

**ENGINEERING DESIGN, CONSTRUCTION MANAGEMENT,  
AND ENVIRONMENTAL ASSESSMENT SERVICES FOR  
SECONDARY CITIES PROJECT IN EGYPT**

**ASWAN GOVERNORATE  
CITIES OF KOM OMBO, DARAWO & NASR  
ENVIRONMENTAL SCOPING REPORT**

Submitted to

**U.S. AGENCY for INTERNATIONAL DEVELOPMENT  
CAIRO - EGYPT**

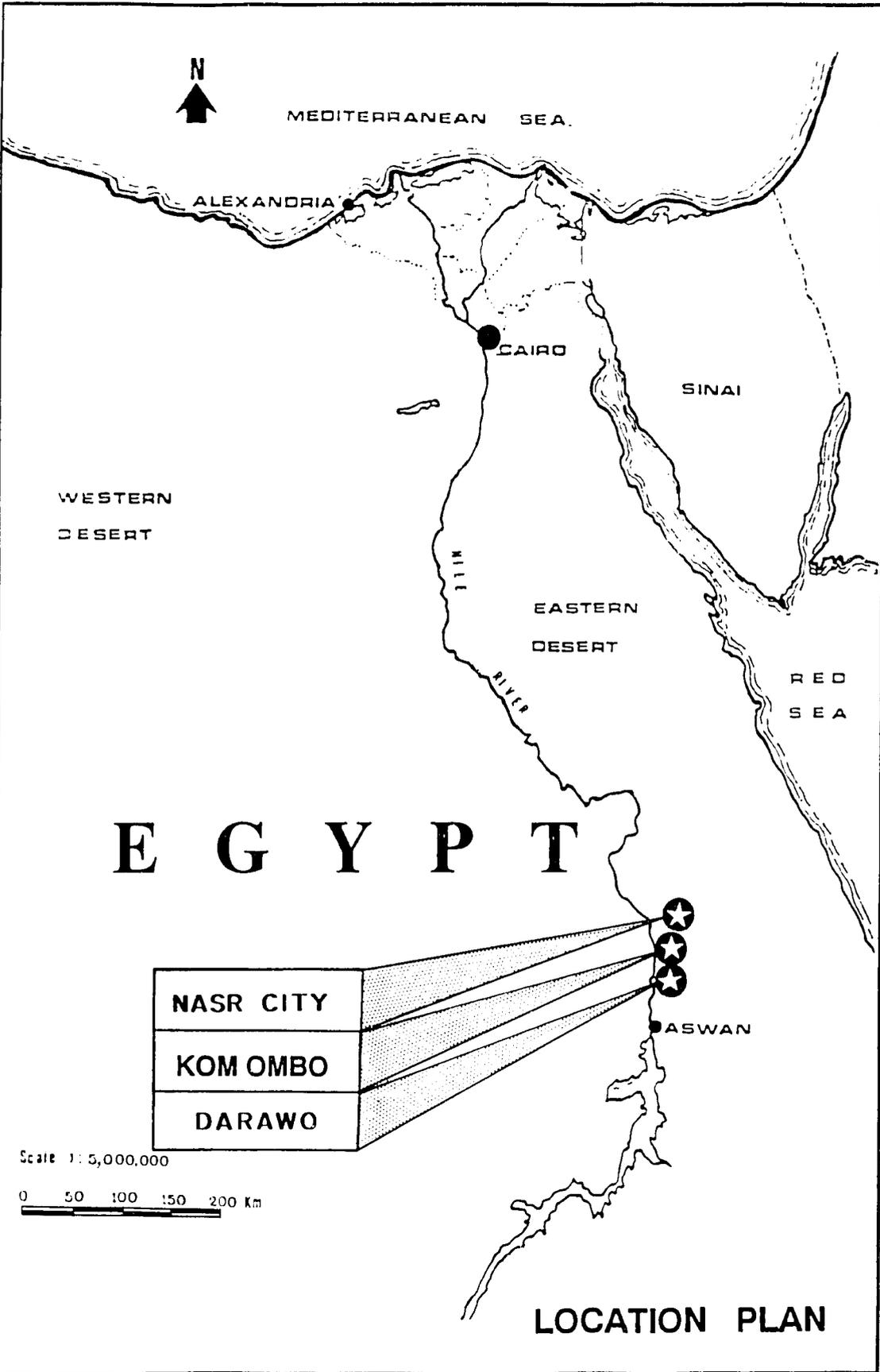
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19 Oct. 1995



MEDITERRANEAN SEA.

ALEXANDRIA

CAIRO

SINAI

WESTERN  
DESERT

NILE  
RIVER

EASTERN  
DESERT

RED  
SEA

E G Y P T

- |           |
|-----------|
| NASR CITY |
| KOM OMBO  |
| DARAWO    |

ASWAN

Scale 1:5,000,000

0 50 100 150 200 Km

LOCATION PLAN

## **SECONDARY CITIES PROJECT**

### **ASWAN GOVERNORATE**

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# SCOPING REPORT: ASWAN GOVERNORATE CITIES

## 1. Introduction

This is the Scoping Report for the Aswan water and wastewater facilities components of the Secondary Cities Project, undertaken for the Government of Egypt (GOE) through the National Organization of Potable Water and Sanitary Drainage (NOPWASD) and the United States Agency for International Development (USAID).

