign aid.

**We are not building a fragile city that crumbles under crises; we are constructing a strong city that stands firm against challenges.**

### **"Everlasting" – Sustainability and Continuous Development**

The reconstruction project is not just a temporary rebuilding effort but a smart plan for Gaza's future, which includes:

- Green and smart buildings that rely on renewable energy and modern technology.
- Developing a sustainable economy that creates permanent job opportunities and advances industry, agriculture, and technology sectors.
- Achieving a cultural and educational renaissance that ensures continuous progress in Palestinian society.





## 6-2 General Land Use Plan

The general land use plan serves as a key tool in the reconstruction of Gaza, aiming to achieve sustainable development through integrated planning that considers population, economic, and service needs. The plan is based on a strategic vision that ensures the fair distribution of services and vital facilities, contributing to improved quality of life and enhanced social and economic stability.

### 6-2-1 Key Objectives of the General Plan

1. Providing a comprehensive urban environment based on sustainability principles, optimal land use, and a balanced distribution of urban and economic activities.
2. Enhancing the economic capacity of the region by developing industrial, logistical, and tourism zones that support economic growth and create sustainable job opportunities.
3. Improving quality of life by developing well-equipped residential areas and strengthening health, educational, and cultural services.
4. Protecting natural resources and the environment through the establishment of green corridors, adoption of renewable energy strategies, and ensuring the sustainability of agricultural and rural activities.
5. Strengthening local and international connectivity by developing the transportation network, expanding ports, and improving logistical infrastructure to support trade and investment.

### 6-2-2 Components of the General Plan

#### 1. Residential Areas and Urban Planning

Residential areas have been designed according to standards that ensure a suitable urban environment with varying densities, including:

- **Low-density housing:** Designed for families seeking larger spaces, often located near green belts.
- **Medium-density housing:** Includes mid-sized housing units suitable for middle-class needs, ensuring easy access to services.



- **High-density housing:** Designed to accommodate a large population within a compact urban environment, ensuring efficient land and infrastructure use.

Additionally, the plan allocates **mixed-use residential zones** that integrate residential, commercial, and service functions to achieve a balanced urban dynamic.

## 2. Economic and Development Zones

Economic activities are distributed according to a vision that supports various productive sectors, including:

- **Industrial and logistics zones:** Aimed at enhancing manufacturing and trade by providing a supportive environment for medium and heavy industries, along with advanced logistical infrastructure for supply chains.
- **Agricultural and handicraft industries:** Focused on developing the agricultural sector and traditional industries to strengthen local production and support rural development.
- **Solar energy and utility zones:** Dedicated to environmental sustainability through renewable energy solutions and efficient resource management.

## 3. Urban and Service Centers

The plan includes several integrated service centers that meet essential population needs, including:

- **Central service zone:** Houses government institutions, commercial centers, and public facilities to ensure a developed administrative and economic environment.
- **Central green corridor:** An urban environmental area designed to create open spaces that enhance quality of life and encourage community and recreational activities.
- **Salah Al-Din Corridor:** A key transportation and commercial artery connecting various urban and industrial areas within the sector.

## 4. Tourism and Recreational Areas

The plan pays special attention to promoting the tourism sector by designating entertainment and tourism zones, including:



- **Coastal tourism area:** Featuring Mediterranean beachfront resorts, recreational facilities, and tourist ports.
- **International port and fishing harbor:** Aimed at boosting economic and commercial activities while supporting the fishing industry and maritime operations.

## 5. Agricultural and Rural Areas

- **Villages and agricultural lands:** Dedicated to sustaining agricultural activities by allocating vast spaces to support local production and ensure food security.
- **Integrated development units:** Represent a modern model for sustainable development, with each unit covering approximately 21 km<sup>2</sup> and accommodating between 250,000 to 300,000 people, offering all necessary services and infrastructure for modern living.

This comprehensive land use plan ensures balanced urban expansion, economic sustainability, and environmental protection, contributing to a resilient and prosperous future for Gaza.



## 6-2-3 Land Use Budget for the General Plan

The general land use budget has been carefully allocated to ensure a balanced distribution of residential, commercial, industrial, and service areas, fostering sustainable urban development and economic growth. Below is a breakdown of land allocations:

### 1. Residential Areas

- **Allocated Area:** 21,000 acres (25% of total land)
- Designed to provide a fully integrated living environment that meets the needs of various social groups. The planning includes diverse housing units while ensuring access to service facilities for a high quality of life.

### 2. Cemeteries

- **Allocated Area:** 2,000 acres (2.4% of total land)
- Strategically located in accordance with urban planning standards, ensuring accessibility while being situated away from densely populated areas.

### 3. Public Services and Facilities

- **Allocated Area:** 5,500 acres (6.5% of total land)
- Includes healthcare centers, educational institutions, and community services, ensuring urban sustainability and the provision of essential services to residents.

### 4. Governmental and Administrative Institutions

- **Allocated Area:** 3,500 acres (4.2% of total land)
- Comprises government headquarters and administrative institutions that enhance public administration efficiency and institutional infrastructure.

### 5. Logistics and Regional Free Markets

- **Allocated Area:** 1,500 acres (1.8% of total land)
- Serves as a key hub for goods and services, supporting economic development and strengthening regional trade.



## 6. Main Road Network

- **Allocated Area:** 11,000 acres (13.6% of total land)
- Aims to connect different areas within the plan efficiently, enhancing traffic flow and transportation effectiveness.

## 7. Agricultural Areas

- **Allocated Area:** 25,000 acres (31% of total land)
- Reflects the sector's vital role in food security and environmental sustainability, ensuring optimal land productivity.

## 8. Tourism Villages

- **Allocated Area:** 2,000 acres (2.4% of total land)
- Designed to boost tourism and support the local economy through the development of resorts and entertainment facilities.

## 9. Commercial, Administrative, and Investment Areas

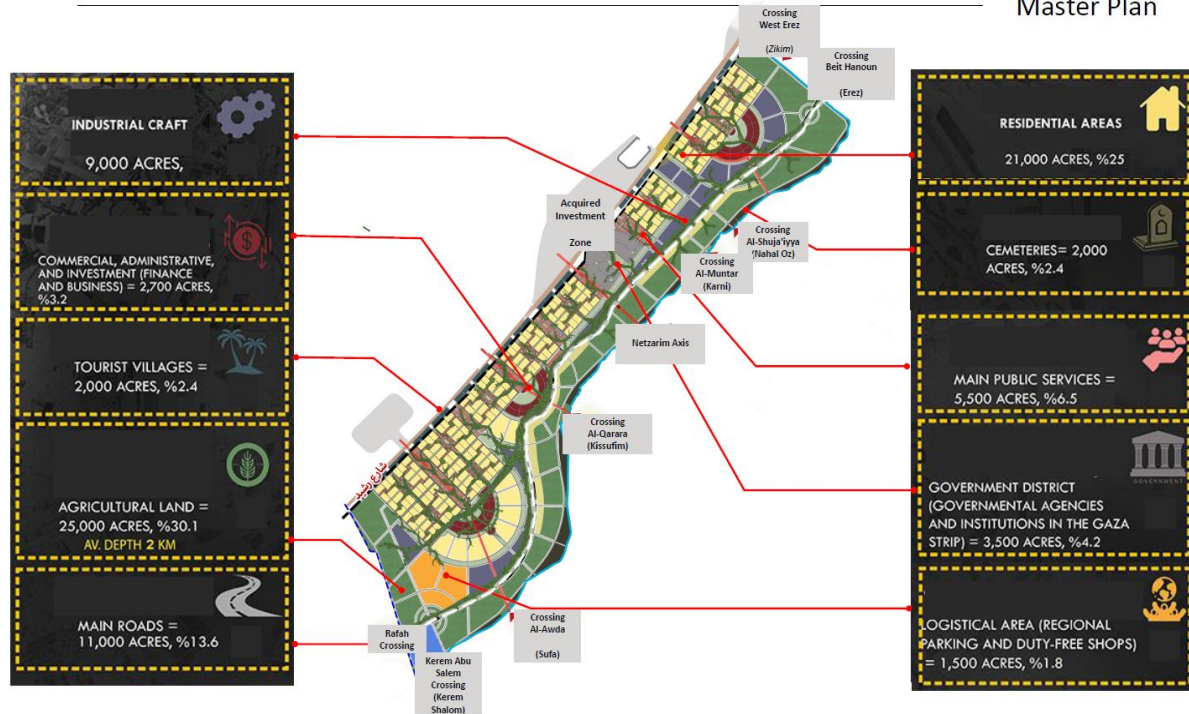
- **Allocated Area:** 2,700 acres (3.2% of total land)
- Provides an attractive environment for entrepreneurs and investors, driving economic activity and job creation.

## 10. Handicraft Industries

- **Allocated Area:** 9,000 acres (8% of total land)
- Dedicated to small and medium-sized enterprises (SMEs) to promote local industries, strengthen the productive economy, and create employment opportunities.

This comprehensive land use budget ensures a well-balanced, functional, and sustainable urban environment that supports long-term growth and development in Gaza.





### 6-3 Integrated Development Units

The **Integrated Development Unit (IDU)** represents an urban and developmental model designed to achieve a balanced land use strategy. It integrates **residential, commercial, industrial, and service areas** within a **sustainable strategic framework**.

Each **IDU spans approximately 21 km<sup>2</sup> (5,000 acres)** and is designed to accommodate **250,000 - 300,000 residents**. It provides a **comprehensive urban environment** that harmonizes **housing, employment, and recreational facilities** to support population growth efficiently.

#### 6-4-1 Key Components of the Planning Unit

##### 1. Residential Areas

The housing plan ensures diverse residential options to cater to different population needs:

- **Low-density housing:** Comprises villas and detached houses with **large green spaces**, providing a high-quality living environment.
- **Medium-density housing:** Consists of **mid-rise buildings**, balancing residential efficiency with open spaces.



