THE ARAB REPUBLIC OF EGYPT

National Organization for Potable Water and Sanitary Drainage NOPWASD
Governorate of Bein Suef

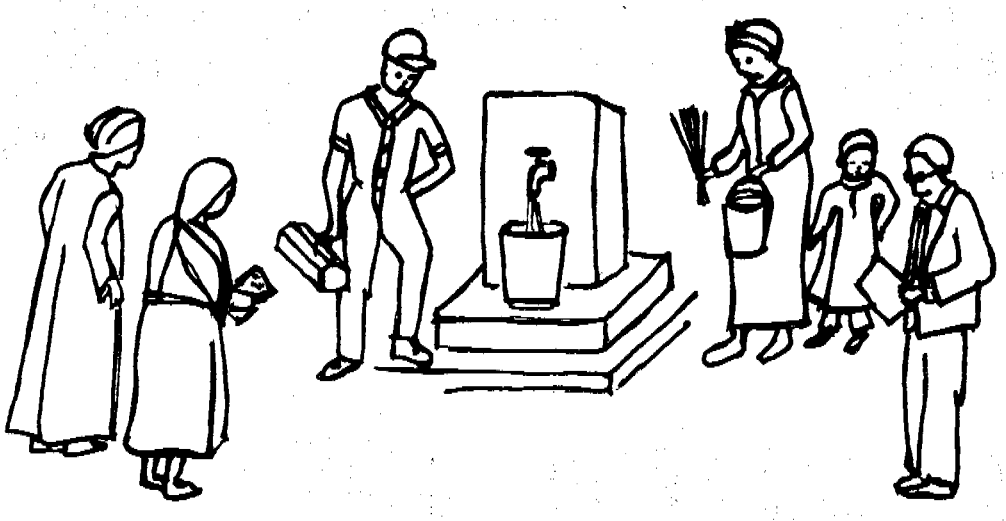
THE REPUBLIC OF FINLAND

Ministry for Foreign Affairs,
Department for International Development Cooperation

Review of Phase I and Appraisal of Phase II of Regional Water Supply and Sanitation Project in Beni Suef Governorate

REPORT OF THE REVIEW AND APPRAISAL MISSION

November 21, 1996



IRC International Water and Sanitation Centre

Abreviations and Acronyms

CAPMAS	Central Agency for Public Administration and Statistics
EGA	Economic General Authority
EHP	Environmental Health Project (USAID-supported technical Assistance)
Ezba	Part of a village
FIDIC	Federation Internationale des Ingenieurs Conseils
HRD	Human Resources Development
LE	Egyptian Pound
LWC	Local Women Coordinator
Markaz	District of a Governorate, (pl. Marakez)
MINISTRY	Ministry for Foreign Affairs of Finland, Department for International Development Cooperation
MSW	Municipal Solid Waste
NOPWASD	National Organization for Potable Water and Sanitary Drainage
PHC	Primary Health Care Project
RMC	Regional Maintenance Unit
RMU	Reorganized Markaz Unit
RWSSP	Regional Water Supply and Sanitation Project in Beni Suef Governorate
USAID	Unites States Agency for International Development
WS	Water Supply
WS & WW	Water Supply and Wastewater
WSS	Water Supply and Sanitation
WW	Wastewater

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The opinions presented in this Report are those of the members of the Mission, and are not to be considered official statements of the governments of Finland and Egypt.

Review of Phase I and Appraisal of Phase II of Regional Water Supply and Sanitation Project in Beni Suef Governorate

Executive Summary

The objective of this Mission was to review the achievements to date of Phase I of the Regional Water Supply and Sanitation Project (RWSSP) in Beni Suef Governorate, Egypt, which is being undertaken as a collaboration between the Governorate and the Department for International Development Cooperation, under the Ministry for Foreign Affairs of Finland (hereafter referred to as MINISTRY, for convenient reference). Based on this review, the Mission was to recommend activities to be undertaken in Phase II.

In its work, the Mission concentrated not so much on the physical achievements of the RWSSP, but rather on the extent to which the project had succeeded in establishing a reasonable basis for continuation into a second phase.