Background data and information for the proposed activities in the three Aswan Governorate cities of Kom Ombo, Darawo, and Nasr City were gathered and reported in the Secondary Cities Background Data and Information Report and Technical Annex, completed in March 1994 by USAID's Water and Sanitation for Health Project (WASH).

## 2. Project Description

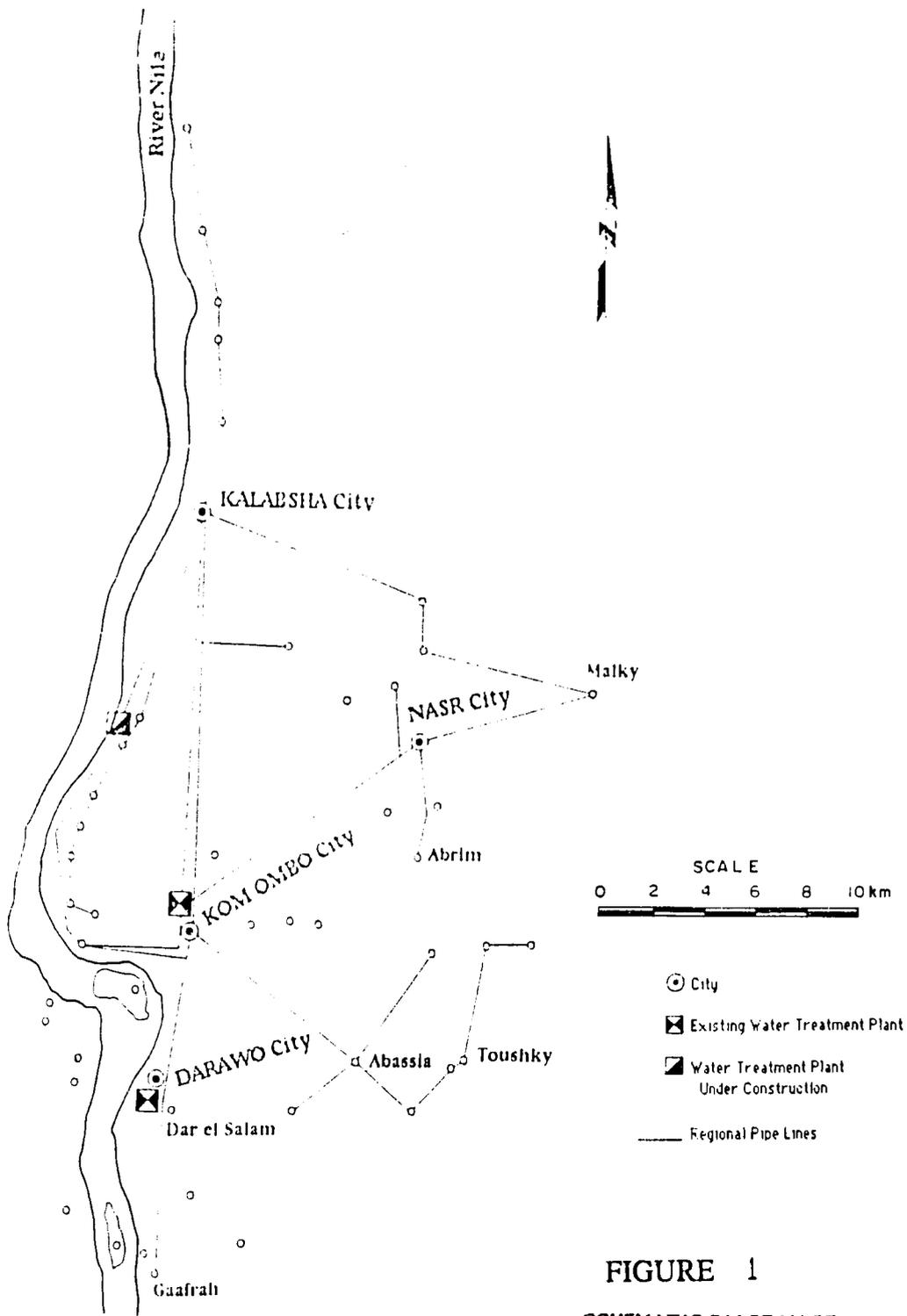
The three subject cities are close to each other, and to some extent will share water and wastewater facilities, as shown schematically in Figures 1 and 2, and as outlined further below.