- **High-density housing:** Located near **commercial corridors and public transport hubs**, featuring **high-rise apartment buildings** to accommodate a larger population.

## 2. Mixed-Use and Commercial Areas

To optimize urban space and reduce long-distance commuting, **mixed-use zones** integrate:

- **Residential-commercial areas:** Shops and businesses located **on the ground floors of residential buildings**.
- **Office and public service areas:** Ensuring convenient access to essential services while considering Gaza's limited land availability.

## 3. Service and Developmental Hubs

### Central Services:

- Positioned in a **strategic central location** within the planning unit.
- Includes **government offices, administrative centers, schools, hospitals, cultural centers, and entertainment facilities**.

### Regional Services:

- Located at the **edges of the unit**, serving both **local and neighboring areas**.
- Comprises **large commercial centers, government institutions, and transport infrastructure**.

## 4. Recreational and Tourism Zones

Positioned along the **Mediterranean coast**, these areas offer:

- **Resorts, parks, public beaches, and leisure facilities**.
- Open spaces promoting **domestic tourism and relaxation**.

## 5. The Central Green Corridor

A **green spine** running through the unit to enhance urban quality:

- **Parks and extensive green spaces** improving air quality and aesthetics.



- **Pedestrian and cycling pathways** promoting sustainable mobility.

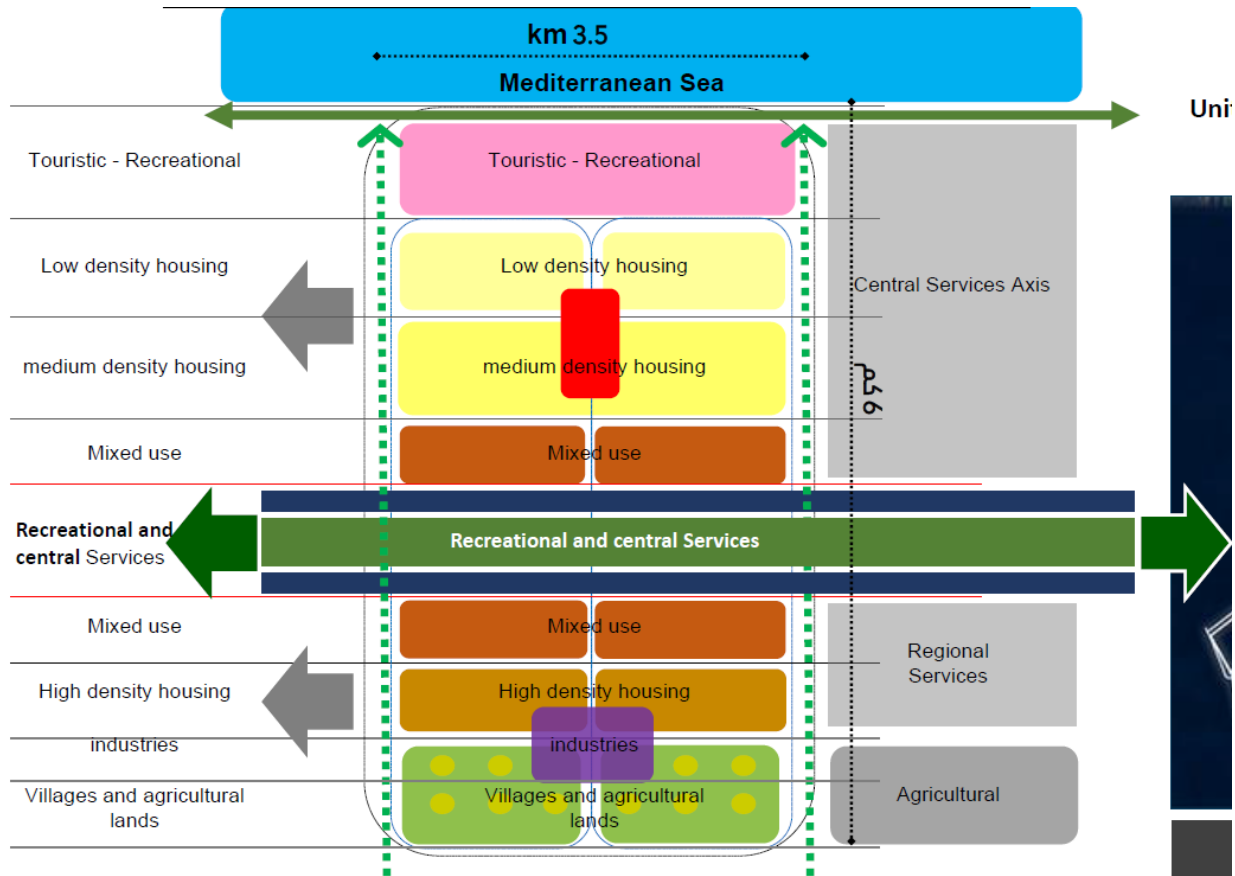
## **6. Agricultural and Industrial Zones**

- **Agricultural zones** are positioned on the unit's outskirts, supporting **self-sufficiency** through **small-scale farming communities**.
- **Handicraft and agro-industries** create employment and strengthen **local economic resilience**, focusing on **food production and light industries**.

### **6-4-2 Spatial Dimensions of the Planning Unit**

- The unit extends **6 km in length and 3.5 km in width**, ensuring **efficient land utilization**.
- **Urban planning revolves around the central green corridor**, guaranteeing **equitable distribution of amenities and services**.

By integrating residential, economic, and green spaces in a **holistic development approach**, the **Integrated Development Unit** ensures **sustainable growth, economic vitality, and an enhanced quality of life** for Gaza's future.



#### 6-4 Residential Areas in the Master Plan

The **residential sector** within the master plan is designed to create a **comprehensive urban environment**, ensuring efficient land use while accommodating a **large population**. The housing plan considers **density distribution, family needs, and sustainable urban expansion**.

##### 1. Number of Residential Buildings

The plan includes **1,773 apartment buildings**, strategically distributed to **maximize space efficiency** while maintaining a **well-organized and livable urban fabric**.

##### 2. Number of Housing Units

The total number of residential units in the plan is **42,588**, offering **diverse housing options** tailored to accommodate **various social groups**. The units are designed with **different sizes and configurations** to cater to different family structures and economic capabilities.

##### 3. Average Household Size

The plan assumes an **average household size of 6 individuals**, reflecting the **expected demographic composition** of the region. This assumption enables a

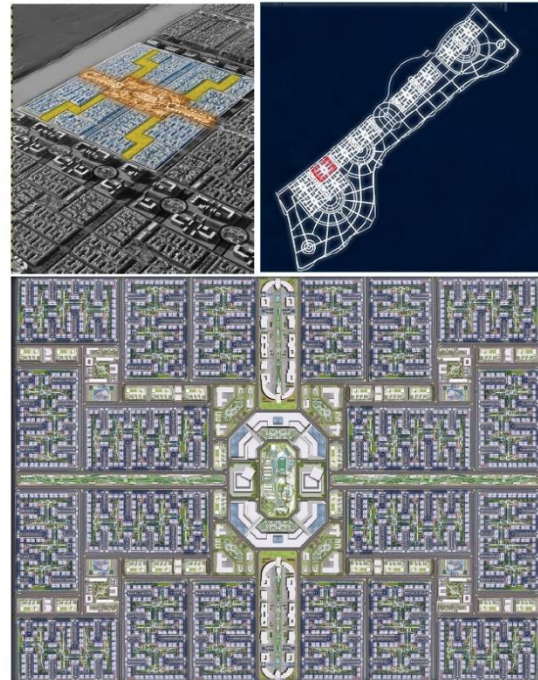


precise estimation of the total population capacity within the planned residential zones.

By **balancing housing density with essential services**, the master plan ensures that residential areas are **livable, accessible, and capable of supporting sustainable population growth**.



Number of buildings: **1,772** buildings  
Number of residential units: **42,528** units  
Average family size: **6** individuals  
City population: **255,168** people  
Building ratio: **20%**  
Built-up area factor: **1.12**





## 6-5 Study of the gradation of services

The planning of the service sector in the Gaza Reconstruction Project is based on a hierarchical methodology that aims to provide services at multiple levels that efficiently meet the needs of the population, while achieving a balance between providing services and reducing construction and operating costs.

The service planning approach in the proposed plan was based on:

- Green spaces and recreational facilities are integrated into urban planning to enhance quality of life.
- Services are distributed evenly to ensure easy access without the need to travel long distances.
- Service buildings are based on sustainable and modern design with the use of local building materials that are compatible with the environment and climate.
- This gradual model of service distribution aims to achieve integrated development in the Gaza Strip, with a focus on sustainability and integration between various economic and social activities.