The conclusion of the Mission is that the time is not yet right for launching the second phase. There are a number of serious problems that need to be resolved before, in the opinion of the Mission, this could be done with confidence. However, a withdrawal of the external support at this stage would cause the loss of the results achieved so far. The Mission considers that a "bridging operation" is therefore needed, prior to the full second phase. The Mission therefore focused on identifying actions that should be taken during this bridging operation in order to consolidate progress made to date and lay a basis for subsequent extension and expansion. The Mission did not consider that any useful purpose would be served by continuing with an Appraisal of a theoretical Phase II, in the absence of a sound institutional basis for proceeding, and before sufficient results had been achieved by the first phase to allow a reasonable judgement to be made on the justification for further long-term involvement of the MINISTRY.

The first and most important problem to be resolved during this bridging period is undoubtedly the time taking process of the establishment of the new Economic General Agency. The EGA is to be an autonomous body, operating on a commercial basis, responsible for water supply and sewerage services throughout the governorate. It was authorised in a Presidential Decree in September 1995, but little progress had been made by the time of the Mission's arrival, one year later. During the Mission, the Governor appointed an Interim Committee to be responsible for managing the establishment of EGA, but the term of office of this committee is indeterminate (a possible life of 1 or 2 years was mentioned to the Mission), and its members already hold senior positions and will be working part-time. It is therefore likely that EGA will not be fully operational for some considerable time. Until this vital point is resolved, the RWSSP has no effective counterpart organisation, and future sector organisation, staffing, policies, procedures, budget, etc., are uncertain.
The second major problem to be resolved is a much clearer definition of the objectives and activities of the project. At present it is undertaking some rehabilitation works, some demonstration and pilot projects, and some training. There does not seem to be a coherent overall strategy to which these various components relate, nor any plan for building on the findings of this initial phase in order to "go to scale", progressively hand over responsibility to EGA, and create a self-sustaining water supply and sanitation service in the governorate.

The third major problem is the difficulty experienced by the RWSSP to fully integrate technical and social factors in its work. Some of the pilot activities undertaken have failed largely because technical solutions, when implemented, did not match social conditions and community expectations. These difficulties could not necessarily have been anticipated (and indeed that is the purpose of pilot trials); the Mission's concern is that the project appeared unable to respond promptly once the difficulties emerged. As a result, the project's credibility has suffered to some extent, and the project has been unable to determine precisely what approaches would be sustainable, since the pilot trials have not gone through the full cycle of installation, monitoring, feedback and adjustment.

The Mission therefore recommends a one-year extension of Phase I, until the end of 1997, to give time for these problems to be resolved. During this period, the project should be substantially reoriented, with social factors taking a much more prominent role. The staff should also be changed from Finnish-dominated to Egyptian-dominated, but if this is to be successful there has to be far more commitment from the EGA to the project than has been the case to date by the Governorate: the Project Director (this change of title of the position is to illustrate that there is no Finnish director) should be full-time and truly managing the work (at present the National Project Director is the Secretary-General of the Governorate, effectively the Governor's deputy and also the Acting Chairman of EGA; he is therefore a person with heavy commitments of time to activities outside the project); the working time in the Project of the seconded Egyptian staff need to be reviewed carefully; which task needs full-time, and which can be accomplished by part-time occupation. When the EGA is established the incentives paid to these staff (actually they should then become EGA staff) should be from EGA funds, not the MINISTRY support.

The present draft of the project document for the proposed Phase II does not respond adequately to any of the above concerns. The Mission recommends that, provided that the Egyptian authorities agree in principle with the Mission's recommendations and wish to proceed in this manner, a document should be prepared to cover the extension period and to define in more detail the reorientation required, together with deciding priorities and setting benchmarks. Provided that satisfactory progress is made, a new Phase II project document should be prepared, and a further review should be carried out in about September 1997.

Review of Phase I and Appraisal of Phase II of Regional Water Supply and Sanitation Project in Beni Suef Governorate

1. Background

1.1 Government's Water Supply and Sanitation Policy

The water supply and sewerage sector in Egypt is at present going through a major transition. In the past, it was heavily centralised, with capital investments in new facilities being planned and implemented by a central agency, the National Organisation for Water Supply and Sanitary Drainage (NOPWASD). These facilities were then handed over to the governorates for operation and maintenance, typically by the Housing Directorate (which itself was linked to the central Ministry of Housing and Public Utilities, as well as to the governorate administration). Planning was not necessarily closely coordinated with governorate priorities and activities (the "compact units" for water treatment are a remnant of this centrally-planned process). Even within the governorates, responsibilities were not entirely clear. Some responsibilities and powers were vested with markaz, city and village administrations subjected to the Governor, and some to the Housing Directorate.