### 2.1 Kom Ombo and Darawo

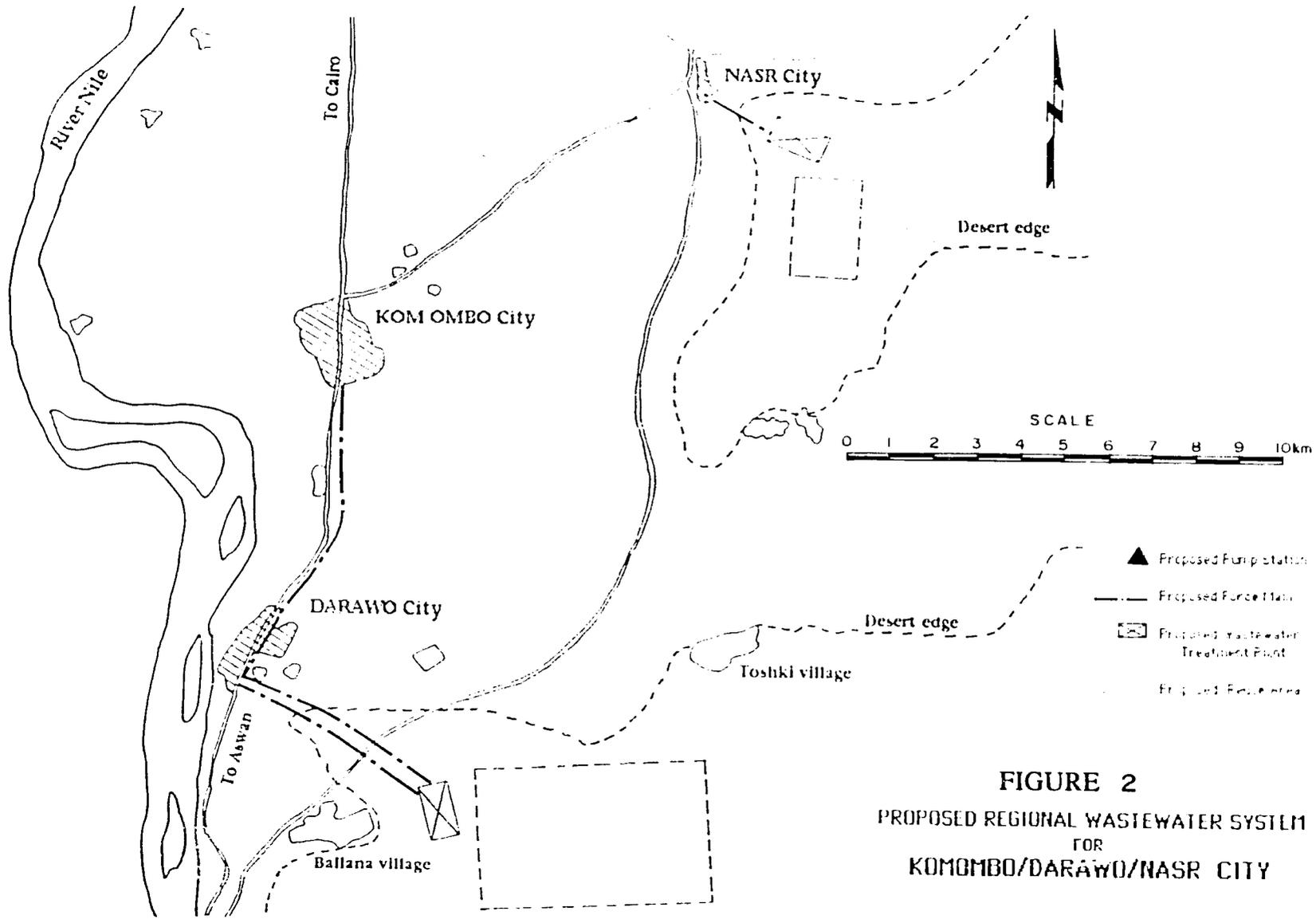
**Water supply.** The existing water supply for the Kom Ombo, Darawo, and Nasr City area is a regional supply system, in that not only are the three cities supplied from the treatment plants, but several smaller villages also receive their water supplies from these plants. A new regional water plant is currently under construction, and is expected to be operational in early 1997. This plant is located about 15 km north of Kom Ombo on the east bank of the Nile River (Figure 1). This new plant is not within the scope of this project, except for its effects on supply requirements.

For Kom Ombo, the proposed water supply improvements include the rehabilitation and expansion of the existing water treatment facilities, and expansion of the water transmission and distribution network. The locations of these activities are shown on Figure 3. The existing water treatment plant, located on the Kassel canal in the northern part of the city, will be the focus of this project's design efforts.

For Darawo, the proposed water supply improvements will include the rehabilitation of the existing water treatment plant, and expansion of the transmission and distribution systems, as shown in Figure 4.



**FIGURE 1**  
**SCHEMATIC DIAGRAM OF**  
**REGIONAL WATER SUPPLY SYSTEM**  
**FOR**  
**KOM OMBO/DARAWO/NASR CITY**



**FIGURE 2**  
**PROPOSED REGIONAL WASTEWATER SYSTEM**  
**FOR**  
**KOMOMBO/DARAWO/NASR CITY**





**Wastewater.** Neither Kom Ombo nor Darawo have a wastewater collection network at present; the project's activities will include the design and construction of a network for Kom Ombo (Figure 5) and one for Darawo (Figure 6). The project will also include the design and construction of a new wastewater stabilization pond treatment plant to serve both cities (Figure 2), together with the means for year-round disposal of the effluent.

## 2.2 Nasr City

**Water supply.** Nasr City currently obtains most of its treated water by pipeline from the Kom Ombo water supply system (Figure 1). The project will consist of the expansion of the existing transmission mains and distribution network as required, including additional water booster pump stations, as needed; and construction of additional facilities as needed. The locations of these activities are shown on Figure 7.