Services are classified into three main levels.:

### 1. Regional Services (Sector-Wide)

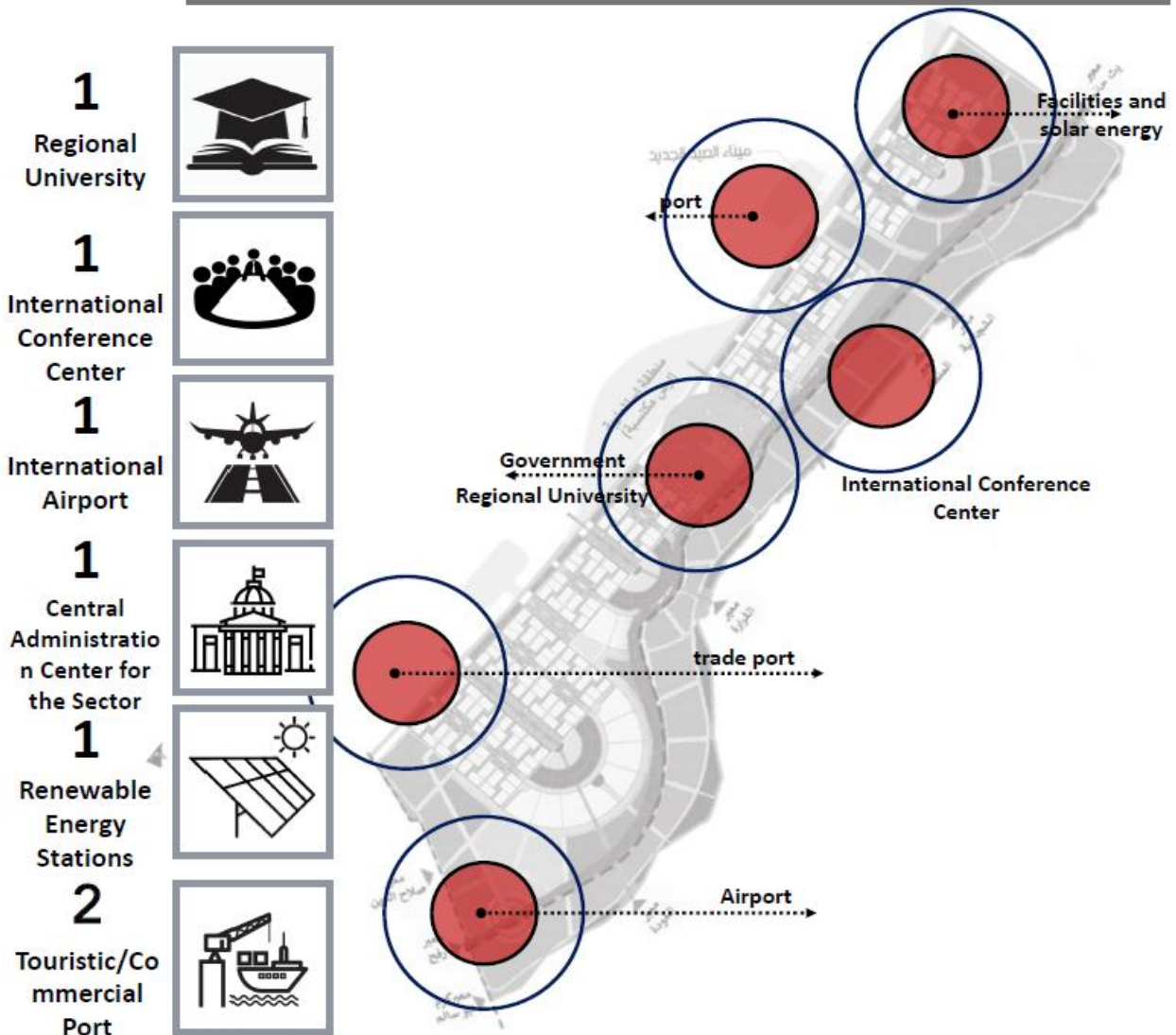
Major services that serve the entire Gaza Strip, and are located in strategic locations to ensure access from different areas, include::

- **International Airport** To support mobility, travel and trade.
- **Regional University** Provides high-level education and contributes to the development of human resources.

- **International Conference Center** to promote economic and cultural activities.
- **Renewable energy station** to support sustainability and reduce dependence on traditional energy sources..
- **Commercial and tourist port** to stimulate the economy and trade exchange.

**Central administrative center** to coordinate government services on a large scale

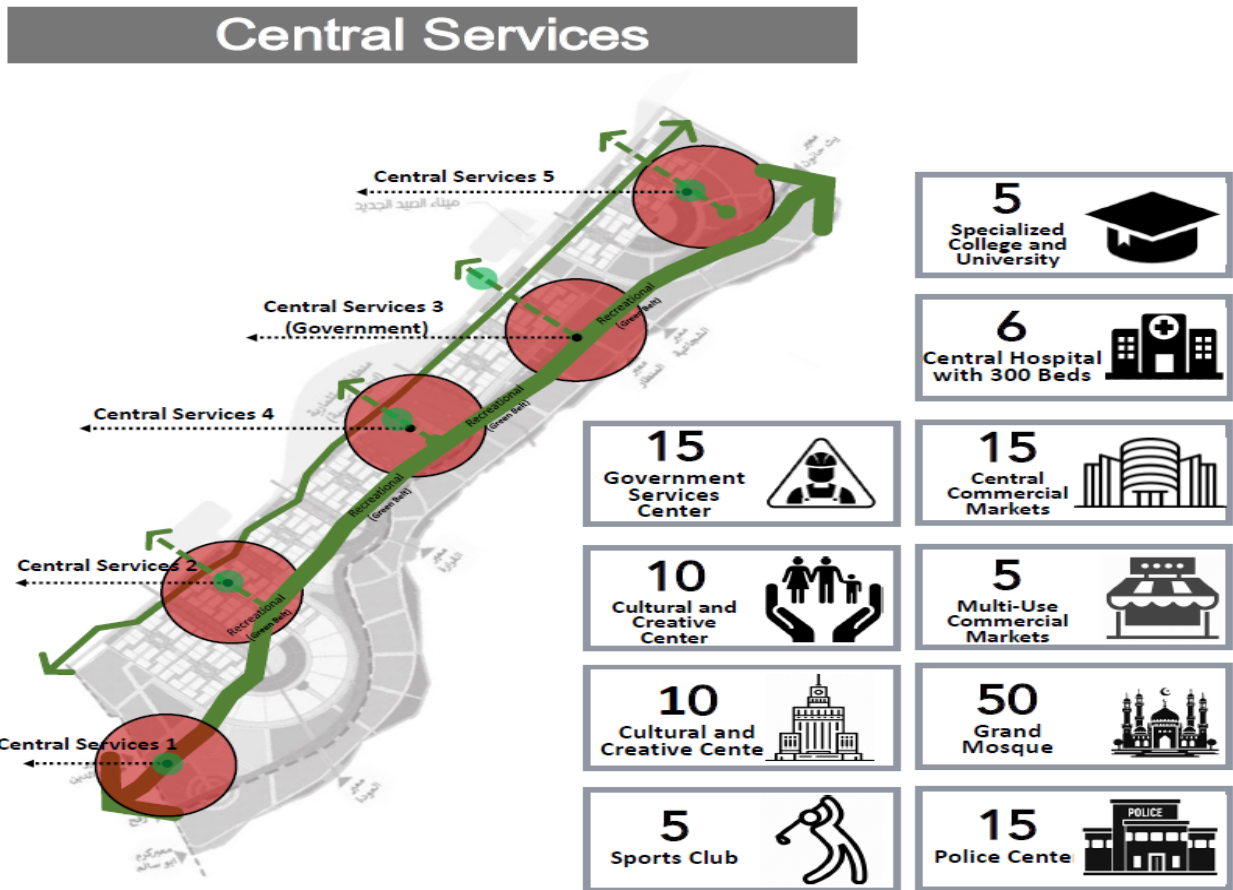
## Regional Services (At the Full Sector Level)



## 2. Central Services (at the governorate level)

These services focus on meeting the needs of each governorate within the Gaza Strip, including:

- **5 Specialized colleges and universities** to support higher and specialized education.
- **6 Central hospitals with 300 beds** to provide advanced healthcare.
- **15 Central shopping malls** to provide essential consumer goods and business services.
- **50 Grand Mosque** to serve the population spiritually and socially.
- **15 Police station** to enhance security and stability.
- **15 Government services center** to provide administrative services to citizens.
- **10 Cultural and creative centers** to support arts and cultural activities.
- **5 Sports clubs** to promote general health and fitness.

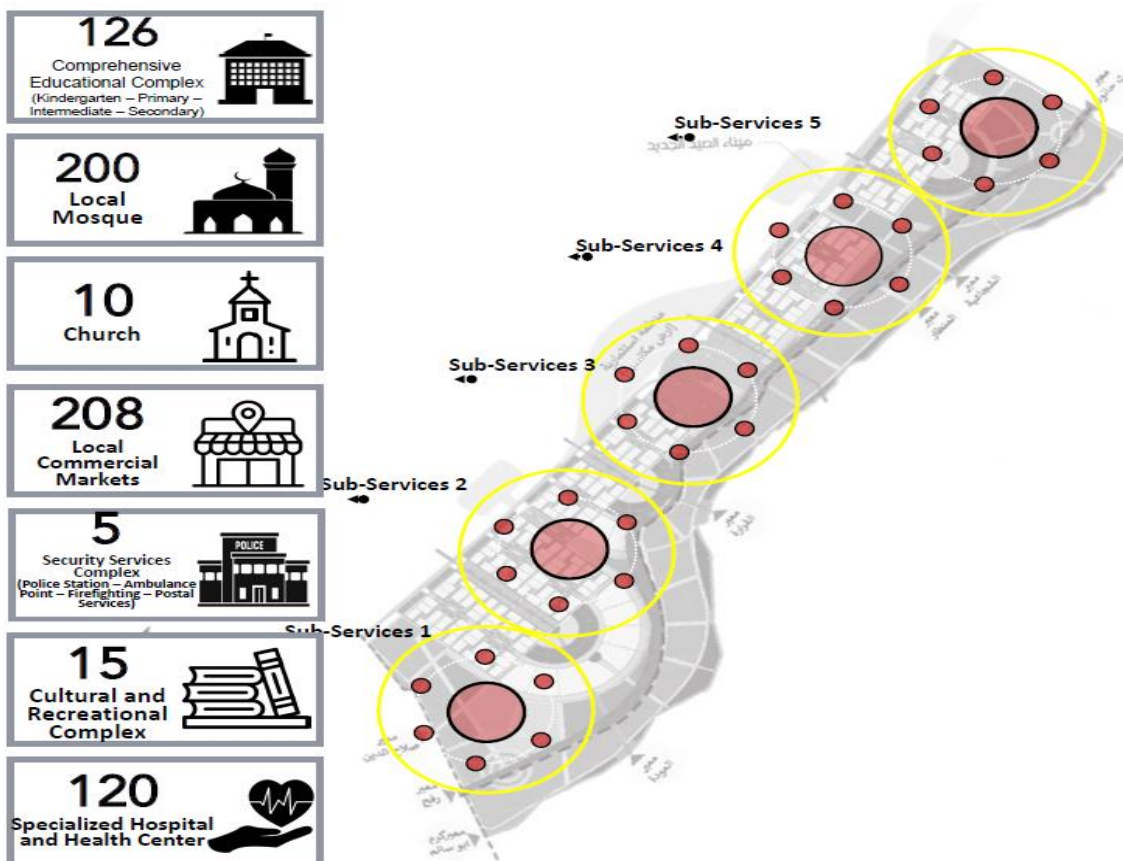




## Sub-services (at the level of residential neighborhoods and adjoining areas)

These services aim to meet the daily needs of the residents of the neighborhoods and surrounding areas, and include:

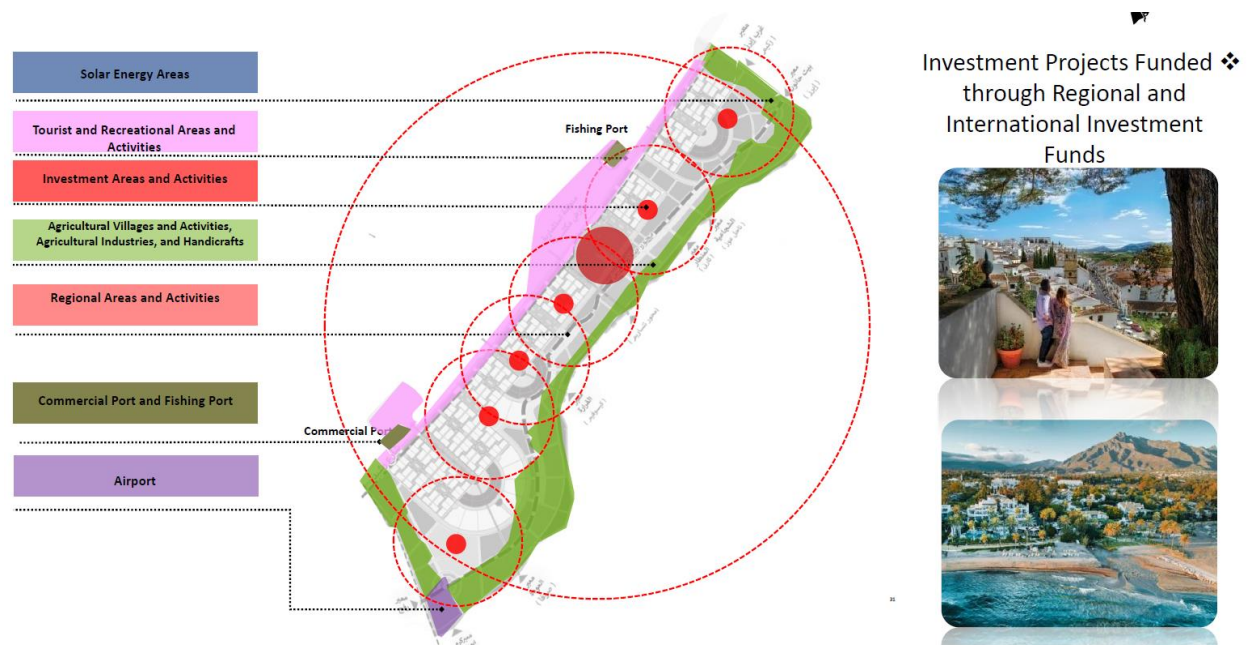
- **200 Local Mosque** to meet religious needs within residential areas.
- **10 Churches** to serve the Christian communities in the Gaza Strip.
- **208 Local commercial markets** to provide the basic needs of the population.
- **5 Security complexes** It includes police stations, ambulance and fire stations.
- **15 Cultural and entertainment complex** to support community and cultural activities.
- **120 Specialized hospital and health center** to ensure the availability of health care in all areas
- **126 Integrated educational complex** Includes primary, middle, high schools and kindergartens.



## 6-7 Distribution of investment projects

The plan aims to achieve an integrated economic and social renaissance through:

1. Stimulating local and international investments by providing a supportive environment for business, industrial and agricultural development.
2. Creating new job opportunities in various sectors, which contributes to improving the standard of living and reducing unemployment rates.
3. Promoting social integration by providing a sustainable urban environment that includes different population groups, while enhancing community and cultural interaction.





## 7- Detailed plan

### 7-1 Studies and outputs of the detailed plan

#### Introduction

The detailed plan provides an integrated vision for planning the Gaza Strip, divided into five main sectors, where the different uses of land, infrastructure, transportation, and services are distributed in a way that ensures sustainable urban development and achieves maximum efficiency in exploiting available resources.

The detailed plan provides a comprehensive vision for planning and organizing the Gaza Strip, so that it achieves:

**Integrated urban development** Services are distributed evenly among the governorates. Improving the quality of life through modern and sustainable infrastructure.

**Stimulating the local economy** Through advanced industrial, commercial and logistics areas Support sustainable transport through tram lines and modern infrastructure.

#### 7-1-1 Division of urban sectors

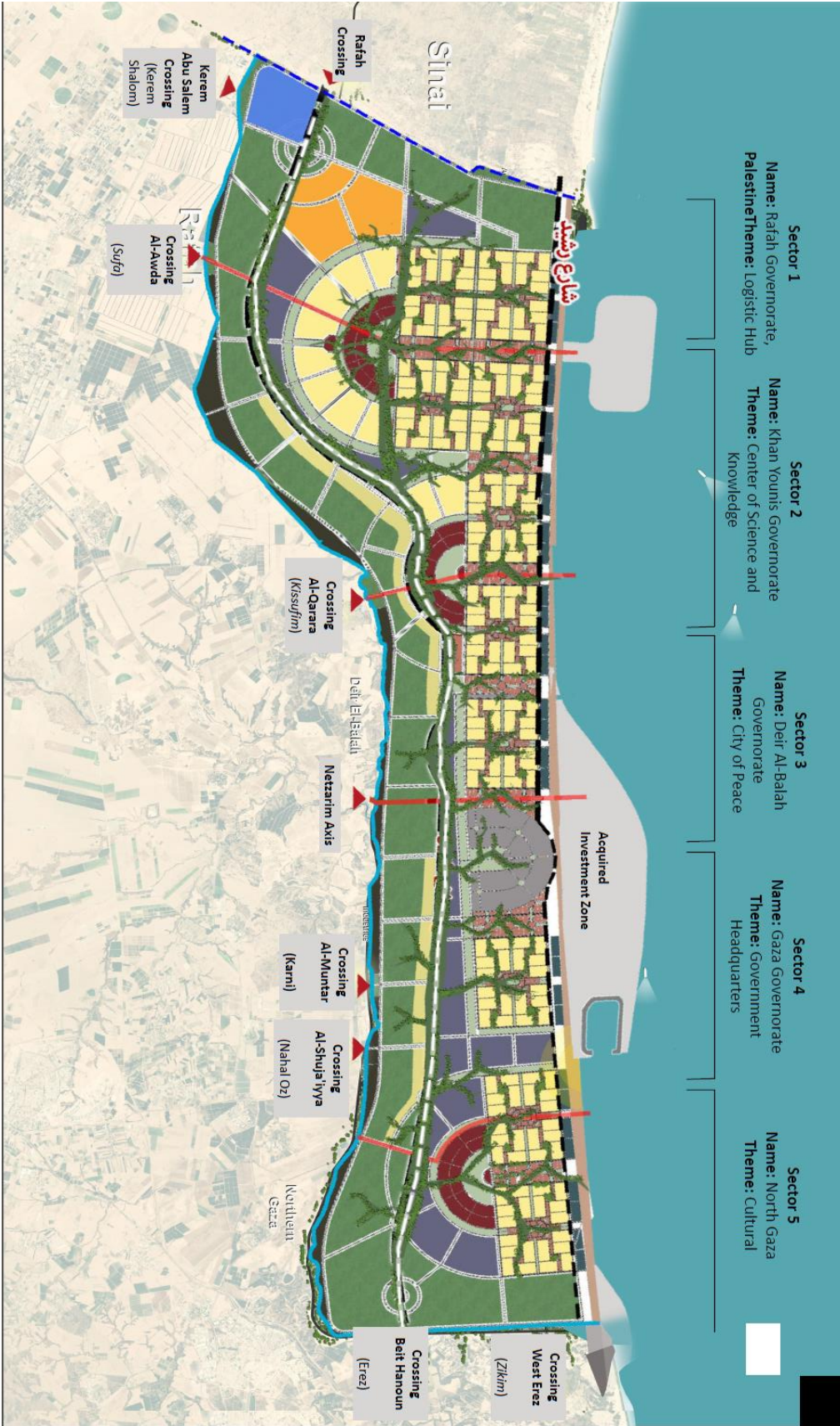
The Gaza Strip was divided into 5 **Key sectors** Each has a distinct character and function.:

Sector	The governorate	Area (km <sup>2</sup> )	Main character
Sector 1	Rafah	64	Logistics Center
Sector 2	Khan Yunis	109.7	Center of Science and Knowledge
Sector 3	Deir al-Balah	58	seat of government
Sector 4	Gaza	70	peace
Sector 5	North Gaza	61	cultural



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**This division ensures the fair distribution of economic, social, and administrative activities among the different regions.**





### 7-1-2 Distribution of densities in residential areas

Residential areas are classified into three levels according to density:

- **low density residential areas** It includes villas and detached residences with large green spaces.
- **Medium density residential areas** It includes medium-rise residential buildings, serving the middle class.
- **High density residential areas:** strategically located in **city centers and along major public transportation corridors** to ensure **efficient land use and accessibility**.

