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Sewerage and Water Sector Projects in Egypt

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and Economic Cooperation

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Evaluation of Sewerage and Water Sector Projects, Egypt
Final Report – August 1997

Executive Summary

1) Four water and sewerage sector projects, costing Sida slightly more than SEK 11 million, have been completed for National Organisation for Potable Water and Sanitary Drainage (NOPWASD) in Egypt.

2) The purpose of this report is to evaluate the impact of the projects. The viability of future investments in the same sector in Egypt will be based on the experience of lessons learned.

3) The evaluation was conducted by reviewing reports and documents, interviewing people in Egypt and Sweden who are involved with the projects or ongoing aid programmes in Egypt. A two week visit was spent in Egypt between 20 February to 8 March 1997. During this time visits were made to the project sites to assess project benefits.

4) A change in the Egyptian economy has occurred since the projects were completed. During the project implementation, the country's economy was in dire straits with a large trade deficit. Through economic reforms introduced since, the Government of Egypt succeeded in 1996 to generate a trade surplus of about US$ 17 billion. The reforms include privatisation of both private and public sector enterprises, and the Government is amenable to undertaking performance orientated projects.

5) Egypt is still heavily dependent on foreign assistance for development. USAID is the largest aid donor, providing about US$ 1 billion annually. Other current donor countries investing in the water sector include DANIDA, The Netherlands, European Union, and World Bank.

6) Swedish Aid to the water and sewerage sector is small compared with other donors. The Government of Egypt has allocated Minoufiya Governorate as the governorate to benefit from Swedish Government assistance. The governorate is located immediately north of Cairo and its economy is mainly agricultural. It is also the birthplace of Presidents Sadat and Mabarouk, and other senior politicians.

7) The portfolio of the Egyptian Ministry of Housing and Utilities includes managing water and sewerage projects throughout the country. NOPWASD is an organisation under this ministry who is responsible for the implementation of capital investment projects country wide in the water and sewerage sector.

8) The responsibilities and powers for providing water and sewerage services in the majority of the 26 governorate are fragmented and centrally managed. Operating costs are not balanced against revenues. The four ministries involved with the provision of water services are the Ministries of Housing, Local Government, Health, and Finance.

9) About 25 per cent of governorates, have created semi-autonomous, commercially orientated water authorities. These must ensure recurrent operating costs are met from revenues collected from customers.

10) The four projects being evaluated were identified by K-Konsult, the Consultant, and NOPWASD, the beneficiary. Swedish Government funding was based on Project Descriptions prepared for each of the four projects.

11) Terms of Reference and Project Contracts were agreed between NOPWASD and K-Konsult. BITS (the former Swedish agent responsible for funding the Egyptian Aid programme) were not involved in contract negotiations.

12) Contracts between BITS and K-Konsult were negotiated. The relatively small value of the contract did not merit competitive bidding. BITS paid the foreign currency costs and NOPWASD the local costs. The local costs were approximately equivalent to ten per cent of the foreign currency amount.

13) Four projects were implemented over seven years. They include –

- Feasibility Study for Water and Sewerage in Minoufiya.
- Sewerage Network Analysis Project including the provision of equipment, training and technical assistance for NOPWASD to computerised sewerage network designs, undertaken by Egyptian consultants.
- Pilot Project for El Hamoul, Minoufiya Governorate, including a water network computer programme and associated training.
- Community participation to verify the design of a public laundry project developed in the Pilot Project above.

14) The Sewerage Network Analysis project is regarded as the most successful of the four. The unit set up under the project has since expanded, and most of the equipment and software supplied is still in use. The staff present during the evaluation, who claimed to have received training under the project, had general knowledge about computers and common software, but little knowledge of any of the network analysis programme.

15) The sustainable benefits of the other three projects are rated 'minimal'.

- Some recent sewerage investments in Minoufiya follow the recommendations of the Feasibility Report. The fact the report is translated to Arabic is a benefit to the engineers in the governorate who unfortunately have little direct influence over planning capital works.
- The village of El Hamoul received no sustainable benefit from the Pilot Project. A small water treatment unit purchased under the project has been removed by NOPWASD, and an advanced computerised water pipe network analysis programme was issued to NOPWASD, together with some training.
- The public laundry has not been implemented. NOPWASD is tendering its construction.

16) The Egyptian Government is currently proactive to and needs external support for water and sewerage infrastructure. Support is needed to accelerate the progress of commercialising the management of water services in all governorates, and NOPWASD require assistance for either (1) recommending the most appropriate format for commercially orientated management of water services, or (2) to review the role of NOPWASD in the future.

17) The Swedish Government's funding policy is that the preferred projects are those that can be replicated, also normally project funding is limited to 24 months. In Egypt, projects with direct and sustainable impact on communities are appropriate. Examples are – upgrading an existing hospital at El Hamoul; or introducing communal water, washing and sanitation facilities for small isolated rural communities, called 'ezbas'.

18) Some lessons learned from the implementation of the four projects are –

- The SNWA computer supply and training programme is a good example of a successful project. Equipment supplied is still in use and Swedish Aid contributed significantly to the creation of an activity wanted by NOPWASD, the client.
- Future projects are to be clearly defined and linked to measurable performance indicators.
- Where appropriate, a Logical Framework Approach should be developed by beneficiaries.
- Terms of Reference should be written for all future projects.
- Concise environmental benefits should be stated.
- Community participation for small scale projects should be encouraged.
- Funding agreements should clearly state who pays construction costs.
- The impact of small scale community projects would be greater if NOPWASD delegated authority to the direct beneficiary.
- A proactive approach by Sida to identifying and managing projects, will contribute towards greater success of projects.
- Swedish nationals are well received by Egyptians.
- The ongoing Sida training programme is providing a good bond between the two countries. Pre-set performance related goals would enhance the programme benefits.

Table of Contents

ACKNOWLEDGEMENTS 3

DEFINITIONS 4

INTRODUCTION 6

- GENERAL 6
- DEVELOPMENT OF THE WATER SECTOR IN EGYPT 6
- INSTITUTIONAL AND OPERATIONAL FRAMEWORK 6
- FOREIGN ASSISTANCE TO WATER SECTOR 7

OUTLINE OF PROJECT EVALUATION 8

- TERMS OF REFERENCE FOR THE EVALUATION 8
- PURPOSE FOR EVALUATION OF PROJECTS 8
- DETAILS OF PREVIOUS PROJECTS 8
- CONSULTANT AND PROJECT SITE 9

EVALUATION METHODOLOGY 11

FINDINGS - GENERAL 12

- GENERAL 12
- EGYPT ECONOMY 12
- WATER/WASTEWATER SECTOR 13

FINDINGS - SWEDISH AIDED PROJECTS 14

- GENERAL 14
- PROJECT IDENTIFICATION AND CONTRACT ARRANGEMENTS. 14
- CONTRACT COST AND TIME PERFORMANCE 14
- FEASIBILITY STUDY (BITS REF. EGY0252) 15
- SEWERAGE NETWORK ANALYSIS (SNWA) - (BITS REF. EGY0671) 16
- PILOT STUDY IN EL HAMOUL, MINOUFIYA - (BITS REF. EGY0253) 17
- EL HAMOUL PUBLIC LAUNDRY - (BITS REF. EGY0254) 20
- SIDA TRAINING PROGRAMME 21

CONCLUSIONS 23

- GENERAL 23
- SIDA PROJECTS 23
- ENVIRONMENTAL IMPACT AND WOMEN 23
- RATING OF SUSTAINABLE BENEFITS OF PROJECTS 24

RECOMMENDATIONS FOR FUTURE PROJECTS 26

LESSONS LEARNED FROM SWEDISH PROJECTS 27

APPENDICES

Appendix A Terms of Reference for Evaluation

Appendix B People Met In Egypt (20 February to 8 March 1997)