**Wastewater system.** The Project will consist of the design and construction of wastewater stabilization ponds, including the means for effluent disposal, and the construction of sewers, wastewater pump stations and associated force mains, in areas as shown on Figure 8.

## 3. Environmental Considerations and Key Issues

The USAID-funded Secondary Cities Project is conducting an Environmental Assessment (EA) of the facilities proposed for Aswan Governorate. An EA is a process used to identify and predict the environmental consequences of a newly planned activity and to assist in planning appropriate measures to reduce the adverse effects and maximize environmental benefits before such activities are allowed to go ahead. It is a practical and valuable means for aiding decision makers as regards project implementation.

The EA provides the decision makers with reasonably accurate information concerning existing environmental conditions, potentially significant environmental impacts and possible mitigation measures, monitoring programs, opportunities for environmental enhancement and environmental management plans.

"Scoping" is an EA activity which:

- Identifies those attributes of the environment for which there are concerns, and
- Provides a plan that enables the EA team to be focused on these attributes.

Scoping is a shared responsibility where the proponent government agencies, the Governorate of Aswan and USAID, and the public, both have a role. As part of this process, a Scoping Meeting was held in Aswan on 14 October, 1995. A list of the attendees at that meeting is given in Appendix A.



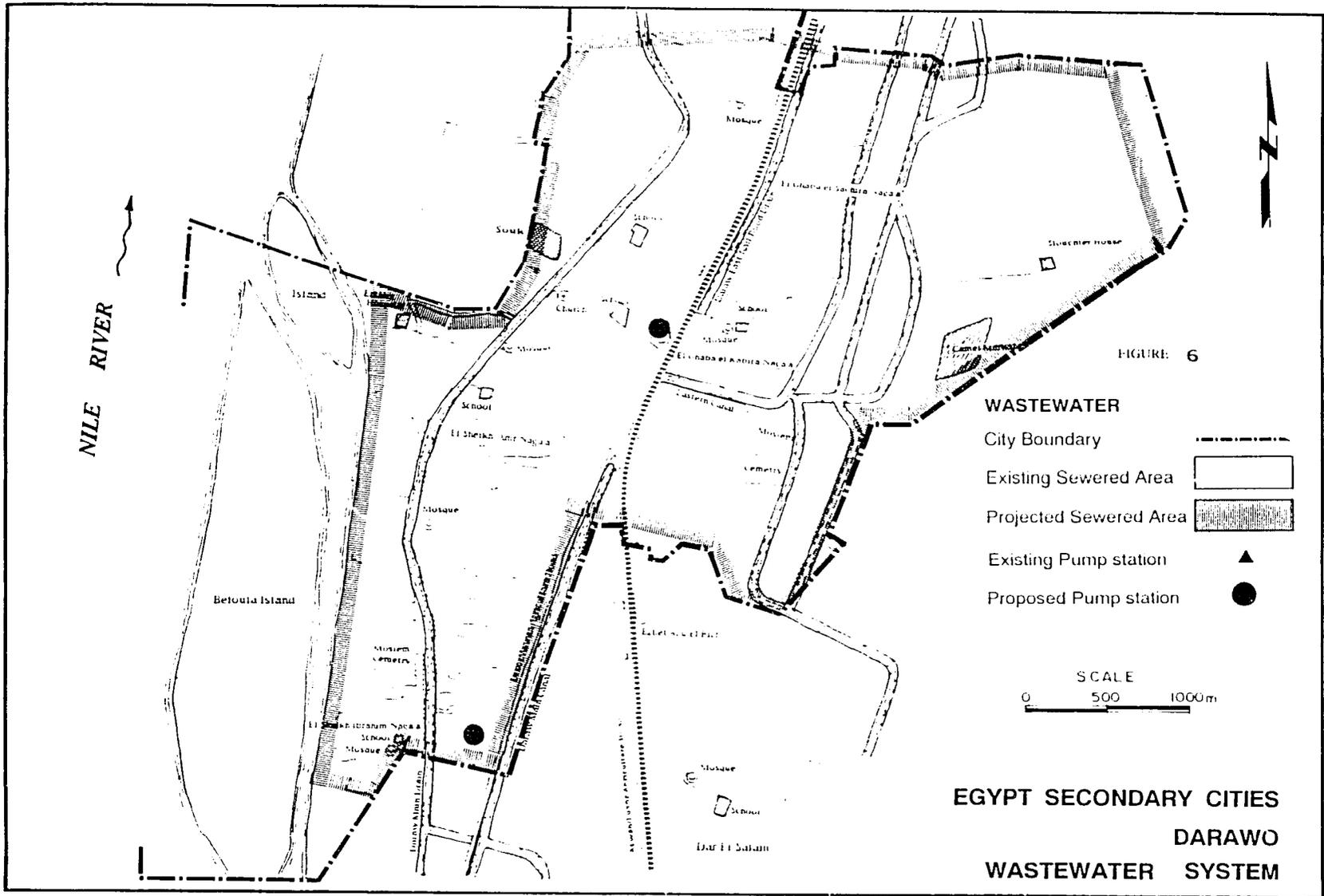
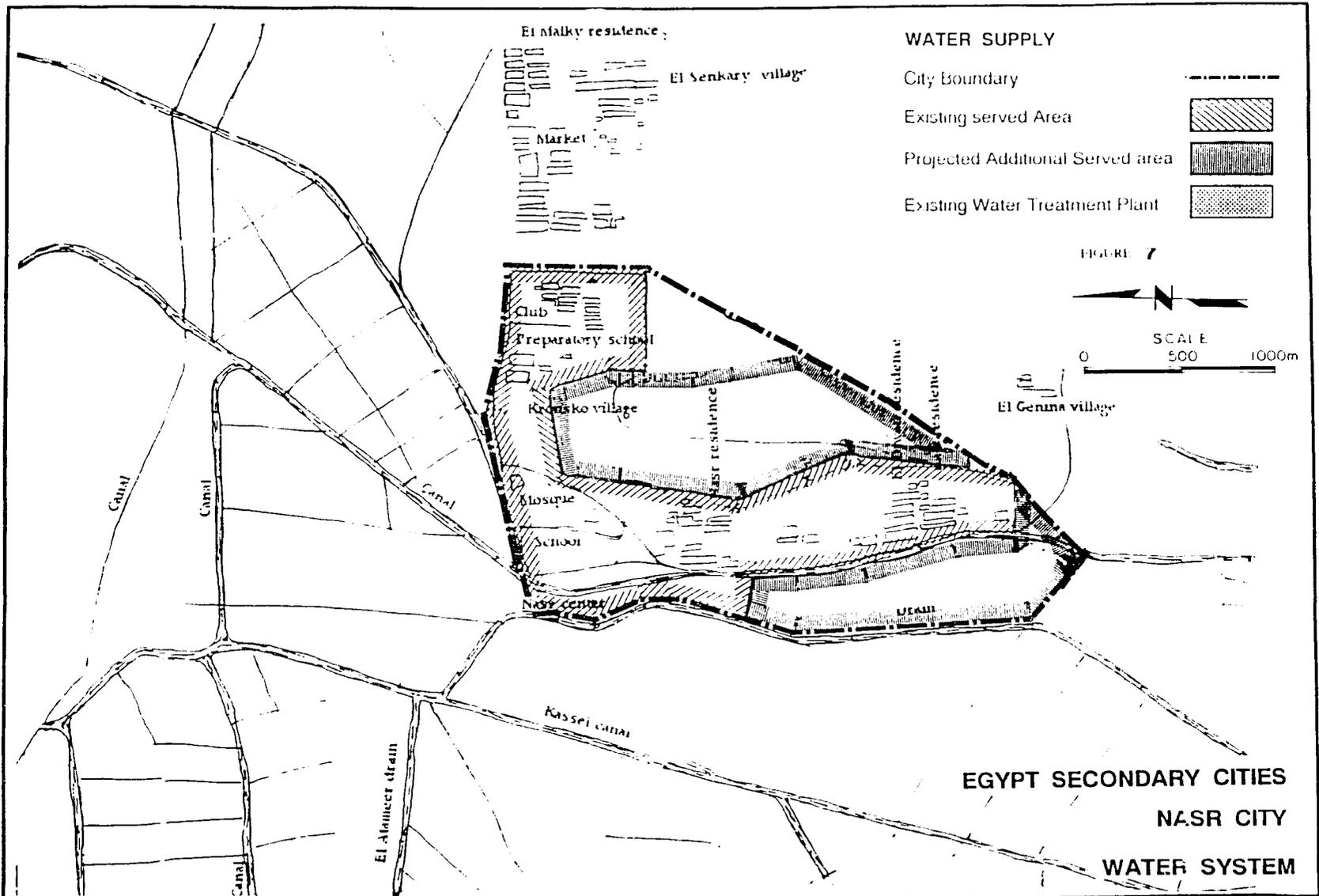
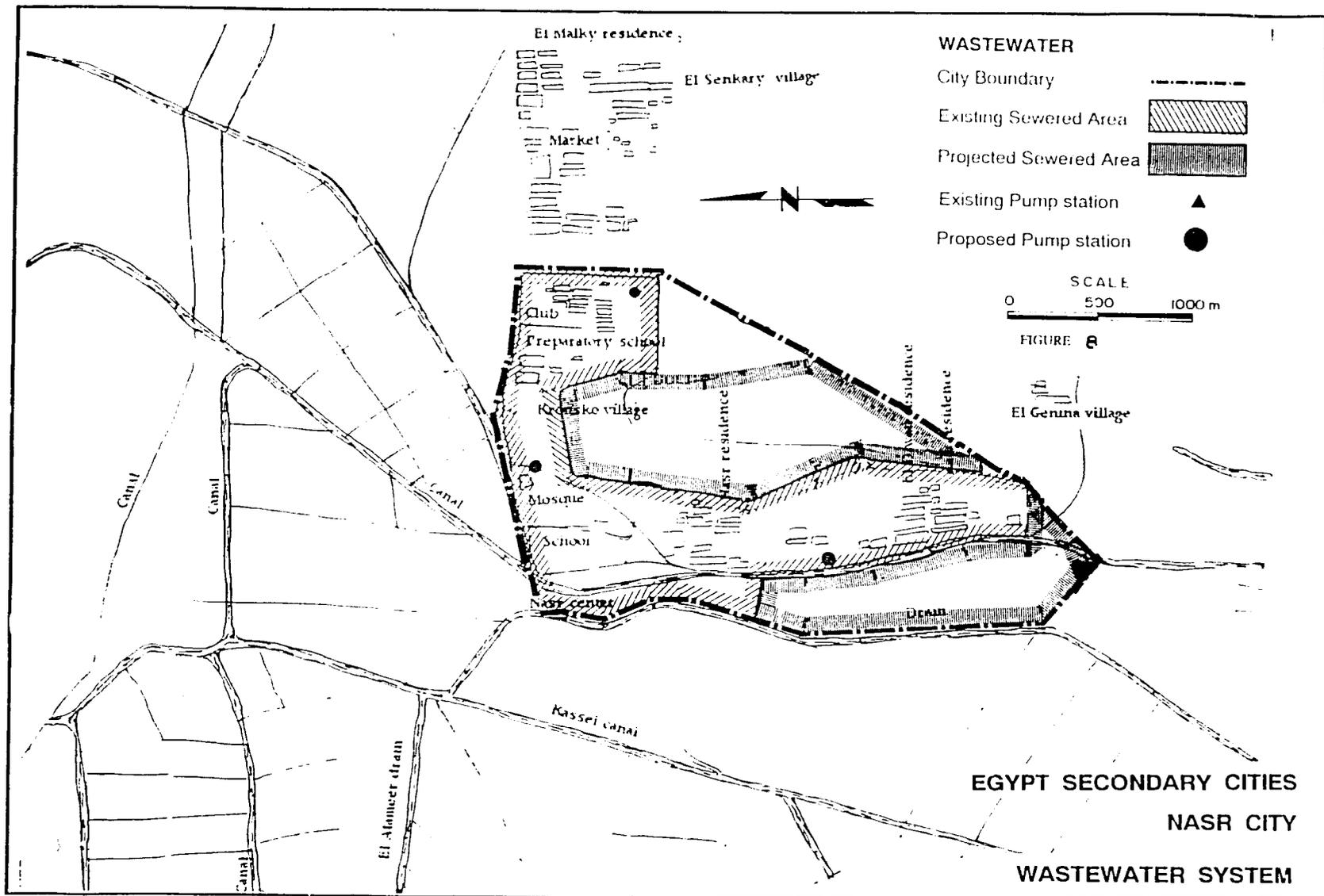


