



THE CENTER FOR MACRO PROJECTS AND DIPLOMACY
ROGER WILLIAMS UNIVERSITY

**BUILDING FOR PEACE:
A PHASED PLAN FOR THE ECONOMIC DEVELOPMENT OF
THE GAZA STRIP AND THE MIDDLE EAST REGION
FOLLOWING ISRAEL'S DISENGAGEMENT**

PRELIMINARY PROJECT PROPOSAL: SUMMER 2004

The Center for Macro Projects and Diplomacy was established at the First Macro Conference held at Roger Williams University, Bristol, Rhode Island in April 2004.

The Center fosters the interdisciplinary formulation, study, demonstration and debate of ideas contributing to human progress through the improvement of world habitat. In the increasingly globalized world, solutions to problems require a broad approach that considers an array of concerns--cultural, environmental, technical, economic, social, political and legal--as well as the communication and negotiation skills necessary to achieve agreement. Many current proposals or projects fail because they are conceived in isolation or consider relationships narrowly. With invited leaders, faculty and students concentrating on clearly-defined issues of importance to the world community— land, water, energy and food supplies; transportation, environmental quality, housing, education, health care, heritage--the Center follows through on steps needed to design, display, debate, evaluate, test, and in appropriate cases, deploy undertakings of relevance and urgency.

Current activities of the Center include:

- organization of an annual conference on selected themes involving large scale projects and their potential for positive diplomatic impact,
- publication of the annual *Journal of Macro Projects and Diplomacy*, that acts as a forum for exchange of ideas and a means to disseminate information and report research activities. The *Journal for Macro Projects and Diplomacy* is available from Roger Williams University, Bristol, Rhode Island.
- development of Preliminary Project Proposals for consideration by investors and government for implementation.
- publication of Occasional Papers by leaders in the field on selected large scale projects with urgent implications

MACRO PROJECTS WORKING PAPERS SERIES

The Center also publishes the Macro Project Working Paper Series. All Working Papers are the product of faculty and student research at Roger Williams University that address an annual conference theme. Papers have been grouped by subject such as international relations, architecture and planning, engineering, management, law and finance.

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Preface

The pages that follow merit, in my view, both attentive study – and deep and widespread appreciation. Franck de Rouville of the remarkably successful “Pro Natura” group which has promoted Peace Parks to conserve nature by trans-border cooperation, recently pointed out the primacy of the seldom – identified role of the process of consultation. The mere fact that competent people of divergent opinions and backgrounds persist in the search for a consensus that is rigorously fair to all individuals and communities directly concerned, can be a harbinger of practical achievement. With common sense and a minimal dose of that increasingly rare commodity – optimism – could not the Middle East be on the verge of social and economic “take-off”?

The mid-April 2004 conference at Roger Williams University set exactly the right tone. As Dean Stephen White correctly informed us, “it is quite remarkable that Rhode Island is the first place on earth where religious liberty was written into its founding charter.” Dame Margaret Joan Anstee, OSMG, now retired after years of service as Deputy Secretary-General of the United Nations, herself embodies the spirit of perseverance mandated by the context: following her retirement, she managed to “stick it out” in what turned out to be an 18-month hazardous commitment as Head of the U.N. Peacekeeping Mission in Angola.* That she came to Bristol and participated actively in the deliberations helped establish the “sérieux” of the meeting! Noteworthy, too, was the presence of Timothy Rothermel, Special Representative in Jerusalem of the United Nations Development Program (UNDC) – for the past twenty-five years. Harold Frederiksen, a World Bank consultant on regional water resources was there, along with Suha Ozkan, who came from Geneva, where he is Secretary-General of the Aga Khan Award for Architecture. From Japan we were honored to welcome Dr. Hiroshi Hori, a retired senior adviser to the UN. And more than sixty others – deserving of recognition – were also there, forming an influential and knowledgeable team from many countries.

That the project envisages a seaward thrust explains the contribution of Monsieur Lucien Deschamps, who as Secrétaire-Général of France’s “Prospective 2100” organized and led – ten years ago – the pathbreaking Conference on Artificial Islands, held in Monaco; in his lecture last April in Bristol, it was quite clear that this specialist “knew whereof he spoke”. If Palestinians and Israelis are soon to think very realistically of construction in the sea, they will wish to read about the physical history of Holland, more than sixty-percent of whose land is below sea-level! Perhaps the Dutch invention of a “dike army” was an early model for William James’s army

enlisted against nature as proposed in his 1910 essay, "The Moral Equivalent of War"? Of course Franklin D. Roosevelt's brilliant adaptation of James's idea – the Civilian Conservation Corps of the 1930's – was really an army enlisted to protect and conserve nature – but otherwise it was a faithful attempt to transpose the virtues of the military ethos into a framework where peacetime construction could provide an objective that commanded the willingness to volunteer and to endure hardships.**

On another level, "the process of consultation" launched by the Center for Macro Projects and Diplomacy may be regarded as an effort to improve what A. Lawrence Lowell called for in his historic chapter, "Foresight in Foreign Affairs".*** Clearly, if the "world community" does not assist the Israelis and Palestinians in "changing the context" which has hitherto prevailed in the Middle East, there could be a prolongation of a kind of warfare that is tragic but – equally – unnecessary and, let us be candid, counter-productive for both sides as well as for regional and international comity. To "change the behavior" which has now gone beyond reasonable bounds, one promising option is to change the physical context, and this suggestion is implicit in the "preliminary" project proposal. The kind of foresight discussed by President Lowell more than sixty years ago requires what would now be denoted a "systems engineering" approach, that is, an interdisciplinary and comprehensive examination of the situation and its dynamics and the delineation of a strategy for meeting the identified problems. Buckminster Fuller might have described the need for "a comprehensive anticipatory design science". Regardless of the preferred vocabulary, people of good will can begin to explore the problem together.

"The Preliminary Project Proposal" is not complex. It is to be hoped that its main tenets will not be turned aside on the assertion that they are "too simplistic". Reclaiming land – from sea and/or desert – is "obvious" – but on what Jay Forrester has dubbed "this tightly-coupled globe", "the obvious" is often overlooked. Because of the extra costs of land reclamation, both donors and investors will hesitate unless there are credible assurances of safety and security. On the other hand, governments may be forgiven for not wishing to underwrite what may appear as obligations of such high risk that they are politically unwise.

Perhaps the solution to the puzzle is a verifiable exchange of undertakings: the private sector (through individual or group pledges) can offer a stated amount of support subject to official agreements to maintain an even-handed and properly-enforced peace. And entities acceptable to the national and international authorities concerned can be appointed or, if need be, designed and incorporated, to receive tax-deductible gifts and to make the requisite investments.

To achieve this “consummation devoutly to be wished”, it may be useful to apply the World War II concept of “combined operations” to the somewhat different theatre of the quest for peace. A regional development plan that will yield an “even-normal water supply” and ample and reliable electric power will appropriately involve the participation of all nations in the region, including Syria and Lebanon. Many projects in addition to the steps discreetly proposed on these pages will be compatible and cordially welcomed, once the habitual choice between indifference and confrontation is replaced by a robust sense of the vast potential in a strategy of combined operations.

The Bristol Conference did not, it is admitted, seek a solution for the difficult and “incontournable” question of Jerusalem. However, a former member of the British Foreign Office, the Reverend David Kitching, has recently published a thoughtful analysis of this matter, and as the area of inquiry broadens and deepens, there will be contacts with other experienced people who have devoted time to the multitudinous facets which make up the “problématique” of the region. What the Center for Macro Projects and Diplomacy can already offer is an unbiased focal point for cooperative research, and an unswerving commitment to candor and public benefit. As George von Lengerke Meyer put it, a century ago, “Things alter for the worse spontaneously unless altered for the better designedly.”

Frank P. Davidson

Notes and References

- * “Orphan of the Cold War: The Inside Story of the Collapse of the Angolan Peace Process by Margaret Joan Anstee, Macmillan Press Limited, London, 1996, ISBN-0-333-66445-0. See also her more recent autobiographical “Never Learn To Type: A Woman at the United Nations”, John Wiley & Sons, Limited, Chichester, U.K., 2003.
- ** “The Moral Equivalent of War” first appeared in *International Conciliation*, June 1910 and was reprinted as an appendix in “*American Youth: An Enforced Reconnaissance*”, Harvard University Press, Cambridge, Mass., 1940. The book’s Foreword was contributed by Mrs. Franklin D. Roosevelt.
- *** “Foresight in Foreign Affairs” was the introductory chapter in “*Before America Decides: Foresight in Foreign Affairs*”, Harvard University Press, 1938. At the time of publication, Mr. Lowell was President-Emeritus of Harvard University.

Introduction: Origins of the Proposal

This preliminary project proposal has been developed through the Center for Macro Projects and Diplomacy at Roger Williams University beginning in Fall 2003, through a multi-step process of concept development, research and schematic design, and discussion and review among international leaders and members of the Center that has led to further revisions and development.

Steps in the Project Proposal development process to date have included:***Framing of Working Papers, October 2003-April 2004***

Concepts, briefing papers, research and design studies were undertaken by noted international consultants, and through faculty-directed student work at Roger Williams University in the areas of international relations, engineering and management, architecture and planning. The work centered on a paper, "A Plan for the Economic Development of the Gaza Strip", prepared by Ernst G. Frankel, MIT Professor Emeritus of Ocean Engineering and Management; along with concepts raised by the Center's Founding Advisor Frank P. Davidson, co-founder of the Channel Tunnel Study Group. These became the catalyst for the development of Working Papers consisting of briefing papers, along with planning and architectural design studies by Roger Williams University Professors Mark Sawoski, Charles Hagenah, and Patrick Charles. These Working Papers were presented for discussion, strategic working sessions, and debate at the Inaugural Conference of the Center for Macro Projects and Diplomacy in April 2004 outlined below.

Macro Conference, April 15-16, 2004***New Land for Peace: Constructing Prosperity in the Middle East***

"New Land for Peace: Constructing Prosperity in the Middle East" was a gathering of 100+ international leaders and professionals, scholars and students held at Roger Williams University. The Conference was conceived as a "Decision Seminar", seeking to develop and test potentials of the large scale project initiatives aimed at increasing prosperity and environment improvements in Gaza and the region. An 8-page illustrated Conference Report documenting the Conference was produced.

Preliminary Project Proposal Working Group and Study Group, May-August 2004

The Preliminary Project Proposal emerged from the Working Papers and Conference, through further development taken up by a six-person Working Group and 13-person Study Group in

Summer 2004. The Working Group was composed of those who were central in establishing the Working Papers and the Conference--Ernst Frankel, Frank Davidson, Roger Williams University Professors Mark Sawoski, Charles Hagenah, Patrick Charles and Stephen White. The group convened in early May 2004, reaching a preliminary consensus on the scope of the project proposal.

This scope was reviewed with further comment and suggestions from an interdisciplinary 13-person Study Group that convened in Montfort l'Amaury, France from June 23-25, 2004. The Study Group consisted of Renaud Abord de Chatillon, Ingenieur-General des Mines, and consultant to the French Ministry of Environment; Maurice Armand, Director of International Investments, Credit Lyonnais (retired); Philippe Bernard, Professor, Ecole Polytechnique, Paris (retired); Christoph von Braun, Former Director, Research + Development Strategy, Siemens Corporation, Munich; Jean Paul Calon, General Counsel, Suez Canal Company (retired); Patrick Charles; Frank Davidson; Elizabeth DeBlois, Undersea Environment Specialist, US Navy; Karl Sabbagh, Author, England; Henri Teissier du Cros, Member, Conseil d'Etat (Supreme Administrative Court), France (retired); Collette Teissier du Cros, Architectural historian, France; Stephen White; and William Yale, attorney.

In July and August 2004, the Preliminary Project Proposal was re-drafted in response to these multiple inputs, and to emerging events in the Middle East. Additional maps and illustrations were developed. Leadership in this area was taken up by Sawoski, Hagenah, and Charles.

Stephen White

Director, Center for Macro Projects and Diplomacy

**Building for Peace:
A Phased Plan for the Economic Development of the Gaza Strip and
the Middle East Region Following Israel's Disengagement**

Summary

1. Proposal: A Four Stage Economic Development and Infrastructure Plan

To create sustainable, secure employment and expanded business opportunities for Palestinians, mainly from the Gaza Strip, as well as new housing and improved infrastructure in Gaza, upgraded transportation and communications links within Gaza and between Gaza and the West Bank, and strengthened Palestinian governmental institutions; this by:

- **Establishment of a joint "Free Industrial Zone"** at the border¹ between Egypt and the Gaza Strip;
- **Construction of an offshore deepwater² seaport and large artificial island** – within Palestinian jurisdiction off Rafah and Khan Younis – connected by causeway to the mainland;
- **Construction of a secure underground rail link connecting Gaza and the West Bank**, designed for the transport of commercial containers headed for the seaport as well as for the secure flow of passengers and messages;
- **Strengthening of regional planning and development processes**, to promote broad oversight of the project and also to guide implementation of other related projects, including major infrastructure improvements and the development of culturally-sensitive, sustainable housing communities.

The project is being undertaken: in response to the expressed needs of Palestinians, particularly in Southern Gaza;³ consistent with the Economic Road Map submitted by Palestinian and Israeli economic experts, including past and present government officials meeting on an unofficial basis, in January 2004;⁴ subject to endorsement by local authorities; and in furtherance of UN Millennium Development Goals and *Agenda 21*.

We believe the project is in the interests of Palestinians, Egyptians, Israelis and all others with a stake in stability and prosperity in the Middle East, over both the short and long-term.

In the words of World Bank President James Wolfensohn: "Without an economic revival, today's Palestinian youth face a gloomy future, and their desperation will endanger any peace process. After ten years of concerted efforts to build a viable Palestinian economy, we are running out of opportunities. We cannot afford to let this one pass us by."⁵

2. Project Components

The greater part of the project will be undertaken over nine years in three overlapping phases—with Phase One commencing as soon as becoming feasible and widely accepted locally. Phase Four will be on-going. It is *important to act quickly*, starting before the end of 2005.

The components are:

Phase One. Construction of a 4-6 square km “Free Industrial Zone” initially located mostly in Egypt along the Gaza-Egyptian border—northeast of the former Sinai settlement of Yamit⁶--with planned expansion across the border into Rafah in Southern Gaza.⁷ Workers would come primarily from Gaza—with related vocational training centers located at existing sites in Rafah, Khan Younis, and Gaza City as well as on-site in the industrial zone.⁸

Initially, products of the free industrial zone would mainly be exported overland via Port Said.⁹ From here, one destination would be dedicated facilities in Genoa or other Southern European ports providing direct distribution to the European market. Another destination would be ports in the United States in accordance with duty-free, quota-free arrangements put in place following the Oslo Accords.

As the situation warrants, exports would increasingly be made from the Gaza International Airport, a ‘Roll-On, Roll-Off’ facility and a deepwater seaport in Gaza.

Major upgrades would be made to existing infrastructure in Rafah, Khan Younis, and on the Egyptian side of the border proceeding hand-in-hand with construction of the free industrial zone; these, to include significantly raising transportation, road, power, sanitation and water treatment standards in the general area. Infrastructure improvements will also be required as development of the airport and proposed seaport goes forward—as well as the more immediate upgrading of existing facilities to house the training centers.

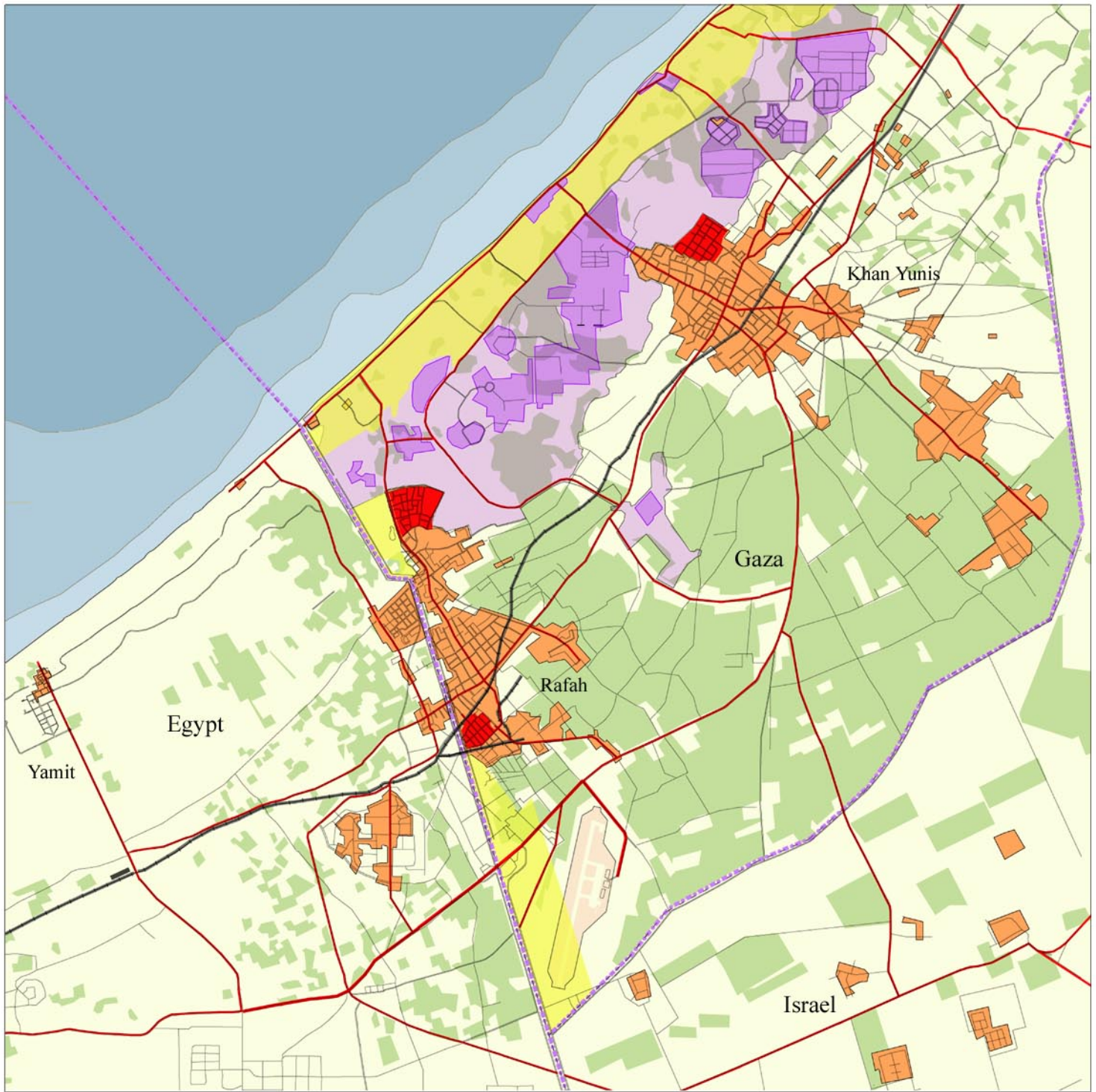
Why Start in Egypt?

Locating the free industrial zone initially in Egypt is done principally to address important security concerns and because of the urgent need for visible, new employment opportunities for Palestinians—and other hope-inspiring benefits--as the disengagement proceeds. Major foreign investors will not come unless there is security and effective overall management—as well as a guaranteed source of labor not interrupted by border closings. The failure of the Erez Industrial Park demonstrates this. Reportedly, there were no new investors in Erez once the *intifada* began



Project Locations in Context of Middle East








- Phase 1. Establishment of a joint Free Industrial Zone at the border between Egypt and the Gaza Strip, starting on the Egyptian side of the border.
- Phase 2. Construction of an off-shore deepwater seaport and large artificial island- within Palestinian jurisdiction off Rafah and Khan Younis -- connected by causeway to the mainland.
- Phase 3. Construction of a secure underground rail link connecting Gaza and the West Bank
- Phase 4. Strengthening of regional planning and development processes



Existing Conditions

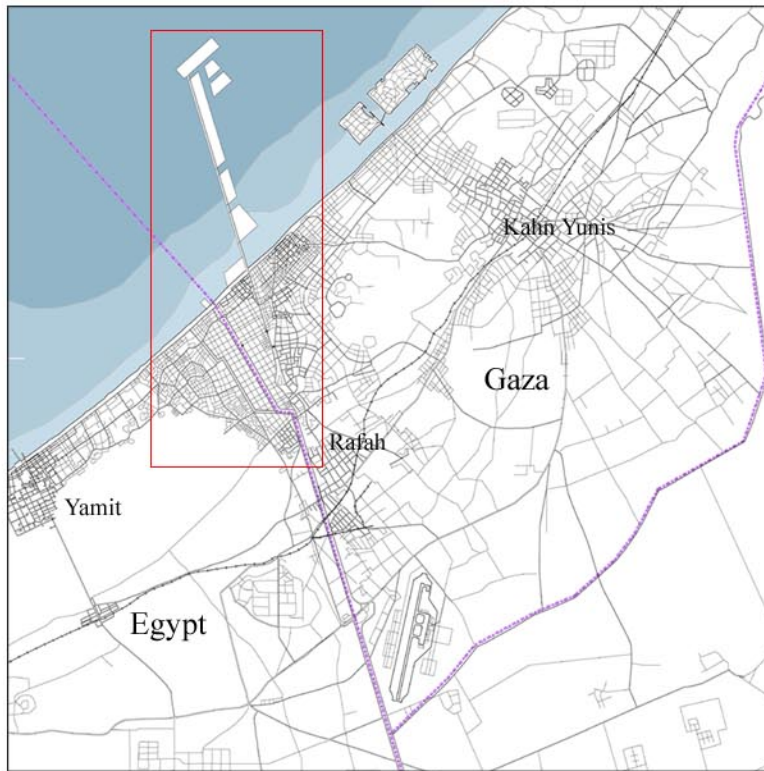
This map shows the Southern Gaza Strip area with the existing Israeli settlements and Israeli security zones, as well as existing Palestinian refugee camps.

