

Buildings Environment Infrastructure

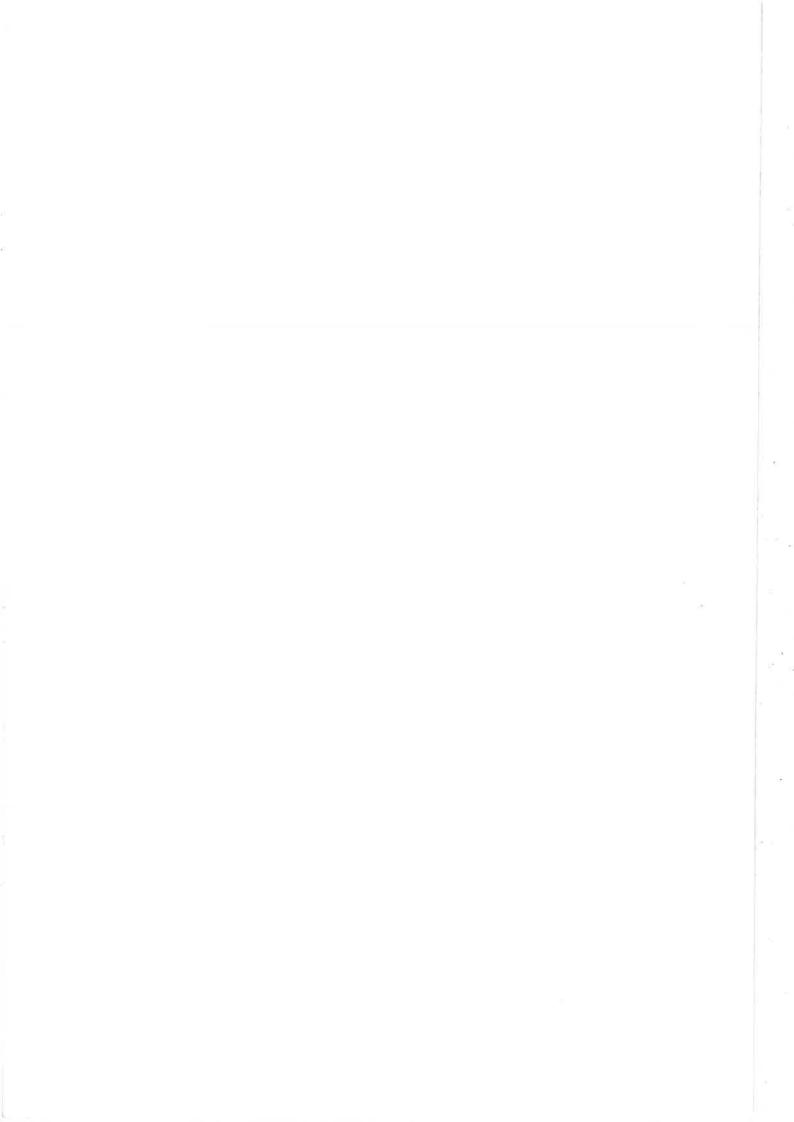


Palestinian National Authority
Ministry of Planning and
International Cooperation
Environmental Planning
Directorate

Environmental Impact Statement for the Gaza Sea Port Progress Report 1

Witteveen+Bos
Consulting engineers

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prepared by	W.J. Bolkesteln	M	95-05-11				
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TABLE OF CONTENTS	page
1. INTRODUCTION	1
2. ADJUSTMENT OF THE TECHNICAL PROPOSAL	2
3. PLAN FOR ON-THE-JOB TRAINING	3
4. MEETINGS WITH GOVERNMENTAL ORGANIZATIONS (GO'S) AND NON-GOVERN- MENTAL ORGANIZATIONS (NGO'S)	4
5. SOCIO-ECONOMIC PROFILE	5
6. INSTITUTIONAL BUILDING OF THE PORT AUTHORITY	6
7. BUILDING OF PUBLIC PARTICIPATION	7
8. DEVELOPMENT OF ALTERNATIVES	8
ANNEX I Stepping Schedule II Staffing Schedule III Minutes of meetings with GO's and NGO's IV Socio-economic profile V Questionnaire for NGO's VI First screening of alternatives	

# 1. INTRODUCTION

According to the Technical Proposal the project activities for the Environmental Impact Statement Gaza Sea Port have started at April 18, 1995.

In this first Progress Report an overview is given of the results of the activities until May 4, 1995.

It deals with progress of the following items:

- the adjustment of the Technical Proposal
- the plan for on-the-job training
- the meetings with governmental organizations (GO's) and non-governmental organizations (NGO's)
- the socio-economic profile
- the institutional building of the port authority
- the building of public participation
- the development of alternatives (exact location and lay-outs)

The following chapters will treat these items.

#### 2. ADJUSTMENT OF THE TECHNICAL PROPOSAL

As ever the first step in a project is to review the Technical Proposal (TP). The TP was drafted in a very short time by Witteveen + Bos Consulting Engineers. Regarding the TP has led to a number of changes. After submitting the proposal there have been deliberations with the client (the Dutch Ministry of Foreign Affairs, i.c. Directorate General for International Cooperation), within the Dutch project team, with the Palestinian counterpart (Dr. Mohammed Ajjour) and with the Palestinian partner TEAM. These deliberations have also led to adjustments of the TP. The adjusted TP will transformed into a Project Plan (PP). The remarks will be mentioned here. Some of the remarks will be treated extensively on this place, other remarks will be taken up in the PP. The PP will be submitted at May 22, 1995. Of each remark it will be stated whether it is treated in this

progress report (PR) or in the coming PP. Of course, finally, all remarks will be taken up in the PP.

#### Remarks

- (PP) According to the Terms of Reference gender aspects should be taken into account.
- (PR) Determining the strategy, that means for example the determining of the alternatives of the exact site and lay-outs of the port should take place in Gaza. This must be clear in the PP. Chapter 8 of this PR gives information about the progress on this item.
- (PR) Capacity building and on-the-job training must be treated by a programme, which
  must have the approval of the EPD (Dr. Mohammed Ajjour. Chapter 3 of this PR gives the
  programme (draft). Deliberation of this draft must lead to a definitive programme.
- (PR) Public participation should be taken into account in the process of making the EIS.
   An idea on this matter is made in the programme for public participation (chapter 7 of this PR).
- (PP) Consultations of the Israeli should be done because of information and possible adverse environmental impacts of port construction on the Israelian coast. Deliberation with Dr. Mohammed Ajjour must make this point clear.
- (PP) A few numbered activities (40, 41, 48 and 50) are not attached to a team member.
- (PP) The summary must also be written in Arabic.
- (PP) The final report EIS should not consist of more than 80 to 100 pages.
- (PP) An important field of environmental knowledge: geohydrology was not taken up in the TP. Now, two geohydrologists will strengthen the project team: Jos Timmermans of Witteveen + Bos and Mr.Samir Khall Sha'ath, affiliated with TEAM.
- (PR) With respect to all relevant activities, which should be executed in this project, a new "Stepping Schedule" (see for the previous one on pages 9 and 10 of the TP) is made. The new Stepping Schedule is taken up under Annex I of this PR.
- (PR) As a result of the revised Stepping Schedule a new Staffing Schedule (see for the previous one on page 18 of the TP). The new one is taken up under Annex II of this PR.

#### 3. PLAN FOR ON-THE-JOB TRAINING

An important objective of the EIS for the Gaza Sea Port is to enable the Palestinian Authorities to gain experience with environmental impact assessment practice in general. To reach this objective a plan for on-the-job training is developed.

This plan has two objectives:

- To build capacity within the Environmental Planning Directorate of the Ministry of Planning and International Cooperation. This capacity should be able to treat environmental impact assessment for future projects by itself
- Related to the subject of this EIS: to build up capacity within the Palestinian National Authority to develop a Port Authority which is able to manage the port in an environmental proper way.

To meet this objectives, the consultants propose the following activities:

- General meetings with governmental organizations (GO's). (see chapter 4 of this PR)
- Specific meetings or workshops for the staff of EPD in which specialists of Witteveen+-Bos and TEAM give a presentation about their speciality in relation to environmental impact assessment.

May 14, 1995:

Mr. Zitman: coastal morphology

Mr. Samir Khall Sha'ath: geohydrology

May 18, 1995:

Mr. Ligtvoet: aquatic ecology

Mr. Velthuis: environmental risks

May 25, 1995:

Mr. De Jong: noise

Mr. Akkermans: archaeology

Mr. Mohamed Gobrail: institutional aspects Mrs. Meester: environmental legislation

May 31, 1995:

Mr. Treffers: port related environm, matters

June 8, 1995:

Mr. Bolkestein: environmental policy

June 15, 1995:

Mr. Van Kuyk: air pollution

Each of the presentations will take about 15 minutes, after which there are possibilities for questions and discussion.

As stated before, the meetings are destinated for the staff of EPD. Some subjects give an inducement to invite representatives of other GO's. Of course, this is possible.

- Training in The Netherlands. Four representatives of the Palestinian National Authority will visit The Netherlands for one week in June or July 1995. To please the two objectives for on-the-job training a mixed delegation should be composed: two representatives of the EPD-staff and two representatives of port related GO's, such as the Ministry of Transport. The programme for the training could be as follows:
  - \* presentations of consultants of Witteveen + Bos how they work in practise (methods, literature, computer-applications, such as Auto-Cad and GIS): 2 days.
  - \* visits to one or two Dutch agencies, such as the Ministry of Housing, Physical Planning and Environment (Ministerie VROM), the Commission for Environmental Impact Assessment (Cmer) or the State Institute for Health and Environmental Care (RIVM): 1 day.
  - \* visit to one or more Dutch ports and harbours: Rotterdam (one of the largest ports in the world) and for example Vlissingen (more comparable with the proposed Gaza Sea Port): 2 or 3 days.

The training should of course be in balance with the requirements and wishes of the EPD. This is a point of deliberation. At short time the composition of the delegation must be clear. The best suitable period should also be considered.

# 4. MEETINGS WITH GOVERNMENTAL ORGANIZATIONS (GO'S) AND NON-GOVERNMENTAL ORGANIZATIONS (NGO'S)

The meetings with GO's and NGO's have four purposes:

- to introduce Witteveen + Bos and TEAM in these organizations
- to give information about the project to these organizations
- to get relevant information about all kinds of issues related to the development of the port
- to create a basis in society for the development of the port (see also for this item chapter
   7: Building of public participation of this PR)

The following GO's and NGO's are or will be visited:

#### GO's:

- Ministry of Planning and International Cooperation
  - \* The Minister
  - \* Environmental Planning Department (April 19 and April 29, 1995)
  - \* Physical Planning Department (April 24, 1995)
  - \* Gaza Environmental Profile project (April 24, 1995)
- Ministry of Agriculture and Fishery (April 22, 1995)
- Ministry of Tourism and Antiquities (April 22, 1995)
- Ministry of Transport (April 26, 1995)
- Ministry of Health
- Ministry of Housing and Public Works (April 23, 1995)
- Ministry of Industry (April 29, 1995)
- Palestinian Economic Council for Development and Reconstruction (PECDAR)
- Municipalities
- Institute of Environmental Protection and Research (May 2, 1995)
- Customs
- Navy

#### NGO's:

- Palestinian Chamber of Commerce
- Palestinian Women's Affairs Centre (April 23, 1995)
- Palestinian Trades Union Federation
- Al Tawfic Fishermen Society

There are a lot of NGO's in Gaza. To get in touch with most of these organizations a questionnaire is distributed (see further chapter 7 of this PR).