Appendix C List of Reference Reports and Documents

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Definitions

Adobe	Type of house construction using dry clay and straw
AUC	American University of Cairo.
Bab	Category of the Egyptian National Budget
BITS	Beredningen för Internationellt Tekniskt-ekonomiskt Samarbete. Swedish Aid Programme.
Canal	Channel or ditch bringing irrigation water from Nile (terah)
DANIDA	Danish International Development Agency
Drain	Channel or ditch taking surplus water from the fields (masraf)
EU	European Union
Ezbah	A settlement in a Mother Village which is usually smaller than a Satellite Village.
GOE	Government of Egypt
GOPS	General Organisation for Potable Water
Governorate	Equivalent to a 'Län' in Sweden.
LE	Egyptian Pounds (LE 1 = SEK 2,25 approx.).
lcd	Litres per capita per day.
MLA	Ministry for Local Administration
Markaz	District Administrative unit, between the Governorate and Village. Equivalent to a 'Kommun' in Sweden.
Mother Village	Legal entity responsible for village affairs (qariya el om) administered by an Executive Council.
Naga	A settlement similar to an ezbah, commonly used in Upper Egypt
NOPWASD	National Organisation for Potable Water and Sanitary Drainage.
O&M	Operation and Maintenance.
ORDEV	Organisation for Reconstruction and Development of Egyptian Villages.
Satellite Village	Name given to villages that are administered by a Mother Village (tawaba)
Septage	Toilet Waste
Sida	Swedish International Development Co-operation Agency
SNWA	Sewerage Network Analysis.
Sullage	Washing and kitchen wastewater.
UNPD	United Nations Development Program

Village	Unless otherwise stated, 'Village' means a Mother Village and its associated satellites.
VEC	Village Executive Council.
WASH	Water and Sanitation for Health. A USAID project.
USAID	United States Agency for International Development.
SEK	Swedish Kronor
ECU	European Currency Units
$	United States Dollars

Introduction

General

The policy of the Egyptian Government after nationalisation in 1952 has been to upgrade the standard of living of the people. In rural areas this was done through the provision of protected piped water supply systems that dependent mainly on wells, which provided a safe source of water compared with the surface water supplies which were being polluted by various sources.

Development of the Water Sector in Egypt

In the early 80s, World Bank and USAID, Egypt, started an initiative to upgrade and extend the water supply and sewerage services in the Provincial Areas. Separate programmes were developed for upgrading of water supply and sewerage in the cities of Cairo and Alexandria.

An indication of the progress resulting from these investments is that the number of people in rural areas connected to piped water systems rose six times, from 5 per cent to 31 per cent, between 1976 to 1986. At the same time the rural population increased, with a net effect that the number of people **not** connected remained almost static at 19 million people. In other words the multi-million Dollar investments over the ten year period only managed to maintain a *status quo* with respect to the number of rural people connected to piped water supplies.

Institutional and Operational Framework

Egypt's National Government provides services to the population through authorities centrally controlled by the various ministries. Management of water supply and sanitation services is complex with involvement from several different Ministries including –

- Ministry of Housing and Utilities, who in 1978 divested the responsibility of planning and implementing of capital investments in the sector to National Organisation for Potable Water and Sanitary Drainage (NOPWASD)
- Ministry of Local Government.
- Ministry of Health, who is responsible for monitoring the quality of all public piped water supplies against the Egyptian Drinking Water Standards.
- Ministry of Finance.
- Ministry of International Co-operation, for foreign aid programmes.

The day to day running of all the public water supply and sewerage facilities is the responsibility of the Housing Department, through the Ministry of Local Government who administers the 26 Governorates, their respective Markaz and Village Councils.

Funds for operating costs come as 'Bab' from the central budget through the Ministry of Housing. Whereas revenues collected for water sales and sewage collection are collected directly by Ministry of Finance. There is therefore no balancing of operating costs against revenues. Furthermore the annual Bab allocation is usually less than the budgets requested by the villages, markaz etc.

Apart from the disadvantage that at the governorate level and below, there is no balancing of revenues against costs, other factors which act as a disincentive for raising the standard on water and wastewater services include –

- Sub-economic water charges (tariffs) imposed by the government.
- Lack of incentive for reducing operating costs.
- Lack of incentive to collect revenues.
- Shortage of funds for proper maintenance of pumps and other facilities.

These have led to a situation which was described in 1980 as being a *downward spiral* where standards of service were dropping, the public became increasingly reluctant to pay, causing acceleration of the downward trend in service standards.

To reverse this trend of deteriorating water and sewerage services, some Governorates created a commercial authority for managing the water and sewerage services under the control of the governorate. The first was Beheira Governorate. Now about 25 per cent of the Governorates either have or are in the process of creating commercially orientated public sector authorities.

The new water authorities are initially responsible for managing the annual operation and maintenance of the water and sewerage works, and balancing these costs against the revenues collected from the public who benefit from the services. These governorates even have some control over the charges raised for the services, although there is an understandable reluctance to raise prices above those generally approved by GOE. NOPWASD continue to be responsible for the capital development programme of the sector.

Foreign Assistance to Water Sector

The creation of commercial water and sewerage authorities is linked to foreign assistance.

Beheira Water Company for instance was created through support from the World Bank. USAID, DANIDA, Germany and the Netherlands are others who have provided direct assistance to the creation other water authorities.

The assistance is usually in two packages. One being funds to upgrade the physical assets which are either badly run down through lack of proper maintenance, or undersized through lack of capital investment. The second package is to provide training and technical assistance (technical and financial) to raise the standard of the management for the new authorities.

Other donor funds for Governorates whose water supply systems are still managed by GOE, are usually channelled through NOPWASD who has established a system of allocating a donor country to a governorate. This system has the advantage that –

- There is some continuity between the donor and the governorate.
- There will be a better chance of standardisation of equipment and spare parts.
- Personal relations develop between the donor country and governorate.

In the case of Sweden as an aid donor to the water and wastewater sector, Minoufiya is the selected governorate.

Outline of Project Evaluation

Terms of Reference for the Evaluation

The terms of reference for the evaluation is to review four projects the water and wastewater sector of Egypt, for NOPWASD. The four projects are listed in Table 1 and consist of –

- Feasibility Study.
- Sewerage Network Analysis.
- Pilot Project in El Hamoul.
- A social survey for El Hamoul Public Laundry.

A copy of the Terms of Reference for the Evaluation are contained in Annex A of this report.

Purpose for Evaluation of Projects

The purposes of the evaluation as stated in the Terms of Reference for the Evaluations are two fold. First to evaluate previous Swedish co-operation in the water supply and sewerage sector of Egypt. Secondly to determine the possibility for further co-operation between Sweden and Egypt in the water sector.

A key component of the evaluation is to use the lessons learned from implementing previous projects to improve the standard of benefits resulting from future projects.

Details of Previous Projects

Over a fourteen year period (1983 to 1996) BITS invested a total of SEK 11 583 000 as shown in Table 1 below -

Table 1 -BITS Investment in Water Sector

Project Reference	Years	Project Description	Budget Amount (SEK)	Amount Paid (SEK)[1]
EGY0251	1983-84	A Water Master Plan for Minoufiya Governorate[2]	(186 000)	(186 000)
EGY0252	1989-92	Feasibility Study for Water Supply and Sewage, Minoufiya Governorate	3 169 000	3 167 120
EGY0671	1992-96	Sewage Network Analysis	3 628 000	3 627 915
EGY0253	1993-96	Pilot Project in El Hamoul, Minoufiya (including training and an action plan)	4 400 000	4 148 805
EGY0254		El Hamoul Public Laundry	200 000	200 000
		TOTAL Projects Evaluated (SEK)	**11 397 000**	**11 143 840**

[1] A local contribution was paid in addition to the SEK foreign funds grant. This is discussed further in 'Findings - Swedish Aided Projects'.

[2] The terms of reference excludes this project from the evaluation.