Legend

- | | |
|---|---|
|  Existing Israeli settlements 2004 |  Areas of Israeli military control and Palestinian Civil Affairs control |
|  Lightly urbanized Israeli settlements |  Approximate city outline perimeters |
|  Palestinian refugee camps |  Agriculture |
| |  Airport (not currently in operation) |

Free Industrial Zone and Deepwater Seaport

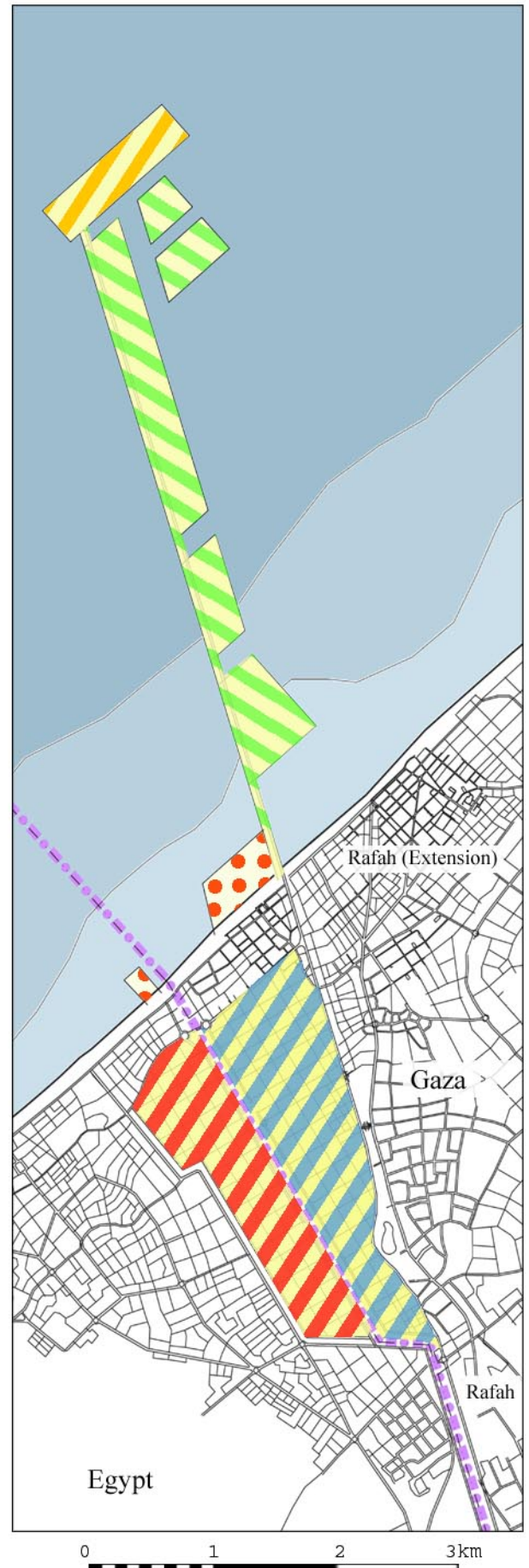
Construction of a 4-6 square Km Free Industrial Zone initially located mostly in Egypt along the Gaza-Egyptian border-- north of the former Sinai settlement of Yamit-- with planned expansion across the border into Rafah in Southern Gaza as well as into the Mediterranean Sea. A deepwater seaport terminal complements the Free Industrial Zone.



Projected Southern Gaza Strip area at Horizon 2014

Legend

-  Border between Egypt and Gaza
-  Phase 1a (2005-2008): Free Industrial Zone , Egypt
Area as shown= 1.5 sq. km.
-  Phase 1b (2006?-2009): Free Industrial Zone, Gaza
Area as shown= 2.0 sq. km.
-  Phase 2a (2007-2010): Expansion of the Free Industrial Zone into the sea with Roll on/ Rollff facility. Area as shown= 2.0 sq.km.
-  Phase 2b (2010-2014): Construction of deepwater seaport
Area as shown= 0.5 sq.km.
-  Ancillary Infrastructure Areas (water treatment plants, desalination plants, etc) (2005-2008) Area as shown= 0.3 sq.km.



in September 2000.¹⁰ Israel announced its intention to close Erez in June 2004.¹¹ Similarly, while the Palestinian-operated Gaza Industrial Estate (GIE) remains open, employment levels there are very low compared to the initial World Bank target;¹² and attracting major investors has been problematic. Egyptian leadership in the Arab world is a major asset that could make the critical difference.

As discussed below, a joint Palestinian-Egyptian free industrial zone would also facilitate Palestinian development of an export base that is relatively independent of Israel, as called for by the Aix-en-Provence Group in the Economic Road Map.¹³

Moreover, joint operation would permit Palestinians to take advantage of Egyptian expertise in the establishment and operation of Free Trade Zones and industrial parks. Egypt has seven Free Trade Zones and forty industrial zones.¹⁴ Egypt has an established legal framework for such areas and experienced managers and trainers capable of working closely with Palestinian managers and trainers who have not had the same opportunities as the Egyptians.¹⁵

So – mindful of the serious need for action no later than 2005 -- we propose starting on the Egyptian side of the border and then expanding into Rafah district as the security situation improves.

It should also be noted that the Sharon Government, as part of its published disengagement plan, states that it will, together with Egypt, “examine the possibility of setting up a joint industrial zone on the border between Israel, Egypt and the Gaza Strip.”¹⁶

Phase One Timing: 2005-2008.

Phase Two: Phased construction of:

(a) A 5-6 km causeway into the sea to serve as a temporary free port – with roll on, roll off capacity -- serving the Free Industrial Zone and as a construction road for Phase 2b uses: the site of the causeway is to be determined, but tentatively envisioned as extending out from Al Mawasi in the southern Gaza Strip in either Rafah or Khan Younis¹⁷--see illustration;

to be followed by:

- (b) **A connected deep water free port serving the Free Industrial Zone and other commercial sites in Gaza and, later¹⁸, the West Bank and also a 2 square Km artificial island providing culturally sensitive zones for small neighborhoods, desirable housing, markets, cultural facilities, waterways, pedestrian green spaces and open public spaces.**

After completion, an estimated population of 40,000 people would find very good living conditions here. Development is to be highly responsive to climate and environmental concerns--and to the management of water.

Phasing would also include related mainland development, including major infrastructure improvements such as transportation links to the Free Industrial Zone and to the Gaza terminus of the West Bank-Gaza tunnel connection discussed below. Mainland development would also include the use of former Israeli settlements after withdrawal. (See housing discussion under Phase Four discussion below.)

According to the World Bank in June 2004, "If a satisfactory security protocol can be established, a seaport in Gaza, provided it is accessible to West Bank businessmen and efficiently run by a private operator, is likely to be competitive – particularly if initiated as a "Roll-On, Roll-Off" facility, which could be built in relatively short time and for as little as US\$15-20 million."¹⁹

Note: The Gaza seaport²⁰ abandoned in 2000 after two months of work is widely criticized for its poor location. In the words of the World Bank in June 2004: "there is no need for the [new] facilities to be located on the same site as the abandoned port project."²¹ In particular, it is necessary that there be agreement that the site is suitable for a deepwater port.

Apart from proximity to the Free Industrial Zone, locating the seaport and residential island in Al Mawasi in either Rafah or Khan Younis keeps the construction at a distance from the ecologically sensitive Wadi Gaza (Valley of Gaza) which begins in the Hebron Mountains and descends into the Sea south of Gaza City. An Al Mawasi location would also interfere less with existing populations and is consistent with optimizing existing transportation links to the proposed tunnel terminus as well as to the Free Industrial Zone.

Nevertheless, the final siting of Phase Two is to be determined.²²

Phase Two Timing: 2007-2014.

Phase Three: Construction of a tunnel connecting Gaza and the West Bank by secure rail²³ – designed for the secure transport of commercial containers as well as for the secure flow of passengers and messages, including a direct cargo link from West Bank manufacturing and agricultural centers to the newly constructed seaport in Al Mawasi – with planned links to Northern Gaza, Jordan and Eastwards; potentially, also to Israeli exporters. The tunnel would help make a contiguous Palestinian entity a reality, thereby, significantly contributing to successful Palestinian statehood. A tunnel could also be used to accommodate high-speed communication links between Gaza and the West Bank, consistent with UN Millennium Development Goals.

Phase Three would include projects at both ends of the tunnel. It would also facilitate major infrastructure improvements, including a direct link between its Gaza terminus and the deep water seaport.

Prior to completion of the tunnel, the use of secured convoys could be resumed, as recently recommended by the World Bank. According to the Bank: “Convoys could consist of tractor-trailers carrying sealed containers, following appropriate pre-shipment inspection and scanning. Eventually it might be possible to relax the use of convoys, relying instead on electronic means to monitor container movements (e.g. GSP-linked transmitters or transponders), with obligatory reporting stations along the route.”²⁴ While consistent with the objectives of this project, we believe a secure rail link is a better long-term solution. The positions of past Israeli governments indicate that it would be feasible politically under the right conditions.

As noted above, secure access of West Bank business to the proposed seaport is important to the success of the seaport as a profitable entity.

Site: To be determined. Initial discussion to be based on the track set out in Prime Minister Barak’s 1999 proposal to construct an elevated road twenty-five miles long between Beit Hanoun in Gaza and the village of Dura, near Hebron, in the West Bank.

Phase Three Timing: 2009-2012.

Phase 4. Strengthening of regional planning and development processes, to promote broad oversight of the project and also to guide implementation of other related projects, including major infrastructure improvements and the development of good, sustainable housing.

Note: Phase Four is to be on-going, commencing together with the start of Phase One in 2005.

For the project fully to succeed, effective planning on a regional scale will be critically important; this, consistent with *Agenda 21*. For example, the economic impact of the tunnel alone clearly would have a major impact on the entire Gaza strip as it is today – as well as the West Bank. New economic venues and their development will require new roads, new power supplies and new rail systems within the West bank and the Gaza Strip. They would be necessary and expected. New population movements would suggest an adjustment in other infrastructure elements like housing, schools and neighborhood centers and, accompanying these growths, will come the planning of new water sources and water distribution and treatment facilities – infrastructure which, for example, the local residents of Rafah and Khan Younis *today* are in desperate need. International dimensions of the project must also be effectively addressed.

Moreover, it is expected that this project will spur other, related projects such as desert land reclamation,²⁵ macro projects to address water resources on a regional basis (such as the Marks-Moavenzadeh project), the planned use of former Israeli settlements after withdrawal particularly for Palestinian housing, and also the possibility of manmade islands for Israeli residential or commercial uses, perhaps including a new airport off of Tel Aviv.

The need for a master plan for the region is evident – and is increasingly being brought front and center as the preliminary stage of the project proceeds. Indeed, it seems apparent that moving forward with this project is likely to accelerate such planning. This is a key objective.

The project will specifically be undertaken in such a way as to support current efforts underway by the PA Planning Agency and the UNDP to empower a Middle East Regional Development Council as well as other relevant initiatives.

Phase Four Timing: 2005-Continuing.

3. Assessment Criteria: Preliminary and on-going evaluation of the project is to be made based on the following *key* criteria:

- The sustainable employment of Palestinians, especially 15-24 year olds²⁶
- New vocational training opportunities
- Economic growth, specifically revenue generated in Southern Gaza, Gaza, the West Bank, and Egypt
- A sustainable increase in per capita food consumption²⁷
- Increased private investment levels
- Timeliness
- Technical proficiency of later proposals
- Quality of life for specific groups of people in the region based on survey data
- Infrastructure improvements, initially in Rafah and Khan Younis
- Palestinian “ownership” of the project
- Environmental impact

- Political stability in Gaza and the West Bank, including strengthened governing institutions and planning processes
- Regional stability.

Assessments for each of these criteria are to be an important part of the project’s feasibility study.

4. Estimated Costs:

The project, as noted, would be implemented in four overlapping phases.

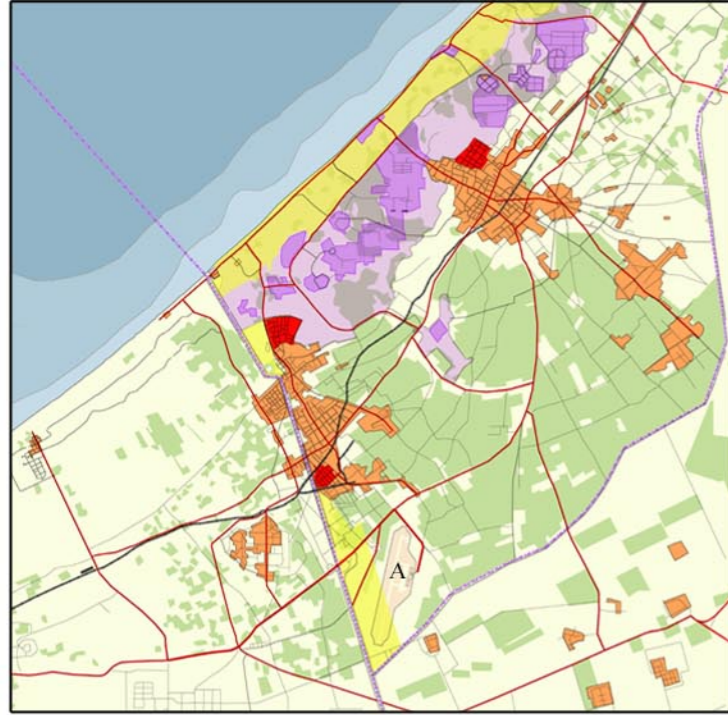
<i>Phase</i>	<i>Description</i>	<i>Timing</i>
1	<i>Construction of a free industrial zone along the Gaza-Egyptian border</i>	<i>2005-2008</i>
2a	<i>Construction of an 5-6 Km causeway into the sea to serve as a temporary port and construction road for artificial island, free zone and deep water port</i>	<i>2007-2010</i>
2b	<i>Construction of 2 square Km artificial island and deep water port</i>	<i>2010-2014</i>
3	<i>Construction of a tunnel connecting Gaza and the West Bank by secure rail</i>	<i>2009-2012</i>
4	<i>Strengthening regional planning initiatives; related projects</i>	<i>2005-</i>

Excluding lease costs and other government transfers, the development and construction costs of the project are currently estimated at:

Phase 1	4-6 square Km, improvements, infrastructure, etc.	US \$150-200 million ²⁸
Phase 2a	5-6 Km causeway (100 m wide paved and armored)	US \$200 million
Phase 2a	Temporary port	US \$15-20 million
Phase 2b	Full service port and 2 sq. km. artificial island in 12-15 m deep water	

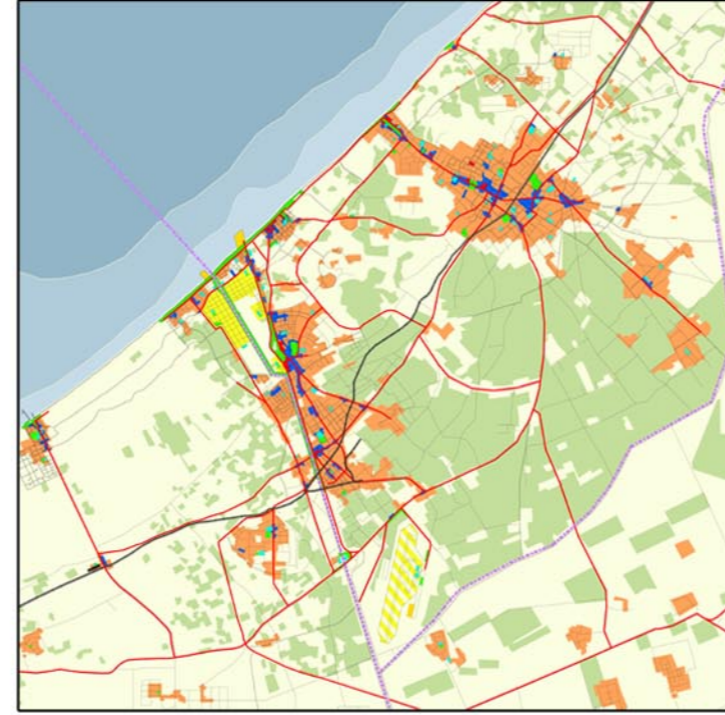
	Dikes and armor	\$160 million	
	Reclamation	\$240 million	
	Infrastructure	\$120 million	
	Port construction	\$200 million	
	Equipment	<u>\$ 65 million</u>	
	Total	US \$785 million	
Phase 3	Tunnel connecting Gaza and the West Bank by secure rail		TBD
Phase 4	Strengthening regional planning initiatives;		US\$0.5million
Phase 4	Related projects.		TBD

Building for Peace Phasing Plan



Existing Conditions (2004)

see larger scale drawing page II



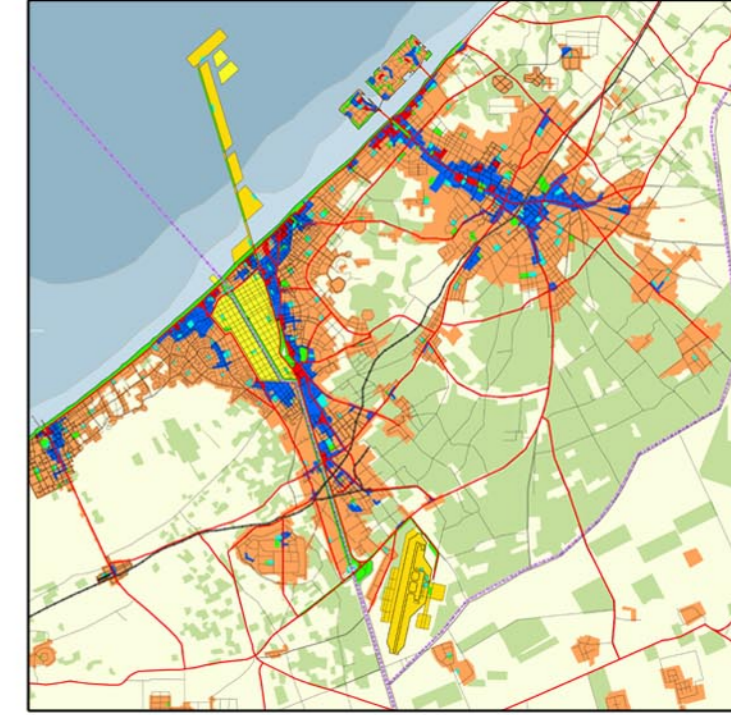
Phase 1 (2005-2008)

see larger scale drawing page VIII



Phase 2a (2007-2010)

see larger scale drawing page IX



Phase 2b (2010-2014)

see larger scale drawing page X

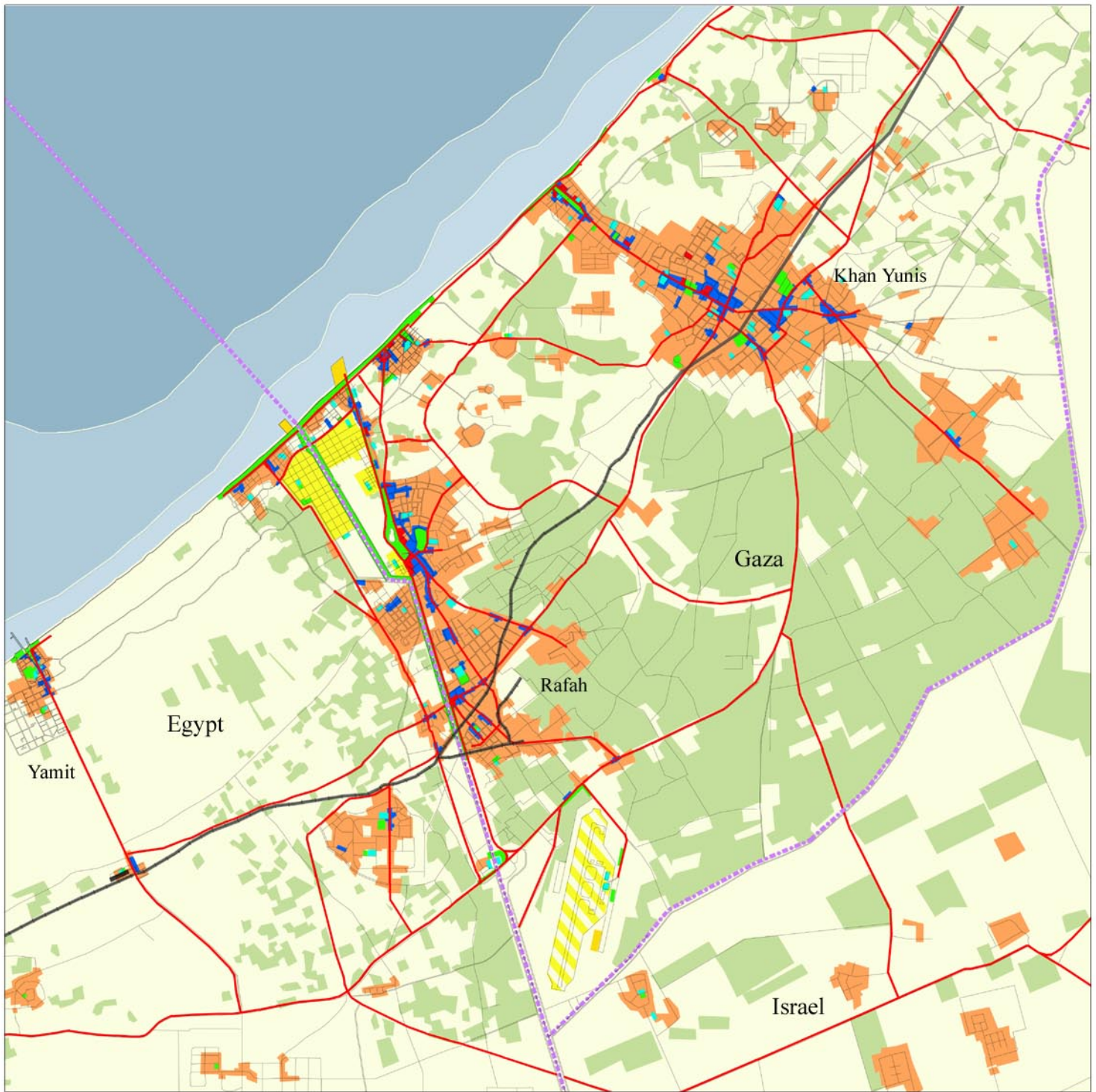
Legend

- Existing Israeli settlements 2004
- Lightly urbanized Israeli settlements
- Areas of Israeli military control and Palestinian Civil Affairs control
- Approximate Palestinian urban area (low and medium density)
- Palestinian refugee camps (high density)
- Agriculture
- Airport (not currently in operation)
- Train tracks
- Roads

- Free Industrial Zone
- Airport reconstruction
- Low and Medium density urban areas
- Commercial and retail growth
- Higher density urban areas
- Public buildings
- Public parks, green edges

- Free Industrial Zone (Extension /Reclamation, causeway)










- Deepwater seaport and recommissioned airport

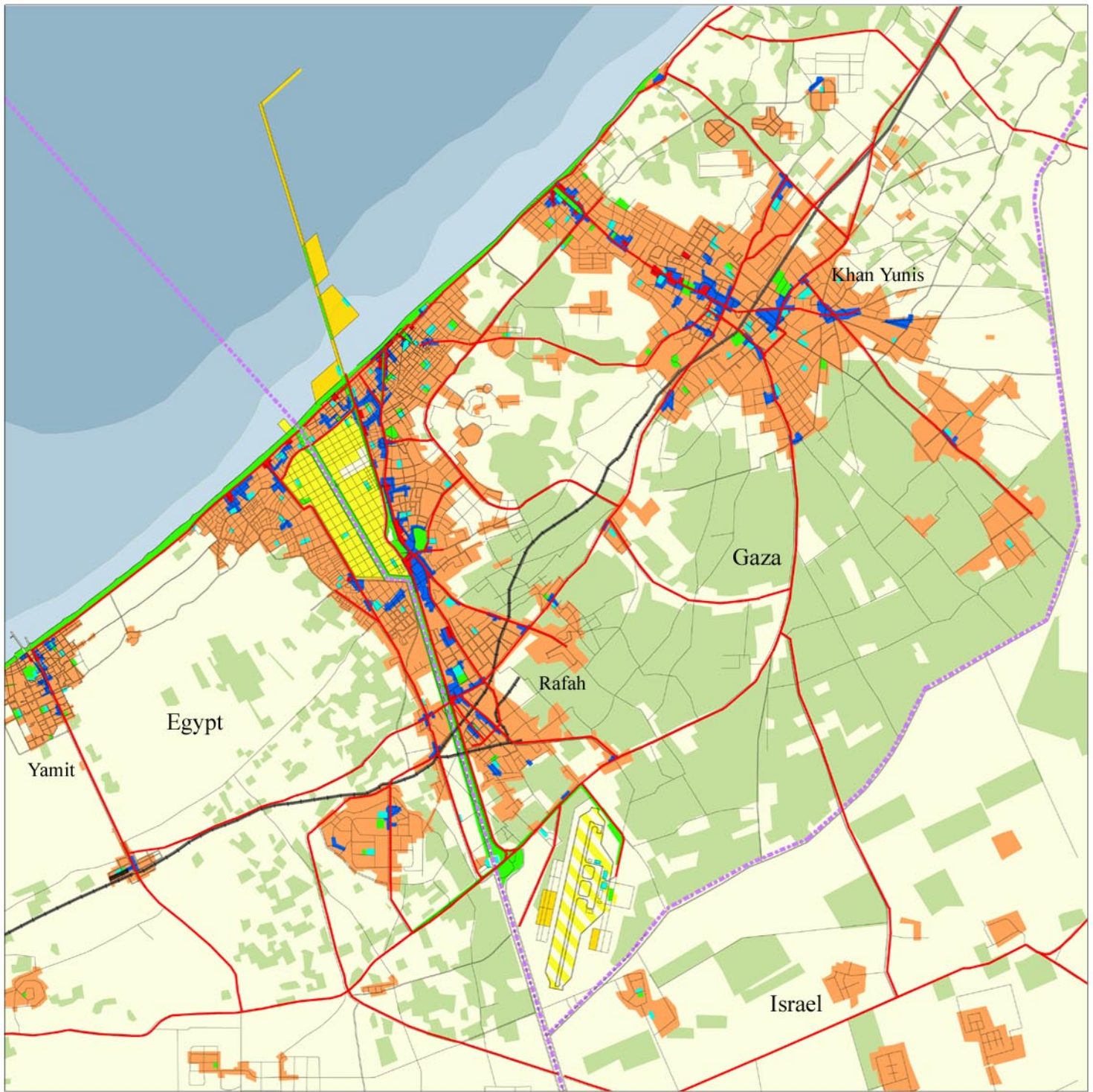


Phase 1

This map shows the construction of a 4-6 square Km Free Industrial Zone initially located in Egypt along the Gaza-Egyptian border-- north of the former Sinai settlement of Yamit-- along with its planned expansion across the border into Rafah in Southern Gaza.