FIGURE: 6

7





Potential effects that have been identified, whether positive or negative, are listed in the following subsections. Hollow bullets ("o") denote issues that are routinely to be expected in projects of this nature. Solid bullets ("●") denote issues specifically raised in the scoping meeting:

### **3.1 Water Supply System**

- Improvement to water supply services will improve the quantity and quality of the city's water supply, and consequently of the city's public health, and thereby improve conditions in the society and in its economy.
- o The plant will represent an additional electric load on the existing grid.
- o Consider operation and maintenance activities including sludge disposal.
- o Construction activities will increase the levels of dust and noise.
- o Consider public safety, traffic control and interruptions during construction including interruptions of water services.
- o Consider the stability of structures due to construction activities, e.g. alteration of water table due to site dewatering.
- Consider the quality of raw water at the water treatment plant intake in the Kassel canal, and at the intake pump station for the Kassel canal on the bank of the Nile. Consider the proximity of drain discharges to the Nile, as well as any discharges to drains or the Nile from the sugar processing facility adjacent to the water treatment plant.
- Consider the quality of raw water available in the Nile River during those times that large flows are diverted from the Nile to the irrigation system, particularly during the winter.
- The water distribution network should be of a closed-loop form for redundancy.
- Pipe diameters in the distribution network need to be enlarged, and washout valves added.

### **3.2 Wastewater System**

- o There will be an improvement in public health.

- Consider the stability of structures, including septic tanks, affected by construction activities.
- Consider the potential impact of construction activities on antiquities.
- Consider public safety, traffic control and interruptions during construction; including interruptions of sewerage and other utility services
- During construction, ensure the continuation of wastewater disposal, by septic tanks or any other means.
- Consider the impacts of new pump stations on land use, energy consumption, and traffic control.
- Consider operation and maintenance activities at these new pump stations, e.g. problems of odors and disposal of screenings.
- Consider the problems of stabilization pond siting, and associated land acquisition.
- Consider the quality of the treated effluent from stabilization ponds, and its suitability for agricultural use, and for surface disposal in agricultural drains
- Consider the impacts of sanitary sludge disposal from the stabilization ponds.
- Consider the impact of the stabilization ponds on the ground water level.
- Consider the specifics of industrial waste disposal
- Sewerage planning and financing should include the means to include house connections, whether by simple inclusion in the scope of the funded project, or by a funding pool and/or an installment payment system, to help individual property owners pay for the connections.

### **3.3 General**

- Recognize the importance of public awareness campaigns regarding these works.
- There are several parts of Kom Ombo where elevated ground water levels are a significant problem, both with respect to mosquito nuisance and the stability of structures. These require an engineering solution.
- Tourist cruise ships discharge their wastes too close to the water plant intake [presumably meaning the intake from the Nile to the Kassel canal, which in turn supplies the existing water

treatment plant.]