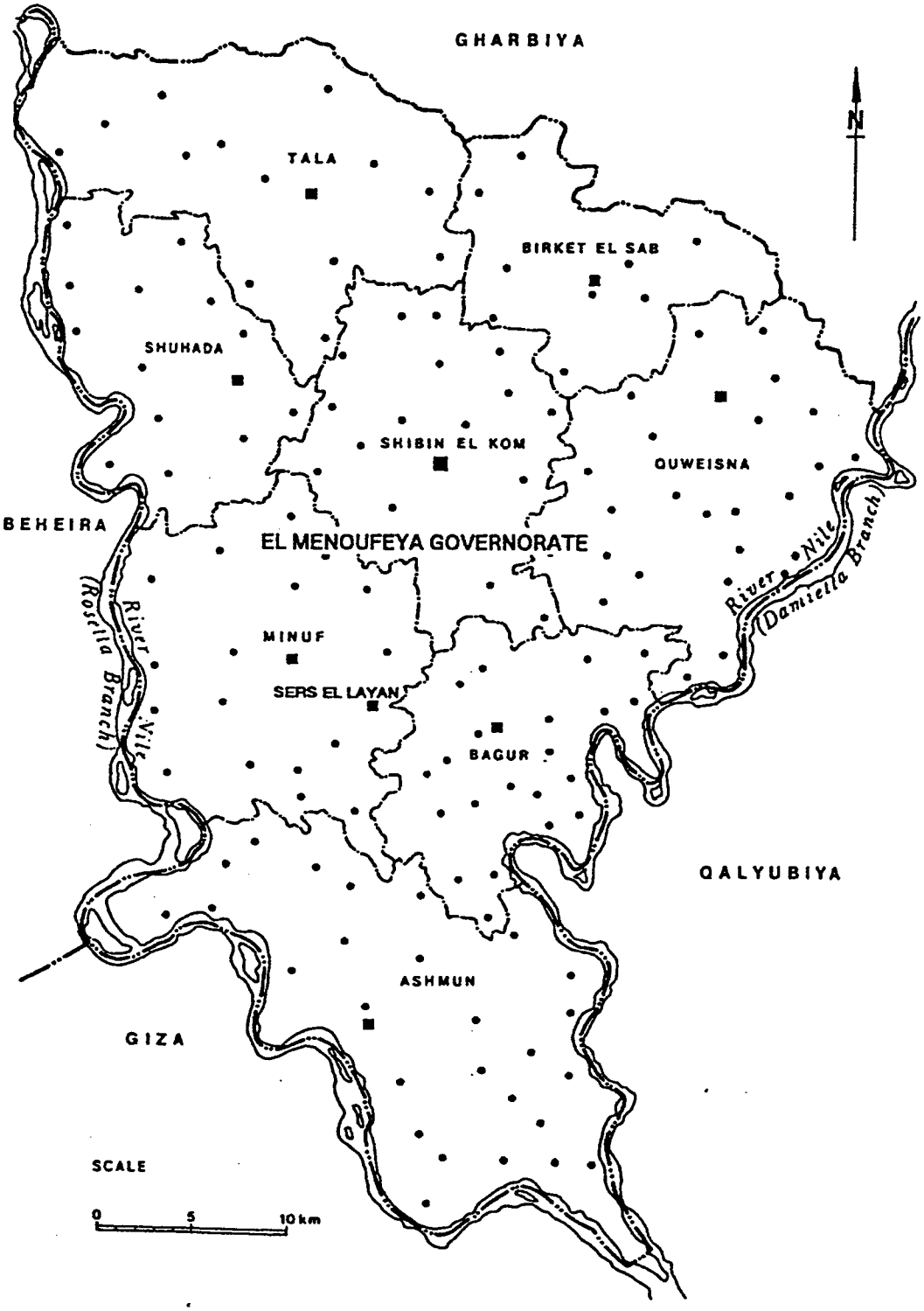
Consultant and Project Site

K-Konsult[3] is the Consultant appointed by NOPWASD for all four projects and, except for the Sewerage Network Analysis all work was conducted in Minoufiya Governorate which is located immediately north of Cairo in the Nile Delta as shown in Figure 1 over leave.

This Governorate is the birth place of several politically important people including President Sadat and President Mubarak.

[3] K-Konsult is the Swedish firm of Consultants appointed to provide the services for all four projects included in this evaluation. Since completing the projects, K-Konsult has been taken over by Rust VA-Projekt.

Figure 1- Location Map



Evaluation Methodology

The method used for evaluating the previous involvement of the Swedish Government in the water and sewerage sector of the Egyptian development programme is –

1) review of documents and reports made available by Sida, Stockholm, Swedish Embassy, Cairo, and NOPWASD. These consisted of –
   - Reports produced by the consultant as part of the services.
   - Project documents requesting funding.
   - Terms of Reference for the projects.
   - Contracts between the Consultant and NOPWASD.
   - Letters and faxes in connection with the projects.
2) a visit to Egypt between 20 February and 8 March 1997,
3) interviews with people in Egypt, including personnel from NOPWASD, the main beneficiary, the governorate, the Swedish Embassy Cairo, Sida, and other funding agencies supporting GOE as indicated in Annex B - People Met in Egypt,
4) review of background reports relating to the water and sewerage sector in Egypt. See Annex C - Reports and References for a list of the supplementary reports referred to for background and supporting information,
5) site visits to Governorate of Minoufiya, Markaz Minuf, and village of El Hamoul. This included visits to the water stations, ezba with no public water or sewerage services, inspection of the flooded areas of the village, inspection of the now closed village hospital and an inspection of the site for the proposed public laundry,
6) interviews with people in El Hamoul and the Governorate who provided inputs to the projects, including staff from Housing Department, Village Chief, groups of women, village officials and the operators of the water treatment stations,
7) interviews with NOPWASD officials in the Hydraulic Design Unit and the M&E Research and Engineering Department,
8) interviews with personnel from the Consultant Rust VA-Projekt, formerly K-Konsult, who provided the services for the project.

Findings - General

General

This section covers the general situation in the country as well as the current situation in the water and wastewater sector. The next section covers in detail the findings from reviewing the projects funded by the Swedish Government.

Egypt Economy

The national economy of Egypt is and has for several years been dependent on the following four pillars of the economy which generate revenues for the country –

- Suez Canal fees.
- Oil and Gas concessions.
- Tourism.
- Remittances submitted by migrant workers.

Seven years ago (1990), at the time of the Gulf War, Egypt had a trade **deficit** of $50 billion. In the following six years GOE introduced various reforms which generated by 1996 a trade **surplus** of $17 billion. This is a remarkable economic recovery by any standards.

The economic initiatives introduced by GOE which resulted in the economic recovery of the country include –

- Privatisation programmes in both the private and public sectors.
- Civil reforms.
- The introduction of a Social Services Scheme which contributed to the relocation of labour and the creation of more jobs.

During the same period external assistance from international funding continued, but the donor countries reinforced the economic reforms of the government by attaching measurable performance improvements to loans and grants. This has resulted in project implementing agencies becoming more accountable for projects, and increasing the responsibility of the beneficiary such the completed projects are generally more sustainable than they were seven years ago. The introduction of commercially orientated water authorities is a good example of increased responsibility and accountability at the governorate level.

USAID through the Camp David Agreement, is currently the largest single contributor of aid to the country and invests almost US$ 1 billion annually. Much of this has been invested in new water and wastewater projects. Both construction of physical works (treatment works, pipelines, pump stations, reservoirs etc.) and technical assistance to strengthen the management of governorate water authorities.

One program funded by USAID which had a widespread impact on the whole country was the Local Development Project which provided support through the Ministry of Local Government to Urban and Rural communities throughout the country. The project was principally a decentralisation programme aimed at the relevant public administrative council deciding how to spend the funds and taking responsibility for the project implementation. This project is further discussed below.

Water/Wastewater Sector

Capital funds for expansion and extension of water supply systems are derived from both national funds and funds from international sources. The total funds available are insufficient to construct the water and wastewater projects needed to connect the increasing population to reliable piped water supplies and public sewerage networks.

The national policy, especially for funds advanced internally by GOE, is to ration the funds equitably among all governorates. The effect of this policy is that it is not unusual for major capital works projects to take 5 to 10 years to complete. By which time the level of service has deteriorated to the stage where the public in many locations receive piped water for just a few hours every day. Supplies are therefore supplemented by the public especially in the rural areas taking untreated water from the Nile and canals.