The minutes of meetings of GO's and NGO's which were visited uptil now are taken up in Annex III of this PR.

# 5. SOCIO-ECONOMIC PROFILE

The description of the current socio-economic environment consists of:

- population characteristics: population density, growth, availability of qualified workers;
- water supply and sanitation: availability of freshwater resources, existing impacts on groundwater depletion and saline water intrusion, treatment of sewage and solid waste;
- economic activities: agriculture, fishery and industry.

The socio-economic profile which is a part of the current situation of the environment is taken up under Annex IV of this PR.

# 6. INSTITUTIONAL BUILDING OF THE PORT AUTHORITY

A port authority responsible for construction and operation of Gaza Sea Port should be established. This authority is also engaged with a sound environmental management of the port. The consultants have started to investigate all issues of the required organization. A separate report covering this subject will be made. The report will consist the following chapters:

- Introduction
- Objectives
- Existing institutional set up and identification of stakeholders
- Identification of tasks and functions
- Alternative arrangements of ownership
- Responsibility assignments
- Port Authority Organization
- Engineering phase management
- Construction phase management
- Employment and Human Resources development
- Financial implications and funding scenarios
- Tentative time schedule

#### 7. BUILDING OF PUBLIC PARTICIPATION

One of the main issues in environmental policy and environmental impact assessment in general is to get public involved in decision-making on major projects, but also in smaller projects. In fact the Palestinian National Authority and the Palestinian people do not have any experience in this field. One of the aims of the Environmental Impact Statement for Gaza Sea Port is to start with some kind of public participation. By the absence of public participation in Gaza uptil now, legislation and procedures on this matter also do not exist.

The consultants of Witteveen + Bos and TEAM have considered to apply a way of public participation which is optimally linked with the possibilities of this project. In this respect the limited time available must be considered.

The approach consists of the following items:

- The development of a questionnaire. The questionnaire is a method to explore opinions and interests of the general public and the non-governmental organizations (NGO's). A copy of the questionnaire has been added in Annex V of this PR. The questionnaire has been distributed to about 45 NGO's. Some of the NGO's have distributed the list to individual members of their organizations.

By receiving of about 20 lists, the following -interim- results can be presented:

- \* 100% of the respondents is aware of the study for establishing the port.
- \* The port is (highly) welcome for 90% of the respondents.
- \* According to the respondents a commercial port is great importance, followed by a passenger travelling port, a fishery port, an oil importation port and finally a marina.
- \* 75% of the respondents has concerns about negative impacts which could be associated with port construction and port operations.
- \* According to their seriousness the possibility of endangering marine life is ranked at the highest position followed by leakage from oil tankers, unacceptable noise level, endangering social life style and finally salvaging operations.
- \* The success of the port will be determined at most by the quality and speed of services and at least by compliance with governmental directions or community participation and cooperation, according to the respondents.
- The organization of a meeting for NGO's in week 21 or 22 (May 29-June 1, 1995). In that meeting the Palestinian National Authority in close cooperation with the consultants Witteveen + Bos and TEAM give information about the project with respect to the environmental impacts (port locations and lay-outs related to environmental issues). In addition to the questionnaire the NGO's have the opportunity to give comments on the proposed activity.

This meeting has to be prepared very well: subject(s), location, selection of representative NGO's etc.

The organization of a similar, second meeting with NGO's after finishing the EIS. The
results will be presented: the port location and lay-out most suitable for the environment,
also with respect to socio-environmental matters. This meeting will take place at the end
of September 1995.

In case of public participation it is advisable to get and to hold the general public informed about developments concerning the port. We advise to use local newspapers for that purpose. Once a month or when the project gives occasion newspapers could give attention to this matters.

Information / Consultation

#### 8. DEVELOPMENT OF ALTERNATIVES

The main issue of the EIS Gaza Sea Port is the development and the determining of environmental impacts of alternatives (each alternative shall be composed of a site and a lay-out) of port development. The location of the port has already been decided. The exact location between Wadi Gaza and the border of the Municipality of Gaza, however must be determined. The EIS, from an environmental point of view, should give the information to take that decision. Lay-out, i.c. the configuration and phasing of construction should also be taken into consideration.

The consultants have started with the development of alternatives. The Basic Engineering Study Port of Gaza (BES) (Grabowsky&Poort under assignment of the Dutch Ministry of Economic Affairs and the Palestinian National Authority, September 1994) is the basis for this activity.

The following procedure is and will be executed:

- Review on the proposed alternatives of the BES to get a comprehensible connection and a smooth transition to the EIS. The locations and lay-outs of the BES are confrontated to the Programme of Requirements for Gaza Sea Port once again.
  - In order to look at a exact location, the alternative locations IVa of the BES will be taken into account in the EIS. Of the port lay-outs B and "S" will be taken into consideration. "S" is an optimized lay-out of lay-out C. Phases Ia and III will be evaluated in the EIS.
  - Of this screening procedure a short note has been made. This note is added in Annex VI of this PR.
- The next step (under preparation) is to make an anatomy of the port, that means all main physical elements are mentioned. The anatomy refers to the proposed lay-out of the Gaza Sea Port. The anatomy will allow the consultants to describe the potential environmental impacts of the port.
  - Many impacts will occur regardless location, lay-out or phasing, such as the socioeconomic impacts of labour import for port construction, shore facilities for ship waste. These elements will be treated in the first part of chapter 6: Impacts of the EIS.
  - Other impacts are related to the location, lay-out and phasing of the port, such as construction time, breakwater construction, land reclamation, construction of berths/quay structures, dredging operations. Per location, lay-out and phasing possibilities these potential impacts will be considered. These elements will be treated by matrices in the second part of chapter 6 of the EIS. Of course the matrices will be explained in the annexed text.

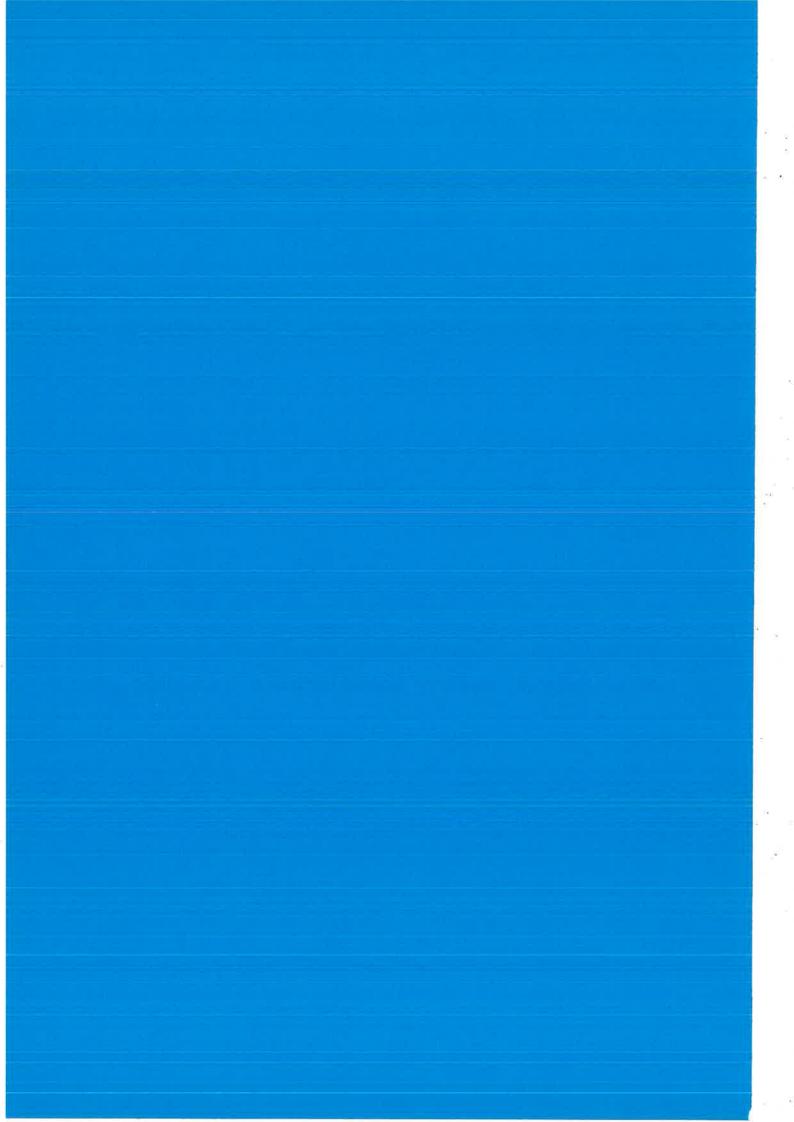
After evaluation of the impacts a comparison of the alternatives can be made.

The next weeks will be spent at the working out of each alternative. That means the assessment and or the calculation of the following items:

- Coast morphology and geohydrology
- Quantities of all materials needed: breakwaters, berths, reclamation, dredging etc.
- Construction time
- Distances to settlements
- Connecting infrastructure
- Landownership
- Landscaping

After these activities the environmental (water, air, noise, risk, ecology, archaeology) and socio-economic impacts can be stated.

**ANNEX I Stepping Schedule** 



# Environmental Impact Statement for the Gaza Sea Port

#### Plan of work

Step 1 Introduction, inventory and determining a strategy, capacity building and public participation.