- Coordinate plans for facilities and power demands with the electrical department so that the electrical distribution system can be ready to supply the water and wastewater system whenever and wherever power is needed.

#### **4. Outline of The Environmental Assessment Report**

The Environmental Assessment Report will be written in standard NEPA (U.S. National Environmental Policy Act) format. The proposed outline for this report is given in Appendix B.

## APPENDIX A

### Environmental Scoping Session for Kom Ombo, Darawo, Nasr City

held at Aswan, 14 October, 1995

#### LIST OF ATTENDEES

	<b>Name</b>	<b>Position</b>
1.	H.E. Gen. Salah Misbah	Governor of Aswan
2.	Mr. Farag Abd El Azziz Abd El Rahman	Ministry of International Cooperation
3.	Mr. Fathi Abd El Hamid El Sheikh	Ministry of Planning
4.	Mr. Zein El Abedeen Said Hasan	Head of Governorate Popular Local Council
5.	Mr. Wagih Abd El Ghani	Aswan City & Markaz Chief
6.	Eng. Mohamed El Said El Schiti	Chairman South Said Electricity Distribution Co.
7.	Eng. Mohamed El Amir Osman	Undersecretary of Irrigation
8.	Eng. Abbas Hegazi Mohamed	Gen. Mgr. Housing & Utilities
9.	Mr. Mohamed Abd El Moneim El Sabee	Director Governor's Office
10.	Mr. Moustafa Abbas Metwalli	Edfu City & Markaz Chief
11.	Mr. Hamed El Hussein	Darawo Markaz Chief
12.	Mr. Ahmed Samir Sultan	Kom Ombo Markaz Chief
13.	Mr. Rabee Hasan Mohamed Yehia	Nasr City Markaz Chief
14.	Eng. Hassan Nassef Hassan	Economic Affairs Director, Aswan Governorate
15.	Mr. Moustafa Abou El Hassan	Financial Affairs Director, Aswan Governorate

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|-----|-------------------------------------|--|
| 16. | Mr. Ahmed Ibrahim Karim             | Legal Affairs Director, Aswan Governorate                      |
| 17. | Eng. Khaled El Agami                | Urban Development Unit Director, Aswan Governorate             |
| 18. | Eng. Hasan El Desouki               | Housing & Utilities Project Manager, Aswan Governorate         |
| 19. | Eng. Abd El Razek Taha              | NOPWASD representative   |
| 20. | Mr. Arafa EL Said Mohamed El Yamani | Ministry of Finance  |
| 21. | Eng. Ahmed Hussein El Refai         | Engineering Director, Darawo                                   |
| 22. | Eng. Ahmed El Mekkawi               | Zoning Section Head, Darawo                                    |
| 23. | Eng. Mahmoud Saleh Ismail           | Engineering Director, Kom Ombo                                 |
| 24. | Eng. Abd El Karim Ahmed Saleh       | Zoning Section Head, Kom Ombo                                  |
| 25. | Eng. Mohamed Sami Maher             | Engineering Director, Nasr City                                |
| 26. | Mr. Abd El Hadi Ali Ahmed           | Zoning Section Head, Nasr City                                 |
| 27. | Mr. Mohamed Abou El Kassem          | National Democratic Party, Kom Ombo                            |
| 28. | Mr. Mohamed Ahmed Gohar             | Kom Ombo Council   |
| 29. | Mr. Mostafa Youssef Mahmoud         | Kom Ombo Council   |
| 30. | Mr. Badri Anour Mohamed             | National Democratic Party, Darawo                              |
| 31. | Mr. Hamed Hussein Mahrous           | Public Relations Department, Aswan Governorate                 |
| 32. | Mr. Abd El Karim Kassem Hussein     | Public Relations Department, Aswan Governorate                 |
| 33. | Mr. Nabil El Rodawi                 | Housing Committee Chairman, Popular Council, Aswan Governorate |
| 34. | Mr. Abd EL Dayem Hussein Ahmed      | Darawo Markaz Popular Local Council                            |
| 35. | Mr. Hussein Masloub Hussein         | Darawo Markaz Popular Local Council                            |

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|-----|----------------------------------|---|
| 36. | Mr. Hussein Gad El Karim Hussein | Darawo City, Popular Local Council                                |
| 37. | Mr. Said El Naggari Ali Gouda    | Kom Ombo Markaz, Popular Local Council                            |
| 38. | Mr. Shawky Abd El Rahim Ismail   | Nasr City Markaz, Popular Local Council                           |
| 39. | Mr. Said Ahmed Suleiman          | Nasr City Markaz, Popular Local Council                           |
| 40. | Mr. Mohamed Abbas Huzein         | Nasr City, Popular Local Council                                  |
| 41. | Prof. Dr. Ahmed Ismat Billal     | Faculty of Science & Environmental Affairs<br>Dept.               |
| 42. | Prof. Dr. Salama Abd El Hadi     | Energy Institute  |
| 43. | Prof. Dr. Mohamed Hussein Amin   | Dean, Faculty of Engineering, South Valley<br>University at Aswan |
| 44. | Mr. Mowafak Abou El Leil         | El Ahram Newspaper  |
| 45. | Mr. Fathi Mohamed Wahish         | El Akhbar Newspaper   |
| 46. | Mr. Ahmed Kamali                 | Middle East News Agency   |
| 47. | Mr. Ahmed Awad                   | El Messaa Newspaper   |
| 48. | Mr. Gamal Hashem                 | Local Radio   |
| 49. | Ms. Sahar Ibrahim                | Local Radio   |
| 50. | Dr. Abd El Hafez Abd El Rassoul  | Kom Ombo Hospital Director  |
| 51. | Dr. Abd El Nair William Fakhouri | Darawo Hospital Director  |
| 52. | Dr. Ali Adli El Demerdash        | Nasr City Hospital Director                                       |
| 53. | Dr. Ahmed Kotb                   | Health Department, Aswan  |
| 54. | Dr. Hassan Farrag                | Head of Aswan Medical Syndicate                                   |
| 55. | Eng. Abd El Wahab Borai Ahraed   | Chairman, Kom Ombo Sugar Co.                                      |
| 56. | Eng. Mohamed Abd El Moatti       | Chairman, Misr Dairy  |