Also many communities do no have piped sewerage. Instead private septic tanks are used. These tend to be badly construct and often overflow due to the high cost for emptying them, thus poor sewage disposal systems continue to cause health and environmental problems in many parts of the country.

As mentioned above the major foreign investor in the provincial areas is USAID who since 1980 through an urban and rural decentralisation program invested over US$ 1 billion in extending infrastructure. This programme was executed through the Ministry of Local Government, and not through NOPWASD, which is the normal channel for water projects. The project spanned a ten year period. During this time, over US$ 100 million or about 40 per cent of the total funds for the rural communities, were invested in water projects (which was only one of over 20 different types of sub-project that could be selected). As a result of this programme about 4000 villages throughout the whole country gained some improvement to their water supply system.

Other on-going assistance to the sector during March 1997 is from –

- DANIDA, which is funding the largest amount of small country funds for water and wastewater projects in Aswan and Qena Governorates.
- USAID is funding projects in the Provincial Cities including Fayoum and Beni Suef.
- Holland is assisting with a project in Fayoum.
- World Bank and possibly EU, will fund a project in Sharkia Governorate.

The Swedish Government aid to the water and sewerage sector is small by comparison to these other donors.

Findings - Swedish Aided Projects

General

This section covers –

- the method used for identifying the various projects,
- the contractual arrangement between the client and the consultant, including methods of payment, and,
- the technical evaluation of each of the four projects.

Project Identification and Contract Arrangements.

The steps for identifying the projects and obtaining funding the projects are as follows –

1) The projects were identified by K-Konsult in conjunction with NOPWASD.
2) Based on Project Proposals, funds were allocated by BITS and the Egyptian Ministry of International Co-operation were notified by letter that the projects could start.
3) A Contract was entered for each project between the Consultant, K-Konsult and NOPWASD. The contracts included a contract agreement, terms of reference, work plan, reports to be delivered, budget of costs, payment schedule, staffing inputs, and minutes of the contract negotiation meeting.
4) Consultant services were paid into two parts –
   - Consultant fees, travel from and to Sweden, and equipment purchased for the NOPWASD were paid by BITS in SEK.
   - Local costs, including the hire of a local consultants and accommodation in Egypt for the foreign experts were paid by NOPWASD in Egyptian Pounds. NOPWASD was liable for paying local costs directly to the main consultant. The funds amounted to about 10 per cent of the foreign costs for each project.

A sub-contract agreement was entered between K-Konsult and Sabbour Engineering, the Egyptian consulting firm who provided local inputs to the projects. No documents were seen to verify sub-agreements or to check their financial performance.

Contract Cost and Time Performance

K-Konsult appears to have completed the work for the four projects within the time frame of the contracts, at slightly less than the foreign cost budget allocated for the projects. (Table 1).

There is evidence that on at least one occasion K-Konsult suffered a long delay in payment for due by NOPWASD. K-Konsult confirm that minor delays in payment were the norm.

No records were not seen to verify the local amounts of LE received by K-Konsult.

The technical performance for the four projects were evaluated against either the project terms of reference or the project identification document.

The four projects funded by BITS which are included in this evaluation are reviewed below.

Feasibility Study (BITS ref. EGY0252)

Project Summary

The first project included in this evaluation is a Feasibility Study into the water and wastewater for Minoufiya Governorate. An earlier master plan was allegedly completed using BITS funds, but no report or reference could be found of this earlier study either in Egypt or in Sida offices in Stockholm.

The **purpose** of the Feasibility Study was to develop a list of priority projects with a basic master plan for Minoufiya Governorate, including costs and a time schedule.

The primary **beneficiary** of the project is NOPWASD who received the final report. However personnel from the governorate benefited from the implementation of the study which included an extensive data collection phase.

The **output** of the project is a final report entitled *Concise Feasibility Study for Water Supply and Sewerage, Minoufiya.* The report consists of two volumes, the main report and appendices. The main report has been translated to Arabic.

Assessment of Project Impact

The feasibility study was undertaken by Swedish specialists who lived in Shibin El Kom, the governorate capital, during the data collection phase of the project. This developed good relations between the consultant staff and governorate counterparts. Governorate and NOPWASD officials were further involved with the study through presentations and by commenting on the interim report, which was translated to Arabic.

An Arabic translation of the final report was found in the offices of the Minoufiya Housing Department and there was an English version in NOPWASD offices.

According to records supplied by NOPWASD, by February 1997 the status of actual investment in the projects listed as first priority in the action plan is shown below in Table 2 -

Table 2 - Comparison of Proposed against Actual Expenditure

Sector	Proposed Expenditure (LE million)	Actual Expenditure (LE million)	Actual vs. Proposed (%)
Water Supply	43,51	12,00	28 %
Sewerage Schemes	61,95	45,00	73 %

The following are some observations made after reviewing Feasibility Report –

- The report contains a list of suggested capital works projects required to upgrade and expand water and wastewater throughout the governorate, which is useful for master planning purposes.
- No cost benefit analysis is included.
- The interim report contains four sections which increases to eight in the final report. The final report has thus become disjointed. Conclusions dispersed rather being summarise in one section; and the priority list of planned works is presented without reference the ranking process explained earlier in the report.

- Details about groundwater and water resources for the governorate, does little or nothing to add to data collected and already reported earlier by other consultants.
- The report would have benefited from better analysis of the vast amount of valuable data collected - especially the inventory of village water supply schemes.
- The report does not highlight the intermittent hours of water supply service experienced by consumers, especially those living in villages.
- The acute shortage of elevated storage (often less than one hours supply at peak demand) typically found in the villages is not highlighted. This defect is considered by some to be the main reasons for intermittent supplies.
- No recommendations are given for improving the operational management of the water and wastewater services.
- The connection between the 'Priority List' and 'Priority Investments' is unclear.
- No recommendation are made for funding improvements to the village water supply and sewerage systems, yet a number of serious defects in the standards of service are reported.

Sewerage Network Analysis (SNWA) - (BITS ref. EGY0671)

Project Summary

The **purpose** of the Sewerage Network Analysis (SNWA) project is to establish within NOPWASD a computerised system to review and check designs for new sewer networks submitted by private consultants commissioned to design sewerage systems.

The **beneficiary** for this project is the Hydraulic Design section of the central office in Cairo of NOPWASD.

The **outputs** include computer hardware and software, trained staff, and detailed sewer network analysis of 46 cities. The project was implemented in two phases with a total of four reports containing details of the completed network analysis. These are entitled *Technology Transfer Project - Sewage*[4] *Network Analysis - Stage 1, 2, 3 and 4.* Twenty-four networks were completed under the first phase of the project (Stages 1 and 2) and 22 networks were complete in the second phase.

Hardware and software supplied under the project included –

- Two 486 computers, including screens, keyboards, and graphics cards.
- Laser Printer.
- Colour Printer.
- Data plotter for digitising maps.
- Two copies of MOUSE sewerage network analysis program.
- AutoCad, Spreadsheet, Word Processing, Virus Protection and File Management software.

[4] *Sewage* is the word used for the title of the report, but sewage is the name of liquid which is carried by *sewers*, and the system or network of sewers is called a *sewerage system*

Assessment of Project Impact

The following facts were established –

- The four volumes containing the 46 network analysis were found in NOPWASD offices.
- The two computers supplied under the project were still in use and the Hydraulic Design Section, NOPWASD, has purchased 7 more computers since the completion of the project.
- A later version of MOUSE the sewerage network analysis programme is now in use in Hydraulic Design Section, addition to the version supplied under the project.
- The Laser Jet printer is also still in use.
- The Colour Printer was out of service, awaiting the supply of spare parts, but judging by the accumulation of dust on the printer it had been out of service for some time.
- Since the data plotter is not in every day use, the operating software has been removed from operating computer to make space for other more commonly used software.
- About three of the 25 trainees were working in the section at the time of the visit. The lady engineer named as the star pupil by K-Konsult, was on a training course in Germany.
- Trainees interviewed were not familiar with the MOUSE network analysis programme.
- As an extra to the SNWA terms of reference, are a set of design guidelines for sewerage pump stations. The document is incorporated in the National Design Standards issued by NOPWASD to consultants hired by the governorates.