Other central organisations also had a significant influence, or even direct control, over the sector; for example, the Central Organisation on Audit on accounting and audit (and, according to some reports, also over matters such as salaries), the Central Agency for Organisation and Administration on organisational structure, etc.. Central government policies also applied to matters such as salaries and employment conditions.

The sector was heavily subsidised. Tariffs were set by central government, with revenues insufficient in most cases to cover operation and maintenance (resulting in deferred maintenance and premature failure of installations), and certainly inadequate to cover depreciation and replacement of assets. However, the governorate was in no position to remedy this problem: revenues were transmitted by the governorate to the Central Ministry of Finance, and operating funds were released from Central Government as part of general support to the governorate's operations. There was therefore little incentive for efficiency or cost-saving in the operating agencies, since there were few tangible results either for staff or for the agency as a whole.

The only parts of the sector operating outside this framework were Cairo, Alexandria, and the three canal cities, Suez, Port Said, and Ismailia. The first two cities have had independent water and sewerage authorities (now titled EGAs) for many years, and the utilities in the three canal cities were established and managed by the Suez Canal Company.

This position is now in the process of radical change. Government policy is that the water and sewerage sector should become progressively more self-supporting, operating on an autonomous and commercialised basis. For example, the governorate of Beheira, under a World Bank-assisted project which lasted from 1981 until 1994, established the Beheira Water Company, a semi-autonomous company which became the first (and, until 1995, the only) company in the country to meet the objectives of the May 1985 National Water Pricing Policy, which called for water companies to recover all operation and maintenance costs by

1991. Similar governorate-level water companies now exist in Damietta, Kafr-El-Sheikh and Luxor.

For the governorates of Beni Suef, El Fayoum and Minya, USAID arranged for a mission from the Environmental Health Project (EHP), a technical assistance group established by USAID and based in Washington, to visit the three governorates and set out steps that should be taken to create viable water and wastewater undertakings. The findings and recommendations of this study, which was carried out from April to September 1995, were set out in a series of reports, of which No. 10: *Findings and Institutional Options for Management of Water Supply and Wastewater in the Governorates of Fayoum, Beni Suef and Menya* recommended the creation of the EGAs in these governorates, and set out basic objectives and processes for this reorganisation.

USAID, in indicating its willingness to assist sector development in the three governorates, set out three essential conditions to be incorporated in any agreements for providing such assistance: that, after improvement efforts have been implemented for several years, the new EGAs will have:

(a) the capacity to make investments and borrowing decisions and be able to retain revenues collected;
(b) the capacity to select, remunerate, develop and promote staff unencumbered by existing civil service regulations; and
(c) the authority to charge agreed-upon rates for water and wastewater to recover operation and maintenance costs.

The urgency to move from a highly-subsidised water sector to a self-sustained one shifted the focus of development from investments to institution-building and improved management. In the Governorate of Beni Suef, the basis for this development was laid when the Presidential Decree No. 281/1995 was issued on September 4, 1995, making possible the establishment of EGAs in seven governorates, including Beni Suef (an English translation of the text of the Decree is included as Annex 13). These authorities will be responsible for water supply and wastewater (WS&WW) projects and works in the governorate besides managing, operating and maintaining WS&WW systems. They will also be responsible for proposing regulations and tariffs for selling potable water and sanitation services so as to achieve a balance between income and expenditures.

Subsequently, USAID launched a "bridging operation", under which a consulting firm (Montgomery Harza) developed detailed proposals for the transition to the new EGAs in Beni Suef and Minya (as noted below, El Fayoum governorate is receiving separate assistance from Dutch bilateral aid). These proposals are set out in their August 1996 report and include:

(a) Development of a proposed organisational structure, and of job descriptions
(b) Preparation of a complete assets inventory
(c) Development of a "bottom-up" budgeting system
(d) Development of a financial modelling tool, compatible with the new budgeting system, and of a chart of accounts and financial monitoring and reporting systems
(e) Studies of the unaccounted-for water problems, and preparation of a short-term action plan for reduction of non-revenue water

(f) Recommendations on priority action to improve commercial and consumer relations
(g) Design of a strategic maintenance system
(h) HRD activities in support of this transition

The Mission was unable to review the extensive and comprehensive report in any detail, but it is clear that if the governorate is prepared to meet USAID's conditions so that USAID assistance is continued, very significant reforms may be expected, especially at EGA central level.