Legend











- | | | |
|--|--|---|
|  Free Industrial Zone |  Commercial and retail growth |  Agriculture |
|  Airport reconstruction |  Higher density urban areas |  Roads |
|  Low and Medium density urban areas |  Public Buildings |  Public parks |

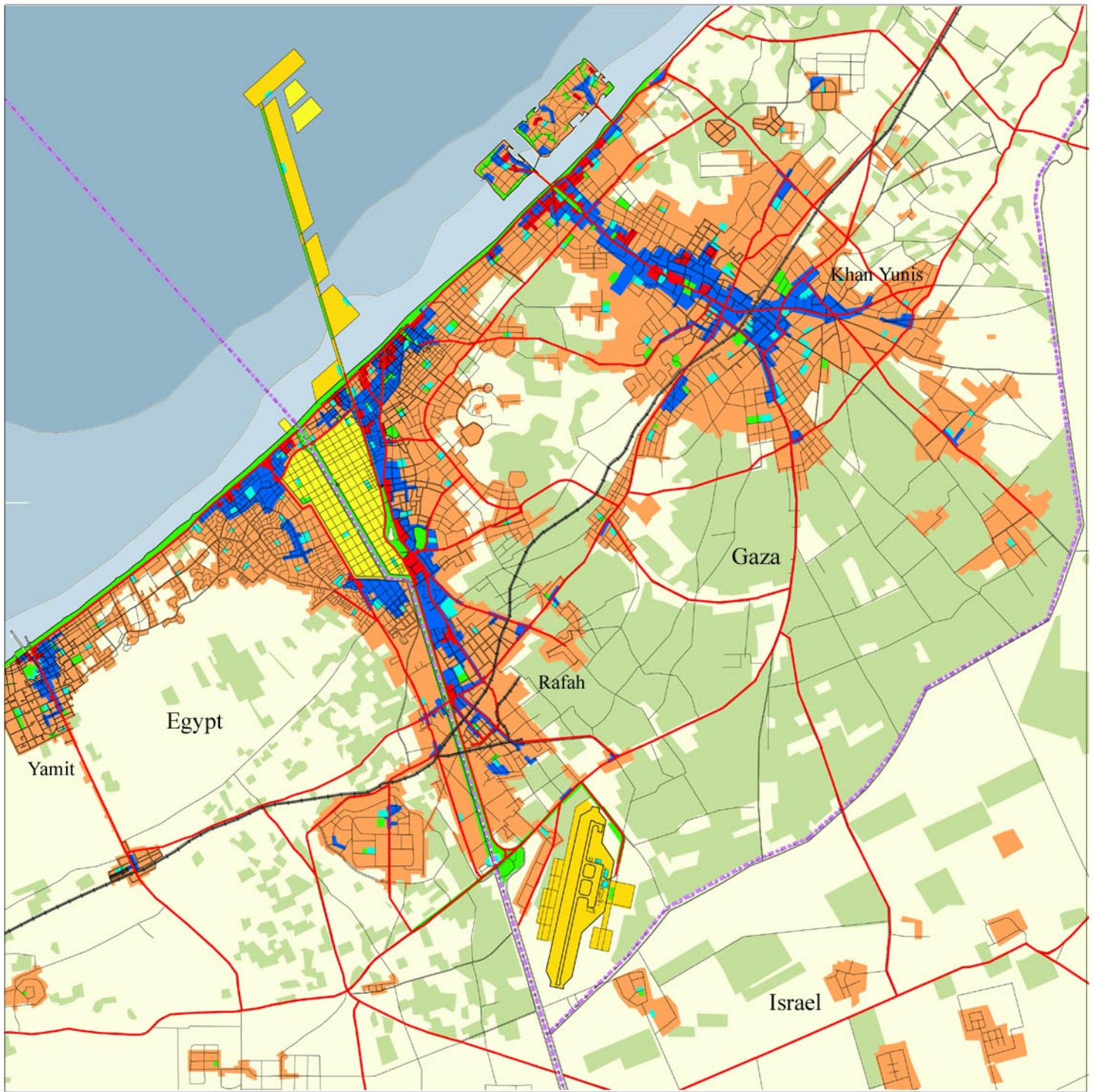


Phase 2a

Expansion of Free Industrial Zone: a 5-6 Km into the sea to serve as a temporary free port with combined infrastructure improvements

Legend










 Free Industrial Zone (Expansion)	 Commercial and retail growth	 Agriculture
 Free Industrial Zone Phase 1	 Higher density urban areas	 Roads
 Airport reconstruction	 Public buildings	 Public parks
 Low and Medium density urban areas		



Phase 2b

A connected deep water free port serving the Free Industrial Zone and other commercial sites in Gaza and, later, the West Bank and also a 2 square Km artificial island providing culturally sensitive zones for small neighborhoods, desirable housing, markets, cultural facilities, waterways, pedestrian parks and public spaces.




Legend

 Free Industrial Zone	 Commercial and retail growth	 Agriculture
 Airport and Deepwater Seaport	 Higher density urban areas	 Roads
 Low and Medium density urban areas	 Public buildings	 Public parks

Satellite Image / Urban Outline Overlay

The satellite image clearly shows the varying land cover patterns resulting from the different agricultural land management practices across the three countries.

Legend

-  Areas with reduced /inexistent land cover
-  Cultivated areas /Planted areas
-  Urban areas








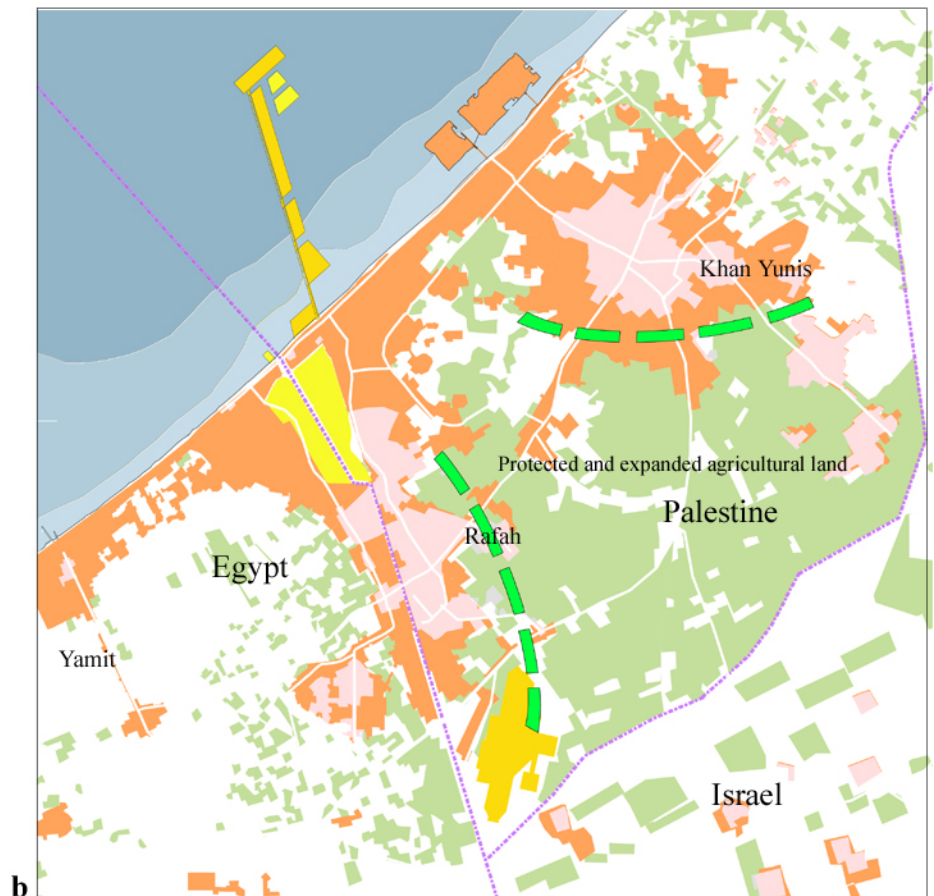
a

Agricultural Land Protection

Valuable agricultural land should be protected from encroachment by uncontrolled urban growth

Legend

-  Major existing urban areas
-  Projected future urban expansion
-  Boundaries of urban growth
-  Agricultural land
-  Deep-water port, Free Industrial Zone, and Gaza Airport reconstruction



b




Existing Water Considerations

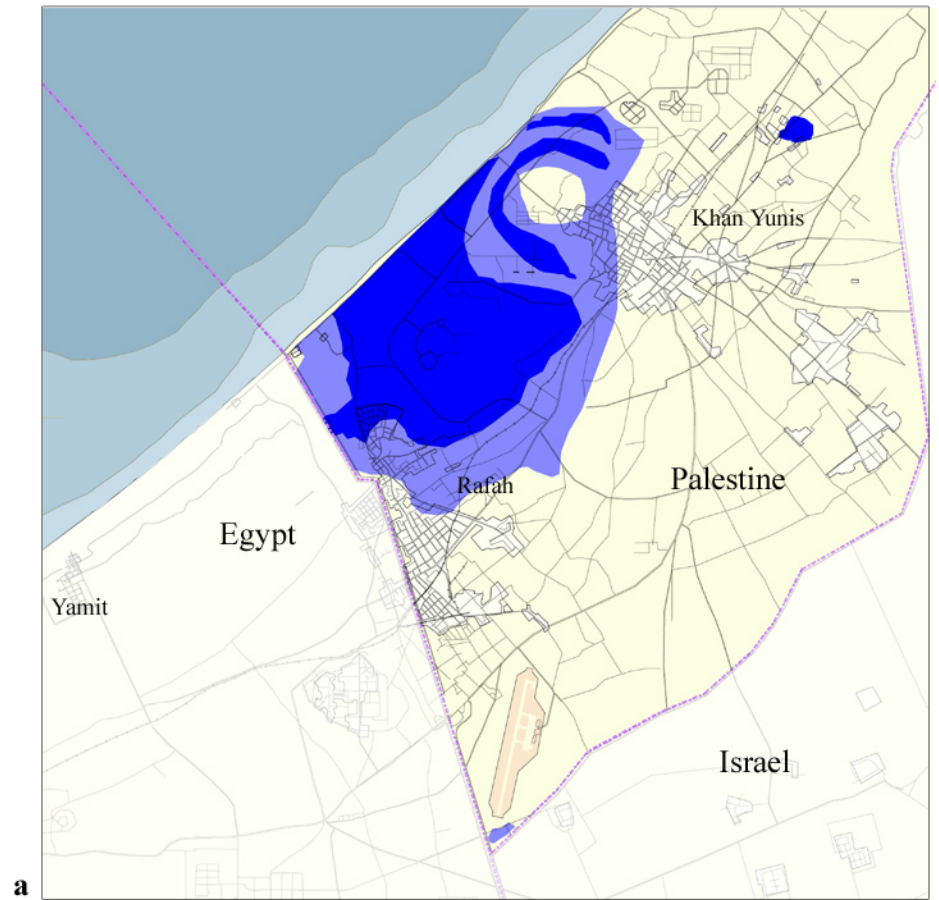
Below the south Gaza Strip, aquifer supplies provide various water qualities from potable to that which would require treatment. Developed urbanization above ground should protect this rare resource.

Source:

<http://www.fw.no/kgf/artikler/palestina/article.htm>

Legend




-  Grade 1: Potable water, High grade water
-  Grade 2: Secondary quality
-  Grade 3: Requires treatment

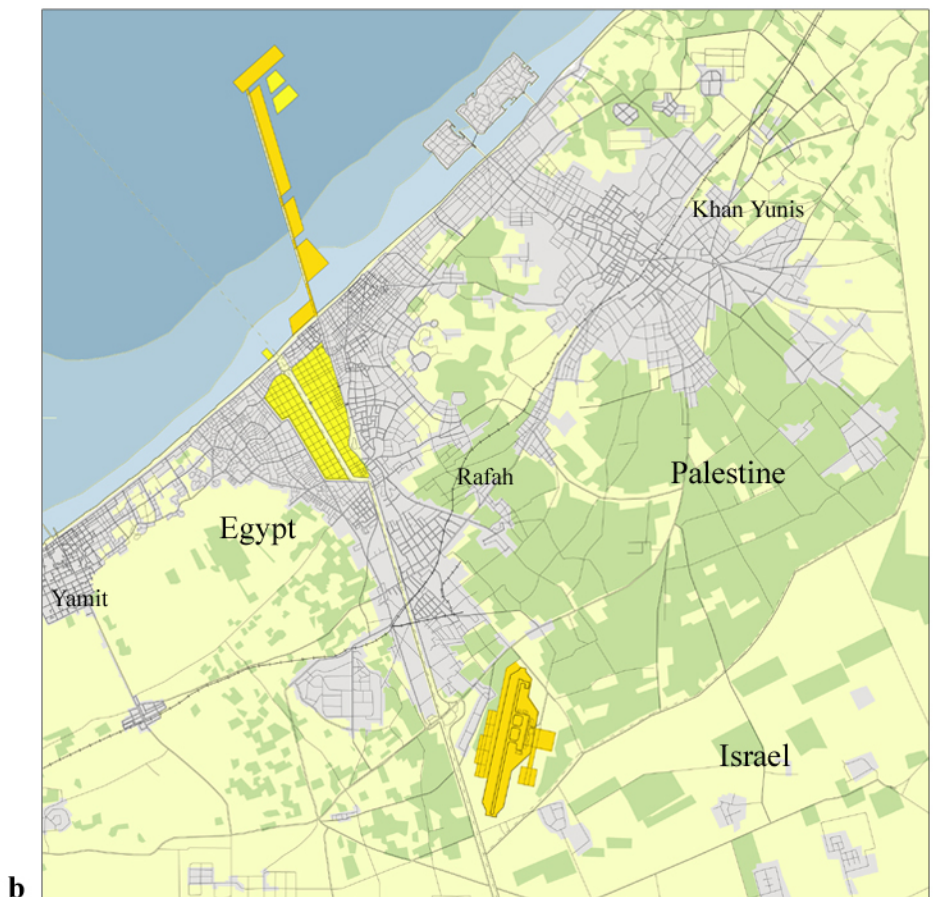


Master Plan Land Use

Protection of valuable underground water resources should inform urban development patterns as well as agricultural land management practices. Limiting impervious urban surfaces should provide for replenishing of underground water reserves.

Legend




-  Arable land / Intensive use: grains, orchards, crops
-  Undeveloped Agricultural land/ Extensive use
-  Urban fabric growth patterns

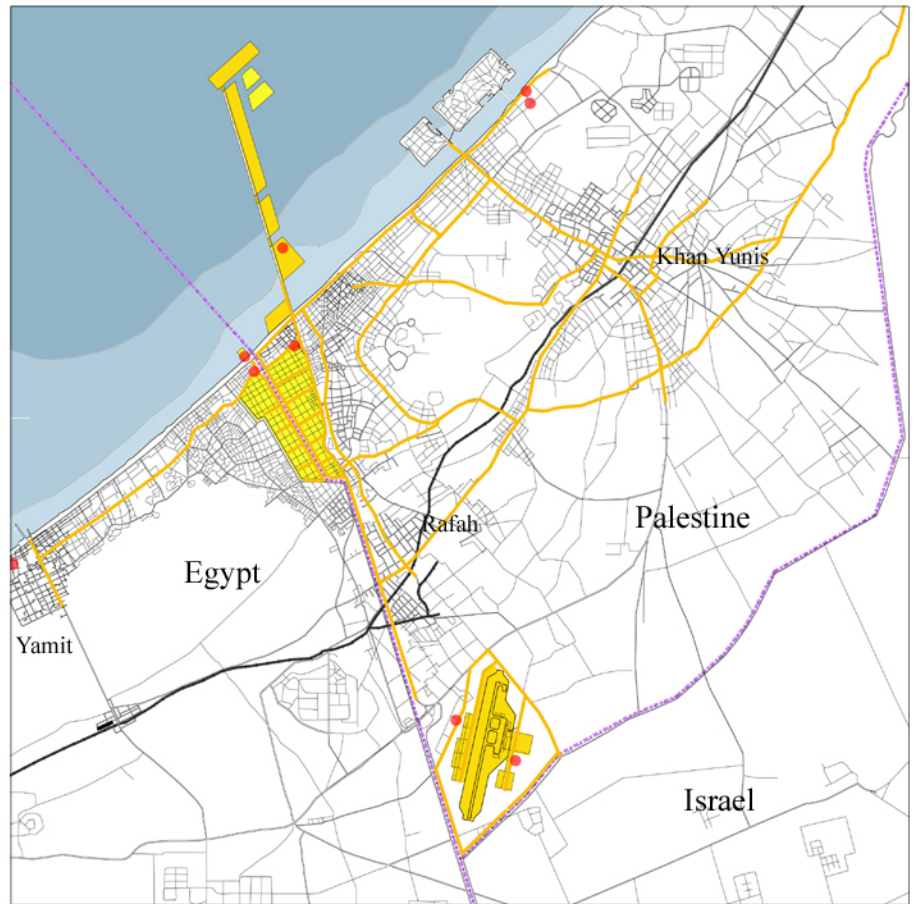


Infrastructure Improvements

Major upgrades would be made to existing infrastructure in Rafah, Khan Yunis, and on the Egyptian side of the border proceeding hand-in-hand with construction of the free industrial zone; these, to include significantly raising transportation, road, power, sanitation and water treatment standards in the general area.

Legend



-  Schematic location for water treatment plants, desalinization plants
-  Schematic location for road improvements including sewer and water distribution systems
-  Deep-water port, Free Industrial Zone, and Gaza Airport reconstruction

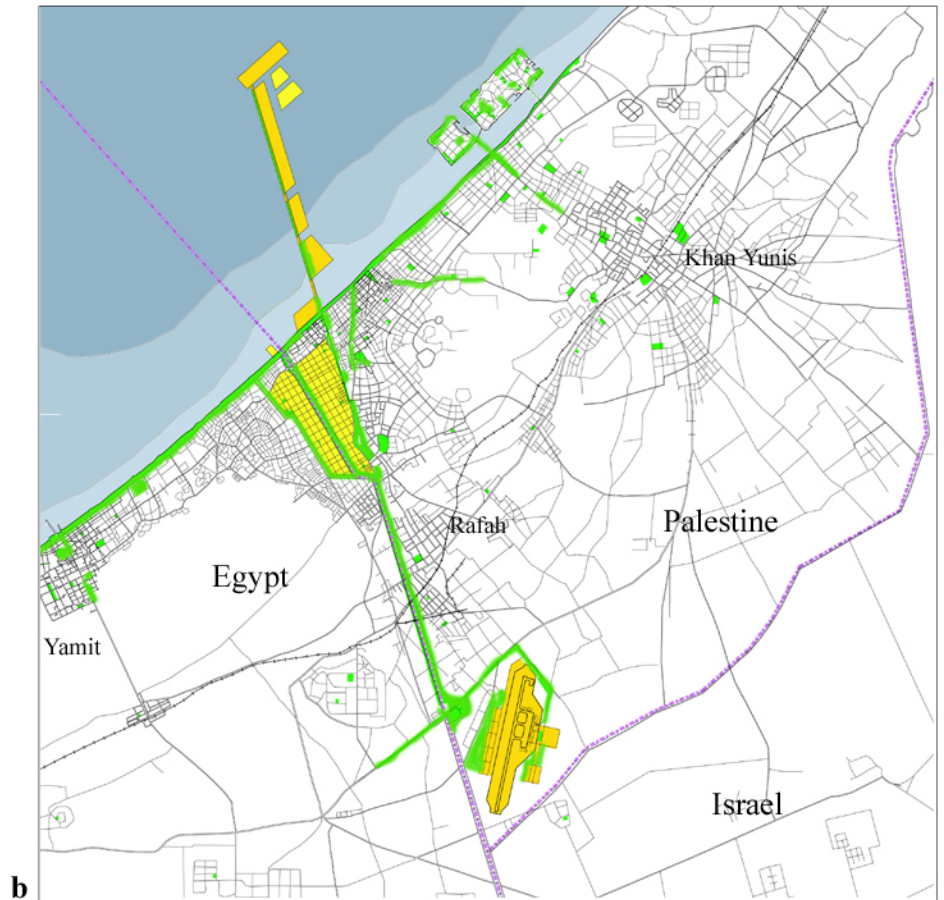


Green Edges

Where and when infrastructure improvements are necessary, the living quality of public spaces and parks within the urban character should be enhanced.