Pilot Study in El Hamoul, Minoufiya - (BITS ref. EGY0253)

Project Summary

The **purpose** of the study as defined in the terms of reference is to develop and implement low cost technical solutions suitable for the specific problems in Minoufiya.

The **beneficiary** of this project is NOPWASD and to a lesser extent the village council of Hamoul in Minoufiya.

The **outputs** include a pilot water treatment unit for testing alternative methods for reducing the iron and manganese; several small diameter test wells; training of village personnel; and a report entitled *Pilot and Technology Transfer Project in El Hamoul Area, Minoufiya.*

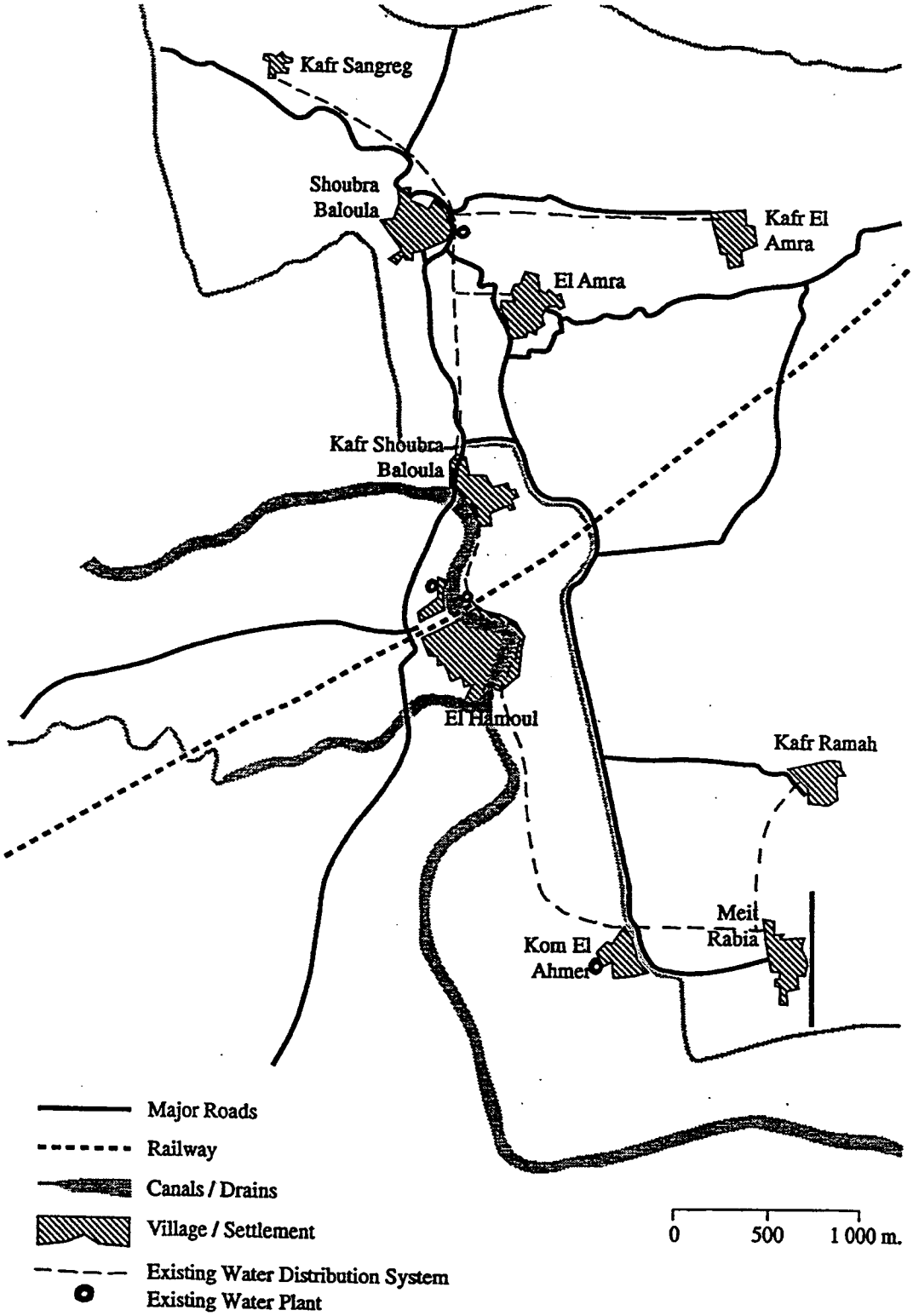
Assessment of Project Impact

El Hamoul village is located beside the city of Minuf which is shown on Figure 1 above. A general layout of the Mother Village and its satellites is shown in Figure 2 over leave.

According to the terms of reference for the pilot study, the aims of the project are '*... to develop and implement low cost technical solutions suitable for the specific problems in Minoufiya Governorate.*' In actual fact some of the problems listed in the terms of reference are typical problems in many other rural areas of Egypt and not just to Minoufiya. Examples of the problems which are generic and not specific to Minoufiya include the following –

- insufficient water supply to meet demands,
- high iron/manganese in water, flooded areas, and
- inadequate sewerage.

Figure 2 - Layout of El Hamoul Village



The Consultant completed all activities in the Scope of Works for the project, consisting of –

- purchase and installation of a water treatment pilot plant to test three different processes for reducing the concentration of iron and manganese contained in well water,
- drilling of test wells to locate the best position and level to abstract drinking water with minimum iron and manganese,
- ascertaining the reasons causing groundwater to flood to low lying areas of the village, and propose solutions,
- undertaking water pipe network analysis, including the supply of a computer programme and training to NOPWASD staff,
- outline designs for upgrading water supply service to El Hamoul village, including the design of a public laundry, and,
- ascertaining the feasibility of constructing a public laundry. (The work for this was financed by the next project, but the report of the results is included as an Annex to the Pilot Study report).

During the site visits to the village some of the observations made and comments made by villagers are as follows.

1. No sustainable benefit was gained by the village from the project. The pilot plant was taken to the NOPWASD Training Centre, in Beheira Governorate. This disappointed the villagers as the pilot plant supplied good quality water to the Village Offices and Clinic.
2. No cost comparison was made between removing iron and manganese using the pilot plant, and treating surface water using the compact treatment plant at El Hamoul, which is similar to those widely used in Egypt.
3. The test wells were only small diameter. None was developed into a production well, as the authority to do so was not obtained.
4. The recommendations for upgrading the water supply system have not been implemented.
5. The public laundry designed by the Consultant has not been constructed. Land has been acquired for project, but as of March 1997, NOPWASD had not appointed a contractor.
6. No action has been taken to alleviate flooding caused by groundwater infiltration.
7. No benefit was gained by the village from the computerised water pipe network analysis. It is questionable if such an analysis has any benefit on simple pipe networks serving villages, where water shortages are due to insufficient source works and storage capacity rather than undersized pipes. (The main beneficiary of the analysis programme is Design Department of NOPWASD who received the software and hardware, and training.)
8. The final report is available, in English only, in NOPWASD offices in Cairo. El Hamoul Village Chief attended a presentation by K-Konsult, but did not get a copy of the report.
9. El Hamoul villagers were disappointed with the outcome of the project. They co-operated fully during the project preparation and received nothing in return. Indeed the villagers regard the project as a research programme, with no useful benefit to the village.
10. The report *Pilot and Technology Transfer Project in El Hamoul Area, Minoufiya* is similar to a Feasibility Study but has some omissions. For one, it fails to highlight the acute shortage of elevated water storage estimated at less than 1 hour of peak demand.

11. Some villagers use piped water for personal hygiene and cooking only. Untreated canal water is used for tea and coffee, and canals are used for washing clothes and dishes.

El Hamoul Public Laundry - (BITS ref. EGY0254)

Project Summary

The **purpose** of El Hamoul Public Laundry Project is to involve community participation in the design of a public laundry which forms part of the previous project.

The **beneficiary** is the village of El Hamoul.