Location

: Gaza

Duration

: Three weeks (April 18 - May 4, 1995)

Main activities : Investigation of the problem

Literature study

Site visits

Acquaintance with counterpart Preparation of Project Plan

Preparation of a plan for on-the-job-training

Meetings with governmental (GO's) and non-governmental organizations

(NGO's), counterpart and local partner

Preparation of EIS - alternative (sites and lay-outs)

Preparation of the socio-economic profile

Preparation of institutional concepts for port management

Preparation of public participation

Output

: Project Plan

Plan for on-the-job-training

Draft alternatives

Questionnaire for NGO's Socio-economic profile

# Step 2 Inventory, working out of alternatives, capacity building

Location

: Gaza and The Netherlands

Duration

: Two weeks (May 6 - May 18, 1995)

Main activities : Investigation of aspect of coastal morphology and geohydrology (work in

Gaza)

Working out of alternatives (work in The Netherlands)

First inventories of environmental specialities on location: ecology, flora

and fauna, risks

Specific meetings with GO's and NGO's, counterpart and local partners

Output

: Worked out alternatives

Progress with capacity building

Step 3 Processing, further inventory, testing of alternatives first determining of environmental impacts, capacity building and realization of public participation

Location

: Gaza

Duration

Four weeks May 20 - June 15, 1995)

Main activities : Further inventories and finalization of environmental specialities (see step

2 and also legislation and regulation, noise, archaeology) Testing of alternatives on environmental specialities

Possible readjustment of alternatives

Discussion with counterpart about environmental impacts

Writing chapters 2, 3 and 4 of the EIS

Writing a draft of chapter 6: Impacts on the environment

Specific meetings with GO0s and NGO's, counterpart and local partner

Determining social-economics impacts Finalization of institutional aspects

Information meeting for people in the surroundings of the port

Output

: Finalization of inventories

Final agreement of adjusted alternatives First insight of environmental impacts Report on social-economic impacts Concept for port management Progress with capacity building Progress with public participation

Chapter 2: Problem analysis and objectives

Chapter 3: Setting of Gaza Sea Port

Chapter 4: Proposed activity and alternatives

# Step 4 Final determining of results and drafting EIS

Location

: The Netherlands

Duration

: Eight weeks (June 19 - August 11, 1995)

Main activities : Completion environmental impacts

Fillings gaps in information

Writing of chapters 1, 5, 6, 7, 8, evaluation and monitoring plans and

summary

Output

: Draft EIS

After processing of the comments of the Directorate General International Cooperation of the Dutch Ministry of Foreign Affairs and the approval of the Dutch Commission for Environmental Impact Assessment the EIS will be presented to the Palestinian Authority.

# **Step 5 Presentation**

Location

: Gaza

Duration

: Two or three days (in the period September 16 - September 28, 1995)

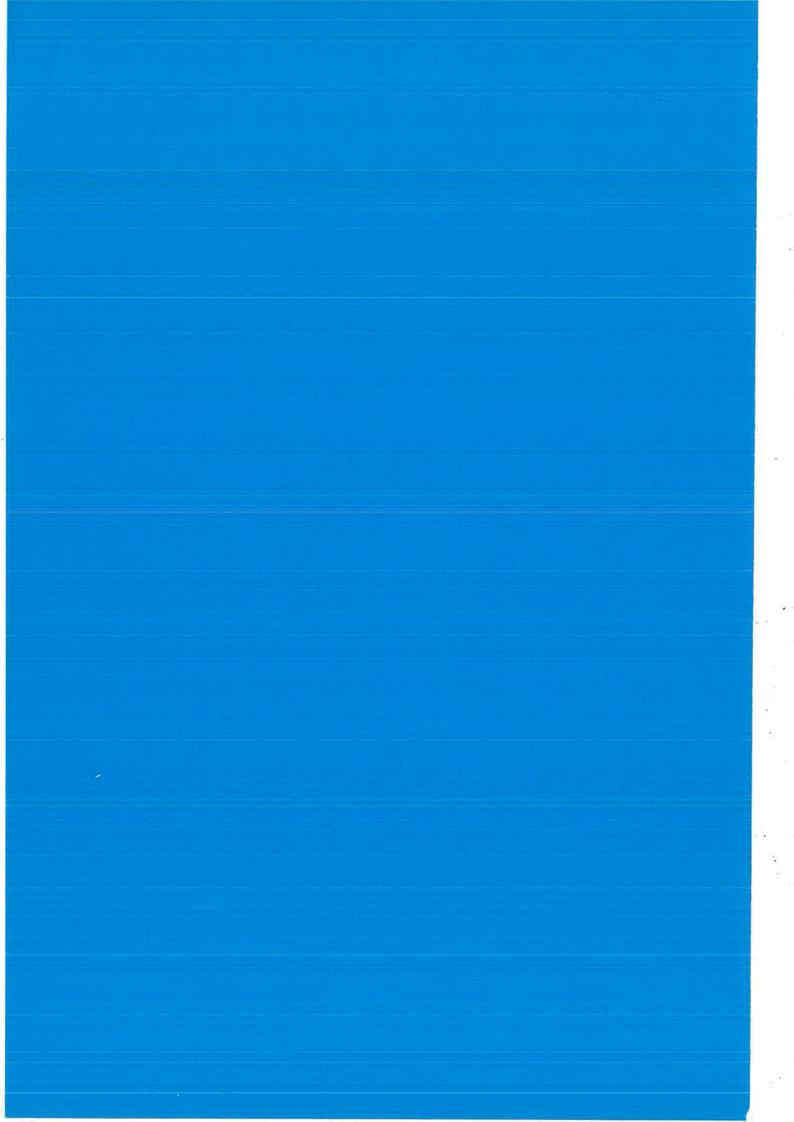
Main activity

: Presentation in one or more meetings (workshops) with GO and NGO's

Output

: Progress with capacity building and public participation

**ANNEX II Staffing Schedule** 



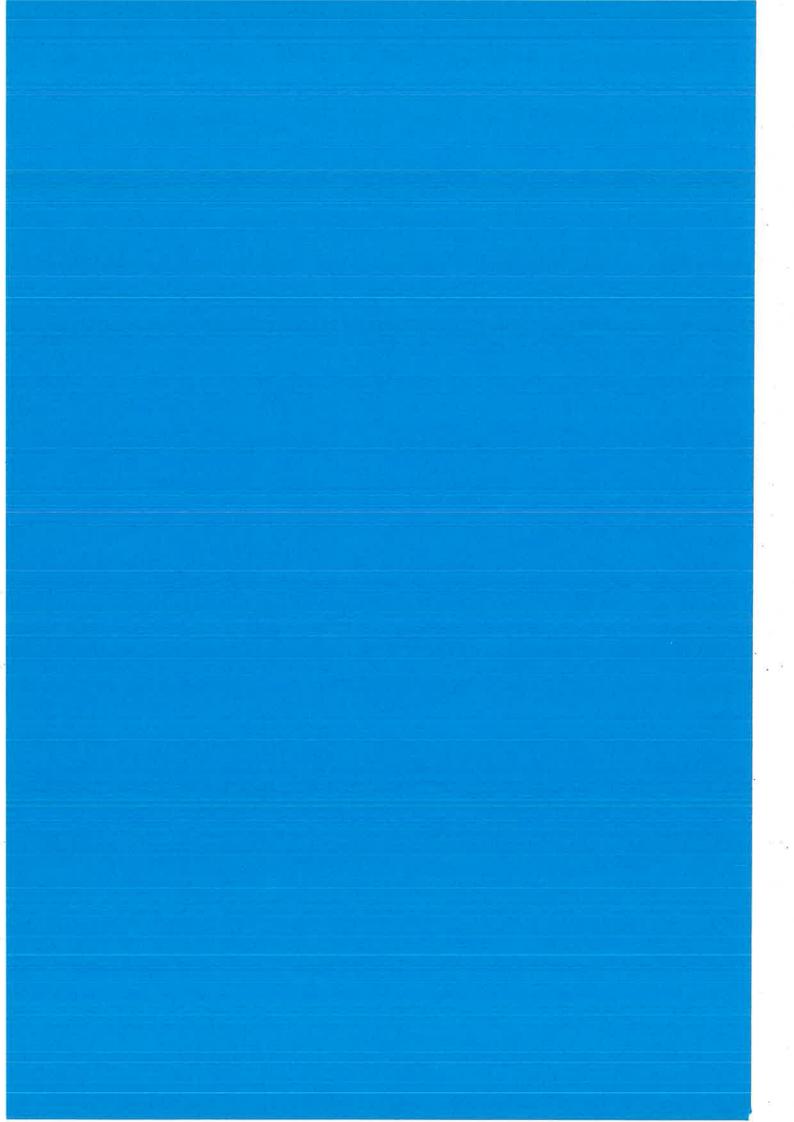
# **Environmental Impact Statement for the Gaza Sea Port**

# Staffing Schedule (1)

week 1995	18.04 20.04		29.04 04.05	06.05 11.05	13.05 18.05	20.05 25.05	27.05 01.06	03.06 08.06	10.06 15.06	19.06 23.06	26.06 30.06		10.07 14.07	17.07 21.07	24.07 28.07	31.07 04.08	07.08 11.08	14.08 18.08
Bolkestein	G	G	G	N		G	G	G	N	N	N	N	N				N	N
Treffers		G	N	N			G		N	N								
Timmermans		N	G	N	N													
Meester- Broertjes				N		G	G				N	N	N	N	N			
Zitman		N		G	G	ė												
Ligtvoet			N	G	G	N								2				
De Jong					N	G	N											
Velthuis				G	N											20		
Van Kuyk								G	G	N								
Akkermans					N	G	N											
Mohammed Gobrail	1/2 X	х	х		E	х	х	1/2 X										
Nabil Sha'th	1/2 X	х	х		х	х	х	1/2 X								*:		
Samir Khall Sha'ath			х	х														

- G Dutch team members are working in Gaza
- N Dutch team members are working in the Netherlands
  X TEAM members are working in Gaza
  E TEAM member is working in Egypt

ANNEX III Minutes of meetings with GO's and NGO's



Meeting

: Ministry of Planning and International Cooperation

Environmental Planning Directorate (EPD)

**Project** 

: EIS Gaza Sea Port

Project No.

: GAZ 2.1

Date

: April 19, 1995

Present

: EPD

Dr. Mohammed Ajjour

Witteveen + Bos / Team

Dr . Ala'a Sha'at

Mr. Mohammed Gobrail

Mr. Nabil Sha'th Mr. J.G.A. Coppes Mr. W.J. Bolkestein

Copies: present persons, project file

#### 1. Introduction

The purpose of the meeting is mutual acquaintance between EPD and Witteveen + Bos / Team

The exchange of information and ideas on the project is the main theme,

# 2. Technical Proposal

Mr. Coppes explains the bringing about of the project in the Netherlands, the cooperation between Witteveen + Bos and Team and the Technical Proposal.

# 3- Main results and appointments.

Specific plans and date on environmental issues for Gaza does not exist. The environmental Profile is a good starting point.

There is no positive interaction the between government and the people . A tradition in this matter does not exist .

The participation of people however, also in environmental issues is of vital importance. The general impressions that a lot of people are supporting the port.

So information of at least the people around the proposed port is important.

- \* The suggestion is to organize a meeting for that purpose.
- \* Special attention should be paid to the management of the port. What about capacity

building and legal matters in this respect? There exists a preliminary Gaza Port Committee(Dr.Sami Tarazi). This committee consist of three members, one of them is Head of the Chamber of Commerce.

The information of all relevant institutions ( GO's and NGO's ) and the creation of a basis in society for the port construction and the acceptance of a minimum of adverse environmental impacts is essential .