Serious issues remain to be resolved. One is the terms and conditions surrounding the transfer of existing assets from NOPWASD, which at present holds them on behalf of the government, to the EGAs. In accordance with Egyptian practice, these assets have not been revalued periodically, and depreciation payments for them are made directly to government in perpetuity; the assets are not written off at the end of their economic life. How they should be valued (in particular assets in need of rehabilitation, or short-lived and unsatisfactory ones such as the compact plants) will therefore be a serious issue for the new EGA.

The present law for the environment was issued on January 27, 1994 (Law 4/1994). It constitutes, together with bylaws and some other regulations, the basis for environmental protection in Egypt. It should be noted that the law does not affect compliance with the provisions of Law 48/1982, which deals with the protection of the River Nile and other waterways from pollution. Law 4/1994 is also the legal basis for the Environmental Affairs Agency, which is the guardian organisation enforcing this law.

1.2 Features of Governorate Water Supply and Sanitation

Annex 4 contains a translation of the October 6 1996 report prepared by the Governorate members of the Mission. It contains statistics on the Governorate, including present water supply and sanitation status. Please refer to this annex for details.

In the water supply sector availability of water is still a problem, although a piped system exists in all villages of the project area, that is the marakez of Beba, Sumusta and El Fashn. Many households still rely on public taps which may not be located at a convenient distance. Others have access to water from private handpump wells and prefer to use it even when piped water is available, because of breakdowns and quality problems with the piped systems. These quality problems are to some extent connected to the practice adopted by NOPWASD, the highest authority in establishment of planning criteria, to favour surface waters from the Nile and the canals as raw water sources for water supplies. Full chemical treatment, consisting of primary settling, coagulation with aluminium sulphate, flocculation, sand filtration and chlorination is applied in package plants, the so-called Compact Units. Often, however, the quality of the water produced is not satisfactory, due to the poor condition of the Compact Units, and lack of proper operation and maintenance.

Favouring the use of surface waters has left development of groundwater sources without due attention.

In dealing with wastewaters, the focus has been on piped sewerage systems in cities, that is, the capitals of governorate and marakez. Simpler on-site systems that would bring immediate environmental improvements at low cost have received little attention up to now.

The major concern affecting RWSSP operations in Beni Suef is that the new EGA has not yet been formed, although a year has now passed since the Presidential Decree, and despite the preparatory assistance outlined above. This is apparently leading to problems within the administration, as staff who will clearly be transferred to the new EGA find that their original departments no longer have budgets for their salaries, while the non-existent EGA has no means of paying them. More importantly from the perspective of RWSSP, there is at present no parent organisation that can determine the environment within which RWSSP will operate at the markaz level: key matters such as organisational framework, staffing, conditions of employment, policies, financial management, and procedures are all at present undefined.

During the Mission, on October 2, 1996, the governor issued a decree establishing an Interim Committee charged with overseeing the establishment of the new EGA. This committee will be under the leadership of the Secretary-General of the governorate, who is also the National Director of RWSSP. This is encouraging, in the sense that the lessons learned through RWSSP should be incorporated in the new EGA's thinking, but at the same time discouraging, since it means that the RWSSP and the EGA will be competing for the scarce time of an already over-burdened senior official. The committee will exist until such time as it can hand over to the new EGA Board - a possible life of up to 2 years was mentioned, which is discouraging as it means that, for example, in the foreseeable future the HRD activities of RWSSP will be operating in an uncertain long-term environment.

Delay in establishing the EGA and setting in motion the slow process towards financial viability means that the financial position of the EGA will continue to deteriorate. Moreover, the size of the present deficits, and the significant improvements in cost recovery, may lead to some reluctance to take on responsibility for creating and managing a utility that is meant to be self-sustaining. For example, the EHP team, considering only Beni Suef city, concluded that with present operational performance an increase of 4.5 times in the current water tariff would be needed to achieve coverage of water supply O&M costs by the year 2000, and the wastewater tariff would similarly have to increase from 40% of the existing low tariffs to 130% of the new high tariffs - effectively an increase of about 1250%. Even assuming considerable improvements in performance, the water tariff would have to be increased by 100% and the wastewater tariff by 400%.