The **output** included surveys over several days by Swedish Social Scientists in co-operation with people from AUC. Details of the interviews are recorded as an Annex to the report *Pilot and Technology Transfer Project in El Hamoul Area, Minoufiya.*

Assessment of Project Impact

Two social surveys were conducted to assist with the identification and design of the public laundry. The first was done as part of the SRP and involved a senior and well respect Egyptian anthropologist from American University Cairo (AUC). This was followed by a second survey by Swedish Social Scientists, at the cost of SEK 200 000 additional funds granted by BITS.

The Governor of Minoufiya is supports the use of public laundries and has recently built several, using a different design to the one proposed at El Hamoul. However one inspected on a market day with many women in the vicinity, was not being used. Yet women were washing dishes and clothes in the canal immediately next to the laundry building.

Judging by the dry drains, the laundry had not been used for at least a day and in the opinion of the women, even though the laundry was free of charge, there is little or no inducement to using it in preference to washing in the canal. Reasons given for not liking this design of laundry are –

- The flow of water in the laundry is insufficient for properly washing and rinsing of clothes and dishes.
- Washing benches in the laundry are too small to stack and wash the large bowls and cooking pots which are common in the homes of the villagers.
- The laundry is often closed at times convenient to the women, even the custodian, a man, stated that the laundry is always closed on Fridays, the Moslem weekend.

It was also noted that drainage from the laundry discharges directly to the canal, which contravenes Egyptian Law which prohibits the discharge of polluted water into any canal or the River Nile.

Participatory Design of Public Laundry

The idea of developing the project through community participation was generally well received. The following are some of observations made from the documents examined and discussion with the villagers.

- The survey funded by BITS, followed the completion of an earlier survey that was done by the SRP program. The report produced is reference 4 in Annex C.
- The first survey was through co-operation between K-Konsult and the SRP project.

- The second survey conducted by K-Konsult adds little to the findings of the first. Over several days, women were interviewed who had different social standing and lived in different parts of village. The opportunity was missed of an official meeting of women organised by the Village Executive Council. Decisions made by such a group are likely to be more credible and effective.
- The women villagers claim they were not asked to comment on the ranking in importance of the laundry project over other projects. The general consensus of a group of women interviewed during the evaluation, is that the laundry project is low priority. One woman, interviewed by the team from Sweden, said she raised the point that the laundry project was low priority but was told that no other projects were being considered, so she co-operated with the social survey.
- The design of the proposed public laundry includes the installation of washing machines. Many households, including those in remote Ezba of the village that do not even have piped water, now have simple clothes washing machines.

Current Status of Laundry Project

The status of the pilot laundry project is now as follows.

1. A site for the laundry has been identified in the main village of El Hamoul and not the satellite village of Kom El Ahmer as defined in the terms of reference for the project.
2. The Governor of Minoufiya assisted the village to acquired land for building the laundry.
3. The K-Konsult prepared a design and contract document for NOPWASD under the Pilot Water Project. NOPWASD is responsible for funding the construction of the laundry.
4. NOPWASD tendered the construction of the laundry and received only one bid, which exceeded the estimated cost prepared by K-Konsult by nearly 50 per cent. In any case NOPWASD policy requires at least three bids before awarding a contract.
5. NOPWASD have recently re-tendered the project and expect to have evaluated and awarded a contract for the laundry project by May 97.

Sida Training Programme

Although not included in the Terms of Reference for this evaluation, it is felt important to mention the training programmes supported by Sida.

These provide funds for Egyptians to visit Sweden to undergo various types of training programmes. This is regarded as a highly successful way of promoting trade between Sweden and Egypt in all sectors of the economy.

In the opinion of the author the training programme is to be encouraged and if appropriate should be expanded but with the introduction of better controls to monitor the benefit of the programme to the Egyptian authorities who send trainees.

USAID has recently started a centralised Training Program project, which covers the training needs of every on-going USAID funded project in Egypt. One of the main features of the project is that the benefiting authority must agree to measurable, time base, improvement goals that expected as result of the training received.

Sida is encouraged to investigate the possibility of either modelling this performance related programme for the training it supports, or associate with the USAID programme. In discussions in Egypt, a representative from the USAID training project expressed a willingness to co-operated with Sida to develop a joint system of goal-orientated training.

Conclusions

General

Major and effective economic reforms have been introduce by GOE since the Swedish funded projects were implemented.

Up to the time of implementation of the Swedish funded projects, the management of NOPWASD was in a state of flux and senior management was often reluctant to make major decisions because often their appointments were regarded as temporary. This stifled the progress of development and often caused major difficulties with the implementation of projects funded by foreign aid. The World Bank at one stage withdrew support to Egypt because of GOE's non-acceptance of conditions the World Bank wanted to attach to loans.

During the 90s, GOE embarked on an economic reform policy which reversed a negative balance in trade. The economy of the Egypt is now stable and the impact of the economic reforms are starting to reap rewards.

The population continues to increase (although the growth rate is slowing) so there is still much investment needed to bring reliable water and sanitation services to all Egyptians.

Egypt still depends on foreign aid for infrastructure development, and GOE now accepts aid assistance linked to measurable results. However Swedish Government aid policy towards Egypt is expected to be minimal for the near future.

Sida Projects

The conclusions that follow are in the same format as the Findings.

Contractual Arrangements

None of the project documents specify performance targets to be achieved as a result of the projects. This is considered a major flaw in the project preparation, as none of the project partners (Sida, GOE, and Consultant) have measurable goals to work towards.

Small technical assistance projects funded by BITS were normally identified by a Consultant in conjunction with a prospective Client. Although this precludes competitive bidding, small value projects do not merit the cost of advertising and evaluating bids. Instead BITS negotiate rates based on their experience of other contracts. In the case of the contracts with K-Konsult, the rates were all negotiated down from the budgets presented.

BITS had little involvement in the projects thereafter. It was not represented at contract negotiations between NOPWASD and K-Konsult, and did not attend site visits or project progress meetings.

The Swedish Embassy in Cairo has no resources to manage technical assistance programs, and therefore has little documented information about any of the evaluated projects.

Environmental Impact and Women

Except for the completion of a few of the actions identified in the Feasibility Report, none of the projects have any directly measurable benefit on **environmental impact**.

Indirect environmental benefits may result from the sewer networks which had been reviewed using the SNWA and from the design guidelines that were prepared.

The projects have to some extent impacted on **women** in Egypt.

In the SNWA project some of the trained candidates were women. The 'star' pupil is a woman who is being encouraged to develop her career further by being sent on other training programmes. Also the two sections within NOPWASD (Hydraulic Design, and Mechanical & Electrical Research and Engineering) which supervised the Swedish aided projects, are both managed by women engineers.

Women were involved in the community participation process for the design of the public laundry in El Hamoul.

Rating of sustainable benefits of projects

The value and benefits of the individual projects are summarise in the following paragraphs. Since there are no performance targets set for the projects, the comments are subjective, based on impressions and observations.

The **Feasibility Study** provided little measurable sustainable benefit. Its value to the client is subjectively rated as 'moderate'.

- There was good co-operation between staff of the Governorate and the Consultant during the data collection phase of the project.
- The fact that the report was translated into Arabic makes it more accessible to the governorate engineers. However they have little influence on implementing water services development plans, which in Minoufiya are dictated by NOPWASD.
- According to NOPWASD, the recommended 1996 investment in high priority projects amounts to only 28 per cent for water projects and 73 per cent for sewerage projects.
- The report contains information associated with a master plan rather than a feasibility study. There is for instance no economic analysis of the proposed investment programme.
- The report does not contain a comprehensive analysis of data collected on water supply facilities. It is claimed that the data was suspect.
- Many of the groundwater and water resources studies are a repetition of work reported earlier by others.
- The report is badly edited making it difficult to follow the logic of discussions and the basis for recommendations.
- Little mention is made of the management and institutional aspects of operating the water and sewerage services, and no mention is made if the designs recommended take into consideration the existing operating capacity. No training programme is proposed.
- One problem in implementing this project is the central management of water and sewerage facilities in Minoufiya governorate. Governorate officials are responsible for operating works but all the financial powers and powers for introducing improvements and changes are vested in the central authorities based in Cairo.