\* The following institutions are mentioned and will be visited:

GO's :-

Ministry of planning and International Cooperation.

- EPD
- Physical Planning Team
- Environmental Profile Gaza Project

Ministry of Agriculture and Fishery

Ministry of Tourism and Antiquities

Ministry of Transportation

Ministry of Health

Ministry of Housing and Public Works

Port Committee

Palestinian Economic Council for Development and Reconstruction (PECDAR)

Institute of Environmental Protection and Research

Municipalities of Gaza

Customs

Navy

NGO's:-

Palestinian Chamber of Commerce

Palestinian Women Union

Palestinian Trade Union Federation

All Tawfic Fishermen Society

Meeting

: at Ministry of Agriculture, Environmental Department

Project

: EIS Gaza Sea Port

Project No.

: GAZ 2.1

Date

: April 22, 1995

Present

: Ministry of Agriculture

Mr. Mohammed Kaware Mr. Mohammed Srour Mr. Mustafa Al Sa'dooni

Witteveen + Bos / TEAM

Mr. Mohammed Gobrail

Mr. Nabil Sha'th

Mr. Wouter Bolkestein

Copies: present persons, project file (TUTR)

## 1- Introduction

The purpose of the meeting is mutual acquaintance between the Environmental Department of the Ministry of Agriculture. The exchange of information and ideas on the project is the main theme. The founding of the Environmental Department is of very recent date, i.e April 15, 1995.

#### 2- Organization

The Environmental Department, i.c. the Directorate of Environmental Affairs consist for the Gaza Strip of four units: Chemicals - Environmental Protection, - Land use and - Water. For the West Bank the same organization has been erected.

# 3- The importance of the port - agriculture

The new sea port will be of vital importance to the agricultural im- and export position of Gaza

Commodities are citrus, fruits, vegetables and flowers. Im - and export possibilities will enlarge agriculture production.

Enlarging of agricultural production can have also adverse environmental impacts, citrus needs for example large quantities of water, flowers and some fruits and vegetables need

considerable quantities of chemicals (pesticids and fertilizers ) . But there are solutions :

- Citrus cultivation is diminishing: 1965: 72.000 dunums.

1995: 42.000 dunums in favour of other (agricultural) land use.

- The agricultural sector is implementing a biological agriculture which means less use of chemicals, fertilizers and pesticids.

The agriculturee will not be seriously affected by the waste products resulted from the ships coming and leaving the port. By loss of beach of several kilometers tourism and recreation will be affected.

# 4- The importance of the port - fishery

The port will serve the fishing and transportation will be better. The number of boats will be enlarged.. At the moment there are about 2000 fishermen.

#### Boats available:

- large boats 82
- medium - sized 177
- small boats 409

The port will increase the production of fish. Not everything could be consumed at the local market. The rest will be exported and or canned.

There is a French / Palestinian project to encourage fishery artificial pools / lakes. This could also enlarge the fishery - production on the benefit of the port.

With respect to the boats: they are limited to 12 miles seaward. For this distance they don't need permission of the Israeligovernment. For the large boats a larger distance is in force: 20 miles. They fishermen need the permission of the Israeli government.

Meeting : at Ministry of Tourism and Antiquities

Project : EIS Gaza Sea Port

Project No.: GAZ 2.1

Date : April 22, 1995

Present : Ministry of Tourism and Antiquities Mr. Mohammed Moain Sadek

Witteveen + Bos / TEAM Mr. Mohammed Gobrail

Mr. Nabil Sha'th

Mr. Wouter Jan Bolkestein

Copies: present persons, TUTR (project file)

#### 1- Introduction

The purpose of the meeting is mutual acquaintance between EPD and Witteveen + Bos / TEAM . The exchange of information and ideas on the project is the main theme .

# 2- Location and structure of the port.

Because of resons of excavation knowledge about the exact sites and structure (lay - out ) is important. When maps of the sites are given, Mr Mohammed Moain Sadek can give us the information whether there are any archaeological sites on the proposed, alternative locations.

# 3- Landowner ship

There are three possibilities of landownership:

- governmental
- land owned by a foundation
- private proparty

Each form of property should be considered, because they all have their requirement in case of landobtaining.

# 4- Function of the port

Mr. Mohammed Moain Sadek: the port must have also a function for the people, so think about the establishment of ferry port operations, in that case several platforms should be built. Passenger travel by boat or ferry could relieve the existing road travel between Gaza and Rafah which is very loaded at this moment.

Meeting

: at Women Service Center (WSC)

**Project** 

: EIS Gaza Sea Port

Project No.

: GAZ 2.1

Date

: April 23, 1995

Present

: Women Service Center

Afat Adran

rresent

Witteveent + Bos / TEAM

Mr. Mohammed Gobrial

Mr. Nabil Sha'th

Mr. Wouter Jan Bolkestein

Copies: present persons, project file (TUTR)

## 1- Introduction

The purpose of the meeting is mutual acquaintance between the Women Service Center. To get an idea of the ideas of the WSC on development like the construction of the Sea Port is the main theme of the meeting.

#### 2- Goals of WSC:

- \* To train Palestinian Women from the occupied territories to carry out base line research on all aspects of women's lives here. The goal is to create a research cadre and the information that will allow women to be informed about and argue for their rights in the local context.
- \* To equip women and the women's movement with the professional skills that have historically been closed to them and that have precluded them from joining men in various sectors of public life on an equal footing. Management, administration, public speaking and writing, organization and strategic thinking and planning are all skills that most Palestinian women have been unable to acquire because they imply access to practical positions in the workplace that have traditionally been reserved for men.
- \* To open a wider world of women's experience and history to women in the local context. Due to the particular situation of the occupation, local knowledge of the world outside these borders remains extremely limited. This has a very negative impact on how Palestinian women are able to conceive of

their situation , as well as limits their ability to conceptualize new strategies to comerehend and change it .

\* To provide training in a variety of practical development skills such as marketing, accounting and small business management as a means to help empower women to be active and responsible actors in their own economic future.

In fact WSC is the only well - organized institution for women in Gaza Strip.

# 3 - Women and the proposed port

Women are not really involved in economy . The link beteen women and the port is also for that reason not very clear .

#### The relationship could be follows:

- the encouragement of women to do some kind of project with respect to the establishment of the port
   for example to promote employment for women .
- the operation of the port markes international contacts between people more easy, which also can stimulate the emancipation.

On the other hand the port will contribute to the environmental damage of Gaza Strip , according to the WSC .

Mr. Mohamed Gobrial delivers the WSC a copy of the questionnaire for the NGO's, with the request to answer it.

Individual women should also have the apportunity to answer the list.

Meeting

: at Ministry of Housing and Public Works

**Project** 

: EIS Gaza Sea Port

**Project No** 

: GAZ 2.1

Date

: April 23,1995

**Present** 

: Ministry of Housing and Public Works

Mr. Ibrahim Abu Humaid

Witteveen / TEAM

Mr. Mohammed Gobrail

Mr. Nabil Sha'ath

Mr. Wouter Jan Bolkestein

Copies: present people, TUTR (project file)

#### 1- Introduction

The purpose of the meeting is mutual acquaintance between the Ministry of Housing and Witteveen + Bos / TEAM . Exchange of information and ideas on the project is the main theme .

#### 2. Location of the Port

For the location of the port the following factors should be considered:

- the geographical and political status
- the function and nature of the port
- transportation network
- industrial zones
- natural development of the urban area of Gaza city .

After analyzing these factors the area south of Gaza, between the Israeli settlement and Wadi Gaza is must suitable for port construction. The coastal zone north of Gaza city will be allocated (preferably) for beach tourism and recreation.

Meeting

: at Ministry of Planning and International Cooperation

Physical Planning Department.

**Project** 

: EIS Gaza Sea Port

Project No.

: GAZ 2.1

Date

: April 24, 1995

Present

: Physical Planning Department

Mr. Mohammed E. Sbakhi

Witteveen + Bos / TEAM

Mr. Alaa Sha'at

Mr. Albert Treffers

Mr. Wouter Jan Bolkestein

Copies

: present persons, Mohammed Gobrail, Mr. Nabil Sha'th

#### 1- Introduction

The purpose of the meeting is mutual acquaintance between the Physical Planning Department and Witteveen + Bos / Team, Deliberation about the alternative sites of the poort is the main theme of this ( short ) meeting.

# 2- Location of the port

Within the Palestinian National Authority there is a strong preference for the site, which is know in the Basic Engineering Study as location IVA. For a great number of reasons this location is the most feasible one.

#### 3- Site Visits ·

The appointment is made to make a visit to the sites at Tuesday 25, April 1995 at 2. p.m. Mr. Mohammed will give Witteveen + Bos / TEAM a detailed map (1: 20.000) of the area.

Meeting

: at Ministry of Planning and International Cooperation

**Physical Planning Department** 

**Project** 

: EIS Gaza Sea Port

Project No.

: GAZ 2.1

Date

: April 24, 1995

Present

: Physical Planning Department

Mr. Ulf Tellefsen

. Witteveen + Bos / TEAM

Mr. Alaa Sha'at Mr. Albert Treffers

Mr. Wouter Jan Bolkestein

Copies: present persons, Mohammed Gobrail, Mr. Nabil Sha'ath, TUTR (project file)

### 1- Introduction

Short meeting, informally arranged after the meeting with Mr. Mohammed E. Sbakhi.

Mr. Ulf Tellefsen is a consultant of Asplan Viak AS from Norway. He is in the scope of the Institutional Building Project working at the Structure Plan for Gaza Town.

#### 2- Structure Plan

The main issue is whether the Structure Plan , which is under preparation , should give any limitation to the development of the port .

The Structure Plan should form the physical plan for Gaza Town in which all principle functions (housing, industrial areas, agricultural areas, transportation etc) are taken up. In the plan the port has been taken up according to location IVA of the Basic Engineering Study.

It is expected that any other location of the port will be acceptable from a physical planning point of view, merely because of the importance of the port.

Meeting

: at Ministry of Planning and International Cooperation

Gaza Environmental Profile (GEP)

**Project** 

: EIS Gaza Sea Port

Project No.

: GAZ 2.1

Date

: April 24, 1995

**Present** 

: GEP

Mr. Reitse Koopmans

Witteveen + Bos / TEAM

Dr. Ala'a Sha'at Mr. Albert Treffers

Mr. Wouter Jan Bolkestein

Copies: present persons, Mohammed Gobrail, Mr. Nabil Sha'ath, TUTR (project file)

# 1- Introduction

The purpose of the meeting is to get information of the GEP-project, Mr. Reitse Koopmans as a Dutch consultant of Euroconsult is until November 1995 as Dutch Project Manager involved in the GEP - project.

# 2- GEP - project

The aim of GEP is to establish a beginning of environmental policy in Gaza. For that purpose three studies has been already finished:

- Part One : Inventory of Resources
- Part two: Interactions between Man and Environment.
- Part three: Towards a sustainable use of Resources.