Legend

-  Landscaped edges, public park systems, integrated in Master Plan
-  Deep-water port, Free Industrial Zone, and Gaza Airport reconstruction



Project Proposal

Need for the Project

a. Conditions in Gaza

The economic condition of Palestinians in the Gaza Strip is dire, with a per capita income estimated to have sunk to less than \$600/year, with unemployment near 42% and youth unemployment even higher.²⁹ More than 30,000 workers from Gaza have lost their jobs in Israel since 2000, with an additional 4,900 workers with jobs in the Erez Industrial Zone being only intermittently employed – and soon to be mostly out of work due to the planned closure of Erez.³⁰ Average daily wages in Gaza have held steady at about 55 NI Shekels (about \$11.62) or only about 75% of those earned in the West Bank and 30% of those earned by Israeli workers. At the same time, consumer prices increased by nearly 6% during the last 2 years, reducing standards of living even further.³¹

According to World Bank estimates, even if Israel's disengagement is accompanied by such developments as the lifting of internal closures in the West Bank, the opening of all external borders, and an infusion of US \$1.5 billion from donors over 2004-2006, *the official poverty rate in Gaza will still be an unacceptable 53%.*³²

The most urgent need, based on interviews with local inhabitants conducted by the Palestinian Ministry of Planning and International Cooperation (MOPIC) in cooperation with the Palestinian offices of the UNDP, is for the establishment of reliable employment opportunities and vocational training for residents of the Gaza Strip; employment which is not subject to political and/or security problems, and which generates adequate income. For example, according to the Palestinian Participatory Poverty Assessment (PPPA) Project Report on Rafah District published in March 2002: "Through case studies conducted in the District, it was evident that lack of a job opportunity with consistent income for a family member, especially the father, for any reason . . . is what prevents the family from escaping their severe poverty. But in case a family member finds a job, all problems are suddenly resolved and the family starts to think of and plan for a better future that they have wished for since long time, while being unable to provide for their daily livelihood."³³

Based on interviews – conducted in accordance with accepted social science research methods by the MOPIC in cooperation with the UNDP Palestinian office: “Main recommendations proposed by the poor [of the Rafah District] include: activating the role of NGOs, especially in providing vocational training for farmers, women and youth; supporting small income-generating projects; improving infrastructure services, particularly sewage network . . . constructing a desalination plant;” and requests for transportation links and equal treatment by local authorities.³⁴ Similar priorities are placed on training, job opportunities, and basic infrastructure improvements in other political districts in Gaza, including Khan Younis.³⁵

The need for sustainable job opportunities for Palestinians is likely to become more acute as Israel goes ahead with its planned withdrawal from Gaza and part of the West Bank, which is now scheduled in principle to be completed by the end of 2005. Despite warnings from the World Bank and others, the stated intent of the Sharon Government remains more to cut Palestinians off from Israel rather than to promote Palestinian independence.³⁶ That is: Palestinians are unlikely to return to pre-*intifada* employment levels in Israel.³⁷ According to the Economic Road Map, “Central to our discussion is a recognition that future Palestinian economic strategy can no longer afford to rely so heavily on the export of labor and remittance income.”³⁸

Instead, according to the Economic Road Map, “A viable economic future for the Palestinian state entails a significant expansion of productive capacity in order to create jobs and incomes (including for those lost in Israel) for a population growing rapidly through natural increase and needing to provide for an influx of refugees. Such viability means a triple transaction: from full economic dependency to greater autonomy; from asymmetrical to more balanced relations; and from a high degree of automaticity to truly sovereign decision-making. This demanding transition requires that preparatory steps begin without delay.”³⁹

Experience with the development of industrial zones elsewhere has shown that for each job generated in such a zone at least three jobs are generated outside the zone by a spin-off effect, which generates new demand for services, consumables, and more. As a result, establishment of say 30,000 jobs in a new industrial zone could generate as many as 120,000 new jobs in total, more than replacing those lost in Israel, reduce unemployment to only 20-25%, and double average per capita income in the Gaza Strip.

The project is advanced now, when the Israeli government has announced its intention to withdraw from Gaza Strip by the end of 2005⁴⁰, including the dismantling of Jewish settlements in the area. As noted, this will require Palestinians in the Gaza Strip to become even more self-sufficient, as it is unlikely that free border crossing of workers from Gaza to Israel will be permitted after the withdrawal, and the jobs traditionally offered in the Jewish settlements and their factories located in the strip will no longer exist.

The destitute economic conditions in Gaza and the West Bank are principal contributing factors driving the violent unrest, the growth of the military organizations, and the general feeling of hopelessness. Meaningful, reliable, secure, long-term jobs for tens of thousands in nearby factories and offices (located less than half the distance of work places in Israel) in an Arab environment, run by world-class managers and including profitable tenant companies would provide not only income, economic stability, growth of self-esteem, but also an effective outlet for the lack of faith in an external world community that most there assume has little objective interest in them or their plight.

b. Conditions in Al Mawasi

Al Mawasi is a narrow strip of coastal land located in the Southern Gaza Strip along the Mediterranean coast from the Egyptian border to Deir El Balah. It has two separate areas of administration; Al Mawasi Rafah located to the west of the city of Rafah and Al Mawasi Khan Younis located to the west of the city of Khan Younis. All but about 3 linear Km of coastline falls within Khan Younis.

According to the Oslo accords, Al-Mawasi area was *classified as a yellow area* placing it under Israeli security control, but under Palestinian civil jurisdiction. It is the largest Yellow Area within the relatively small area that comprises the Gaza Strip.

There are approximately 4144 Palestinians living in Al-Mawasi, of which 3154 live in Al Mawasi Khan Younis and 990 live in Al Mawasi Rafah. More than 50% of the current populations are refugees who fled to the area from Israel during and after the 1948 War.

“Palestinians of Al-Mawasi area live in low-level housing conditions where most of their houses are cement-asbestos roofed. Some people also live in small sheds made from plastic or wood. No sewage or water networks are currently available in the area; besides, electricity services are only

available for few hours daily. The Palestinian communities are connected by muddy roads that often flood during winter time and consequently become difficult to use."⁴¹

Once known for agriculture, the economy of Al Mawasi has significantly deteriorated since September 2000. According to the Applied Research Institute in Jerusalem, "the agricultural productivity has been affected severely due to [Israeli] land razing and destruction of agricultural crops, in addition to the shortage of agricultural equipments. These reasons have contributed directly in the collapse of the agricultural sector in the area."⁴²

Phase One: Free Industrial Zone at the Egyptian/Gaza Border

a. General

The proposed Plan is based on providing long-term, sustainable, secure, desirable employment, and business opportunities for Palestinians, mainly from the Gaza Strip as well as for Egyptians residing in the northern Sinai, by establishing a joint “Free Industrial Zone” at the border between Egypt and the Gaza Strip, located initially mainly northeast of the site of the former Israeli town of Yamit. Later the zone would be expanded across the border into the Rafah District—and also later, in Phase Two, connected to a free seaport in Palestinian waters.

Phase One will require an agreement by the Egyptian government to lease land or otherwise transfer land to a joint free industrial zone authority and to permit it to operate outside Egypt’s customs and tax boundaries similar to the existing free trade zones in Egypt. It is expected to attract significant investments in productive assets such as factories, logistic centers, power and water treatment plants, communications facilities, assembly and warehousing centers, and financial service operation. Phase One envisions the initial use of Egyptian construction firms, employment of Egyptian police, border guards, and Egyptian and Palestinian administrators, managers, and engineers growing from a workforce of a few thousand to about 5000 over a five-year period. The remaining workforce of about 20-40,000 will be provided by day workers from Gaza so as to begin to provide meaningful employment for Palestinians. Investors will be attracted by

- low space rentals and/or costs
- abundant low or reasonable cost educated and skilled labor
- strategic site location
- easy and preferred access to European Union and U.S. markets
- effective and efficient transport links that will initially use Egyptian logistic and port infrastructure
- potential access to low cost material and energy sources

The total initial investment in preparing the “Free Industrial Zone” is estimated to be approximately \$150-200 million (4-6km²)⁴³ plus prepaid leasing costs. The industrial plants themselves are expected to be built and equipped by zone tenants that would be offered long-term 10-30 year leases of land and related infrastructure.

b. Security

Security is essential to attract investors. This is the main reason for locating the free industrial zone initially on the Egyptian side of the border. The simple fact is, as James Wolfensohn writes:

“investors cannot be expected to bring capital to an area in conflict.”⁴⁴ Egypt has the resources to bring security to the border area and, as important, the apparent political will to do it.

Establishment of a Free Industrial Zone could be done exclusively in Gaza, but it is highly unlikely to be successful; especially over the short and medium-term, when the need is so great.

Egypt’s presence on the border is a great regional asset for this and other reasons. All indications are that this fact is increasingly realized in Gaza by all parties, including various factions within the Palestinian Authority.⁴⁵ As the project is implemented, the need for security guarantees is expected to become less of an issue and control of the project will shift increasingly to the Palestinians on their own.

c. Management

Similarly, Egyptian expertise in the establishment and operation of Free Trade Zones and industrial zones is a major asset for the region that this proposal is designed to take full advantage of. There are currently seven Free Trade Zones and forty industrial zones in Egypt. The Egyptian Government’s General Authority for Investment and Free Trade Zones (GAFI) is prepared to move quickly to get the proposed joint Free Industrial Zone up and running, should President Mubarak continue Egypt’s enlightened engagement to promote security and well-being in Gaza after Israel’s withdrawal.

Egypt’s expertise is especially critical given the Palestinians’ need for critical legal infrastructure and export-oriented business training, in particular – especially given the deep crisis today in the Palestinian economy and in relevant governing institutions. The Palestinians are not without experience in industrial zones, through their participation in the Israeli controlled Erez Industrial Zone⁴⁶ and through private Palestinian management of the Gaza Industrial Estate (GIE) by the private holding company, Palestine Development and Investment, Ltd. (PADICO). However, both sites are essentially dependent on Israel, with foreign investors in the GIE in particular, such as American soft-drink manufacturers, locating plants there more for outside political reasons than for inside economic ones. Similarly, much progress has been made by the Palestinians over the past ten years with respect to the establishment of the necessary legal, judicial and regulatory system, but much more still needs to be done in this area – and “legal, judicial and regulatory reform has slowed considerably since 2002.”⁴⁷ In particular, there is an urgent need to effect meaningful “rule of law” in Gaza and the West Bank if private investors are to risk capital.

Governmental control of such sites, including development of proposed sites, within Gaza and the West Bank is exercised by the Palestinian Industrial Estates and Free Zones Authority (PIEFZA) which seems to have the experience and personnel to represent Palestinian interests increasingly well in the development and implementation of this project in its various phases.⁴⁸

In Egypt, a Public Free Zone⁴⁹ is managed by a board of directors, which oversees either a public or private authority which administers the zone and also manages the contract with the main development company responsible for building the infrastructure. The trend in Egypt is toward increased private sector management of Free Zones. In particular, Law 83 of 2002 establishes Special Economic Zones (SEZ) which enjoy considerable autonomy and operate away from the bureaucracy although senior governmental officials still maintain final control. For example, the head of the Authority is appointed by the President. The Authority reports directly to the Prime Minister. Nine members of its 17-member board represent various ministries.

Egyptian laws and procedures for the establishment and operation of free zones would have to be modified to accommodate shared management with Palestinian Authorities. Nevertheless, the legal basis exists. (For more discussion, see section on Free Trade Zones below.)

d. Benefits for Egypt

There are important incentives for Egypt including economic development of the desolate northern Sinai.

Revenues to the Egyptian government and economy are estimated to grow from about \$200 million/year-\$1 billion/year in lease fees, income taxes, and various dues (as a Free Industrial Zone, no customs and corporate taxes would be collected). In addition there will be many spin-off or secondary benefits to both the local communities and population as well as to the Egyptian government and economy at large. It will increase government revenues, contribute to the economic development of the northern Sinai Peninsula, as well as provide a variety of other economic benefits for the country, particularly as most transactions such as worker pay and all kinds of services will all be in hard-to-get foreign currency. Egypt is currently going through its own economic crisis resulting from lack of tourism and low commodity prices for some of its important exports. Principal investors/operators in the Free Industrial Zone are expected to come primarily from OECD countries – albeit with significant Palestinian participation.⁵⁰

Free Industrial Zone

The Free Industrial Zone consists of office space, fabrication plants, and warehouses located close to the Port facility. The zone will be developed in a way that demonstrates environmental sustainability through the use of sustainable building technologies which would minimize the impact of the zone on the surrounding environment.

Key Features

1. Flexible bays of manufacturing, assembly and office space.
2. Buildings respond to Sun through both active and passive building technologies
3. Road Systems
4. Water Channel- Passive environmental cooling system
5. Landscaped Corridors



a

Key Features

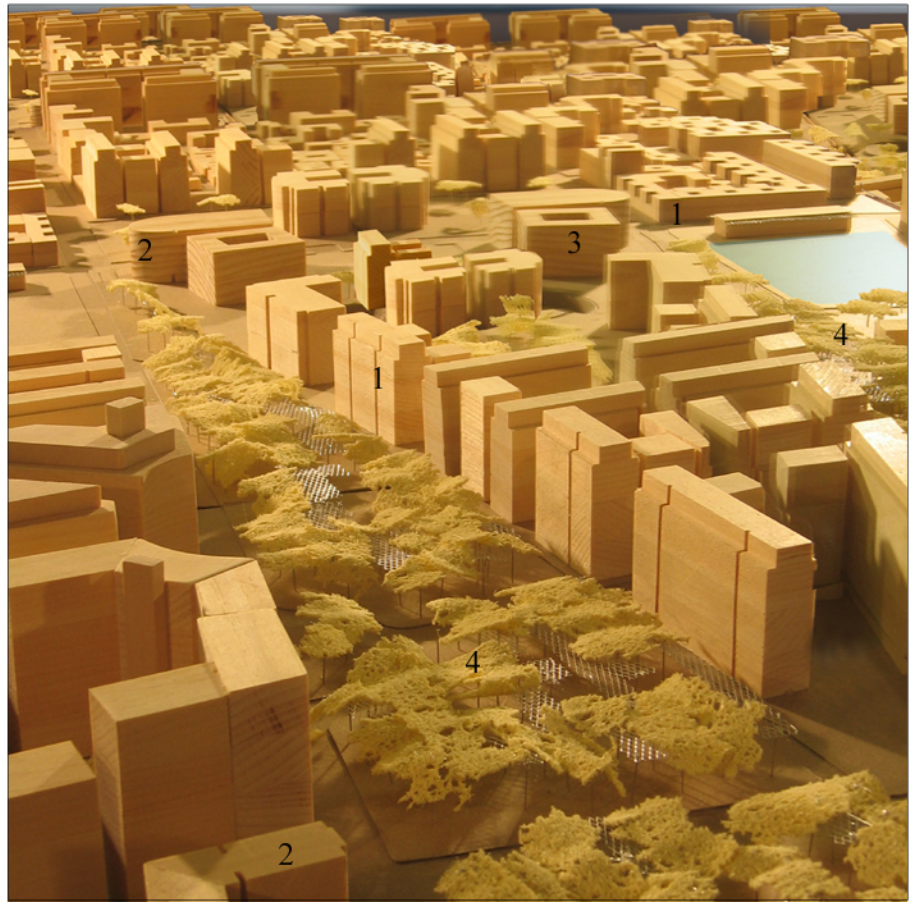
1. Secure Exterior Transition Spaces
2. Landscaped Corridors
3. Environmental Design Elements
 - 3A. Evaporative Cooling Channel
 - 3B. Water Collection
 - 3C. Photovoltaic Arrays



b

Urban Fabric Study - Industrial Zone

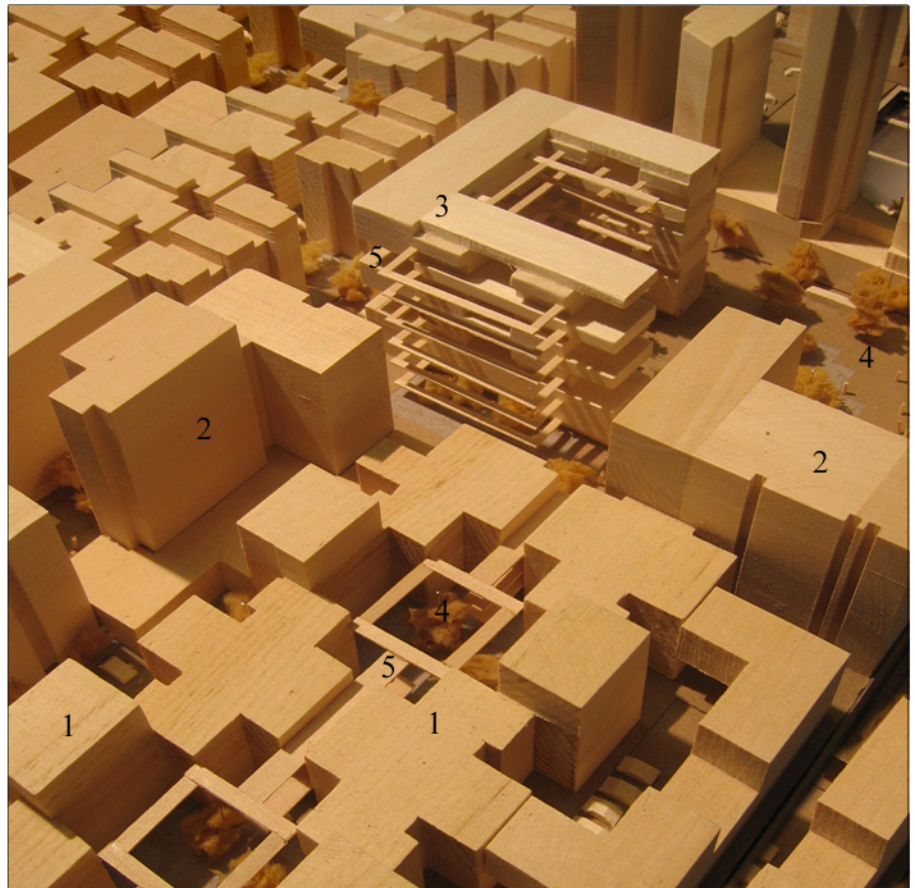
This urban fabric study demonstrates planning principles that could serve as a guide for future development of the Free Industrial Zone. As the population increases, planned development would be of a higher density in order to incorporate desirable, culturally and environmentally sustainable housing and public spaces while still maintaining valuable and sensitive agricultural land. In order to accomplish this density, mixed use development would be used to maximize the available buildable space as well as to create a cohesive, integrated and vibrant urban fabric.



a

Key Features

1. Housing/Mixed Use
2. Assembly Plants
3. Commercial Space
4. Focused Landscaping Program
5. Sun Shading Devices



b

Climatic Responses

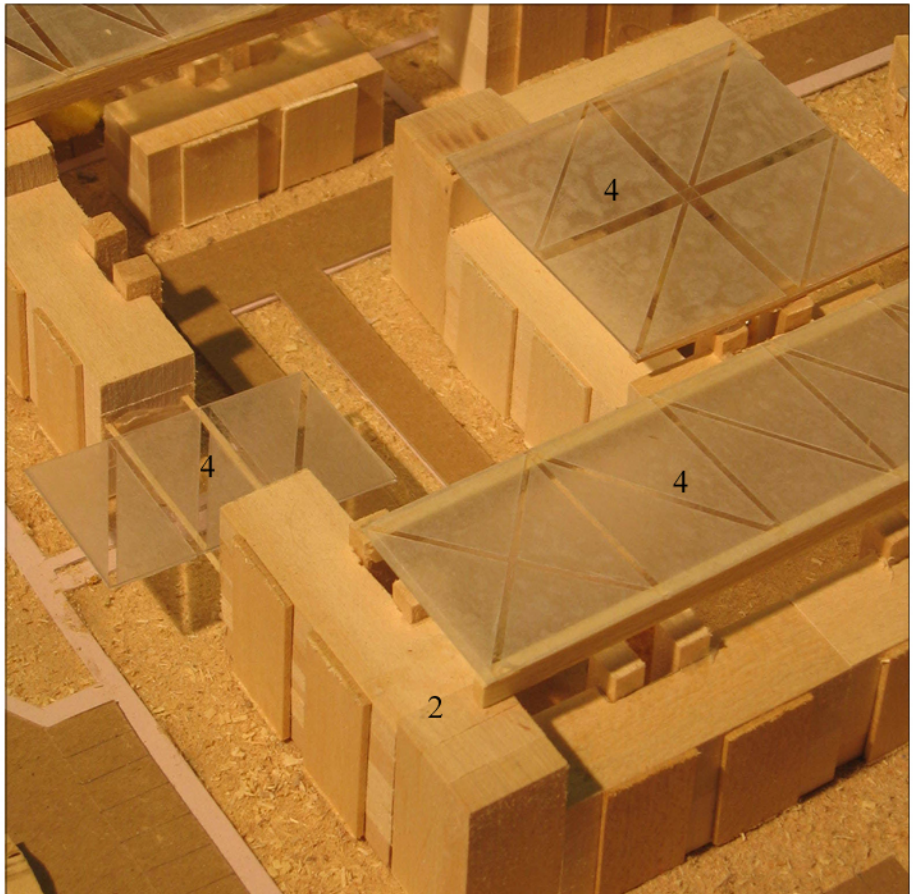
Planned architectural responses to environmental conditions are many. Various responses to climate influences include sunshading devices, photovoltaic arrays for hot water, orientation and window placement for ventilation.

Key Features

1. Photovoltaic Arrays
2. Manufacturing Plants
3. Focused Landscaping Program
4. Sun Shading Devices



a



b

While Egypt's per capita GDP of nearly \$2600 is low by Middle Eastern standards, it is high by African standards (Sudan's per capita GDP \$860). But the economy urgently needs non-farm employment, with over 50% of the population dwelling in urban areas and urban unemployment over 30% total and 50% among the youth. Egypt urgently needs new economic activity, which will generate new jobs directly or indirectly. Such a development would also increase economic activities and opportunities in Egypt such as banking, insurance, education, and health care as well as increased use of Egyptian transport, port facilities, energy supply, and communications. As a result, Egypt should be able to reap significant economic benefits from this project. The proposal is also consistent with Egyptian efforts to encourage habitation outside of traditional population centers.

Other important incentives for Egypt – which we believe may outweigh the important economic benefits noted above--include: The important security benefit to Egypt of a stable, politically successful Gaza; and the overall benefits to Egypt of further demonstration of Egyptian leadership with respect to the Arab-Israeli conflict and with respect to ameliorating the plight of the Palestinian People, in particular.

e. Free Trade Zones

Free trade zones can be organized, owned, and operated in a variety of ways. Each has particular advantages and disadvantages.

In Egypt there are two general types of Free trade zones:⁵¹

Public Free Zones

In Egypt, there are seven Public Free Zones provided with basic infrastructure and utilities. A Public Free Zone is managed by a board of directors, in addition to an administrative organ to provide technical, economic and legal advice and offer all needed facilities concerning establishment of projects and issuing the required licenses.

Land offered in exchange for rent is as follows:

- \$3.5 per m2 annually for industrial projects
- \$7.0 per m2 annually for other projects (storage & services)

- A reduction of 50% on these rates granted in special cases, as has been granted in the case of the Ismailia Public Free Zone Projects and could be granted for this project

Private Free Zones

The General Authority for Investment and Free Trade Zones (GAFI) issues a decree concerning the establishment of Private Free Zone each of which shall be limited to a single project if its nature so necessitates, according to the following criteria:

- Its site must enhance its economic status e.g., near raw material sources or establishment on a site appropriate with the nature of its activity (navigation & maritime transport projects, insurance companies, cement silos ...etc).
- It should contribute to the establishment of new communities according to the current state policy.
- Unavailability of requested areas of land for the project in the public free zones.
- The project must observe all standards and regulations pertaining to the protection of the environment. In this case, the investor determines the site of the private free zone that either can be owned or rented. The authority shall help investors to obtain all necessary infrastructure and utilities needed.