The **SNWA project** provided some sustainable benefit. Its value to the client is subjectively rated as 'above average', mainly because NOPWASD has sustained and expanded project activities since completion.

- A benefit additional to the project Terms of Reference, are the delivery of guidelines for the design of sewerage pump stations. NOPWASD incorporated these in the national design standards used by consultants appointed to design water and sewerage system throughout the country. The guidelines helped to raise the quality of design and introduce standardisation.
- The training provided seems to have had an impact on the capacity of the computer staff in the Hydraulic Design Unit. All the staff interviewed were proficient in the use of computers and seemed to have a good understanding of common word processing and spreadsheet software.
- During the evaluation the MOUSE programme for network analysis was not in use. None of the staff interviewed were fully conversant with the programme.
- The first eight network analysis were undertaken by the Consultant but it is reported that the remaining 38 were completed by NOPWASD but documented by the consultant. No analysis have been documented by NOPWASD since completion of the project.

The **Pilot Project, El Hamoul Village** (including Public Laundry) provided little measurable sustainable benefit. Its value to the village is subjectively rated as 'minimal'.

- The design of the public laundry is the only potential benefit but on the whole, the villagers regard the project as research project, providing no benefit to the people.
- A small water treatment unit supplied in the project, did supply good quality water to the Village Centre (including the clinic). Since the Swedish consultants left, the treatment unit has been moved to the NOPWASD Training Centre in Beheira.
- Authority was not obtained to develop any of the test wells into production wells.
- A computer network analysis on the water mains has not influenced any improvements to the standard of water service to villagers. NOPWASD and not the village received the computer network analysis programme and associated training.
- The Village Chief participated in the workshop to present the report on the project. The village did not receive a copy of the final report even though spare copies were delivered by the Consultant. The only copy seen in Egypt was in NOPWASD office.
- The benefits of the proposed public laundry project are questionable as many households in the village now possess washing machines.
- Groups of women interviewed during the evaluation were of the opinion funds for the laundry would be better spent on projects seen by the villagers as being more important. One such project is rehabilitating the village hospital.
- The village water supply system was functioning but is not reliable. All the plant and equipment inspected is in poor condition and, judging by overflowing and leaking water towers, much wasteful pumping occurs.

Recommendations for Future Projects

Recommendations for future assistance depends on Sweden's aid policy towards Egypt. Generally Sida prefers to fund projects that can be (1) replicated, and (2) have a duration of no more than 24 months. For this last reason institutional development projects lasting more than 2 years might require a special agreement.

Prospective projects identified during the visit to Egypt include the following three institutional projects could be considered and further developed with GOE.

- NOPWASD are interested in assistance to review the different models used for managing water and wastewater operations (there are currently said to be nine different management arrangements). The outcome would recommendations for a standard management model to be adopted throughout the country.
- Assisting Minoufiya Governorate in commercialising water service is beyond the scope of Sida support. However Sida could assist with training governorate staff, if another organisation funded the other institutional development needs.
- The role of NOPWASD is also changing with the decentralisation of water services to governorate level. A study recommending management efficiency improvements to NOPWASD is needed soon.

Other projects that require physical works and that are orientated towards rural communities are as follows -

1. Upgrading the existing hospital at El Hamoul. There is an existing building that needs to be re-equipped. This would save people having to go to Minuf for hospital care.
2. Ezbas are small communities which often have no public services other than electricity. Evidence shows that the prevalence of schistosomiasis in ezbas is much higher than other communities. A pilot project to provide communal public services could be constructed and then monitored to determine the effect on schistosomiasis in the community.
3. Continue with the training programmes that already form part of the Swedish Aid program to Egypt.

The existing Sida funded training programmes are for reasons stated earlier recommended for further support, provided these are orientated towards measurable results.

Lessons Learned from Swedish Projects

Some of the lessons learned from the four projects in this evaluation are as follows -

1. The SNWA computer supply and training programme is a good example of a successful project. Equipment supplied is still being used and Swedish Aid contributed significantly to the creation of an activity wanted by NOPWASD, the client.

2. Future projects are to be clearly defined and linked to measurable performance indicators.

3. Where appropriate, a Logical Framework Approach should be developed by beneficiaries.

4. Terms of Reference should be written for all future projects.

5. Concise environmental benefits should be stated in future.

6. Community participation for small scale projects should be encouraged.

7. Funding agreements should clearly state who pays construction costs.

8. The impact of small scale community projects would be greater if NOPWASD delegated authority to the direct beneficiary.

9. A proactive approach by Sida to identifying and managing projects, will contribute towards greater success of projects.

10. Swedish nationals are well received by Egyptians.

11. The ongoing Sida training programme is providing a good bond between the two countries. Pre-set performance related goals would enhance the programme benefits.

Appendix A
Terms of Reference for Evaluation

TERMS OF REFERENCE FOR EVALUTATION OF THE SEWAGE AND WATER SECTOR IN EGYPT

1. Background

Egypt started in the early 80's an extensive program for the rehabilitation and upgrading of the water & sewage sector, due to the large population growth and lack of capital and knowledge in the environmental sector. Furthermore, studies being made in Egypt shows that many of the common diseases are related to the bad water quality and insufficient sewage cleaning systems. Therefore, Egypt contacted several donor nations to receive support in the form of advisory services and credits. The first request for technical cooperation (on a grant basis) that was presented to BITS covered a governate north of Cairo called Menoufeya. (There has been no credits provided to Egypt from Sweden within the water & sewage sector)

BITS financed, since the middle of the 80's, a number of projects within the water & sewage sector in Egypt directed towards the Egyptian counterpart NOPWASD (National Organisation for Potable Water and Sanitary Drainage). NOPWASD was established in 1968 and belongs to the Ministry of Housing and Public Utilities and is responsible for the water & sanitation in 26 governates. There is a separate authority dealing with Cairo and Alexandria.

The following projects have been completed:

1) A water masterplan for the Menoufeya Governate (186.000 SEK), 1983-84, EGY0251
2) A feasibility study for water supply & sewage in Menoufeya (3.169.000 SEK) 1989-1992, EGY0252
3) Sewage Network Analysis (3.628.000 SEK), 1992-1996, EGY0671
4) Pilot project in El-Hamoul, incl. training programme and action plan (4.400.000 SEK), 1993-1996, EGY0253
5) El-Hamoul public laundry (200.000 SEK), 1994, EGY0254

The total of these projects amounts to 11.583.000 SEK

Please note that the first project is not included in this evaluation. The fourth and fifth projects, El-Hamoul, constituted the implementation of recommendations which came out of the study in the Menoufeya area.

Rust VA-Projekt has been the Swedish counterpart in all projects except for the first one that was carried out by Interconsult AB.

2. Purpose of the evaluation

There are two purposes of this evaluation:

1) to review and evalutate the past cooperation

2) to review the possibilities for continued cooperation

So far Sida has not received any official request from Egypt regarding a new project within the water and sanitation sector. In order for Sida to be able to take a decision about a possible new financement it is important that the previous cooperation has been evaluated. This evaluation will therefore serve as a recommendation for continued cooperation with the Egyptian part.