- |                 |                                      |   |
|-----------------|--------------------------------------|---|
| 57.             | Mr. Ali Abdou Mahmoud                | Chairman, Social Welfare Society            |
| 58.             | Mr. Ahmed Atta Allah                 | Chairman, Darawo Social Development Society |
| 59.             | Mr. Moustafa Mohamed Abd Allah       | Mgr. Social Development Society, Kom Ombo   |
| 60.             | Dr. Bahei El Din                     | Kom Ombo Health Dept.                       |
| 61.             | Mr. Arrafa El Said El Naghi          | Aswan Customs Dept.                         |
| 62.             | Mr. Abd El Razek Abd El Halim        | National Democratic Party                   |
| 63.             | Mr. Saber Mohamed Ali Mohamed        | Nasr City, Popular Council                  |
| 64.             | Eng Abbas Hegazi                     | Housing Director, Aswan                     |
| 65.             | Mr. Zaki Saghir                      | Darawo Markaz Deputy                        |
| 66.             | Mr. Abd El Magid Mohd. Osman Hussein | Housing Committee, Governorate Council      |
| 67.             | Mr. Ahmed Atta Allah                 | Darawo, Social Development Society          |
| 68.             | Mr. Said Ahmed Shehab                | Nasr City Markaz, Deputy Council            |
| 69.             | Mr. Mahmoud Mohamed Ahmed Ishak      | Kom Ombo, Social Development Society        |
| 70.             | Mr. Mohamed Ali El Tayeb             | Kom Ombo City, popular Council              |
| 71.             | Mr. Bertil Vendel                    | Head, DANIDA, Aswan                         |
| 72.             | Mr. Moustafa Nouri                   | DANIDA                                      |
| Chemonics Intl. |                                      |   |
| 73.             | Mr. Dewey Bryant                     | Chemonics                                   |
| 74.             | Mr. Craig Andrews                    | Chemonics                                   |
| 75.             | Mr. Mohamed Ashmawi                  | Chemonics                                   |
| USAID           |                                      |   |
| 76.             | Mr. Ernest Rojas                     | Sec. Cities Project Officer, USAID          |

77. Dr. Anne Patterson Mission Environmental Officer, USAID  
78. Mr. Tarek Bekheit Sec. Cities Project Engineer, USAID  
79. Mr. Mamdouh Raslan Sec. Cities Inst. Project Officer, USAID

CDM/AAW

80. Mr. Leo St Michel Project Director  
81. Mr. David Doran Project Manager  
82. Mr. Moustafa El Tayeb Deputy Project Manager  
83. Mr. Hassan Morsi Design Manager  
84. Dr. Jonathan French Environmental Assessment Director  
85. Dr. Hisham El Badri Environmental Assessment Manager  
86. Dr. Tarek Selim Session Moderator  
87. Mrs. Farida Morcos Administrative Manager

## **APPENDIX B**

### **OUTLINE OF THE ENVIRONMENTAL ASSESSMENT REPORT**

#### **Executive Summary (Arabic and English)**

1. Introduction
  - 1.1 Background
  - 1.2 Proposed action
  - 1.3 Environmental regulatory procedures
    - 1.3.1 Egyptian environmental legislation
    - 1.3.2 USAID environmental procedures.
  
2. Project Description
  - 2.1 Background
  - 2.2 Layout and description of proposed facilities
  - 2.3 Construction activities
  - 2.4 Operation activities.
  
3. Environmental Setting
  - 3.1 Background
  - 3.2 Physical environment
  - 3.3 Socio-economic environment
  - 3.4 Cultural and aesthetic environment
  
4. Environmental Effects
  - 4.1 Background
  - 4.2 Physical environment impacts
  - 4.3 Socio-economic environment impacts
  - 4.4 Cultural and aesthetic environmental impacts
  - 4.5 No - action alternative

## **APPENDIX B**

### **OUTLINE OF THE ENVIRONMENTAL ASSESSMENT REPORT (Continued)**

- 5. Mitigation, Monitoring and Management
  - 5.1 Background
  - 5.2 Physical environment
  - 5.3 Socio-economic environment
  - 5.4 Cultural and aesthetic environment

#### Appendices

- List of EA preparers
- Scoping Report
- Public NGOs correspondence