Criteria for a Private Free Zone:

- Priority is given to export-oriented industrial projects
- Generating high value added to the domestic production factors
- Applying modern and advanced technology
- Creating more job opportunity

Projects Transformed to Private Free Zones

GAFI may approve changing the status of a project to a Private Free Zone in accordance with the following parameters:

- The project is successfully in operation
- The project is committed to export not less than 50% of the production
- Other specific requirements

The Free Industrial Zone being proposed here would likely start as a Public Free Zone and transition to a Private Free Zone in the future. Or, the proposed zone could be established as a Special Economic Zone (SEZ) under Law 83-2002.

Either model will give Egyptian and Palestinian government authorities a large degree of control—at least initially. The four SEZ projects currently underway in Toshka, the Gulf of Suez, East Port Said and Damietta, for example, have each started out with significant governmental participation. However, the long-term value added activities are to be 75-80% dominated by the private sector, according to the American Chamber of Commerce.⁵²

The model was notably used in China in the early years of its industrialization and move towards a market economy. It is also used on a smaller scale in various Middle Eastern countries as well as in Egypt.

Over the long-term it would be preferable for many reasons to shift to a Private Free Trade Zone.⁵³ This would be the objective.

f. Planned Expansion into Rafah District

Will require Palestinian-Egyptian agreement on a single, unified legal framework, a unified incentive package or packages, a unified management team and a unified set of infrastructure services. In addition to the reasons already stated, the potential of such a joint, *trans-boundary* Free Industrial Zone is great. These include the advantages of common services, efficient trade and product development, and efficient connections to regional port and airport facilities.

A study of joint, or trans-boundary, free trade zones relevant to this project is forthcoming.

g. Infrastructure Improvements

Major upgrades would be made to existing infrastructure in Rafah, Khan Younis, and on the Egyptian side of the border proceeding hand-in-hand with construction of the free industrial zone; these, to include significantly raising transportation, road, power, sanitation and water treatment standards in the general area. Infrastructure improvements will also be required as development of the airport and proposed seaport goes forward—as well as the more immediate upgrading of existing facilities to house the training centers.

See Phase Four for discussion of the development of existing Israeli settlements in Gaza.

h. Export Gateways

Port Said: Initially, products of the free industrial zone would mainly be exported overland – or utilizing the proposed “Roll-On, Roll-Off” port facility--via Port Said.⁵⁴ From here, one destination would be dedicated facilities in Genoa or other Southern European ports providing direct distribution to the European market. Another destination would be ports in the United States in accordance with duty-free, quota-free arrangements put in place following the Oslo Accords.

*Gaza International Airport*⁵⁵: As the situation warrants, exports would also be made from the Gaza International Airport, especially of perishable items. Obviously, even a partially operating airport –or heliport--would help investors and other interested parties participate in the free industrial zone. At a minimum, such partial schemes should be seriously considered for Phase One.

Gaza Seaport: As noted, construction of a temporary port facility is scheduled for the commencement of Phase Two in 2007 – to be followed by a full-service deepwater free port. The World Bank estimates that building a limited ‘Roll-On, Roll-Off’ facility could be constructed in less than a year, for US \$15-20 million – and that trip costs and delivery times appear more economic than the land route to Port Said.⁵⁶ However, Israeli security concerns would appear to preclude an earlier start for Phase Two. It should also be noted that the Gaza Seaport envisioned in Phase Two, while significant for Gaza and the West Bank, should pose only minimal competition for the “mega project” underway for East Port Said. In contrast, the project is likely to bring more business to Port Said, since Port Said will remain an intermediate destination for some shipments.

i. Historical Note on Rafah as a Commercial Center:

“Rafah was an open commercial center linking the West Bank and Gaza Strip to Egypt and Sinai. This center was concentrated in the area adjacent to the border with Egypt, known as Poets’ Market. It has such a name because merchants coming from Egypt and Syria in old times used to gather in this market after finishing their jobs in order to exchange poems. Salaheddin Gate was the country’s gateway for merchants. In 1982, when Canada quarter was separated and Sinai turned back to Egypt, the economic status in Rafah was severely affected. About 155 commercial

stores were closed down and Israel utilized the Erez entry point to introduce Israeli products to the area. This separation has affected the daily income of the people, forcing them to seek jobs in Israel. As a result of this situation, the commercial center moved from Rafah to the north of Gaza Strip, close to Erez, affecting the level of commercial projects in Rafah and causing a deterioration in people's income."⁵⁷

Phase Two: Construction of an Offshore Deepwater Seaport and Artificial Island off Gaza

a. General

Phased construction of:

(a) A 5-6 Km causeway into the sea to serve as a temporary free port – with ‘Roll On, Roll-Off’ capacity -- serving the Free Industrial Zone and as a construction road for Phase 2b uses; the site of the causeway to be determined, but tentatively envisioned as extending out from Al Mawasi in the southern Gaza Strip in either Rafah or Khan Younis;⁵⁸

to be followed by:

(b) A connected deep water free port serving the Free Industrial Zone and other commercial sites in Gaza and, later⁵⁹, the West Bank and also a 2 square Km artificial island providing culturally sensitive zones for small neighborhoods, desirable housing, markets, cultural facilities, waterways, pedestrian green spaces and open public spaces. After completion, an estimated population of 40,000 people would find very good living conditions here. Development to be highly responsive to climate and environmental concerns--and to the management of water.

Phasing would also include related mainland development, including major infrastructure improvements such as transportation links to the Free Industrial Zone and to the Gaza terminus of the West Bank-Gaza tunnel connection discussed below. Mainland development would also include the use of former Israeli settlements after withdrawal. (See housing discussion under Phase Four discussion below.)

b. Location

Exact siting for Phase Two of the project is to be determined. The project assumes the best location will be selected for a seaport, independent of the brief effort abandoned in October 2000, a project widely criticized for its poor location. In the words of the World Bank: “there is no need for the facilities to be located on the same site as the abandoned port project.”⁶⁰ In particular, it is necessary that there be agreement that the site is suitable for a deepwater port.

Apart from proximity to the Free Industrial Zone, locating the seaport and residential island in Al Mawasi in either Rafah or Khan Younis keeps the construction at a distance from the ecologically sensitive Wadi Gaza (Valley of Gaza) which begins in the Hebron Mountains and descends into the Sea south of Gaza City. An Al Mawasi location would also interfere less with existing

populations and is consistent with optimizing existing transportation links to the proposed tunnel terminus as well as to the Free Industrial Zone.

Nevertheless, the final siting of Phase Two is to be determined.

c. Housing

The need for housing is of paramount importance. An integral part of the overall planning initiative is a master plan that can allow the growth of at least 50,000 new housing units at this end of the Gaza strip—both on the island and on the mainland--and to allow the growth of the existing urban fabric to expand in a meaningful way to achieve this goal. Two separate, but related, undertakings are envisioned.

1. Planned Use of Former Israeli Settlements After Withdrawal:

See discussion of housing under Phase Four discussion.

2. Sustainable, culturally desirable housing communities on the artificial island:

For details with respect to the housing planned for the island see the developed schemes presented at the Roger Williams University Center for Macro Projects and Diplomacy Conference on “New Land for Peace” in April 2004.⁶¹

d. Deepwater Port Facility

This component is the key to the success of the overall plan for economic growth in the Gaza Strip. It is the “seed” that ensures the sustainability of jobs through the new Free Industrial Zone—and economic development throughout the Gaza Strip and beyond.

The design studies to date have included the conventional facilities and functions provided for Containerized Ports. While other models can be investigated, the Containerized Port seems most appropriate for this location.

The advantages of a Containerized Port are many:

- berth capacity, the amount of material that can be shipped from a single
- ship loading position, is estimated as five times the capacity of non-
- containerized ports;
- overall transit time is less;
- containers are compatible with new technologies and procedures developed
- to ensure the harmlessness of contents;

- container Ports offer safer working conditions;
- less damage to material being shipped;
- less pilferage occurs at container Ports; containers are inspected and sealed.

The principal disadvantage is the amount of surface required for the marshaling area and the Port function efficiently using expensive cranes. Considering types of assembled products and the jobs to pack containers, the impact of the disadvantages, at this point, seems less important than the advantages.

The components of the proposed Port Terminal area include:

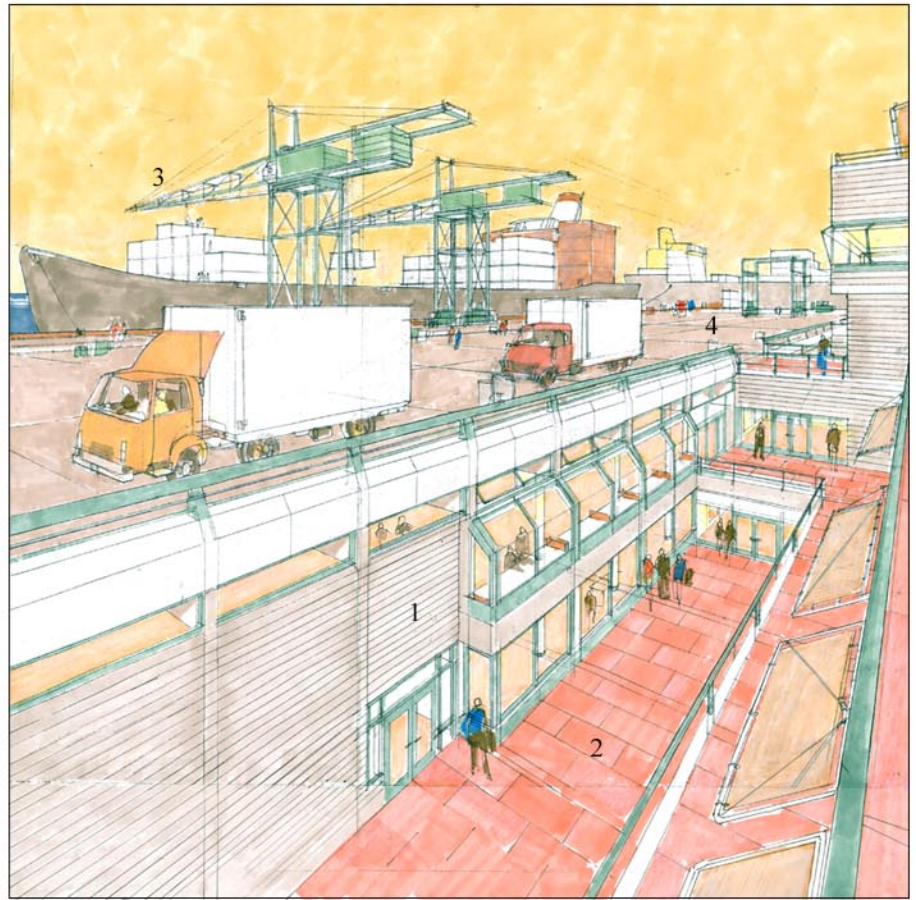
- **Ship Berth** - In the initial phase of design, there will be two berths for large container ships approximately 850 ft in length and approximately 110 ft wide with a draft of approximately 40 ft. Water depths at the proposed locations are approximately 20 meters or about 65 ft;
- **Container Cranes** - These moveable rail mounted machines are large and expensive. Two are required for simultaneously unloading and loading functions for each ship. Crane capacities are approximately capable of carrying 30 tons;
- **Marshalling Area** - This is essentially a storage yard for containers that are being moved onto ships or being unloaded from ships as they move from highway tractors or are loaded onto tractors. This work is done by straddle carriers that stack and move the containers to ships or tractors;
- **Container Packing Facilities**. Less than container loads (LTCL) are packed full or unpacked at this location. Early design investigation examined the possibility of centralizing some manufacturing and assembling processes within a multilevel packing function for efficiency and economy. Structural costs versus monetary gains are to be evaluated for this strategy;
- **Entry Facility** - This function requires truck back-up space for the administrative and inventory functions to be organized;
- **Inspection building / function**- Relatively small in size, this function ensures the security of container loads before entering and leaving the Port.

Floating Breakwaters are being investigated for breakwaters. It is possible that barge type storage may be possible to reduce inventory within the assembly areas.

Containerized Port Facility

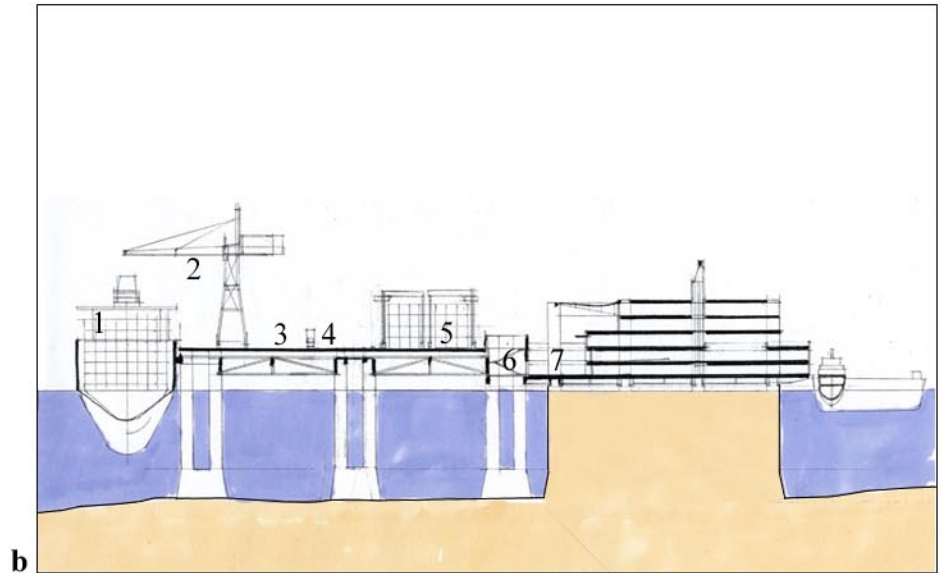
The port facility is the key to the success of the overall plan for economic growth in the Gaza Strip and the region. It is the “seed” that ensures the sustainability of the Free Industrial Zone - and economic development throughout the Gaza Strip and beyond.

1. Multi-level packaging and assembly plant
2. Natural light wells
3. Container cranes
4. Marshalling area



Section Study

1. Cargo Vessel Berth
2. Rolling Cranes
3. Prefabricated Loading Platforms
4. Straddle Carrier Routes
5. Marshaling Areas
6. Cargo Elevator/Circulation
7. Exterior Light Wells



Gaza International Airport Reconstruction

Along with the development and phased construction of the Gaza deepwater seaport, the reconstruction of Gaza International Airport would allow efficient connection to European markets.

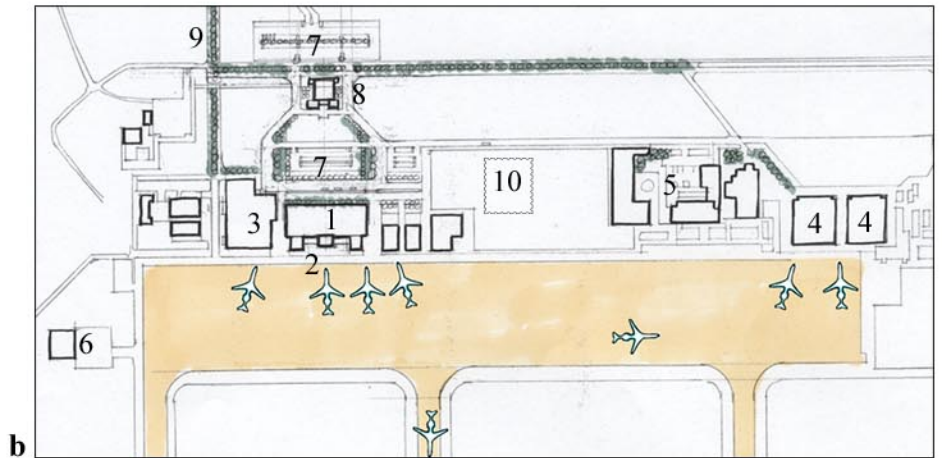
Key Features

1. Control tower
2. Passenger terminal
3. Cargo terminals



Plan Study

1. Passenger Terminal
2. ATS Communication Tower
3. Passenger Services
4. Cargo Terminals
5. Airline Operations (Ground Services)
6. Fire and Rescue
7. Parking
8. Cultural Building
9. Entrance/Exit Road
10. Heliport





Courtyard Housing

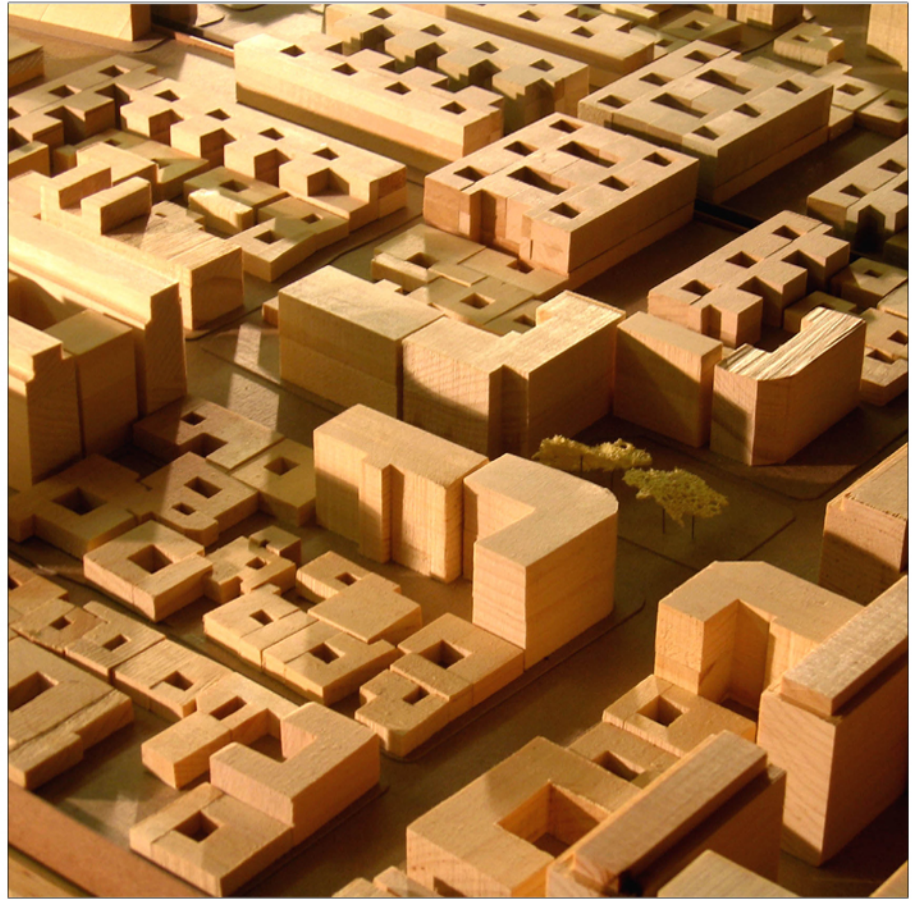
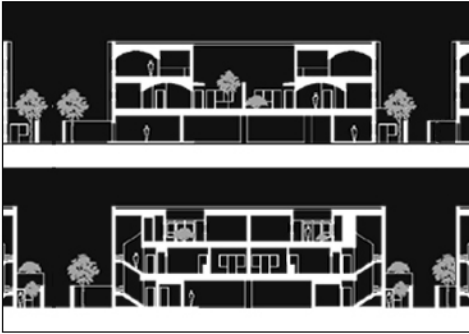
The development of housing in the project will respond to cultural, climatic and environmental concerns. After completion of Phase 2, an estimated population of 40,000 people would be accommodated in neighborhoods that combine desirable housing, markets, cultural facilities, waterways, pedestrian green spaces, and open public spaces.

Key Elements

1. Shaded interior courtyard
2. Sunshading devices
3. Wood Privacy Partitions- Operable for ventilation
4. Public Roof Use
5. Landscaped community spaces

Housing

Housing should be culturally sensitive. This page presents a study of how to reinterpret traditional courtyard housing while providing for contemporary amenities such as integrated parking garage. The dwelling units should also take into account foreseeable evolution in family structure. For example, the accommodation of a relative or a guest while maintaining the privacy of the family quarter.



a

Courtyard Scheme

This particular scheme allows for a larger number of units per hectare than traditional urban fabrics while preserving the “feel” of the narrow Arabic street.



b

Community Spaces Study

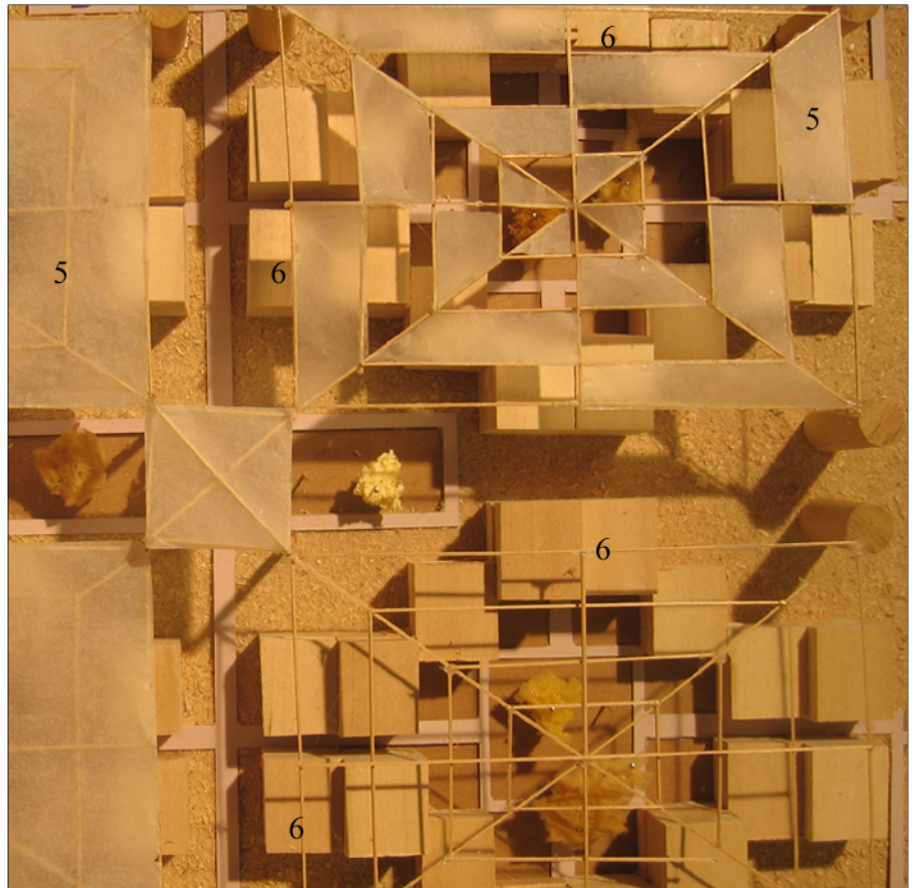
Community spaces such as religious, educational, and cultural facilities would be integrated into the urban fabric in a way that encourages and enhances a sense of community. Culturally inherited elements, such as the courtyard and covered marketplace, would be integrated with sustainable building technologies to create environments with a high degree of social and environmental sustainability.



a

Key Features

1. Courtyard housing
2. Mosque and Cultural Services integrated into the urban fabric
3. Interior Pedestrian Circulation Spaces
4. Private exterior courtyards
5. Sun Shading Devices
6. Market stalls



b

Phase Three: Construction of a Secure Underground Rail Link between Gaza and the West Bank

a. General

Construction of a tunnel connecting Gaza and the West Bank by secure rail⁶² – designed for the transport of commercial containers as well as for the secure flow of passengers and messages, including a direct cargo link from West Bank manufacturing and agricultural centers to the newly constructed seaport in Al Mawasi -- with planned links to Northern Gaza, Jordan and Eastwards; potentially, also to Israeli exporters. The tunnel would help make a contiguous Palestinian entity a reality, thereby, significantly contributing to successful Palestinian statehood and the long term resolution of the Israeli-Palestinian Conflict.⁶³ A tunnel could also be used to accommodate high-speed communication links between Gaza and the West Bank, consistent with UN Millennium Development Goals.