### 7-1-3 Building Heights

Building heights have been defined according to the urban planning framework as follows:

- **Low-rise areas (3-6 m):** Includes rural housing and open spaces.
- **Medium-rise areas (14-18 m):** Comprises residential buildings with two to three floors.
- **High-rise areas (20-35 m):** Consists of residential and commercial towers in city centers.

This classification ensures a **balance between population density and accessibility to services**



#### 7-1-4 Main axes

The plan is based on main urban and development axes, including:

- Green Axis (Axis of Life):** It connects city centers and open areas.
- Salah El-Din Axis:** The main economic and commercial artery.
- Secondary axes** to connect residential areas and basic services.



## 7-1-5 Road and transportation network

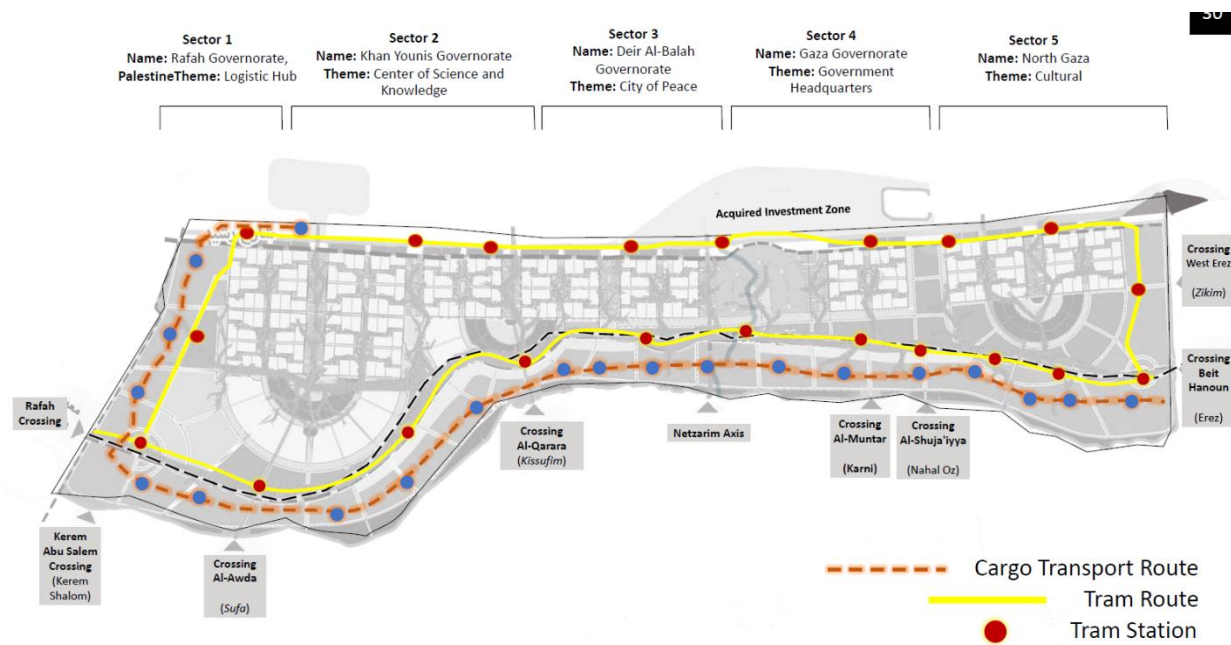
**Main roads:** Connects different governorates and enhances commercial activity.

**Secondary roads:** Connects residential neighborhoods and local services.

**Tram lines:** A sustainable means of transportation that reduces congestion and supports public transportation. **Public transportation stations:** Distributed on main axes to facilitate the movement of residents.

**Freight lines:** Dedicated to facilitating the movement of trade and reducing the traffic impact within cities.

**This plan aims to improve transportation efficiency and reduce reliance on private cars.**







## **7-1-6 Infrastructure Business Plan**

### **Sanitation and water stations**

- 2 Desalination plants with a capacity of 220,000 cubic meters per day.
- 2 Drinking and fire water tanks with a capacity of 110,000 cubic meters.
- 2 Wastewater treatment plants with a capacity of 180,000 cubic meters.

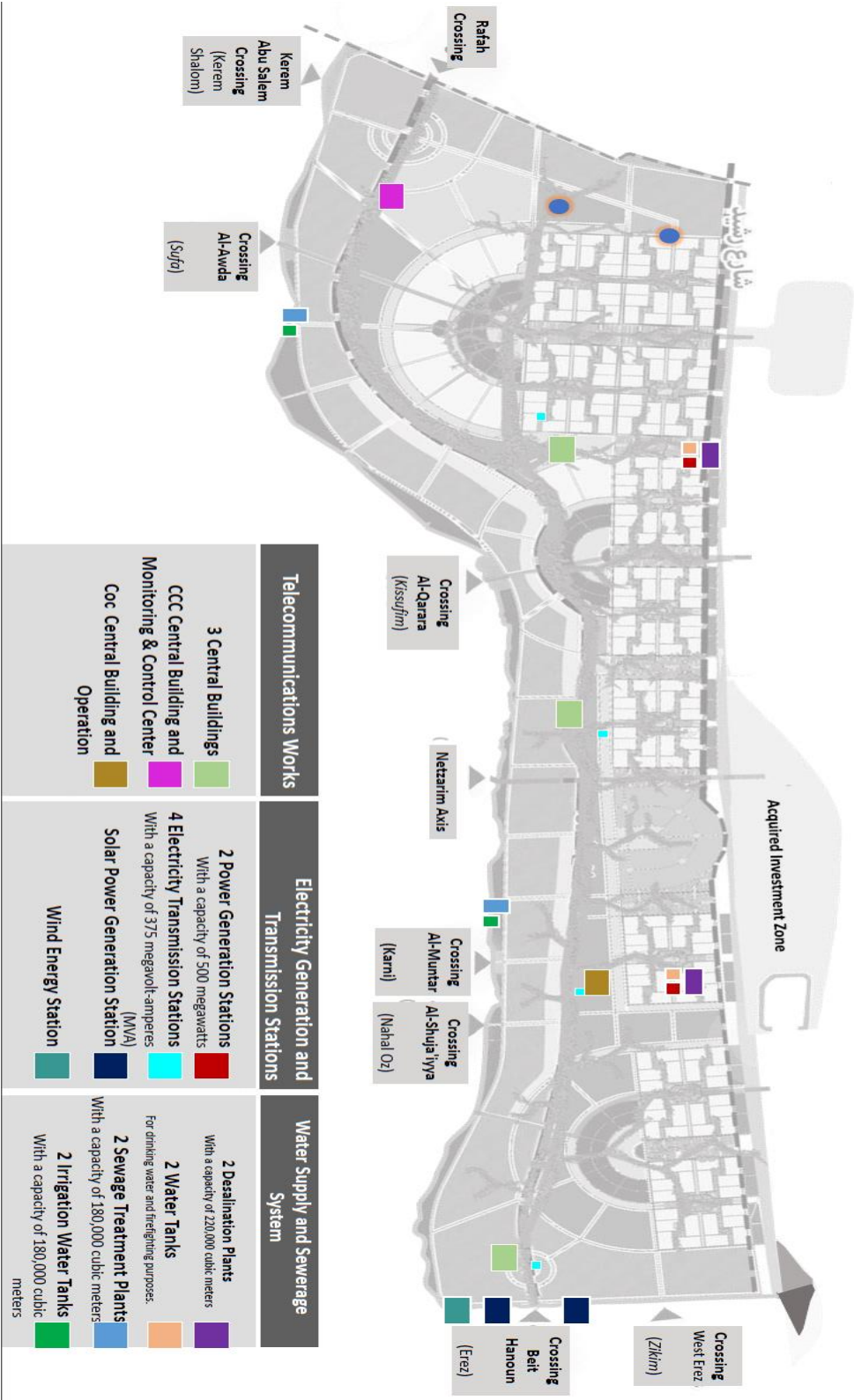
### **Electricity and Sustainable Energy Network**

- 2500 MW power plants.
- 4375 MVA power transmission stations.
- Solar power station and wind power station to promote sustainability.

### **Communications and smart centers**

- 3 Central centers for distributing communications and internet networks.
- Central monitoring and control building to ensure efficient operation of infrastructure.

This planning aims to provide sustainable and reliable basic services to the population.





## 7-2 Urban Identity of Gaza (Architecture and Urban Analysis)

### 7-2-1 Architectural Character

Architectural identity is a fundamental element in shaping the identity of cities and communities, reflecting their history, culture, and quality of life. In the **reconstruction of Gaza**, the architectural style is envisioned as a **blend of authentic Palestinian identity and modern urban development**, achieving a balance between **heritage and modernity** while addressing the **social, economic, and environmental needs** of the population.

The architectural character is primarily based on:

- **Preserving Palestinian identity:** By incorporating traditional architectural elements such as **interior courtyards, pointed arches, and stone carvings** inspired by heritage.
- **Ensuring environmental sustainability:** Through the use of **local eco-friendly building materials, natural ventilation systems, and solar energy solutions**.
- **Flexibility in design:** To meet the diverse needs of residents while allowing for **future expansion and development**.

### Proposed Architectural Design Elements

#### Jerusalem Stone:

- A type of **limestone widely used in construction** in Jerusalem and surrounding areas.



- Provides **aesthetic appeal, durability, and climatic adaptability** for buildings.