The team, stational with the EPD of the Ministry of Planning and International Cooperation is working at this moment at Part Four of the GAP: the Action Plan.

The main environmental prolems of Gaza are the effects of the shortage of fresh water and land The wadi and land issues will be dealt by priority in the Action Plan:

- For the water problem a Task Force of the Water Resources Action Programme (WRAP) is

established which deals with water resources, water resources management, demand and supply and water use. Mr. Koopmans gave us the report: " A rapid in interdisciplinary scetor review and issues paper " (October 1994).

- In cooperation with the Physical Planning Department of Mohammed E. Sbakhi GEP made three scenario's for the spatial development of Gaza :
- \* existing situation
- \* autonomous growth
- \* social welfare.

## 3- Development of legislation

A Danish consultant, Dite Sake is working on an environmental legislation programme. The Canadians support EPD to set up guide lines for EIA.

## 4- Gaza Sea Port

The construction of a sea port would be on the benefit to the economy of Gaza. Location 4 A was taken up in the three scenario's for the spatial development of Gaza.

## 5- Gender aspects

There is no basic study of the role of women in the Palestinian society. Gender specific data do not exist. For these reason it is impossible to set a gender specific environmental policy or EIS General statements can always be made, of course.

## **Confirmation Notes**

Meeting

: at Ministry of Transport

**Project** 

: EIS Gaza Sea Port

Project No.

: GAZ 2.1

Date

: April 27, 1995

Present

: Ministry of Transport

Mr. Maher M. Shehadah

Witteveen + Bos / TEAM

Mr. Mohammed Gobrail

Mr. Nabil Sha'ath Mr. Albert Treffers

Mr. Wouter Jan Bolkestein

**Coppies** 

: present persons, TUTR (project file)

### 1 - Introduction

The purpose of the meeting is mutual acquaintance between EPD and Witteveen / Bos / TEAM . The lay - out of the port in relation to its function and the connecting infrastructure are the main themes.

## 2 - Port location and port requirements

Location IV A is preferable because on that site land is available, land that is owned by PNA already. A special road (Transport Corridor) is needed to connect with the main road. A new built way should connect the planned port with a planned airstrip in the south east of Gaza Strip. The railway between Gaza and Rafah should be recovered

Port requirements. The port must be suitable as a :

- commercial port ( general cargo , petroleum )
- fishery port
- port for ferry operations.
- military port

Five docks are considered to make bulk transport, liquid bulk (petroleum) and transfer of containers possible.

In case of bulk the Ministry of Transport is thinking at

- wheat, grain
- corn
- other agricultural products

- The port could be a gateway to other countries in the region; the West Bank, Jordan, Saudi Arabia etc.

The port must be able to receive heavy cargo with vessels from 20.000 up to 50.000 DWT. Breakwater and docks etc. should be suitable for this purpose. The costs of port construction are estimated at U\$ 58-60 million ( not included roads and provisions for port authority ). The EIS will be checked by the Israeli whether the port is damaging the Israelian coast or not.

Mr. Tilbani (Ministry of Transport) is able to say more about aspects of general management of road planning. He is back in Gaza at April 29, 1995.

## 3 - Port related industry

Heavy industries are not prefered in the industrial area close to the port. The Ministry of Transport thinks about food industries and industries for consumer goods. A free zone is under consideration.

## 4- Decision making and port management.

A commission which consists of representatives of:

- EPD
- Ministry of Transport
- Ministry of Housing
- Universities

judges the relevant documents (of which the EIS makes part of it) and takes decisions about further developments.

If the port is coming under construction a separate Port Authority will come in to force

## 5- Excursion to the Netherlands

Mr. Maher Shehadah is told that the proposed excursion to the Netherlands will take place in June or July 1995. The purpose is on - the - job training to create capacity for environmental impact assessment and port management. This issue will be discussed with Dr. Mohammed Ajjour. Appointments will be made about the participants and the programme. Participants will be informed as soon as possible

## **Confirmation Notes**

Meeting

: at Ministry of Industry

**Project** 

: EIS Gaza Sea Port

Project No.

: GAZ 2.1

Date

: April 29,1995

Present

: Ministry of Industry

Witteveen + Bos / TEAM

Mr. Ismail Hassan Al Mesmal

Mr. Mohamed Gobrail

Mr. Nabil Sha'ath

Mr. Wouter Jan Bolkestein

Copies: present persons, TUTR (project file)

## 1- Introduction

The purpose of the meeting is mutual acquaintance between the Ministry of Industry and Witteveen + Bos / TEAM. Getting information about the possible and expected im - and export of the port is the main issue of the meeting. Mr. Ismail Hassan tells about the discussed possibilities of land reclamation and to build the port on the fill.

## 2- Major imports

- Cement and other building materials .
- Food and beverages: sugar, flour and rice.
- Petroleum products .
- Furniture
- Industrial equipment ..
- Electrical products and appliances .
- Consumer goods.

## 3 - Major exports

- Citrus and some other vegetables and fruits
- Flowers " recently "

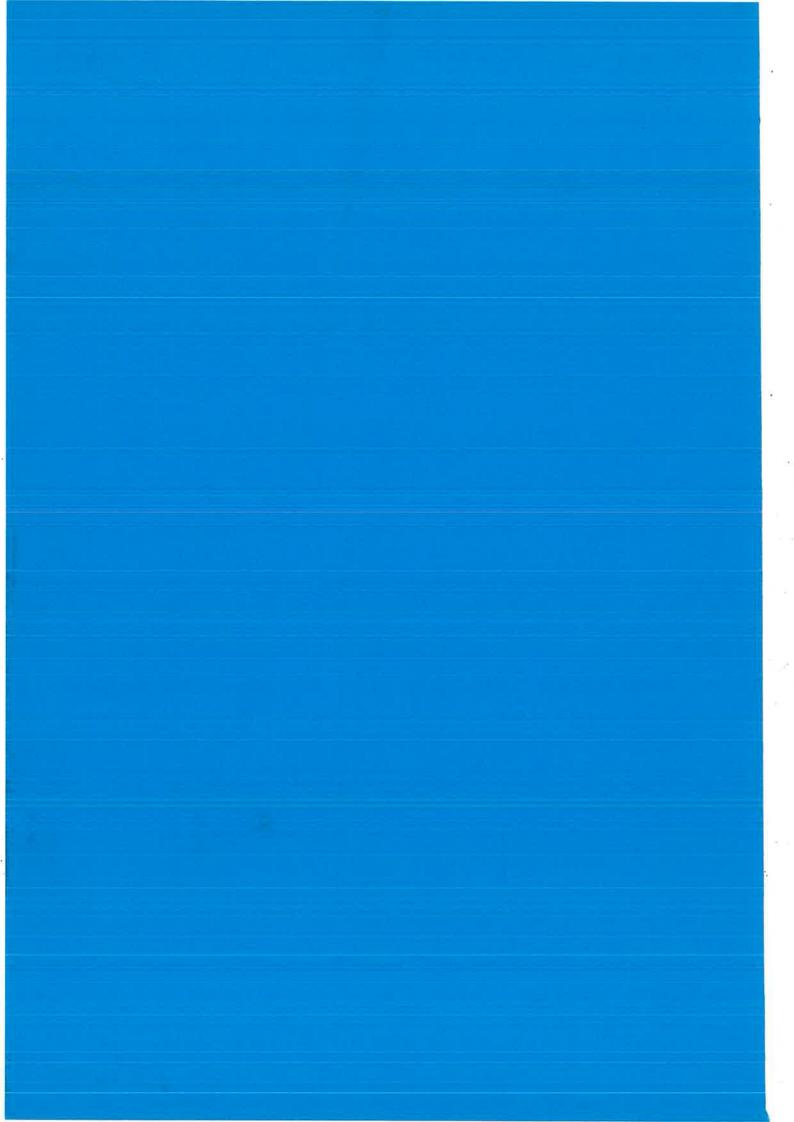
There is a potential to export clothes and garments in the future.

### 4- More information

The Trade Department in the Ministry of Industry may be having records for the volume of trade with Israel over the past two years. However, patterns of trade is future may change considerably for several reasons:

- migration, emigration and immigration forces
- current boom of the construction industry

**ANNEX IV Socio-economic profile** 



## Socio-economic Environment Current Status

IV.1. Population characteristics

IV.1.1. The Gaza Strip (365 Km<sup>2</sup>) is a coastal area a long the eastern Mediterranean Sea 40 Km long and between 6 and 12 Km wide.

The major cities are Gaza, Khan Younis - Dair AI - Balah and Rafah.

The area of Gaza Strip is densely populated with an estimated population of 850000.

Gaza city is densely populated with population of about 274000.

The growth rate is said to be 8.2 % for the Gaza Strip.

- Unemployment is approximately 40% of the total work - force figured 136,290 until 31-12-1994.

The above mentioned percentage increases when Israel closes the border preventing the Palestinian from working.

IV.1.2. Qualified workers are available in many fields. Graduates of post-secondary institutions are available in a large number with a great variety of majors including medicine, dentistry, pharmacy, engineering, arts, natural sciences, social studies, etc. However, a considerable number of such graduates needs training in their fields in order to increase their capabilities.

IV.2. Water Supply and Sanitation

IV.2.1. Fresh water is a scarce resource in the semi-arid climate of the Gaza Strip.

Flood irrigation of crops like citrus - with a high water consumption and low economic return - is one example of the ways in which water goes to waste.

The consequence of this is that the fresco ground water resources of the Gaza Strip are being depleted at an ever increasing rate. In the south near Rafah town, tables decline about 0.2 m per year. As a result, ground water salinity is rising in the same area with 20 mg/1/year.

In the north the situation is better.

IV.2.2. Only three communities have significant reticulation systems, operating conventional water-born sewerage networks, namely Gaza city (with the exception of the newly built area in the south-waste), Jabalia-Nazla village and Jabalia refugee camp. In all the cases the waste water is conveyed to treatment plants. Some other piped systems exist in isolated areas, such as Rafah town and camp, but they serve limited areas, although again the waste is conveyed to a small treatment plant. In addition, many of the camps have open channels for conveyance of storm water to a suitable discharge point, either a wide, an unused open field or a coastal area.

In those areas where piped systems exist the sewage is conveyed away from the dwellings, and there is no negative environmental health impact.

There are three sewage treatment plants, designed as stabilization ponds with mechanical aerators in the facultative mode, but unfortunately none is functioning that is, they merely act as setting pods and the sewage passes through without any treatment excepts the removal of solids.

the untreated effluent from Gaza city passes directly to Wadi Gaza, where is eventually forms a lake of raw sewage discharging into the surf zone of the Mediterranean.