Phase Three would include projects at both ends of the tunnel. It would also facilitate major infrastructure improvements.

Prior to completion of the tunnel, the use of secured convoys could be resumed, as recently recommended by the World Bank. According to the Bank: “Convoys could consist of tractor-trailers carrying sealed containers, following appropriate pre-shipment inspection and scanning. Eventually it might be possible to relax the use of convoys, relying instead on electronic means to monitor container movements (e.g. GSP-linked transmitters or transponders), with obligatory reporting stations along the route.”⁶⁴ While consistent with the objectives of this project, we believe a secure rail link is a better long-term solution. The positions of past Israeli governments indicate that it would be feasible politically under the right conditions.

As noted above, secure access of West Bank business to the proposed seaport is important to the success of the seaport as a profitable entity.

b. Location of the Tunnel

It seems apparent that the shortest distance is located between the northern end on the Gaza Strip at Beit Nanoun to Dura, near Hebron in the West Bank – as proposed in Prime Minister Barak’s elevated highway scheme in 1999. Nevertheless, origin - destination studies would have to be undertaken to assure final locations are most effective in achieving the most good with the least negative impact.

The impact to these two points of departure / arrival are critical not only in their design, but more essentially on their impact on the existing residential / semi urban fabric that they would be constructed in and affect. The physical infrastructure with rail lines and roadways, transportation stations and transport storage and transfer facilities would be major in size and have potential impact on existing settlements and systems.

c. Tunnel Type

The type of tunnel is to be established. Discussions about “cut and fill” construction with relatively minor subsurface conditions would still require major surface construction work and disruptions. Deeper tunnels would involve less surface disruption but would result in higher costs. With deeper tunnel placement security may be more achievable.

With any “cut and fill” plan, the route between the West Bank and Gaza would be difficult involving day-to-day construction through developed areas. It would require significant cooperation between Israeli and Palestinian authorities.⁶⁵ The exact route below ground and the projected effects of construction will be critical.

For these reasons, a deeper tunnel would appear to be superior over a “cut and fill” tunnel.

d. Transportation Service

The type of service within the tunnel is also to be finalized. For reasons of security, the project is inclined towards a rail link utilizing state-of-the-art security systems capable of easily moving both passengers and cargo, including containers. The train might also carry automobiles and other vehicles.

A direct link to the seaport is critical, perhaps by road rather than rail, but only if security concerns are met.

e. Infrastructure Development

To accommodate the new connection, infrastructure development and planning on a large scale will be important. The economic impact of the tunnel clearly would have a major impact on both the Gaza Strip and the West Bank. New economic venues and their developments will need new roads, new power supplies, new rail systems within the Gaza Strip and the West Bank. They

would be necessary and expected. New population movements would suggest an adjustment in other infrastructure elements like housing, schools and neighborhood centers and accompanying these growths, will come the planning of new water sources and water creation, and water distribution and treatment facilities.

In any comprehensive plan regarding the infrastructure, particularly in transportation, the impact of this development would affect adjacent countries. In this regard roads, superhighway and rail systems would be international in scope involving Jordan, Israel and Egypt, and would have to be addressed by these adjacent countries.

f. Environmental Concerns

Environmental concerns also need to be addressed. Assessments of energy use would include fuel costs.

Water tables and considerations related to the shallow Gaza Aquifer are to be investigated. The deposit of displaced soil from the excavation should be explored for its positive potential and secondary use.

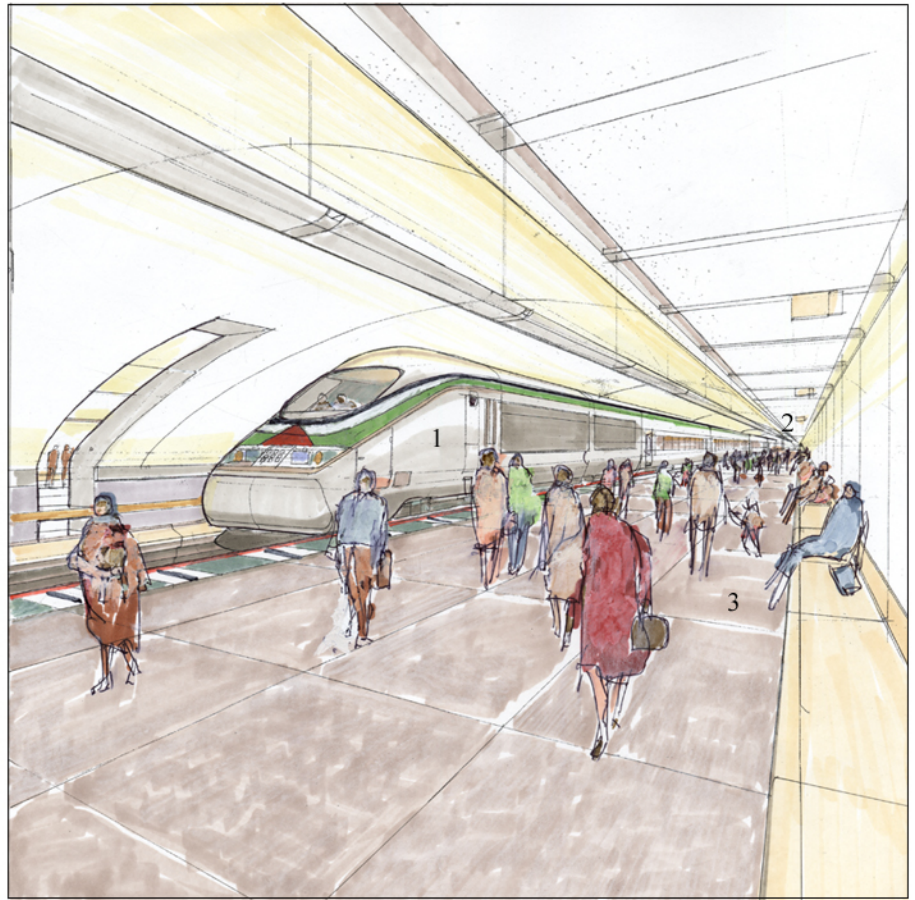
g. Archaeological Considerations

The impact of the construction of any tunnel relatively close to the surface must fully take into account any historical and archaeological implications.

Gaza-West Bank Train Link Tunnel

The Gaza-West Bank Tunnel would make a contiguous Palestinian entity a reality, thereby significantly contributing to a successful Palestinian statehood and the long term resolution of the Israeli-Palestinian conflict.

1. High-speed rail connection
2. Cargo service
3. Passenger service



a

Location of the train link



b

Phase 4: Strengthening Regional Planning and Development Processes

Strengthening of regional planning and development processes, to promote broad oversight of the project and also to guide implementation of other related projects, including major infrastructure improvements and the development of good, sustainable housing. This phase is to be on-going, commencing with the start of Phase One in 2005.

a. Importance of Regional Planning

For the project to succeed, effective infrastructure development and planning on a regional scale will be critically important; this, consistent with *Agenda 21*. For example, the economic impact of the tunnel alone clearly would have a major impact on the entire Gaza Strip as it is today. New economic venues and their development will require new roads, new power supplies, new rail systems within the West bank and the Gaza Strip. New population movements would suggest an adjustment in other infrastructure elements such as housing, schools and neighborhood centers. Accompanying these growths, will come the planning of new water sources and water creation, and water distribution and treatment facilities – infrastructure of which, for example, the local residents of Rafah and Khan Younis *today* are in desperate need. International dimensions of the project must also be effectively addressed.

b. Related Projects

It is expected that this project will spur other, related projects such as (1) desert land reclamation,⁶⁶ (2) macro projects to address water resources on a regional basis such as new potentials for accessing the Red Sea (the Marks and Moavenzadeh project), and (3) planned use of the former Israeli settlements after withdrawal, especially for housing, as discussed below, and (4) the possibility of manmade islands for Israeli residential or commercial uses, perhaps including a new airport.

c. Densification of Housing

The need for new Palestinian housing is of paramount importance. An integral part of the overall planning initiative is a master plan that will construct at least 50,000 new housing units at the southern end of the Gaza Strip, and to allow the growth of the existing urban fabric to expand in a meaningful way to achieve this goal. A special opportunity exists as the withdrawal of Israel occurs from the existing settlements in the Gaza Strip.

Of initial concern is that the overall plan for increased housing be a positive advancement rather than one which ignores the existing houses and infrastructure that is in place already. The balance of reuse and the expanded needs of housing considering the existing conditions of greenhouse food creation and farming is a delicate one that responds to the need for a formal Master Plan. All the existing Israeli settlements need not be retained if planning issues document more important uses. On the other hand, many settlements, assuming they are left intact as the Israeli settlers move out, could provide dramatic potential for housing densification along with reclaiming desert land currently not yet used.

From aerial photographs⁶⁷ of many of the existing settlements, it is apparent that significant undeveloped open land exists around the clusters of existing houses. Most appear to be small subdivisions on independent parcels of land within a settlement structure. Some green space or cultivated crops on small plots of land are evident. In almost all images of the settlements, significant agricultural greenhouses extend away from the housing clusters.

The settlement plans suggest a cluster zoning, possibly for defense purposes and probably a simple response to the severe climatic conditions and the difficult land reclamation process that was required to create decent living conditions and jobs.

Within this clustering, with careful planning, there is an opportunity to create new housing. By assessing each settlement, higher density housing can be added without creating decentralization and "sprawl." This will assure the protection of existing and potential agricultural land for continual food production and allow greenhouse construction to expand. New housing concentrations within the settlements will achieve positive results for both housing needs and reuse and expansion of the agricultural components of the evacuated Israeli settlements.

This strategy is economical and cost effective.

Higher density zoning will result in lower infrastructure costs for roads and related services. It invites the retention of existing roads where improvements are not required. It will result in lower sewer systems development, water distribution, water conservation, and reduce landscaping costs.

For the people it will have clear climatic benefits. High density structures with more dense clusters of housing allow better ventilation and cooling, provide cooling from shadows on the ground plane, create closer distances between destinations, and can foster a sense of community.

Party walls between buildings reduce heat penetration to interior spaces.

From the images of the existing settlements, the density is very low and buildings appear to be small. Planning new use for these existing structures should include the incremental expansion capability of each structure. This would allow for family expansion over time and extended family use. Exterior spaces related to these existing structures should be included under the responsibility of residents to assure their use and maintenance. Private yards incorporating walled spaces as courtyards will foster this responsibility as well as increase cultural and personal privacy.

Along with housing densification, the Master Plan would also address other infrastructure needs, such as schools, cultural and religious buildings, power requirements, recreation and green spaces.

The existing settlements that merit serious investigation include the following in the Al Mawasi Area in South Gaza shared between KhanYounis and Rafah. These are also known as the Gush Katif Settlements – and they are currently underutilized:

1. Rafah Yam Colony
2. Pe'at Sadeh Colony
3. Gan Or Colony
4. Bedalah Colony
5. Dugit Colony

Based on the results of the above investigation, basic concepts and strategies can be established and with specific studies, expanded or modified and applied to other evacuated settlements.

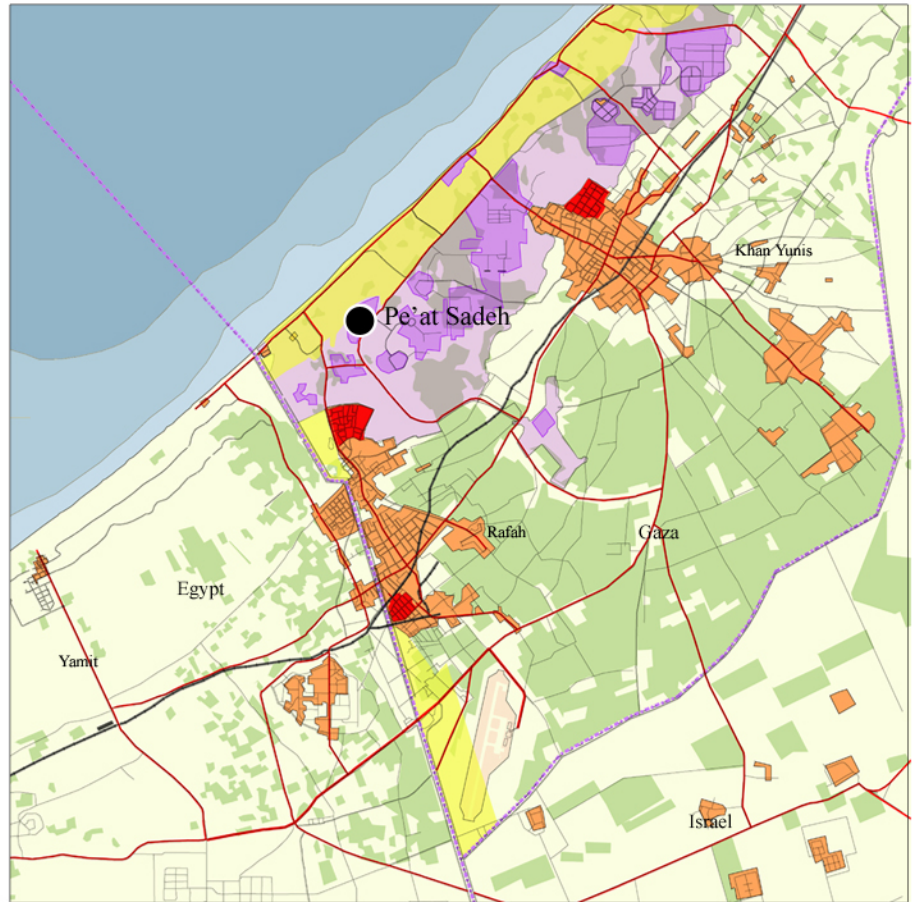
Summary of Phase Four: The need for a master plan for the region is evident – and will be brought front and center as the project proceeds and additional, related projects are identified.

Location and Existing Conditions

This page illustrates an example of how Israeli settlements could be further reclaimed and redeveloped. The map on the right shows the location of one such settlement, Pe'at Sadeh. The photo below shows the existing conditions which shows clearly the extremely low density of habitation and development.



Source: ARIJ



a

Pe'at Sadeh Colony

In contrast to the unsustainable low-density of the existing Israeli settlement, the sketch on the right illustrates that the implementation of a denser urban fabric is to preserve and protect the surrounding agricultural land, while comfortably accommodating a larger population.

Legend

1. Existing Settlement Housing
2. Existing Agriculture
3. New Housing- Reclaimed Land
Town Center: high density; medium/high rise
4. Future Growth- Housing
5. New Town Development
Expanded and Protected Agriculture
6. New Cultural Amenities
Educational, Religious



b

The project will be undertaken in such a way as to support current efforts underway by the PA Planning Agency and the UNDP to empower a Middle East Regional Development Council as well as other relevant initiatives.

All in all, the project is dedicated to the well-being of all the people who may be affected by it.

Notes and References:

1. Because of the urgency of the situation, the zone would start in Egypt and expand into Rafah. Workers would mainly come from Gaza. Management of the zone would initially be shared. See below.
2. Development of a roll-on, roll-off facility would precede completion of the full-service port.
3. For example, see: The reports on Rafah and Khan Younis published by the Palestinian Ministry of Planning and International Cooperation in cooperation with the UNDP, "Palestinian Participatory Poverty Assessment Project," (PPPAP) (February-March 2002): www.pppap.org/what/district/index.html.
4. The Aix Group, "Economic Road Map: An Israeli-Palestinian Perspective on Permanent Status" (January 2004): www.peres-center.org/pages/projects_content.asp?iGlobalVarId=117. See annex.
5. James D. Wolfensohn, "Forward," The World Bank, "Disengagement, the Palestinian Economy and the Settlements," (June 23, 2004): www.worldbank.org/ps. In a survey carried out in 2003 in Rafah by the Gaza Community Mental Health Program, 66% of the 994 children surveyed, aged 10-19, when asked about ways of coping with their situation, said they would concentrate on their schooling – but 24.7% said they would like to be 'martyrs'. *Prevalence of PTSD among Palestinian Children in the Gaza Strip*, European Child and Adolescents Psychiatry Journal, April 2003. Cited in *Ibid.*, 35.
6. Yamit was evacuated by Israel as part of the 1978 Camp David Accords. The buildings were destroyed by Israel as part of the withdrawal. Yamit could be utilized as headquarters for the first phase of construction.
7. We believe that the difficulties of establishing a joint, or *trans-boundary*, free industrial zone are outweighed by important benefits, especially at the outset of the project. See below.
8. A training center in the West Bank should also be considered – especially if safe passage is established under Phase Three.
9. Among other things, this would require agreement with Egypt on the unimpeded movement of goods in bond to Egyptian ports. For problems associated with moving cargo through Egypt see: "Transit Trade and Maritime Transport Facilitation for the Rehabilitation and Development of the Palestinian Economy," UNCTAD, 2003.
10. Ilan Nachson, "Note the price, please," (December 14, 2003): www.globes.co.il. The critical importance of security to attract private investors was a key conclusion reached at the Center for Macro Projects and Diplomacy Conference on "New Land" for Peace in April 2004.

11. Haaretz (June 8, 2004): www.haaretzdaily.com.
12. US AID reported that some 880-890 Palestinians were employed at the GIE in October 2002, of whom 150 worked as a sub-contractor to Kitan, an Israeli manufacturer of sheets and towels. US AID West Bank and Gaza Mission, "Update on the Gaza Industrial Estate," Mission Headlines (October 21, 2002): www.usaid.gov/wbg/headline_66.htm. In contrast, the project target was job creation for some 50,000 people in 1987 (20,000 direct and 30,000 indirect jobs.) World Bank, Private Sector Development and Finance Group, Middle East and North Africa Region, "Project Appraisal Document for a Proposed Trust Fund Credit in the Amount of US \$10.0 Million Equivalent to the West Bank and Gaza for the Gaza Industrial Estate Project," Report No: 17204 GZ (Washington: World Bank, December 10, 1997), 2: www.worldbank.org/ps. The GIE is discussed in more detail below.
13. It is clear that Israel will remain the Palestinians' principal trading partner for the foreseeable future. The point is that development of an independent export base would be very desirable from both a Palestinian and an Israeli perspective. In this regard, it should also be noted that the expressed *intent* of the Sharon Government is "to reduce the number of Palestinian workers entering Israel, and eventually to completely stop their entrance." Israeli Cabinet Decision on Disengagement, June 6, 2004. See annex. For the Economic Road Map: The Aix Group, "Economic Road Map: An Israeli-Palestinian Perspective on Permanent Status" (January 2004), 27: www.peres-center.org/pages/projects_content.asp?iGlobalVarId=117.
14. These operate under the Egyptian Government's General Authority for Investment and Free Trade Zones: www.gafinet.org/docs/profile.htm
15. The Palestinians do have experience with industrial zones (albeit ones entirely dependent on Israel)—and much progress has been made by the Palestinians over the past ten years with respect to the establishment of the necessary legal, judicial and regulatory system, although much more still needs to be done in this area. The GIE is run by the private holding company, Palestine Development & Investment Ltd. (PADICO): www.padico.com/index.htm. Governmental control is exercised by the Palestinian Industrial Estates and Free Zones Authority (PIEFZA): www.piefza.org. See below for discussion.
16. Israeli Cabinet Decision on Disengagement, June 6, 2004. See annex. Our proposal is to the north of this.
17. Al Mawasi is a narrow strip of coastal land located in the Southern Gaza Strip along the Mediterranean coast from the Egyptian border to Deir El Balah. It has two separate areas of administration; Al Mawasi Rafah located to the west of the city of Rafah and Al Mawasi Khan Younis located to the west of the city of Khan Younis. All but about 3 linear Km of coastline falls within Khan Younis. According to the Oslo accords, Al-Mawasi area was *classified as a yellow area* placing it under Israeli security control, but under Palestinian civil jurisdiction.
18. See Phase Three.
19. The World Bank, "Disengagement, the Palestinian Economy and the Settlements," (June 23, 2004): www.worldbank.org/ps, 9.
20. For more information on the Sheikh Ejleen port, South West of Gaza City, see: "Gaza Seaport Project," Palestinian National Information Centre:

www.pnic.gov.ps/english/transportation/sea.html. Construction of the port was a French-Dutch project. The site was bombed by Israel on September 17, 2001.

21. The World Bank, "Disengagement, the Palestinian Economy and the Settlements," (June 23, 2004): www.worldbank.org/ps, 29.

22. For a useful technical study of the Gaza Coast see: Dr. Mahmoud Ali, "The Coastal Zone of Gaza strip-Palestine Management and Problems."

23. As discussed below, secure rail seems the best solution to connect Gaza and the West Bank. Other transportation modes, however, will be considered in the feasibility study.

24. The World Bank, "Disengagement, the Palestinian Economy and the Settlements," (June 23, 2004): www.worldbank.org/ps, 28.

25. Such projects might include desert reclamation in the Halutza sand region, an area which might be made available to the Palestinians as part of a comprehensive peace; this, as part of an overall effort to meet the demands of a "right of return" for Palestinian refugees. Similarly, shares in certain pieces of this macro project might be used to "compensate" Palestinian refugees.

26. Note: This is also a UN Millenium Development goal. It is Target 16.

27. "The population as a whole has reduced its per capita food consumption by 30-35% since 1999, and were it not for donor assistance (food aid having increased five-fold since 2000), malnutrition would be at levels associated with much poorer countries." The World Bank, "Disengagement, the Palestinian Economy and the Settlements," (June 23, 2004): www.worldbank.org/ps, 3. Easing Palestinian "food insecurity" is consistent with Target 2, UN Millennium Development Goals.

28. This number is based on an earlier study which envisioned a 5-10 square Km site. The estimate for a 5-10 square Km site was \$200-300 million.

29. Palestinian Central Bureau of Statistics: www.pcbs.org/.

30. The planned closure of Erez—the relocation of its industrial facilities *and the loss of at least 4,000 additional Palestinian jobs*—was announced by Ehud Olmert, Israel's Industry, Trade and Employment Minister, on June 8, 2004. *Haaretz* (June 8, 2004): www.haaretzdaily.com.

31. According to the World Bank, GDP for both Gaza and the West Bank declined by almost 40% between September 2000 and the end of 2002. The economy stabilized in 2003 but "possesses little vitality." The stabilization is not likely to be sustained. The World Bank, "Disengagement, the Palestinian Economy and the Settlements," (June 23, 2004): www.worldbank.org/ps, 1-2.