### **Pointed Arches:**

- A **distinguished architectural feature** in Palestine, commonly used in **historical mosques, churches, and traditional buildings**.
- Reflects the **Islamic and Levantine architectural heritage**.

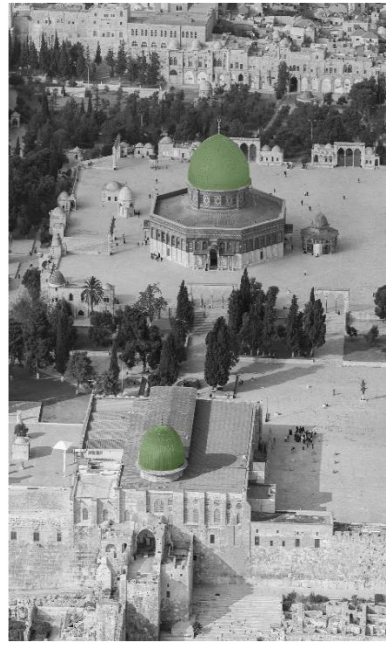
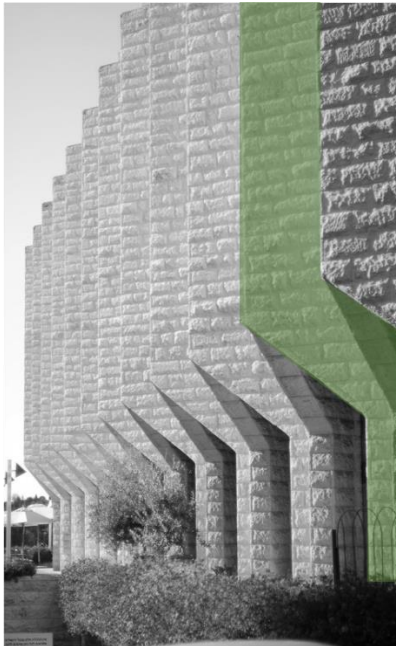
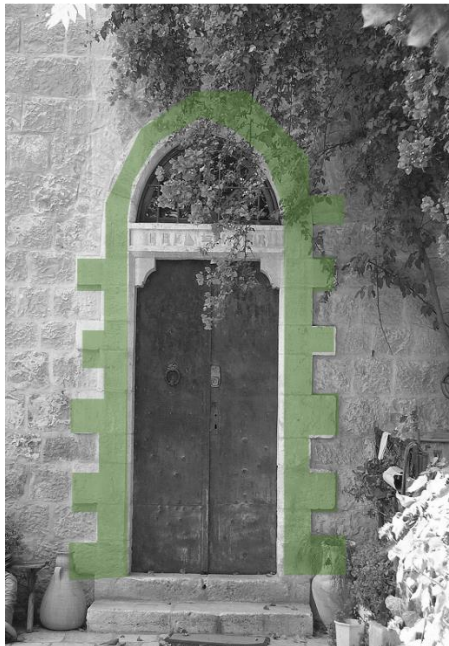
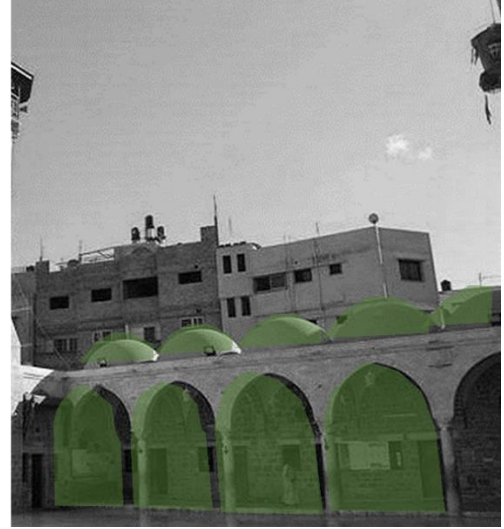
### **Domes and Vaults:**

- A key architectural component in Palestinian architecture, appearing in **mosques, churches, homes, and markets**.
- Provides **aesthetic and functional benefits**, such as **natural cooling and structural stability**.

### **Integrated Urban Fabric:**

- Refers to the **harmonization of various architectural elements** within a building or urban project.
- In Palestinian architecture, this concept reflects a **balance between built structures and their surrounding environment**, ensuring the **preservation of cultural identity and architectural heritage**.

**By integrating these elements, the reconstruction of Gaza will ensure an architectural style that is not only functional and sustainable but also deeply rooted in the region's rich historical and cultural identity**



## 7-2-2 Urban Identity of the Residential Sector

The urban and architectural character of the residential sector is inspired by Arab and Islamic heritage, integrating modern elements to ensure comfort and sustainability. The design reflects a blend of tradition and modernity, utilizing natural building materials such as stone, while adopting urban planning principles that promote social interaction and cultural identity.





### 7-2-3 Urban Identity of the Service Sector

The architectural design of the service sector is inspired by **Islamic and Arab identity**, incorporating **traditional architectural elements with modern construction techniques** to ensure **sustainability and environmental comfort**.

#### Key Urban and Architectural Elements in the Design:

##### Light-Colored Stone Facades:

- The use of **limestone or white concrete** reflects the **local character of Arab architecture**.
- Helps **reduce heat absorption**, improving **energy efficiency** within buildings.

##### Large Glass Arches:

- Repetition of **arched windows and facades** enhances the **Islamic architectural style**.
- Allows **natural light penetration**, reducing reliance on artificial lighting during the day.

##### Open Corridors and Courtyards:

- The layout includes **open courtyards and internal spaces** that enable **natural ventilation**.
- Inspired by **traditional Islamic schools and religious buildings**.

##### Integration with the Natural Environment:

- Incorporating **trees and local plants** to create a **healthy and refreshing atmosphere**.
- Green spaces provide a **comfortable environment for students and facility users**.

##### Multi-Purpose Courtyards:

- The **front plaza** of the building is designed as a **gathering and activity space**.
- Encourages **social interaction and extracurricular activities**.

##### A Blend of Modernity and Heritage:

- Emphasis on **natural materials and large openings** creates a **balance between historical identity and contemporary building standards**.

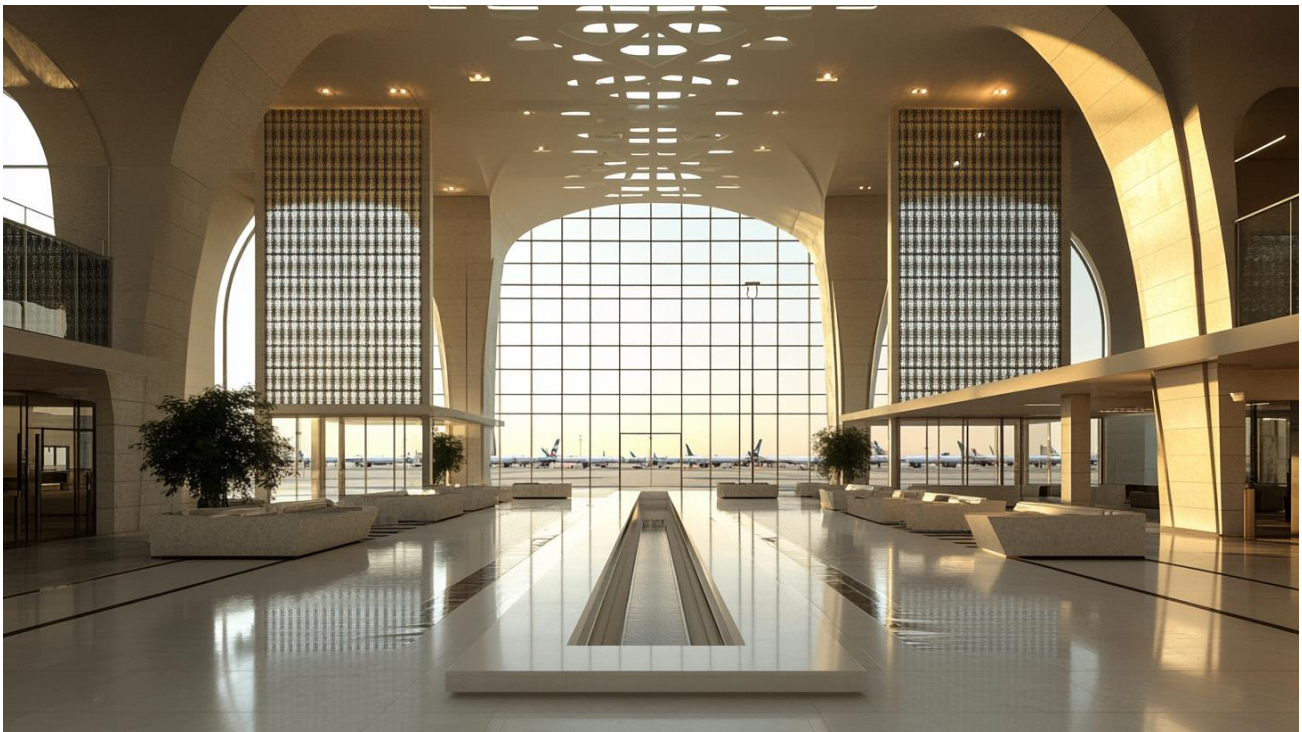
- Results in a **distinctive and sustainable educational and service-oriented environment.**

**This design approach ensures a functional, aesthetically appealing, and culturally rooted service sector that meets both modern and traditional architectural needs.**