IV.2.3. Both the refugee camps and the municipalities dispose of their solid waste in open dump sites located throughout the Gaza Strip. Some of the locations of the various sites are official, others are not. Sanitary land filling is not practised, the material is simply dumped and spread out in open areas. These areas are uncontrolled and any kind of waste material liquid of solid, may be disposed of. At some sites the waste is burned, and at others a thin layer of soil may be placed over filled trenches at infrequent intervals.

Furthermore, the private-sector collectors are prone to disposing of their waste wherever space is available, for example, on the beach north of Gaza city.

The natural and urban environment of the Gaza Strip is spoiled by the widespread presence of solid waste, which presents major public health problems.

Furthermore, the landscape pollution, affecting both inland and coastal areas, prevents any kind of recreation in these areas for local population. In an area where land is scarce, this has particularly negative social consequences.

#### IV.3. Economic activities

## IV.3.1. Agriculture

Agriculture is the most important economic sector. Traditionally, agriculture was based on citrus-growing and rainfed horticulture.

IV.3.1.1. Several types of soils can be found in Gaza Strip: sandy soils, loess soils, alluvial soils. Sandy soils are of very low water-holding capacity, very low in organic matter, chemically poor, but physically suitable for intensive horticulture in green houses and with tunnels.

Typical loess soils are found in the area between the city of Gaza and the Wadi Gaza. Most soils in the Gaza area are more of less influenced by deposition of eolian dust, since the Gaza Strip is situated of the flank of the main deposition in the North-eastern Negev desert.

Alluvial and grumosolic soils, dominated by loamy clay textures are found on the slopes of the northern depressions between Erez and Wadi Gaza.

The agriculture sector half of the available 365 Km<sup>2</sup> of the Gaza Strip.

The total agriculture area covered 170.000 dunums (170 Km²) in 1966 increasing afterwards with a peak in 1968 to 198.000 and slightly decreasing to 179 dunums over the past ten years.

Urban use in that same period increased from 11.2% to almost 19%.

IV.3.1.2. Crops produced in Gaza Strip include wheat, barley, corn, citrus, olives, almond, dates, vegetables, fruits.

Production of kinds mentioned above meets the local demand, and the surplus needs to be exported. Export faces difficulties and restrictions imposed by Israel. Thus the port will be of a great value and importance.

- IV.3.1.3. The use of fertilizers, pesticides and fumigants in vegetables production is high. Percolation losses through the coarse-textured, permeable soils lead to increase groundwater pollution.
- IV.3.1.4. The beaches of Gaza are potentially interesting for beach tourism, not only for the local population but also for tourists from the West Bank and other Arab countries (Jordan, Egypt, the Gulf countries). A major problem, however, is the sever pollution of both sea water and beaches, providing a major health risk for swimmers and marine life. Especially the beaches in front of Gaza city, Beach camp and Deir ElBalah are polluted by sewage system outfalls and individual sewage and sullage drains ending either on the beach and cliffs or a short distance away in the surf zone. Surf zone sea water quality is therefore below the standard for safe swimming in the proximity of these outlets.

The sullage and sewage running down the cliffs have serious effects on the spreading of unhygienic conditions on the beaches.

The odour emanating from these sources of pollution is not only experienced on the beach, but reaches some 50 - 100 m into the nearby camp and town quarters.

### IV.3.2. Fishery

IV.3.2.1. Recently the free fishing zone for Gaza fishermen was extended to a 20 mile zone covering some 800 Km<sup>2</sup>. Fishing along the coasts of Beit Lahia as well as along the Khanyounis-Rafah area is prohibited for Palestinians. Israeli fishermen are allowed to enter the Gaza free fishing zone.

Landing places for Palestinian boats are found near Gaza city, Deir El-Balah, Khan Younis and Rafah.

IV.3.2.2. The free fishing zone in Gaza is said to be not rich in fish. Beyond that area fish may be found in considerable quantities.

IV.3.2.3. Total catches by Gaza fishermen in 1980s up to 1990 dwindled to an annual catch of some 229 tons in 1988/89 and gradually increased to 384 tons in 1989/1990 and 1200 - 1795 tons in 1990/1993.

Most prominent catches are those of Sardines (42%), followed by Lokhous (8%)°, Sea Bass (5.4%), Sultan Ibrahim (3.8%), Sea Bream (0.8%) and mullet (0.8%).

Other kinds such as cuttlefish, and Shrimps account together for some 16.3% of the catches.

In total, 2000 licensed fishermen are permanently of semi-permanently active in fissheries, while another 1500 fishermen applied for permissions to catch fish.

## Composition of fishing fleet is as follows:

	type				
area	big boat	medium boat	small boat		
Gaza	61	98	257		
Deir El-Balah	3	11	51		
Khaan Younis	3	37	45		
Rafah	9	31	56		
total	82	177	409		

This is in addition to other simple instruments.

IV.3.3. Industry: several industries exist, some are being developed, and new ones are established to meet the local demand and for export purpose.

IV.3.3.1. Large industrial plants are absent in the Gaza Strip. Small industries such as garages, steel construction, carpenting and citrus packing and processing are located well within the municipalities or along the main road.

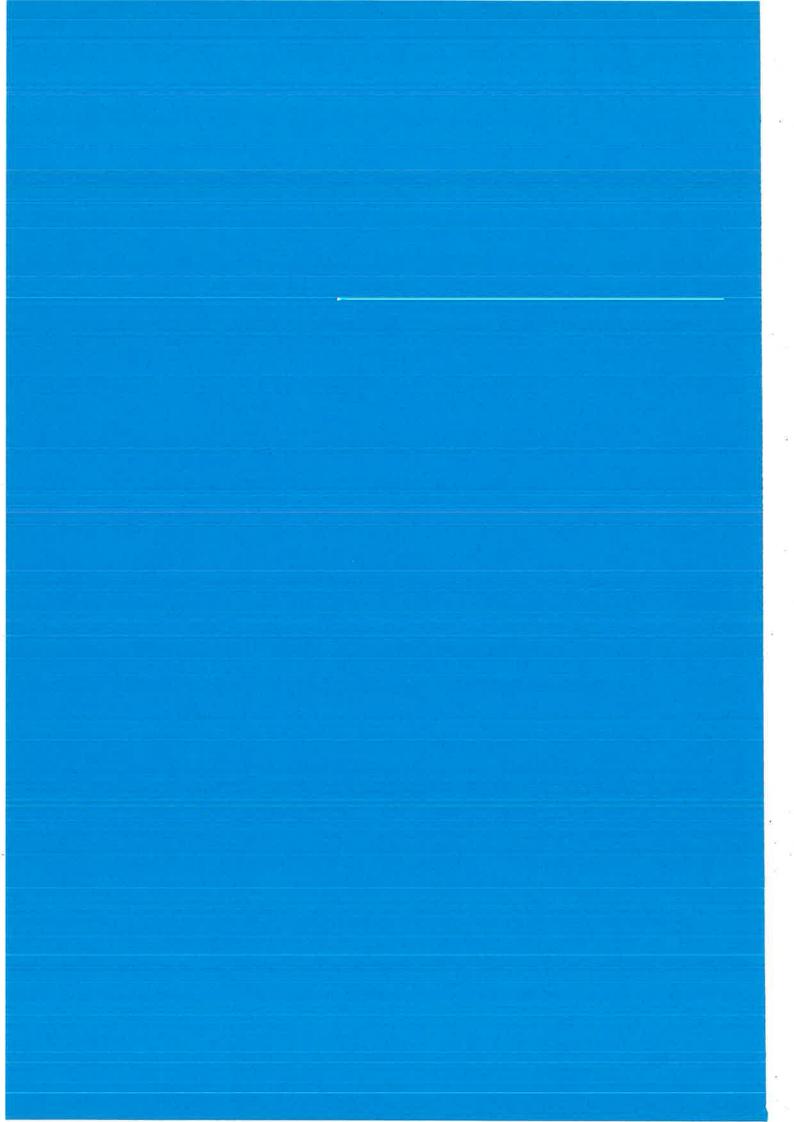
Also many factories producing clothes, plastic tools, furniture, food, have been established. Most of the industries are small-scale.

IV.3.3.2 Commercial and industrial waste are disposed of on the beach north of Gaza, the thing which is deemed hazardous.

## References:

- 1 Ministry of Agriculture
- 2 Ministry of Housing
- 3 Ministry of Tourism an Antiquities 4 Ministry of Transport
- 5 Gaza Environmental Profile Part 1
- 6 Gaza Environmental Profile Part 2 and 3
- 7 Ministry of Labour
- 8 Ministry of Industry

ANNEX V Questionnaire for NGO's



Saza Sea Port

<u>Environmental Impact Statement</u>

<u>Organizational Questionnaire Sheet</u>

<u>April - May 1995</u>

<u>Sheet Number :</u>

ميناء غ<u>زة البدري</u> تقريد الآثار البينية إستمارة الإستقصاء التنظيمي كبريل – مايو ١٩٩٥ إستمارة رقم <u>:</u>

Recognizing Gaza strip's need for a sea port, the Palestinian Authority in coordination and cooperation with the Dutch Government are sponsoring the research and design work required to bring this port into reality.

تقديرا لحاجة قطاع غزة لوجود ميناء بحرى بـــه
تدعم السلطة الفلسطينية، بالتنسيق و التعاون مــع
الحكومة الهوائدية عمل البحوث و التصميمات اللازمة
الحويل هذا الميناء إلى حقيقة واقعة

In this regards, the Dutch Ministry of Foreign Affairs, in collaboration with the Palestinian Ministry of Planning and International Cooperation, assigned the task of preparing an Environmental Impact Statement (EIS) to a consortium composed of a Dutch consultant (Witteveen + Bos), and a Palestinian Consultant (Team Palestine).

و فى هذا الشأن، أسندت وزارة الخارجية الهواندية بالتسبيق مع وزارة التخطيط و التعاون الدولى بالسلطة الفلسطينية مهمة إعداد تقرير دراسة الآثار البينية للميناء الى فريق من الاستشاريين مكون من بيت خبررة استشارى هولندى (فيتيفيين + بوس)، و بيت خبرة استشارى فلسطينى (تيم فلسطين)،

In course of preparing the EIS, we (W+B, & T.P.)

need to explore and take into consideration

opinions and interests of the general public

and the Non-Governmental Organizations.

In the following pages, we designed a simple

questionnaire, to which you are kindly requested

to respond.

و فى إطار الإعداد لهذه المهمة، فإننا نود أن نستكشف و ناخذ فى الإعتبار آراء و إهتمامـــات جموع الشعب الفلسطيني بغزة، و المنظمات الغيــر حكومية بها في الصفحات التالية قمنا بتصميم إستمارة إستقصاء

بسيط، نرجو أن تتفضلوا بملنه و الرد عليه

Your participation in this assignment is highly appreciated, and we assure you of our firm determination to consider your opinions and interests in formulating the EIS findings and recommendations.