32. *Ibid.*, iv. The Bank's main point in this study is that if disengagement is done *without* opening internal closures, etc., the Gaza Poverty Rate will remain at 72%.

33. Ministry of Planning and International Cooperation (MOPIC) in cooperation with the UNDP, "Report on Rafah District," *Palestinian Participatory Poverty Assessment Project (PPPAP)* A(March 2002), 37: <http://www.pppap.org/what/district/pdf/PPA-Rafah.pdf>.

34. Ibid., 6. Emphasis added.

35. For the PPAP reports for Khan Younis and the rest of Gaza:

www.pppap.org/what/district/index.html.

36. See: "PM: My plan will force Palestinians to give up dreams for years," (April 5, 2004):

www.haaretzdaily.com.

37. Although it is interesting to note that the number of legal foreign workers in Israel has dropped from 93,700 in September 2002 to 62,700 in the first quarter of 2004 – most dramatically in the construction sector-- indicating the demand for Palestinian workers in Israel is increasing.

Globes [online] (June 8, 2004): www.globes.co.il.

38. The Aix Group, "Economic Road Map: An Israeli-Palestinian Perspective on Permanent Status" (January 2004): www.peres-center.org/pages/projects_content.asp?iGlobalVarId=117.

39. Ibid., 27.

40. In a phased withdrawal requiring separate votes by the government for each stage of the withdrawal to be implemented. There is some ambiguity with respect to completion of the withdrawal.

41. "Daily suffering of Al Mawasi residents," Applied Research Institute Jerusalem (February 10, 2003): www.poica.org/casestudies/Al%20Mawasi%2010-02-2004/.

42. Ibid. Emphasis added.

43. This number is based on an earlier study which envisioned a 5-10 square Km site costing US \$200-300 million. The smaller GIE – not a trans-boundary site -- was estimated by the World Bank at US \$84.5 million in 1997. World Bank, "Project Appraisal Document for a Proposed Trust Fund Credit in the Amount of US \$10.0 Million Equivalent to the West Bank and Gaza for the Gaza Industrial Estate Project," Report No: 17204 GZ (Washington: World Bank, December 10, 1997), 2: www.worldbank.org/ps.

44. Wolfensohn, "Foreword," The World Bank, "Disengagement, the Palestinian Economy and the Settlements," (June 23, 2004): www.worldbank.org/ps.

45. For example: Khaled Amayreh, "Step One," Al-Ahram Weekly On-line, No. 695 (17 - 23 June 2004): <http://weekly.ahram.org.eg/2004/695/re3.htm>. Amayreh reports that "A consensus is growing among Palestinians about the positive merits of a crystallizing Egyptian involvement in effecting the proposed Israeli withdrawal from the Gaza Strip."

46. About half of the companies located at Erez are Palestinian-owned. However, they account for less than one-fifth of the jobs there. This figure is derived from reports of the employment impact of the planned Israeli evacuation of Erez.

47. The World Bank, "Disengagement, the Palestinian Economy and the Settlements," (June 23, 2004): www.worldbank.org/ps, 11. For PADICO see: www.padico.com/index.htm. For the Palestinian Industrial Estates and Free Zones Law see: www.piefza.org.

48. See: Ibid.

49. See below for the Egyptian models for “Public Free Zones” and “Private Free Zones.”
50. For a 1999 study of potential investors in Palestinian industrial estates see: Sheri Pitigala Can Tutuncu, The Services Group, Inc., “Investor Targeting Strategy for Industrial Estates in the West Bank and Gaza,” USAID Contract No. 294-C-00-98-00110-00 (Washington: USAID, November 1999): Data base at: <http://library.info.usaid.gov/>.
51. The following is from: The Arab Republic of Egypt, General Authority for Investment and Free Trade Zones: Egyptian International Trade Point, Ministry of Foreign Trade and Industry: www.tpegypt.gov.eg/Trade-info/freezone10.asp.
52. www.amcham.org.eg/BSAC?studiesseries/report27.asp
53. For example, government or a public entity could over time sell the land at a premium and establish significant tax and other revenue-earning potentials without much if any financial exposure. Some modification of Law 83-2002 would be necessary to accommodate shared management with Palestinian officials.
54. Among other things, this would require agreement with Egypt on the unimpeded movement of goods in bond to Egyptian ports. For problems associated with moving cargo through Egypt see: “Transit Trade and Maritime Transport Facilitation for the Rehabilitation and Development of the Palestinian Economy,” UNCTAD, 2003.
55. The World Bank estimates that it will require US\$50 million to restore the airport to operating condition and to establish handling facilities for perishables. The Bank questions whether or not this investment is justified in the short term. The Bank suggests a helicopter operation might be more suitable for the near term. The World Bank, “Disengagement, the Palestinian Economy and the Settlements,” (June 23, 2004): www.worldbank.org/ps.
56. Ibid., 28-29.
57. Mr. Nasser Ju’eidi, Director of Rafah Chamber of Commerce, cited in: MOPIC in cooperation with the UNDP, “Report on Rafah District,” Palestinian Participatory Poverty Assessment Project (PPPA) (March 2002), 17: <http://www.pppap.org/what/district/pdf/PPA-Rafah.pdf>.
58. Al Mawasi is a narrow strip of coastal land located in the Southern Gaza Strip along the Mediterranean coast from the Egyptian border to Deir El Balah. It has two separate areas of administration; Al Mawasi Rafah located to the west of the city of Rafah and Al Mawasi Khan Younis located to the west of the city of Khan Younis. All but about 3 linear Km of coastline falls within Khan Younis. According to the Oslo accords, Al-Mawasi area was *classified as a yellow area* placing it under Israeli security control, but under Palestinian civil jurisdiction.
59. See Phase Three.
60. The World Bank, “Disengagement, the Palestinian Economy and the Settlements,” (June 23, 2004): www.worldbank.org/ps, 29.
61. Note: Conference participants favored the specific scheme identified as “Khan Younis.”
62. As discussed below, secure rail seems the best solution connect to Gaza and the West Bank. Other transportation modes, however, will be considered in the feasibility study.

63. Such “safe passage” was an important part of the Oslo Accords and was again “accepted” at both Camp David and Taba.

64. The World Bank, “Disengagement, the Palestinian Economy and the Settlements,” (June 23, 2004): www.worldbank.org/ps, 28.

65. It should be kept in mind that, according to the Sharon Government and many other prominent forces in Israeli politics, the economic development of Gaza and West Bank—because it will both stabilize the territories and also reduce the number of Palestinians seeking work in Israel—is directly in the long-term interest of Israel. A secure tunnel serves Israel’s interest in the economic development of Gaza and the West Bank.

66. Such projects might include desert reclamation in the Halutza sand region, an area which might be made available to the Palestinians as part of a comprehensive peace; this, as part of an overall effort to meet the demands of a “right of return” for Palestinian refugees. Similarly, shares in certain pieces of this macro project might be used to “compensate” Palestinian refugees.

67. For aerial photos of Israeli settlements in Gaza: Applied Research Institute Jerusalem: www.poica.org/casestudies/Gaza%2009-02-2004/index.htm.

Appendices

1. Water

Water is a precious commodity in Israel, the Gaza Strip and the West Bank. About two-thirds of the existing fresh water supply comes from reservoirs in the North. The main underground distribution system is the National Water Carrier that runs from the North to the South providing water to cities and settlements along the way. Supplemental water supply is provided from treated wastewater, brackish water and water harvesting (collection, storage and storm runoff).

The existing water supply is dwindling with estimates by some that Israel will face a major water crisis by 2012.

A major potential source of water exists below the Negev Desert. This desert, which comprises 60% of Israel's territory with only 7% of its population has below it a huge aquifer. The water itself is brackish, somewhat salty (4 grams/ cubic meter; sea water has 35 grams of salt / cubic meter) but can be and is used for special crops and special industries. Deionization of brackish water is less expensive by one third than desalinization of seawater. Forty desalinization units have been erected over the past few decades--of these twenty-three treat brackish water by reverse osmosis on a commercial basis.¹

Additional issues with water use and distribution exist. Increasing salinity in the ground water in Gaza City is of concern and only 70 % of units are connected to the sewage network.² The preservation and supplementing of water sources for the Gaza Strip is particularly acute. The primary causes of deterioration of water quality in Gaza include: Seawater encroachment, upward trend of leisure activities, irrigation by saline water, excessive use of fertilizers and pesticides and apparent infiltration of treated sewage and agricultural drainage into the water system. The shallow water table often exists less than 2m below the surface depleting fresh water by the incursion of seawater.

2. Climatic and Environmental Concerns

The Gaza Strip is located in a transitional zone between the arid desert climate of the Sinai Peninsula and the temperate and semi-humid Mediterranean climate along the coast.

¹ Israel ministry of Foreign Affairs, principal water sources, Aug, 1994

²Governing Council of the United Nations Human Settlements Programme.

The average daily mean temperature ranges from 25 degrees C in summer to 13 degrees C in winter.

The rainy season extends from October to early May and rainfall peaks in December thru February. The average mean rainfall on the Gaza strip amounts to about 400mm. Rain in the Negev desert is negligible.

Wind is constant, coming primarily from the SW during the spring and summer and during the winter months comes from the W. NW across the Mediterranean.

The planned architectural responses to such environment conditions are many. Responses to climate influences include the creation of shade in many forms: Roof overhangs and shades (the simplest), photovoltaic arrays for hot water, wind towers for ventilation, high windows for ventilation from higher room heights, small apertures in building walls on the south and south west sides of buildings, wood screens and grills to allow air to pass but eliminate sun and privacy issues, use of light colored materials to create high albino materiality, porticos, thick wall construction to reduce heat transfer to the interior of buildings, insulated roofs, moisture producing elements in public and private spaces. More technical and experimental methods of cooling include geothermal systems using heat exchangers to provide special building cooling where necessary.

Higher urban densities create building shadows and shade and more comfortable spaces for people. In low-rise housing, the use of ground floor walled courts, courtyards, and walled roof spaces do the same.

Site consideration responses include the use of pervious surfaces to allow water to pass directly to underground aquifers, maximum use of pervious driving surfaces, the capture of rain water for direct use, spot irrigation systems to minimize water use, selected plant selection for minimum water use, and optimum selection and planting of trees for shade and cooling.

New waste treatment plants would continue to recycle water for secondary and additional uses.

3. Power Generation

All power for these projects assumes that new power plants will be constructed. In addition, the critical nature of much of the existing infrastructure of Rafah and Khan Younis and smaller communities like al Shawkeh and Anasr would indicate that these new power generators should have a capacity to provide power to these existing communities as well. The major power sources include photovoltaic arrays or electrical power from the sun, as well as proposals to include wind turbine farms off the coast in the Mediterranean. Geothermal cooling from the Sea should be considered where buildings need special cooling.

Power conservation strategies would be a common theme for these new structures. With natural cooling created by air movement through buildings, the requirement for power is reduced and power conservation is achieved. The methods listed under "Climatic and Environmental Concerns" above would produce a more sustainable environment, one which additionally uses natural elements to help create a more positive and comfortable physical living experience.

4. June 6 Cabinet Decision on Disengagement

Excerpt from Statement by Cabinet Secretary Yisrael Maimon, June 6

The Cabinet has continued to discuss the Disengagement Plan and has decided as follows:

1. The Cabinet approved a Modified Disengagement Plan, Appendix A, but this decision does not amount to an evacuation of settlements.
2. The Cabinet has approved the preparatory work detailed in Appendix C.
3. After the end of the preparation work the Cabinet will reconvene to hold a separate discussion and decide whether or not settlements should be evacuated, which settlements and at what pace, considering the circumstances at that time.
4. The Modified Disengagement Plan approved as per 1 above was preceded by an exchange of letters between U.S. President George W. Bush and Prime Minister Ariel Sharon on April 14, 2004. The letter from the U.S. President is presented herein. Attached are Appendices A and C (Appendix A - Modified Disengagement Plan -Key Principles; Appendix C - Format of Preparations for the Modified Disengagement Plan).

At the conclusion of the discussion on the matter the Prime Minister noted that in two sessions the Cabinet discussed the aforementioned issue for 15 hours; it was a deep and comprehensive discussion, one of the most important the Cabinet has had in recent years. The Prime Minister added that the intention is to complete the implementation of the Plan by the end of 2005. Likewise he intends to complete the necessary preparation work by March 1, 2005.

Immediately after the end of the preparation work the Government will convene to make decisions about the continued execution of the plan. The Prime Minister stressed that once the decision is taken all of the ministers have to stand behind it. The Prime Minister thanked Minister Tzippi Livni, his Bureau Chief Dubi Weissglass, Cabinet Secretary Yisrael Maimon, Director General of the Ministry of Justice Aharon Abramowitz, Chairman of the National Security Council Giora Eiland and the ministers, who spent days and nights to find an agreed formula for the approval of the plan.

Appendix A - Modified Disengagement Plan - Key Principles

I. Background - Diplomatic and Security Significance

The State of Israel is committed to the peace process and endeavors to reach an agreed arrangement based on the vision presented by U.S. President George W. Bush.

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The State of Israel believes it must take action to improve the current situation. The State of Israel has reached the conclusion that there is currently no partner on the Palestinian side with whom progress can be made on a bilateral peace process. Given this, a modified disengagement plan has been drawn up, based on the following considerations:

- a. The stalemate embodied in the current situation is damaging; in order to break the stalemate, the State of Israel must initiate a process that is not dependent on cooperation with the Palestinians.
- b. The aim of the plan is to bring about a better security, diplomatic economic and demographic reality.
- c. In any future permanent arrangement, there will be no Israeli presence in the Gaza Strip. On the other hand, it is clear that some parts of Judea and Samaria (including key concentrations of Jewish settlements, civilian communities, security zones and areas in which Israel has a vested interest) will remain part of the State of Israel.
- d. The State of Israel supports the efforts of the United States, which is working along with the international community, to promote the process of reform, the establishment of institutions and improving the economic and welfare conditions of the Palestinian people, so that a new Palestinian leadership can arise, proving itself capable of fulfilling its obligations under the Road Map.
- e. The withdrawal from the Gaza Strip and from the northern part of Samaria will reduce friction with the Palestinian population.
- f. Completion of the plan will negate the validity of any claims against Israel regarding its responsibility for the Palestinian population of the Gaza Strip.

g. The process in this plan does not detract from relevant existing agreements between Israel and the Palestinians. The relevant security arrangements will remain in force.

h. International support for this process is widespread and important. This support is vital in ensuring that the Palestinians fulfill their obligations in terms of fighting terror and implementing reforms, in accordance with the road map. Only then will the sides be able to resume negotiations.

II. Key Points of the Plan

A. The Process

1. The necessary preparations will be undertaken for the implementation of the plan (including administrative work to determine the criteria, definitions, estimates and preparation of necessary legislation).

2. Immediately after the completion of this preparation work there will be a Government discussion to decide on the evacuation of settlements in consideration of the circumstances at that time – whether to evacuate or not, and which settlements.

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The settlements will be split into the following four groups:

1. Group A - Morag, Netzarim, Kfar Darom.
2. Group B - The four settlements in northern Samaria (Ganim, Kadim, Sa-Nur and Homesh).
3. Group C - The Gush Katif block of settlements.
4. Group D - The settlements in the northern Gaza Strip (AleI Sinai, Dugit and Nisanit).

It is noted that after the end of the aforementioned preparations the Government will convene periodically to decide on the question of whether there will be any evacuation or not, regarding each of the groups separately.

3. The continuation of the process as described above and below will be subject to the decisions the Government makes as stated in section 2 above and carried out in accordance with the contents of the decisions.

3.1 The Gaza Strip

1. The State of Israel will withdraw from the Gaza Strip, including Israeli settlements, and will redeploy outside the area of the Strip. The method of the withdrawal, with the exception of a military presence in the area adjacent to the border between Gaza and Egypt (the Philadelphi Route), is detailed below.
2. Once the move has been completed, there will be no permanent Israeli military presence in the evacuated territorial area of the Gaza Strip.

3.2 Judea and Samaria

3. The State of Israel will withdraw from northern Samaria (four settlements: Ganim, Kadim, Sa-Nur and Homesh) as well as all permanent military installations in the area, and will redeploy outside the evacuated area.
4. Once the move has been completed, there will be no permanent Israeli military presence in the area.
5. The move will provide Palestinian territorial contiguity in the northern parts of Samaria.
6. The State of Israel, along with the international community, will help improve the transportation infrastructure in Judea and Samaria, with the goal of providing continuous transport for Palestinians in Judea and Samaria.
7. The move will make it easier for Palestinians to live a normal life in Judea and Samaria, and will facilitate economic and commercial activity.

3.3 The withdrawal process is slated to end by the end of 2005.

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B. The Security Fence

The State of Israel will continue to construct the security fence, in accordance with the relevant cabinet decisions. In deciding on the route of the fence, humanitarian considerations will be taken into account.

IV. The Security Reality after the Evacuation

A. The Gaza Strip

1. The State of Israel will monitor and supervise the outer envelope on land, will have exclusive control of the Gaza airspace, and will continue its military activity along the Gaza Strip's coastline.
2. The Gaza Strip will be completely demilitarized of arms banned by current agreements between the sides.
3. The State of Israel reserves the basic right to self defense, which includes taking preventive measures as well as the use of force against threats originating in the Gaza Strip.

B. The West Bank

1. After the evacuation of the northern Samaria settlements, there will be no permanent military presence in that area.
2. The State of Israel reserves the basic right to self defense, which includes taking preventive measures as well as the use of force against threats originating in the area.
3. Military activity will remain in its current framework in the rest of the West Bank. The State of Israel will, if circumstances allow, consider reducing its activity in Palestinian cities.
4. The State of Israel will work to reduce the number of checkpoints throughout the West Bank.

V. Military Infrastructure and Installations in the Gaza Strip and the Northern Samaria Region

All will be dismantled and evacuated, except for those that the State of Israel decides to transfer to an authorized body.

VI. The Nature of Security Assistance to the Palestinians

The State of Israel agrees that in coordination with it, consulting, assistance and training will be provided to Palestinian security forces for the purpose of fighting terror and maintaining the public order. The

assistance will be provided by American, British, Egyptian, Jordanian or other experts, as will be agreed upon with Israel.

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The State of Israel stresses that it will not agree to any foreign security presence in Gaza or the West Bank without its consent.

VII. The Border Area between the Strip and Egypt (the Philadelphi Route)

The State of Israel will continue to maintain military presence along the border between the Gaza Strip and Egypt (the Philadelphi route.) This presence is an essential security requirement. The physical widening of the route where the military activity will take place may be necessary in certain areas. The possibility of evacuating the area will be considered later on. This evacuation would be conditioned, among other factors, on the security reality and on the level of cooperation by Egypt in creating an alternative credible arrangement. If and when the conditions permit the evacuation of the area, the State of Israel will be willing to consider the possibility of setting up an airport and a seaport in the Gaza Strip, subject to arrangements agreed upon with the State of Israel.

VIII. Real Estate

In general, houses belonging to the settlers, and other sensitive structures such as synagogues will not be left behind. The State of Israel will aspire to transfer other structures, such as industrial and agricultural facilities, to an international third party that will use them for the benefit of the Palestinian population that is not engaged in terrorism.

The Erez industrial zone will be transferred to an agreed-upon Palestinian or international body.

The State of Israel along with Egypt will examine the possibility of setting up a joint industrial zone on the border between Israel, Egypt and the Gaza Strip.

IX. Infrastructure and Civilian Arrangements

The water, electricity, sewage and communications infrastructures will be left in place.

As a rule, Israel will enable the continued supply of electricity, water, gas and fuel to the Palestinians, under the existing arrangements and full compensation.

The existing arrangements, including the arrangements with regard to water and the electromagnetic area, will remain valid.

X. The Activity of the International Civilian Organizations

The State of Israel views very favorably continued activity of the international humanitarian organizations and those that deal with civil development, which aid the Palestinian population.

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The State of Israel will coordinate with the international organizations the arrangements that will make this activity easier. The State of Israel suggests that an international mechanism (such as the AHLC) be set up, in coordination with Israel and international bodies, that will work to develop the Palestinian economy.

XI. Economic Arrangements

In general, the economic arrangements that are currently in effect between Israel and the Palestinians will remain valid. These arrangements include, among other things:

- A. The movement of goods between the Gaza Strip, Judea and Samaria, Israel and foreign countries.
- B. The monetary regime.
- C. The taxation arrangements and the customs envelope.
- D. Postal and communications arrangements.
- E. The entry of workers into Israel in accordance with the existing criteria. In the long run, and in accordance with the Israeli interest in encouraging Palestinian economic independence, the State of Israel aspires to reduce the number of Palestinian workers entering Israel, and eventually to completely stop their entrance. The State of Israel will support the development of employment sources in the Gaza Strip and in the Palestinian areas in the West Bank, by international bodies.

XII. The International Crossing Points

A. The international Crossing Point between the Gaza Strip and Egypt

1. The existing arrangements will remain in force.
2. Israel is interested in transferring the crossing point to the "border triangle," south of its current location. This will be done in coordination with the Egyptian Government. This will allow the expansion of the hours of activity at the crossing point.

B. The International Crossing Points between Judea and Samaria and Jordan

The existing arrangements will remain in force.

XIII. The Erez Crossing Point

The Erez crossing point will be moved into the territory of the State of Israel according to a timetable that will be determined separately.

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XIV. Summary

The goal is for the implementation of the plan to bring about an improvement in the situation and a break from the current stagnation. If and when the Palestinian side shows evidence of its willingness and ability to actually take action to fight terrorism, a full cessation of terror and violence and the carrying out of reforms according to the Road Map, it will be possible to return to the track of discussions and negotiations.

A PLAN FOR THE ECONOMIC DEVELOPMENT FOR THE GAZA STRIP

Free Industrial Zone on Land and on Artificial Islands

Ernst G. Frankel, Professor Emeritus of Ocean Engineering and Management, MIT

Overview

A Plan for the sustainable economic development of the Gaza Strip was presented at the *Inaugural International Conference of the Center for Macro Projects and Diplomacy* at Roger Williams University in Bristol, Rhode Island on April 15/16, 2004. The mission of the Plan was summarized as having as its primary concerns:

- job creation
- sustainable economic development
- environmental security

The economic condition of Palestinians in the Gaza Strip is dire, with a per capita income estimated to have sunk to less than \$600/year, with unemployment near 42% and youth unemployment even higher (source: PCBS). More than 30,000 workers from Gaza lost their jobs in Israel since 2000, with an additional 6,000 workers with jobs in the border (Eretz) Industrial Zone being only intermittently employed. Average daily wages in Gaza have held steady at about 55 NI Shekels (about \$11.62) or only about 75% of those earned in the West Bank and 30% of those earned by Israeli workers.

At the same time consumer prices increased by nearly 6% during the last 2 years, reducing standards of living even further. The most urgent need appears to be the establishment of reliable employment for a significant number of residents of the Gaza Strip, which is not subject to political and/or security problems, and which generates adequate income. Experience with the development of industrial zones elsewhere has shown that for each job generated in such a zone at least three jobs are generated outside the zone by a spin-off effect, which generates new demand for services, consumables, and more. As a result, establishment of say 30,000 jobs in a new industrial zone could generate as many as 120,000 new jobs in total, more than replacing those lost in Israel, reduce unemployment to only 20-25%, and double average per capita income in the Gaza Strip.