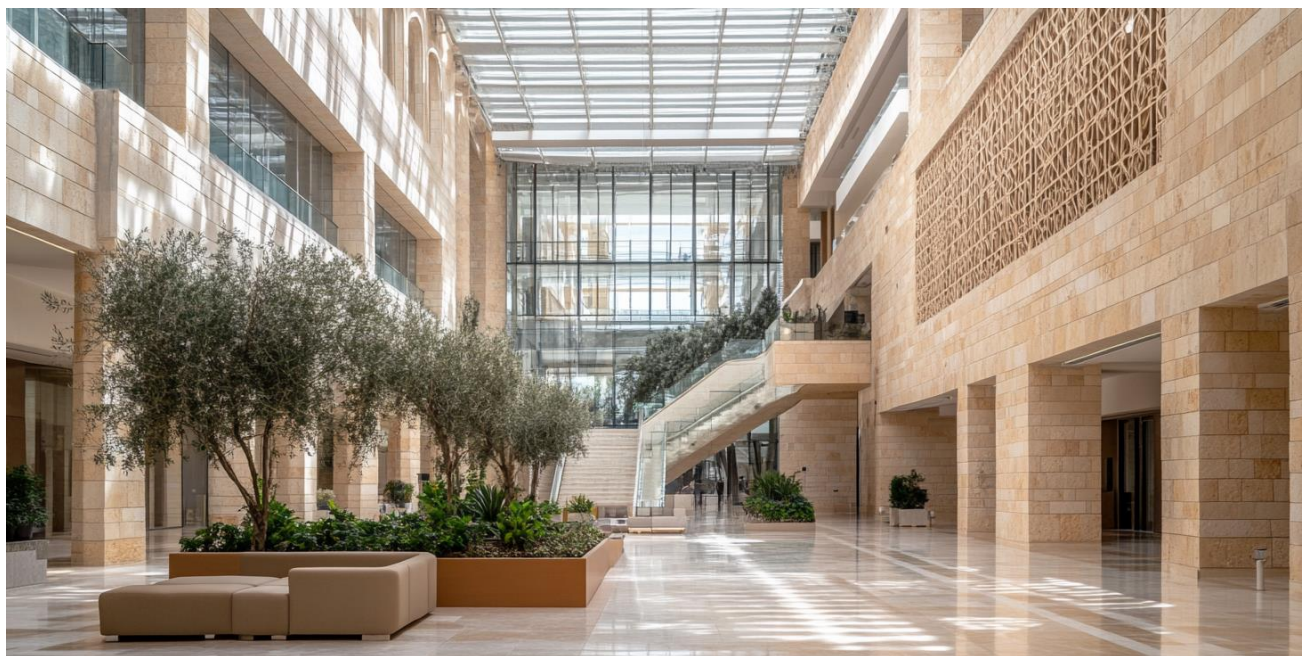






## 7.2.4 Urban Identity of Government Buildings

The interior design of government buildings has been developed to reflect a modern and sustainable work environment that aligns with smart architecture standards and environmental integration. At the same time, it preserves local identity by incorporating natural materials and traditional architectural details.





## 7-2-5 Urban Identity of Public Buildings

The architectural design of public buildings reflects a balance between modernity and local identity, combining traditional architectural elements with modern technologies to create a comfortable, healthy, and sustainable environment.



### 7-2-5 Urban Identity of Industrial and Agricultural Areas

The urban character of industrial and agricultural zones is based on the concept of sustainability and the integration of technology with nature. These areas follow the principles of green development and sustainable manufacturing. The design incorporates:

#### Sustainable Design Integrating Nature and Technology:

- Urban agriculture is integrated within the industrial environment, promoting environmental development and reducing carbon emissions.
- Green spaces and cultivated lands provide a healthy and sustainable working environment for workers and researchers in agricultural and industrial technology.

#### Low-Impact Buildings:

- Natural and sustainable building materials, such as wood and recycled metal, are used in facility design, ensuring energy efficiency and reducing industrial waste.



## 8- Early Recovery (Temporary Housing)

### 8-1 Locations of Palestinian Camps

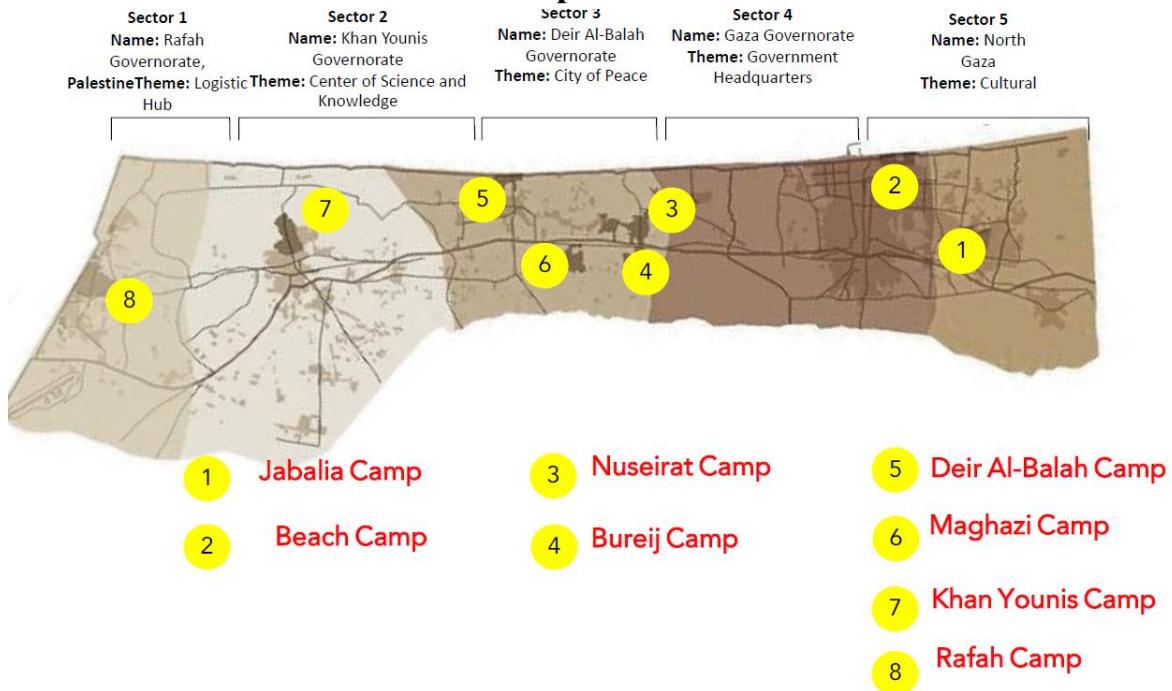


Figure 8-1: Palestinian camp locations

### 8-2 Proposed sites for temporary housing

This proposal is based on locating areas in each governorate in order to accommodate a portion of temporary housing units distributed along the Salah El-Din axis, the main artery in the sector, which will be the green axis in the proposed development plan, as follows:

#### **Location 1 Rafah**

Area: 1,527,782 sqm - Accommodation/Person: 213,889.5

#### **Location 2 Khan Yunis**

Area: 1,597,756 sqm - Accommodation/Person: 223,685.8

#### **Location 3 Deir al-Balah**

Area: 1,314,484 sqm - Accommodation/Person: 184,027.8

### Site 4 Gaza

Area: 2,528,302 sqm - Accommodation/Person: 353,962.3

### Location 5 North Gaza

Area: 1,409,630 sqm - Accommodation/Person: 197,348.2

### 6Gaza site

Area: 1,264,151 sqm - Accommodation/Person: 176,981

### 7 Gaza site

Area: 1,264,151 sqm - Accommodation/Person: 176,981

### Total

**Area: 10,906,256 sqm - Accommodation/Person: 1,526,876**

The following figure shows the distribution of temporary housing sites.

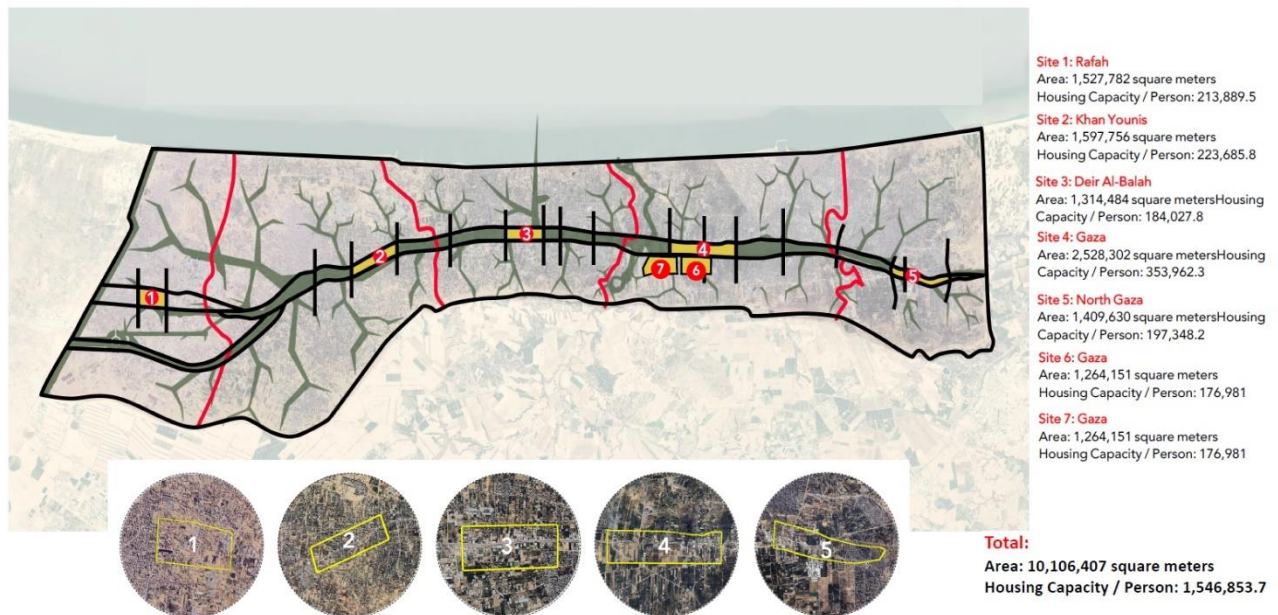


Figure 8-2: Proposed sites for temporary



## 8-3 Shelter camps (tents)

### PLANNING PRINCIPLES

- Each settlement should not contain more than (20,000) refugees. Therefore, the master plan was divided into three levels to ensure providing human needs such as food and medical services quickly, effectively, and equally.
- The settlement consists of 4 sectors, each accommodating 5,000 refugees, and includes a main service area.
- Each sector is divided into 4 blocks, with each block housing 1,250 refugees. Additionally, each group has a secondary service area.
- The service areas in the settlement were divided into two types (main/secondary) according to the type of service provided:

### Secondary Service Areas

These areas provide daily and recurring services for refugees, such as:

- Food preparation area
- Storage for food supplies
- Medical point
- School with three classrooms
- Registration and administration office

### Main Service Areas

These areas provide periodic and non-daily services, including:

- Bread production lines
- Storage for food supplies
- Mosque
- Commercial market
- Waiting area for trucks





- Security checkpoint
- Service areas were divided into 2 types (main/secondary) based on the type of service provided to refugees:
  - Secondary services provide daily services, including:
    - Kitchen
    - Storage
    - Clinic
    - School with 3 classrooms
    - Administration
  - Main services areas provide periodic services and supply the secondary service areas with their needs, including:
    - Health center
    - Storage
    - Mosque
    - Administration
    - Security station
    - Truck parking



Figure 8-3: Proposed sites for temporary

### 8-4 Caravans model (on Salah El-Din axis)

- Shipping/Sea container homes
- Temporary housing unit model.
- Medium - Family (6 people)



Figure 8-4: Alternatives to temporary housing models

## 8-5 Model for distributing caravans on the general site

Number of population required to be temporarily housed	173,551.00
Number of containers used in residential works used to house the number	57,851.00
Space required to accommodate this number	860,234.46
Residential occupancy area	294,145.26
Service occupation area	26,203.39
food crop area	92,311.90
Green space area	74,179.20
Road and pedestrian area	373,394.71



108

Target: 60,000 Caravan Units

Figure 8-5: General site caravan model template



Figure 8-6: 3D views of the temporary housing units.

## 9- Implementation stages until 2030

After reviewing all the information and data received from the Palestinian Authority, the World Bank and some international organizations, all studies and data were reviewed and analyzed, and a roadmap and an urgent development plan were built to rebuild the Gaza Strip over the next five years until 2030 to accommodate about 3 million people, through the following implementation stages:

### **9-1 Early recovery phase with an estimated time frame of about (6 months), at an estimated cost of 3 billion dollars:**

- Removing debris from the central axis area and preparing it to accommodate temporary housing units and preparing Salah El-Din axis as a linking axis for reconstruction work.
- Preparing temporary housing (200,000 temporary housing units) in the central axis area to accommodate 1.2 million people.
- Initiating the removal/sorting of rubble from all areas of the sector parallel to the central axis of the collection areas towards the coast.

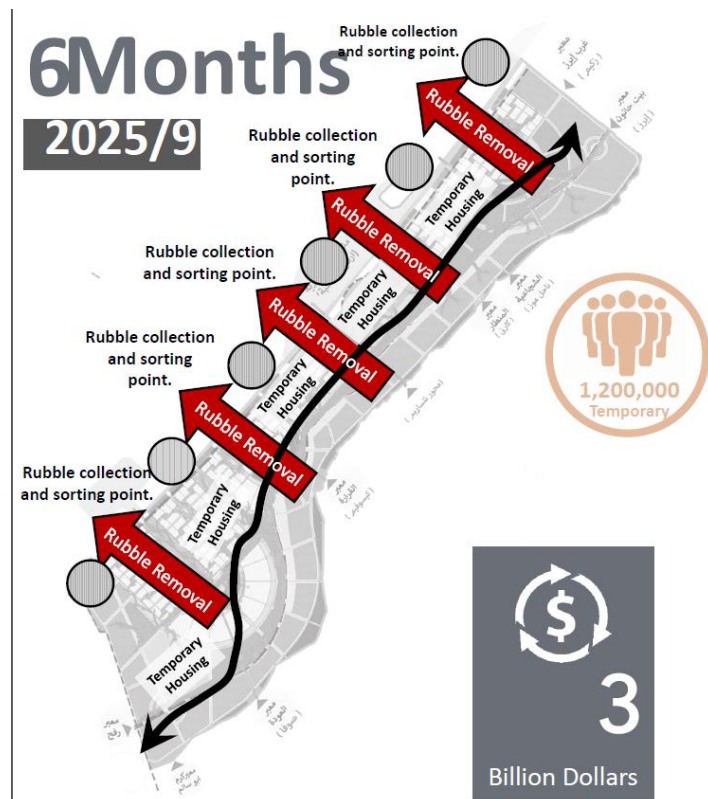


Figure 9-1: Early recovery phase

- Starting the restoration work of partially damaged houses, with a total of 60 thousand housing units to accommodate 360 thousand people.
- Social protection programs and soft loans for rehabilitation through self-efforts.

**9-2 Reconstruction (first phase) with an estimated time frame of about (2 years), at an estimated cost of 20 billion dollars:**

- Completion of the removal and sorting of debris and its use in filling the proposed location in the coastal area.
- Establishment of the necessary utilities and networks for the first phase.
- Establishing permanent housing units (200,000 housing units) and completing the restoration of 60,000 permanent units to accommodate 1.6 million people.
- Establishing the necessary service buildings for the first phase.
- Reclamation of 20,000 acres.
- Social protection program and soft loans for self-rehabilitation



Figure 9-2: Reconstruction (Phase I)

**9-3 Reconstruction (second phase) with an estimated timeframe of about (2.5 years), at an estimated cost of 30 billion dollars:**

- Establishment of the necessary utilities and networks for the Stage Second.
- Establishing housing units (200,000 housing units) to accommodate 1.2 million people. (Total 460,000 housing units to accommodate 2.75 million people).

- Establishing the necessary service buildings for the first phase.
- Establishment of the first phase of the industrial zone on an area of 600 acres.
- Establishment of a fishing port and a commercial port.
- Implementation of the Corniche Road, the first phase of the region Coastal length of 10 km.
- Establishment of Gaza Airport.



Figure 9-3 Reconstruction (Phase II)

#### **9-4 Total implementation phases (5 years) until 2030**

Total population = 3,000,000 people, with a density of about 35 people/acre.

Total estimated cost = \$53 billion.

Total job opportunities = 500 thousand job opportunities, distributed over the following sectors:

Housing sector 80 thousand job opportunities. - Industry sector 70 thousand job opportunities. - Tourism sector 60 thousand job opportunities. - Services sector 90 thousand job opportunities. - Agriculture sector 120 thousand job opportunities. - Fishing sector 80 thousand job opportunities.



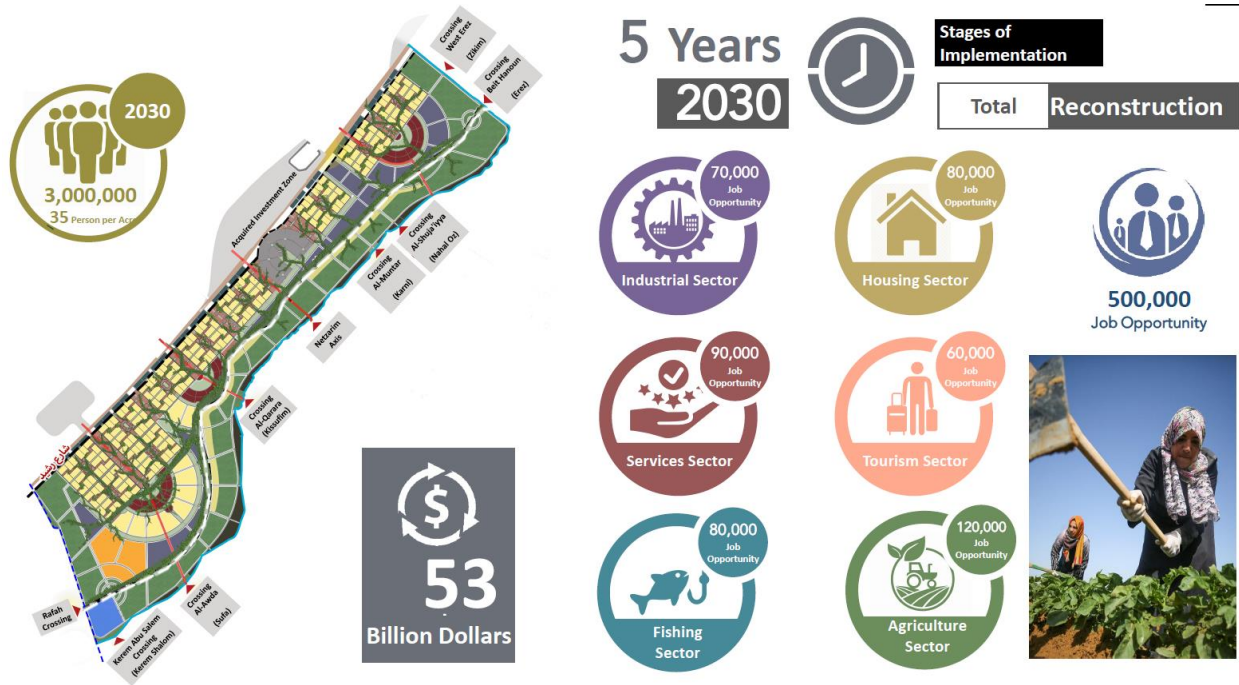


Figure 9-4: Total implementation stages



## Early recovery and re-establishment