مشاركتكم الفعالة فى هذه المهمة محل تقديرنـــا، و نؤكد لكم عزمنا على أن نأخذ آراتكم و إهتماماتكم فى الإعتبار عند إعداد مرنبات و توصيات تقريــر دراسة الآثار البيئية

Gaza Sea Port				ميناع عــــره البدري
Environmental Impac	t Statement	.5		تقرير الآثار البيئية
Organizational Quest	ionnaire Sheet			إستمارة الإستقصاء التنظيمي
April - May 1995				کبریل - مایو ۱۹۹۰
				استمارة رقم
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"by assigning (1) to th	e most important etc."		<b>و,ەك</b> ذ/"	" باعطاء رقع (١) للأنكثر أحمد
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				· ·

Paza Sea Port

Invironmental Impact Statement

Organizational Questionnaire Sheet

April - May 1995

ميناء غ<u></u>زة البح*رى* تقريد الآثار البيئية استمارة الإستقصاء التنظيمي أبريل – مايو 1910 البتمارة رقع

heet Number :			<i>إستمارة رق</i> 1
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		Anna angle	
<ul> <li>Possibility of leakage from oil tankers</li> </ul>		مال حدوث تسرب من ناقلات النفط	- 1
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unlikely			
7- There are several factors that may		اك العديد من العوامل التي يمكن أن تسمهم	7- هنا
contribute to the success of the port.		نجاح الميناء	
Please rank the following factors according	rdina	جو ترتيب العوامل التالية من حيث أهميتها	
to their importance in your opinion :	<b>.</b>	<i>ر رایکم</i> :	فی
"by assigning (1) to the most important etc."		باعطاء رقم (١) للنحتُر أحمية … وحكذًا"	"
by assigning (1) ,			
- Quality, & speed of services		ة و سرعة أداء المقدمات	- جود
- Ability to raise profits for future sustainability		رة على تحقيق أرباح لتوفير القدرة على الإستمرارية	- القدر
,,		×	
- Compliance with governmental directions		زام بتوجهات الحكومة	<ul> <li>الإلتتر</li> </ul>
- Ability to attract high calibers		رة على جذب الكفاءات العالمية	- القدر
		e a matrix	
<ul> <li>Ability to respond to environmental risks</li> </ul>		رة على مواجهة الأخطار البيئية	- القدر
	r	and the same of	
<ul> <li>Community participation &amp; cooperation</li> </ul>		ل و تعاون منظمات المجتمع	- ساع
	r	The substitution of the su	-th
<ul> <li>Marketing abilities in light of competition</li> </ul>		رات التسويقية في ظل المنافسة	- انقدر
		نة الإدارة و قدرتها على المتصرف بحرية	
- Management flexibility, and autonomy		- ۱۹۰۰ره و صوبها نعی انتصارف پدریه	- مرق

Gaza Sea Port

Environmental Impact Statement
Organizational Questionnaire Sheet
April - May 1995
Sheet Number:

ميناء غ<u>زة البحري</u> تقرير الأثار البينية إستمارة الإستقصاء التنظيمي أبريل – مايو 1910 استمارة رقم

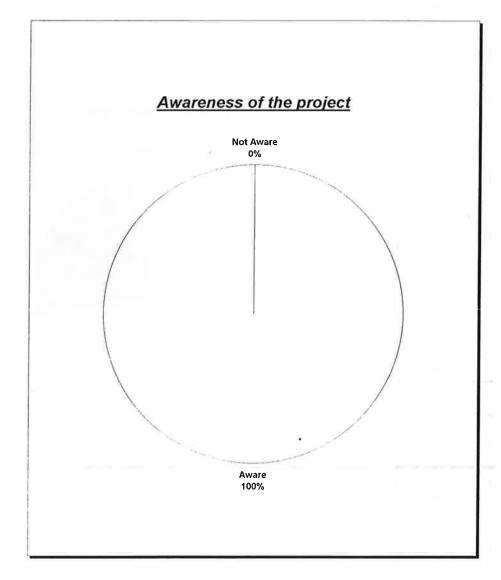
8- Please state in this page any remarks or opinions you have regarding the port and its operations from all prospectives.	8- نرجو أن تدونوا فى هذه الصفحة أية ملاحظات أو آراء لديكم تجاه الميناء وعملياته من كافة المناظير و الأصعدة
	<u> </u>
	-
	`

1- Are you aware of the conduction of a study for establishing a sea port in Gaza ?





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## 2- Generally, how do you perceive the idea of establishing this port?

 2- ما هو تقییمکم لفکرة إنشاء میناء فی غزة بصفة عامة ؟

أعارض بشدة a Highly أعارض b Oppose لا فارق لای <mark>C</mark> Indifferent

d Welcome اُرحب جدا e Highly

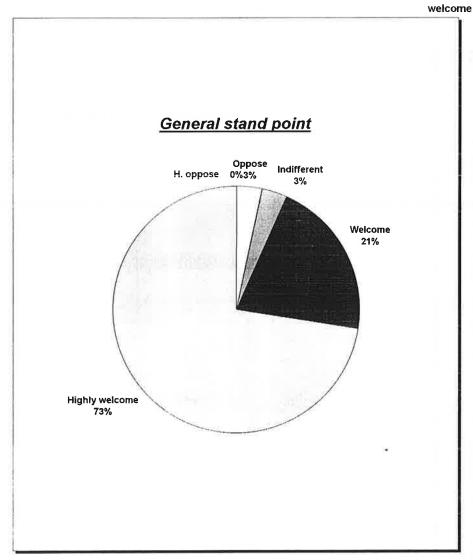
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43 44 45

Total

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3.45% 3.45% 20.69%



3- Ports have different uses, \* please rank the following uses according to their importance in your opinion:

"by assigning (1) to the most important ... etc."

- Commercial uses - Passenger travelling - Oil importation - Marina & Yachting

- Fishering

للمواتئ البحرية استخدامات متعددة	-3
نرجو ترتيب الإستخدامات التالية من حيث أهميتها	
في رأيكم	
باعطاء رقم (١) للأكثر أهمية وهكذا"	"

- استخدامات تجارية

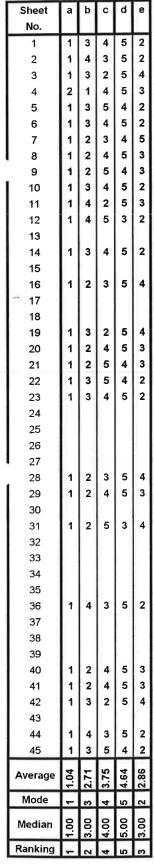
لحركة المسافرين

- إستيراد النفط

- مرسى لليخوت

- صيد الأسماك

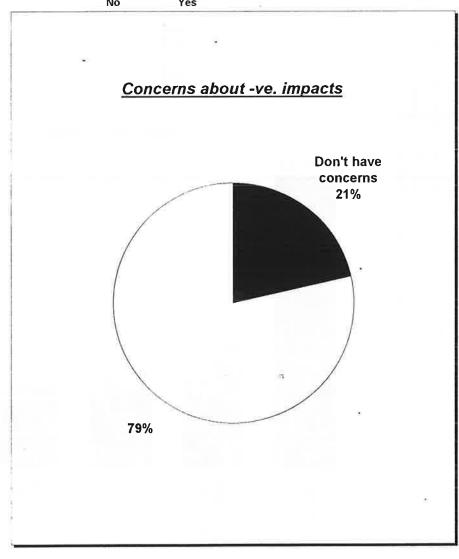
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4- Do you have concerns regarding some draw-backs or negative impacts that could be associated with the port construction / operations?



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Total	9	22	
%	21.43%	78.57%	



## 5- Please rank the following probable negative impacts according to their seriousness :

"by assigning (1) to the most serious ... etc."

- Possibility of endangering marine life
- Possibility of unacceptable noise level
- Possibility of salvaging operations
- Possibility of leakage from oil tankers
- Possibility of endangering social life style

- 5- نرجو ترتيب الآثار السلبية المحتملة التالية من حيث درجة خطورتها في رأيكم
  - باعطاء رقع (١) للنمتر خطورة ... وهكذا"
    - إحتمال الإضرار بالحياة البحرية
    - إحتمال حدوث درجة عالية من الضجيج
      - إحتمال التعرض لعمليات تخريبية
    - احتمال حدوث تسرب من ناقلات النفط
    - احتمال الإضرار بأسلوب الحياة الإجتماعية

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no reply

## 6- With regards to the aforesaid potential negative impacts, what is your assessment to their probability of occurance?

6- بخصوص الأثار السلبية المحتملة السابق ذكرها،
 ما هو تقييمكم لإحتمالات حدوثها ؟

- Possibility of endangering marine life - إحتمال الإضرار بالحياة البحرية ليس لدي تقييم محتمل جدا بعيد الإحتمال d a b С e Very Unlikely Can't assess Probable Highly probable unlikely Sheet No. Perceived probability of endangering marine life Very unlikely Unlikely 3% 0% Can't assess Highly prbable 45% Probable 45% Total 44.83% 3.45% 0.00% %06.9 44.83% %

## 6- With regards to the aforesaid potential negative impacts, what is your assessment to their probability of occurance?

- إحتمال حدوث درجة عالية من الضجيج - Possibility of unacceptable noise level بعيد الإحتمال ليس لدي تقييم e b d c a | Probable Highly Unlikely Can't assess Very probable unlikely Sheet b No. 2 3 Perceived probability of unacceptable 4 noise level 5 6 1 7 Very unlikely 0% 8 Unlikely 9 17% Highly prbable 10 24% 11 1 12 13 14 Can't assess 15 10% 16 17 18 19 1 20 21 22 23 24 Probable 25 49% 26 27 28 1 29 30 1 31 32 33 34 35 36 1 37 38 39 40 41 42 1 43 44 45 <u>₹</u> Total 17.24% 10.34% 48.28%

# 6- With regards to the aforesaid potential negative impacts, what is your assessment to their probability of occurance?

6- بخصوص الآثار السلبية المحتملة السابق ذكرها،
 ما هو تقييمكم لإحتمالات حدوثها ؟

	- Possi	bilit	y o	sal	vag	ing (	perations		، لعمليات تخريبية	- إحتمال التعرض
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## 6- With regards to the aforesaid potential

## 6- بخصوص الأثار السلبية المحتملة السابق ذكرها، ما هو تقييمكم لإحتمالات حدوثها ؟

Probable 55%

e

negative impacts, what is your assessment to their probability of occurance? - احتمال حدوث تسرب من ناقلات النفط - Possibility of leakage from oil tankers ليس لدي تقييم بعيد الإحتمال d b С a Probable Highly Very Unlikely Can't assess probable Perceived probability of leackage from oil tankers Can't assess 0% 7% Very unlikely 0%, & Unlikely Highly prbable 38%

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6- بخصوص الأثار السلبية المحتملة السابق ذكرها، ما هو تقبيمكم لإحتمالات حدوثها ؟

24%

محتمل جدا

e

Highly

probable

6- With regards to the aforesaid potential negative impacts, what is your assessment to their probability of occurance? إحتمال الإضرار بأسلوب الحياة الإجتماعية - Possibility of endangering social life style بعيد الإحتمال ليس لدي تقييم b d c a j Unlikely Probable Very unlikely Sheet No. 2 1 3 1 Perceived probability of endangering 4 social life style 5 1 6 7 Very unlikely 7% Highly prbable 8 10% 9 10 11 12 Unlikely 13 14 1 15 16 17 18 19 20 1 Probable 21 1 22 23 Can't assess 17% 24 25 26 27 28 29 30 31 32

45 Total

%

1

17.24%

41.38%

%06.9 24.14% 10.34%

7- There are several factors that may contribute to the success of the port. Please rank the following factors according to their importance in your opinion:

"by assigning (1) to the most important ... etc."