This Plan is advanced now, when the Israeli government announced the unilateral withdrawal from the Gaza Strip within 1-2 years, including the dismantling of Jewish settlements in the area. This will require Palestinians in the Gaza Strip to become even more self-sufficient, as it is unlikely that free border crossing of workers from Gaza to Israel will be permitted after the withdrawal, and the jobs traditionally offered in the Jewish settlements and their factories located in the strip will no longer exist.

These destitute conditions are the principal contributing factors driving the violent unrest, the growth of the military organizations, and the general feeling of hopelessness. Meaningful, reliable, secure, long-term jobs for tens of thousands in nearby factories and offices (located less than half the distance of work places in Israel) in an Arab (Egyptian) environment, managed by a globally renowned consortium and world-class tenant companies would provide not only income, economic stability, growth of self-esteem, and most importantly an effective outlet for the lack of faith in the world that most these assume does not care about their plight.

The Gaza Strip

The Gaza Strip extends northeast from the Egyptian border of the Sinai Peninsula for 40 km (25 m) with the Mediterranean Sea to the west and Israel to the east. The strip is about 10 km wide (5.6 m) on average. The Palestinian authority is responsible for civil government but Israel maintains control over security. With a population of more than 1.21 million lives on an area of about 140 sq m with a population density of about 8600 per square mile, one of the highest in the world. While the land is traditionally used for farming most people live in cities such as Gaza, Rafa, Khan-Yunis or Jabalyah. There are some orange groves and other fruit plantations as well as some vegetable farms. Eighty-six percent of the population is living in the towns or “refugee” camps that are really low-cost housing developments erected mainly by the UN which also provides a substantial proportion of the food and clothing required. Water, electric power, and telephone service is mainly delivered by Israel which connected its distributed services after the departure of the Egyptian administration in 1967.

The situation is becoming more urgent now when Israel appears to lose faith in the possibility of a peace agreement and is building a separating fence around Gaza and the West Bank to permanently separate the populations ostensibly for security and to prevent suicide bombers from crossing, but the reality will be a de facto social and economic separation of the populations that will demand the rapid development of economic opportunity alternatives which this project is designed to offer.

Proposed Plan

The proposed Plan is based on providing long-term, reliable, secure, well-paying employment, and business opportunities for Palestinians, mainly from the Gaza Strip as well as for Egyptians residing in the northern Sinai, by establishing a “Free Industrial Zone” at the border initially between Egypt and the Gaza Strip, located at or near the site of the former Israeli town of Yamit built in the northern Sinai. Later the zone would be expanded inland and offshore in Palestinian waters onto a large artificial island with a connecting causeway, which will also serve as a jet aircraft runway and with a deep water port. The island located at the southern most end of the coast of the Gaza Strip would be used by both the Egyptian border Free Trade Industrial Zone as well as serve as the principal port for the Palestinian entity.

Such a project will require an agreement by the Egyptian government to lease land (10-40 square km) to an international Free Industrial Trade Zone consortium or intermediary and to permit it to operate outside Egypt’s customs and tax boundaries. It is expected to attract significant investments in productive assets such as factories, logistic centers, power plants, communications facilities, assembly and warehousing centers, and financial service operation. Using the existing housing, road, electric power, telephone and other infrastructure left behind by Israel’s withdrawal, initial development costs of the site should be greatly reduced. The project envisions use of Egyptian construction firms, employment of Egyptian police, border guards, administrators, managers, and engineers growing from a workforce of a few thousand to about 5000 over a five-year period. The remaining workforce of about 20-40,000 will be provided by day workers from Gaza so as to provide meaningful long-term, secure employment to Palestinian workers. Investors will be attracted by

- low land and development costs
- abundant low or reasonable cost educated and skilled labor
- strategic site location
- easy and preferred access to European Union and U.S. markets
- effective and efficient transport links that will initially use Egyptian logistic and port infrastructure
- access to low cost material and energy sources

The total initial investment in preparing the “Free Industrial Zone” is estimated to be \$200-300 million (5-10km²) plus prepaid leasing costs. The industrial plants themselves are expected to be built and equipped by zone tenants that would be offered long-term 10-30 year leases of land and related

infrastructure. There are important incentives for Egypt including economic development of the desolate northern Sinai.

Revenues to the Egyptian government and economy are estimated to grow from about \$200 million/year-\$1,000 million/year in lease fees, personal income taxes, and various dues (no customs and corporate taxes though). In addition there will be many spin-off or secondary benefits to both the local communities and population as well as to the Egyptian government and economy at large. It will significantly increase government revenues, provide a base for the economic development of the northern Sinai Peninsula, as well as a variety of other economic benefits for the country, particularly as most transactions such as worker pay and all kinds of services will all be in hard-to-get foreign currency. Egypt is currently going through a severe economic crisis resulting from lack of tourism and low commodity prices for some of its important exports. Investors/operators in the Free Industrial Zone are expected to come primarily from OECD countries.

While Egypt's per capita GDP of nearly \$2600 is low by Middle Eastern standards, it is high by African standards (Sudan's per capita GDP \$860). But the economy needs urgently non-farm employment with over 50% of the population dwelling in urban areas and urban unemployment over 30% total and 50% among the youth. Egypt urgently needs new economic activity, which will generate new jobs directly or indirectly. Such a development would also increase economic activities and opportunities in Egypt such as banking, insurance, education, and health care as well as increased use of Egyptian transport, port, energy supply, and communications. As a result, Egypt should be able to reap significant economic benefits from this project. In addition, it should provide access to foreign direct investment in Egypt and later in Gaza in addition to new knowledge and technology.

The Project

The proposed project consists of three phases and a vision of providing an effective economic development opportunity for the Palestinians so as to remove the scourge of destitution and hopelessness which provides the principal reason for the long simmering conflict. At the same time it is to make the Palestinians less dependent on Israel and provide a meaningful opportunity for Egypt to gain economically and play an effective role in Middle Eastern peacemaking. The map of Israel and location of the Gaza Strip is shown in Figure 1.

As time is of the essence, the first phase of the project is planned on a 5-8 Km² strip of land between the town of Rafah on the Gaza Strip and the former Sinai town of Yamit, built by the Israelis and abandoned

as part of the peace deal with Egypt. The second phase consists of the construction of an 8-10 km causeway into the sea at the coast just north of the border in Palestinian territorial waters to serve as a connector to the offshore artificial (reclaimed) island industrial zone and deepwater port to be started at that time. Phase 3 is the construction of the reclaimed offshore (2 km²) artificial island free industrial offshore zone with a large free transshipment port that is designed to serve the two free industrial zones, the Gaza Strip, West Bank, and the developing north Sinai area of Egypt. To gain significant transshipment traffic, attracted by the strategic location of the port, it is suggested to designate the port as a “free port” so that it can serve all surrounding areas - Egypt, Gaza Strip/West Bank (Palestine), Israel, and Jordan.

The subject project, as noted, would be implemented in three phases.

Phase	Description	Timing
1	Construction of a free industrial zone along the Gaza Strip-Sinai border	2005-2007
2	Construction of an 8-10 Km causeway into the sea to serve as a runway/airport-temporary port and construction road for artificial island free zone and deep water port	2007-2010
3	Construction of 2 square Km artificial island and deep water port	2010-2013

Excluding lease costs and other government transfers, the development and construction costs of the three phases of the project are estimated at:

Phase 1 5-8 square Km, improvements, infrastructure, fencing, etc.	US\$200-300 million
Phase 2 5-6 Km causeway 100 m wide paved and armored)	US\$200 million
Phase 3 2 square Km artificial island in 12-15 m deep water	

Dikes and armor	\$160 million	
Reclamation	\$240 million	
Infrastructure	\$120 million	
Port construction	\$200 million	
Equipment	<u>\$ 65 million</u>	
Total		US\$785 million

This works out at about \$260/m² or \$23.96 ft² of fully developed industrial land, with direct access to deep water, air transport, and a large educated workforce.

It is planned to coordinate the developments of the onshore Egyptian Free Industrial Zone and the one build subsequently on a reclaimed offshore island in Palestinian territorial waters. Both nations may agree to combine the two free industrial zones into one managed jointly. As it is likely that an international Free Industrial Zone/Free Port investor and operator will be involved such as the one used in the existing Suez Canal Free Industrial Zone, such an arrangement would be quite attractive and mutually beneficial.

Alternative Organizational Structures for and Benefits of Free Industrial Zones

Free port industrial zones can be organized, owned, and operated in a variety of ways. Each has particular advantages and disadvantages. The range is between complete government or public sector ownership, development, and operation, where the public sector entity owns the land, develops all the infrastructure, supplies all the services, divides the zone into appropriate plots, builds standard factory and commercial buildings, and even invests in materials handling and logistics equipment. Tenants lease ready-made factory/commercial buildings and introduce their manufacturing/service equipment and operate it relying on the entity to not only provide all the necessary industrial services, but also control social infrastructure/services such as hospitals, food services, transportation, training, etc. Leases are usually 5-20 years and are renewable. The entity may also go into joint ventures with some tenants and invest in manufacturing equipment as well and/or provide some working capital in return for port ownership, profit sharing, etc. This model gives government a large degree of control and was used in China in the early years of industrialization and move towards a market economy. It was also used on a smaller scale in Egypt and other Middle Eastern countries.

The other extreme is where government simply acquires (and owns) the land of the zone, develops only infrastructure (roads, power, etc.) leading to/from the zone, if necessary gets all the permits, and leases the land to one or more industrial park developers or even to a mix of developers and individual industrial commercial tenants who become responsible to not only build their facilities (factories, etc.) but also arrange for the infrastructure construction (and service provision).

The land in that case could be sold, leased for a long time (say 99 years) or the arrangements may be BOO or BOT. In other words, each is on his own and free to negotiate any terms with infrastructure/service providers. Obviously the latter model involves very little government involvement or control. For that

matter, it also does not require government investments and in fact government or a public entity could sell the land at a premium and establish significant tax and other revenue-earning potentials without much, if any, financial exposure.

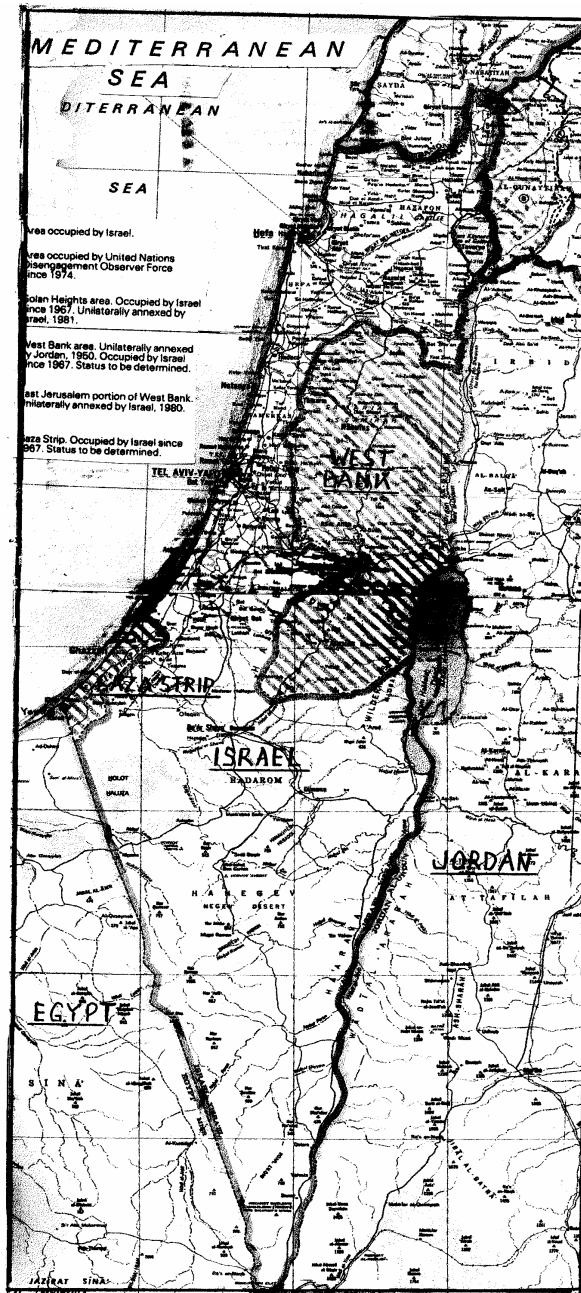


Figure 1: Israel and Palestine

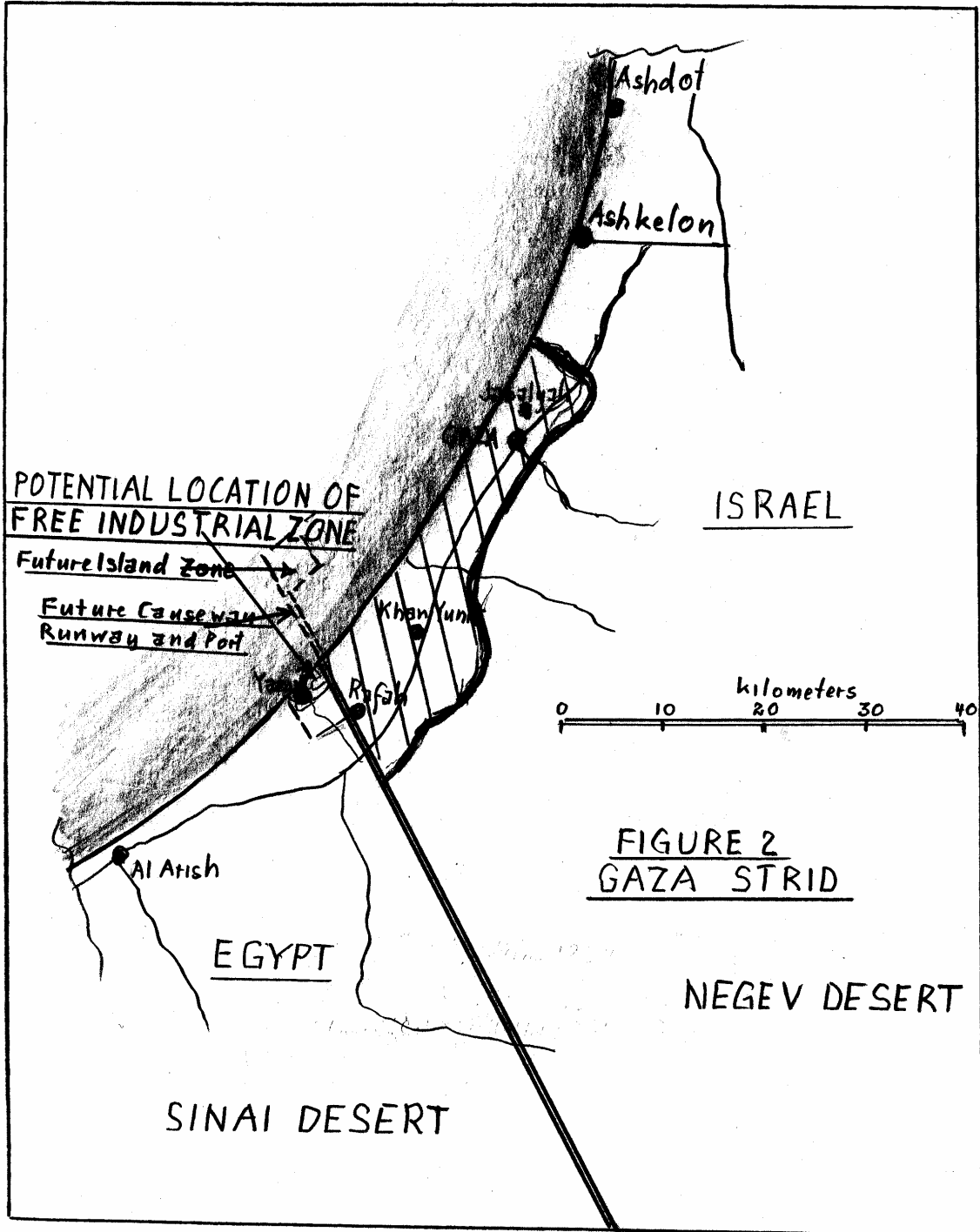


Figure 2: Potential Location of Free Industrial Zone

In fact in many cases such as in Dallas (Alliance Corp.) acts as the land owner, developer, and all. Between these two extreme are many different alternative models, each of which offers a different cost, economic potential, degree of control, and more.

No matter what model is chosen it will require reasonable involvement by government in security, safety, and utilization or use of the activities in the zone and assurance that they are developed in line with the general goals and objectives. The measure of success of the free port industrial zone is its contribution to economic growth in both Egypt and the Gaza Strip. To achieve this, the goals of the value-added activities in the free industrial zones must all be oriented towards achieving lasting economic growth. This not just in terms of new employment generation or new government tax revenues but in the establishment of a new economic structure of interdependent and mutually-supporting economic activities in logistics, manufacturing, research, education, services (banking, brokerage, trade, food, recreation, supply, repair, etc.) and supply services such as power, communications, water, sewage, fuel, etc.

The goal is to help establish a more balanced economy, independent of temporary incentives (tax breaks, etc.) which integrates all economic, social, and geographic sectors and offers long-term opportunities to all the diverse parts of the economy from labor, commerce, business, manufacturing, construction, services, trade, and government. To achieve this, it will have to generate jobs, taxes, business and investment opportunities, construction, services demand, increase real estate values, new training opportunities, large new transaction services incomes, etc. Indirect economic contributions are expected to be several times those of direct economic contributions.

The measure of success will mainly be the contribution of the direct and indirect employment generated to the GDP and GNP. In addition, revenues of service providers and transactional incomes should permit that sector to grow at least by twice its average annual rate. Government (treasury) income should grow at a compound rate significantly higher than the growth of the economy which itself should double its growth rate. In other words, measurements of success of the zone will be:

- < employment generation and growth rate
- < GDP/GNP growth rate
- < government (treasury) income growth rate
- < direct investment (long term)
- < foreign trade growth

- < quality (income) of jobs generated
- < transactional services revenues and profits
- < research activities (volume)
- < education (number of high level professionals trained and retained)

The free port and industrial zone development should maximize these objectives.

Investment in port-related industries and free port zones has become very popular with free ports flourishing all over the world. China now leads in the development of free ports and free economic zones, and now has over 30 with new ones established every few months. Some such as the Shenze Free Port Industrial Area or the Suzhou Free Industrial Zones have attracted hundreds of industrial companies and investments in excess of \$6 billion each. Altogether, investments in free economic/industrial zones in China averaged \$4 billion/year and the number of people employed directly or indirectly in these zones now number in the millions. On average, investments required per direct job created were \$80,000 in 1999. For each direct job on average three indirect jobs were created.

Target Industrial Commercial Sector

Target industrial sectors/clusters that would benefit from locating in the free industrial zone in the northern (Egyptian) Sinai and/or on the offshore artificial island industrial zone in Gaza are manufacturers/assemblers of:

- < automotive parts/component manufacture/assembly and customizing/outfitting of basic automobiles imported from Far East (Japan/Korea)
- < home appliances, garden equipment, etc. assembly and customizing, such as air conditioners, refrigerators, solar water heaters, etc. using imported components and knock-down shells for just-in-time delivery to nearby markets (both home and industrial/commercial)
- < home electronics (TV, VCR, CD-RW, DVD players, etc.) assembled and customized for nearby markets
- < medical diagnostics and other test equipment (CAT scan, MRI, laser, x-ray, etc.) assembled, tested, calibrated for delivery to Latin/Caribbean markets
- < energy generating equipments assembly such as solar, fuel cell, wind power generators, gas turbines, diesel plant assembly

- < automated materials handling, warehousing, etc. equipment assembly
- < office equipment including security, storage, copying, etc.
- < communications equipment assembly, integration, etc.
- < food processing equipment assembly and plant engineering
- < other - largely enterprises benefitting from low capital costs/capital intensity/low transport costs

In summary, targets are industries that benefit from abundant, reasonably priced, trained, disciplined manufacturing workforce, backed up by advanced engineering/science capability that requires good, cheap, long-distance transportation (shipping), and relies on both large-scale global outsourcing, and extensive custom markets in nearby countries. All manufacturing activities in the zones are designed to generate import/export transshipment traffic, as well as value adding, employment activities in manufacturing, assembly, consolidation/deconsolidation and packaging.

The new technological age requires much more team work and coordination to truly produce its benefits. A change in cultural approach may have to be fostered to achieve not only the benefits of the new technology but also to convince industrial investors and port user that the expected performance will be achieved.

Workforce Training Requirements for the Free Industrial Zone

The development of higher technology manufacturing will have implications for workforce training. First, technology is being introduced in a fashion that not only modifies but fundamentally alters the nature of job-skill requirements. This introduction of new technologies is not revolutionary, but is evolutionary. Therefore the training and retraining that it requires must be continuous and ongoing rather than a one-time occurrence. For a number of reasons, including poor levels of workforce academic preparation, there are impediments to specific job-related training. There are, however, correct methods for installing training programs as pursued by a number of companies. Most importantly, training should be viewed as a central part of government, developers, and company strategy. Workers, supervisors, and unions should all be involved in developing, implementing, and evaluating training programs so that the programs meet their objectives and address realistic levels and goals. Furthermore, training should be viewed as a long-term process and companies as well as plants should be viewed as places of continuing learning that maintain and advance the competence of their staff and workers in line with changing technologies.

There are competent educational institutions in Egypt (AAMTA – Alexandria) and in the Palestinian areas capable of providing skill training for the Free Industrial Zone workforce. Such training should take place in parallel with the zone development and its costs be part of the zone development costs.

Benefits of Plan

The proposed plan offers an opportunity to advance the standard of living of Palestinians in the Gaza Strip and provide significant economic benefits to Egypt as well as the Palestinians. It is expected to attract foreign direct investment and will improve the technological and knowledge base of the people in Gaza and northern Sinai. It is a plan that could be started without delay and offer real jobs and economic benefits within the comparatively short period of one to two years. It can play a significant role in the peace process and in moving the area towards a more effective economic condition, full of hope and promise.

Next Steps

Discussions are proposed to be held with major investors, industrial companies, free trade and port operators, government agencies, and public interests to promote the project and obtain support for it. An earlier attempt in 1992 of developing just the artificial offshore island concept as a free industrial zone and port off the shores of the Gaza Strip was well received and attracted major industrial firms, particularly in Japan, to indicate tentative support. We expect to be able to generate even more interest at this critical time.

Conclusion

Economic development is an essential stepping stone towards peace in the Middle East. Without it real peace will not be attained. To achieve this though we must proceed quickly. This is of the essence as each day brings further hatred and bloodshed. The time is ripe for such a basic framework of a 3-step project, starting with an Industrial Zone at the Gaza-Sinai border. To achieve this, it will be necessary to get support and approval as soon as possible. A non-political economic development project with no preconceived requirements that offers a short-term impetus leading to long-term stability of the Palestinian economy and enhances employment significantly is important now to reverse the spiral of violence and hopelessness.

The project has a basic framework and a location that appears to be among the most logical and appropriate for industrial development. Other approaches have been tried for over 50 years without success. It is time to try new methods that are non-political and represent a win-win approach.

The opportunity is now and the need for a resolution of this problem greater than ever. Let us move ahead and show the world that with goodwill even the most intractable problem can be solved.

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