3. The Assignment

An analysis should be made of the projects' relevance, results and effects, long term impact and sustainability and costeffectiveness. The following questions should be treated:

Background
a) describe the institutional structure of the water & sanitation in Egypt
b) assess what other donors are doing in the sector
c) describe main objectives

Relevance
a) where the objectives relevant to the situation
b) where the activities appropriate to the situation

Achieveness of objectives
a) have the objectives been met
b) what results and effects have the projects lead to
c) reasons of high/low achievement of goals
d) what changes have been undertaken as a result of the projects
e) what have the effects been on the environment

Implementation
a) have the activities been undertaken as planned
b) have the parties fullfilled their roles and responsabilitites
c) has the institutional capacity been improved
d) assess the quality of the services provided by RUST VA-Projekt
e) how have the issue of gender been treated in the projects

Side effects
a) what sideeffects have the projects given (positive, negative)
b) have any results of the projects been used for demonstration purposes
c) to what extent have the projects given input to the elaboration of new project proposals (with other donors)
d) have any changes in legislation been made as a result of the projects
e) have the projects given any positive or negative effects on the role of men and women

Sustainability

a) what long term effects have the projects lead to with regard to capacity building and institutional strengthening

b) what improvements with long term effects have been made

c) was the Egyptian counterpart the right one to work with or should other ministeries have been involved

d) are the persones being trained still at NOPWASD

e) could a more closer contact from BITS/Sida have improved the results of the project

Problems in implementation

a) have there been any problems during implementation, how have these been solved

b) what where the reasons to the problems

Cost-effectiveness

a) costs and benefits, the costs in relation to activities undertaken, achieved results and effects. That is, both on the donor and recipient side (local costs being spent).

Recommendations and lessons learned

The consultant(S) should comment on the possibilities for future cooperation in related areas.

a) to give recommendations of a potential future project

b) to assesss the counterparts institutional capacity of a new project

The consultant(s) should also give general recommendations on issues to be considered when implementing similar activities in a similar environment

4. Methodology, evaluation team and time schedule

The evaluation should be undertaken by one person in cooperation with the counterpart involved in the projects in Egypt, NOPWASD. The evaluation should be made upon basis of the available background material concerning the projects such as formal decision papers, contracts and reporting. Additional data should be gathered through interviews in Sweden and Egypt with the parties involved. Interviews should be held with the responsable persons in Sweden and in Egypt. Meetings should be held with NOPWASD, Ministry of Housing and Public Utilities, Ministry of Environment, representatives from the governate of Menoufeya, American University (regarding the El-Hamoul project) and the Swedish Embassy in Cairo. In Sweden interviews can be arranged with RUST VA-Projekt and Sida, if needed.

The consultant himself, acting as independent consultant commissioned by Sida, cannot participate in any tender for the proposals that might result from this mission.

5. Reporting

A draft written report in English should be sent to Sida for comments by 17 February, 1997, preferrably. The evaluation report shall be written in English and should not exceed **40 pages**, excluding annexes. The outline of the report shall follow Sida Evaluation Report - a Standardized Format (enclosure). **3 copies** of the draft report shall be submitted to Sida. Copies should also be sent to the involved parties in Egypt for comments. Within two weeks after receiving Sida's comments and comments from NOPWASD on the draft report a final version in 5 copies and a diskette shall be submitted to Sida. Subject to decision by Sida, the report will be published and distributed as a publication within the Sida Evaluations series. The evaluation report shall be written in WP 6.1 for Windows and should be presented in a way that enables publication without further editing.

The evaluation assignment includes production of a summary (maximum 2-3 pages) according to the guidelines for Sida Evaluations Newsletter and the completion of Sida Evaluations Data Work Sheet. The separate summary and a completed Data Work Sheet shall be submitted to Sida along with the final report.

It is preferrable that the evaluation is initiated within the month of December and that the visit to Egypt is undertaken before 10 January 1997 for reasons of the Ramadan.

ida Evaluation Report - A Standardized Format

ıformation to authors of Evaluation Reports for Sida:

ll Sida Evaluation reports should follow a andardized format. The language of the report .ould be English unless otherwise agreed. If ›nsidered necessary, Sida may demand that the port be checked by a professional language ›nsultant at the expense of the author(s) of the port.

he report must follow the Terms of Reference ;reed upon for the evaluation. The report should : brief and concise, the normal length varying :tween 40 and 60 pages. Additional material should presented in annexes or appendices.

he report shall be typed on a word processor, using 'ordPerfect 6.1 as software. Authors shall supply 'da with a disk to facilicate editing and printing.

ormat for Sida Evaluation Reports

xecutive summary

First in the report immediately following the cover. Preferably not more than two-three pages; these pages numbered separately.

he summary should be self-contained and self-explanatory - will be read by some people who do not know anyting about e programme. It should include

a very brief description of the project/programme/ sector support evaluated (purpose, time frame, volume of funds, main components, geographic location)
purpose and focus of the evaluation as expressed in the Terms of Reference
summary of findings, conclusions and recommendations (this should be the main part of the executive summary).

'able of Contents

rogramme context

the development context of the project
the project history
description of the project: the goal-hierarchy, the Swedish inputs, activities planned and undertaken, expected outpurs, effects and impact

'he Evaluation; Methodology

reasons for the evaluation, scope and focus of the evaluation as outlined in the Terms of Reference

- approaches and methods used in conducting the evaluation (what was done, by whom, when, where and how)
- limitations of the study

Annexes

Findings

(May be expanded into several consecutive sections)

Information, analysis and findings should be presented in clearly defined sections addressing each one of the issues to be covered in the evaluation as outlined in the Terms of Reference.

Conclusions should be stated clearly and substantiated by the evidence and analysis presented.

The degree of confidence with which the conclusions can be drawn should be explicitly mentioned.

Conclusions and Recommendations

This chapter should contain a summary of conclusions and recommendations. Conclusions and recommendations may be written in separate chapters.

It should be concise and may preferably make references to the sections of the report where the respective conclusions are dealt with more extensively.

Lessons learned

This should be a short shapter on lessons of a more general nature that the evaluation has generated, i.e. lessons and experiences that may be of importance also for other projects and programs.

Appendices

1. Terms of Reference for the Evaluation (must be included).
2. List of persons interviewed, including the institution they represent and the position they hold.
3. List of documentation and other references.
4. Tables, diagram, statistical information etc (optional).

Appendix B
People Met In Egypt

Appendix B - People Met during Visit to Egypt

20 February to 8 March 1997

	Name	Position	Organisation	Tel/Fax O=Office D=Direct F=Fax
1.	Mr Christer Sylvén	Ambassador	Swedish Embassy, Cairo	O: 341 4132 D: F: 340 4357
2.	Mr Jan Thesleff	Counsellor	Swedish Embassy, Cairo	O: 341 4132 D: F: 340 4357
3.	Mrs Ragia Rezk	Administrator	Swedish Embassy, Cairo	O: 341 4132 D: 341 1484 F: 340 4357
4.	Eng Mahmoud El Sarnagawi	Chairman	National Organisation for Potable Water and Sewerage Disposal (NOPWASD)	O: 302 3038 D: F: 302 3037
5.	Eng Samira Necola	General Manager M&E Research & Engineering (El Hamoul Project)	NOPWASD	O: 304 2922 D: F: 304 2921
6.	Eng Howida Amani	Engineer M&E Research	NOPWASD	O: 304 2922 D: F: 304 2921
7.	Eng Essam Mohamed Hassan Aly	Hydraulic Design Engineer (Wastewater)	NOPWASD	O: D: F:
8.	Eng Fatma Osman	Chief Engineer	Hydraulic Design Unit, NOPWASD	O: D: F:
9.	Eng Sayed Hussan	Assistant, M&E Research & Engineering	NOPWASD	O: 302 3054 D: x134 F:
10.	Adel Abdel Alim	Rust VA-Project Representative	Techno-Trade Bureau	O: 393 8560 D: F: 393 2307
11.	Eng Mohamed Maher El Sadek	President	Sabbour Associates	O: 335 0232 D: F: 361 5039
12.	Counsellor Adly Hussein	Governor	Menoufiya Governorate	O: D: F:

Name	Position	Organisation	Tel/Fax
13. Eng Mohamed Sabry Abou Omar	Deputy Director	Department of Housing, Menoufiya Governorate	O: D: F:
14. Eng Abdel Salam Mohamed Nawar	Manager, USAID Project	Maintenance Centre, Menoufiya Governorate	O: D: F:
15. Eng Abdalla Abdel Fattah El Qot	Manager, Mechanical and Utilities Unit	Department of Housing, Menoufiya Governorate	O: D: F:
16..Gen Abdel Hadim Zadabya	Markaz Chief	Menuf Markaz, Menoufiya	O: D: F:
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Appendix C
Background Reference Reports and Document

Appendix C - Reports and References

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