- Quality,	8.	speed	of	services	

- Ability to raise profits for future sustainability

- Compliance with governmental directions

- Ability to attract high calibers

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No.

- Ability to respond to environmental risks

- Community participation & cooperation

- Marketing abilities in light of competition

d e

- Management flexibility, and autonomy

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7- هناك العديد من العوامل التي يمكن أن تسهم فى نجاح الميناء ترجو ترتيب العوامل التالية من حيث أهميتها فی رأیکم

" باعطاء رقم (١) للخكيُر أهمية ... وهكذا"

- جودة و سرعة أداء الخدمات

- القدرة على تحقيق أرباح لتوفير القدرة على الإستمرارية

- الإلتزام بتوجهات الحكومة

- القدرة على جذب الكفاءات العالية

القدرة على مواجهة الأخطار البينية

- تفاعل و تعاون منظمات المجتمع

- القدرات التسويقية في ظل المنافسة

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Average Mode

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Ranking

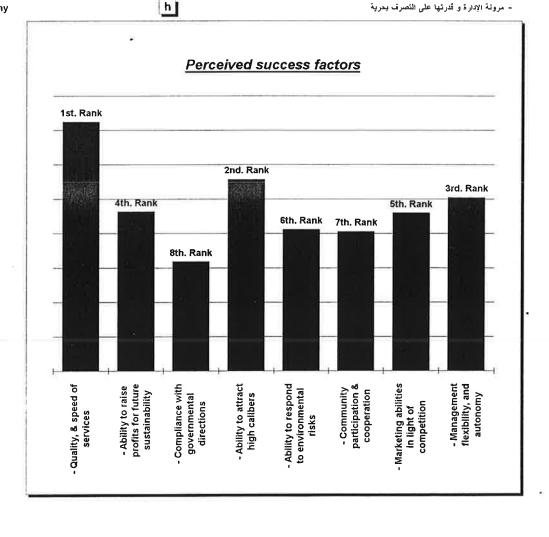
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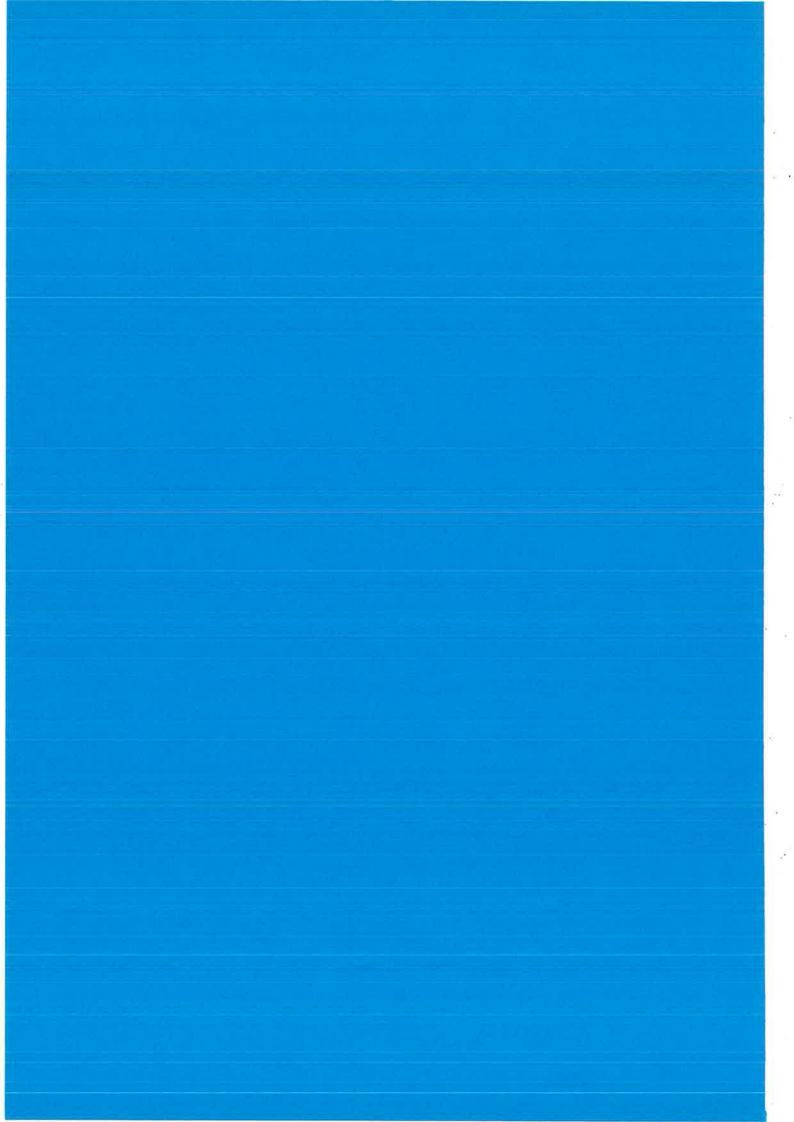
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ANNEX VI First screening of alternatives



### VI.1. Introduction

As stated in chapter 8 of the Progress Report (PR) the Basic Engineering Study (BES) of Grabowsky&Poort is the major basis for the development of alternatives. The studies which have been carried out until now show the following alternatives for the site and for the layout of the port.

### VI.2. Alternatives for the Site

In part 6 of the final report of the Basic Engineering Study a Site Selection Study is presented. In total 6 potential sites for the port have been identified. For a map with the potential sites reference is made to figure.....##

At a later stage the site IVa was added, bringing the total number of sites to 7.

## VI.3. Alternatives for the Port Lay-out

In part 7 of the final report of the Basic Engineering Study a Port Lay-out Study is presented. In total 4 potential lay-outs for the port have been identified, e.g alternatives A, B, C and D. A fifth layout is presented at the end of the report, e.g. an optimized version of alternative C. For the lay-out reference is made to the figures..##.

For each alternative a possible phasing in 4 phases has been presented, e.g. phases Ia, Ib, II and III. For alternative A the phase III cannot be implemented due to physical obstructions.

### VI.4. Alternatives for the EIS

#### VI.4.1. General

In principle each alternative for the port lay-out, including its different phases should be evaluated for each site. This would result in a total of (7 sites x 5 layouts x 4 phases) = 140 alternatives to be evaluated for the EIS. For practical and schedule reasons it has been decided to carry out a first screening of alternatives and to select only those alternatives that will fulfil the programme of requirements as has been set out for the port development. Moreover the decision has already been made by the Palestinian Authority to construct the port between Wadi Gaza and the border of the Municipality of Gaza.

Each site- and lay-out alternative is checked against conformity with the Programme of Requirements. In case an alternative does not fulfil one or more of the important elements of the programme of requirements it is then not further evaluated. The option remains open of course to include again such alternative in case it appears that the other alternatives must be rejected for other, for instance, environmental reasons.

## VI.4.2. Programme of Requirements

The Programme of Requirements for the port is presented in part 7 of the basic engineering moet jul genotiveerd study, with as main elements:

Element	phase la	phase III
Design vessel DWT Berth length m1	5,000 550	70,000 3,100
terminal area ha	16	109

## VI.4.3. First screening of sites

This site does not fulfil the Programme of Requirements for the following reasons: Port operational requirements:

- navigation through Israeli waters may be required;
- not central in goods distribution chain in Gaza;

#### Time factor:

- not sufficient area is available due to an Israeli settlement in the neighbourhood: Security:
- close to the border;

#### Site II

This site does not fulfil the Programme of Requirements for the following reasons:

Port operational requirements:

- not central in goods distribution chain in Gaza;

Physical planning:

 possible conflict with the expansion plans for the city of Gaza, there is no possibility for port expansion;

Project and maintenance costs:

- the land acquisition costs will be extremely high.

### Sites III, IV and IVa

Site IVa is most suitable. For determination of the exact location the neighbourhoods of sites III and IV will also be considered.

#### Site V

This site does not fulfil the Programme of Requirements for the following reasons: Port operational requirements:

- not central in goods distribution chain in Gaza;
- there are limiting factors for the development of Port Industrial areas;

Physical planning:

- remote from urban centers;
- a new transport corridor has to be developed;

Time factor:

- most of the land is private property and land acquisition will be time consuming; Project and maintenance costs:
- subsoil conditions are bad, construction costs will be relative high;

#### Site VI

For this site the same is valid as for site V.

## VI.4.4. First screening of alternatives for the port lay-out

In the analysis of the Basic Engineering Study the focus is on phases IB and II, being the most likely size of ports for Gaza.

The Programme of Requirements on which the lay out

alternatives are evaluated are summarized in the Basic Engineering Study as follows:

- a) excellent potential and flexibility in expansion;
- b) minimization of use of existing coastline and hinterlaying lands;
- c) optimal service to port users, to be able to compete with adjacent Mediterranean ports.

## Alternative A

This lay-out does not fulfil the Programme of Requirements for the following reasons: Manoeuvring:

- the down time is rather high;

Terminal operations:

- long internal transport;
- port facilities are of less quality than the competitors;
- phase II does not satisfy the operational requirements for that phase;

## Landuse:

- there are only limited possibilities for the development of new land;

#### Flexibility:

- the layout is not flexible;
- breakwater extension is not possible;

#### Construction:

- use of local labour will be limited;

## Alternative B and the selected alternative 'S'

Layouts B fulfil the most important elements of the Programme of Requirements. Alternative C has been optimized to the selected alternative 'S'.

### Alternative D

This layout does not fulfil the Programme of Requirements for the following reason: Land use:

- this lay-out uses up quite a lot of coastline.

### VI.5. Conclusion

The above first screening results in the following potential alternatives for sites and port lay-outs that will be further evaluated in the EIS:

#### Sites alternatives

- Site IVa with consideration of the neighbourhoods of sites III and IV Port lay-out alternatives
- Lay-out B
- Optimized lay-out 'S'

The following phases will be evaluated:

- Phase la;
- Phase III;

being the planned initial and the ultimate phases of the port development. The EIS will concentrate on phase III, whereas the environmental aspects of phase Ia will be checked against those of phase III.

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