1.3 Problems to be Addressed

The Project Document for Phase I of the RWSSP specifies the problems to be addressed as follows:

Core problems:

Sanitation sector:	Insufficient wastewater system
Water sector:	Lack of sufficient potable water

Consequently the objectives were stated as:

Improvement of sanitation system, and
Supply of safe domestic water in sufficient quantity

The problems to be addressed were reviewed in the internal evaluation in 1994. The internal evaluation did not disagree with the statement of the core problems, but found the derivation of development objectives and immediate objectives too vague and in need of redefinition. The overall objective, as it is called in the report of the evaluation, was then rewritten to indicate a need to address a problem of non-functioning or poorly functioning structures to deliver the services.

The report of the internal evaluation does not directly name the problems to be addressed, but it is possible to reconstruct them to be:

Inadequate cost recovery
Poor physical condition of facilities, and
Inefficient management.

The reasons for these include the lack of an authority/agency/utility to propose adequate tariffs and charges, and the lack of separate sector-specific planning and budgeting. This has led to inadequate allocation of funds for O&M expenditures. Lack of O&M funds is one reason for the existing poor physical condition of most WS facilities in the project area and will, if continued, cause quick deterioration of facilities. In turn, the poor physical conditions make efficient operation of the facilities impossible. Other problems are lack of efficient working procedures and lack of skills, both in O&M and some administrative functions (for example metering, billing and revenue collection).

The general attitude of employees in the water sector organisations towards the users of services is mentioned in the evaluation report as one of the problems. Participatory approaches have not been used, and a bureaucratic approach, instead of a service- and commercially-oriented one, is applied.

1.4 Other Interventions

As described in Section 1.1 above, in 1995 USAID arranged for a mission from EHP to visit the three governorates of Beni Suef, El Fayoum and Minya and to recommend steps that should be taken to create viable water and wastewater undertakings. The subsequent 1996 Montgomery Harza report provides developed detailed proposals for the transition to the new EGAs in Beni Suef and Minya.

In parallel, El Fayoum, a governorate in which water supply and sewerage services are being upgraded with assistance from the Netherlands, acted promptly to initiate the transition to the new EGA. An Action Plan for sector reorganisation was issued in March 1996, 6 months after the Presidential Decree, and this is now being put into effect. Staff from RWSSP and from other parts of the Beni Suef administration attended the workshop during which the Action Plan was developed.

1.5 Documentation Available

Two different versions of a draft project document for Phase II were provided to the Team. The first one, dated 11.08.1996, had been written by a preparatory group consisting of one Finnish and two Egyptian project staff members. The second one, dated 16.09.1996, was written by a Branch Committee of the Coordinating Committee of the project. Neither of the two drafts had been approved by the Steering Committee or even the Coordinating Committee. The Mission has assumed that the second draft is the more authoritative, and the comments below are based on this draft.

In the second version of the draft document the overall objectives of Phase II are stated (page 3) as follows:
"... to extend the projects which, after evaluation, have been proven successful, to cover the seven marakez of Beni Suef Governorate. In this case the Project Office will act as the internal consultant of the Governorate in the fields of water supply, sanitation and operation and maintenance, help spreading the ideas of untraditional sanitation in villages, environment projects, development of human resources, and maximising the role of women in development and community participation.

In this context, the Project Office will develop and prepare researches, studies, feasibility studies, technical specifications, and estimates of works, and provide technical assistance and advice for all relevant departments and bodies of Governorate of Beni Suef in the said fields.

Indicator of the realisation of the objective is achieving sustainable improvements in the health situation of population in the Beni Suef Governorate."

An immediate beneficiary of Phase II, as stipulated in the draft project document, will be the EGA. The transition from the present situation towards a self-sustained authority will be speeded up by day-to-day technical assistance by RWSSP in the practical application of general management and administration procedures developed by others or by RWSSP. Achievement of self-sustained status will be facilitated by physical improvements to WS&WW facilities and by development of well-organised units, effective working procedures, and skills required for cost-effective management of WS&WW systems. Thus, the inhabitants of the project area will benefit from the improved services and reduced costs that are anticipated as a result of cost-effective management.

Actual benefits to health (which are difficult to measure) can be ensured only by proper water use and sanitation practices in homes. Women, who are responsible for these areas, will be involved in the planning and care of facilities as well as in educational activities through the community participation program of RWSSP and thus they, together with their families, will be the ultimate beneficiaries.

The strategy to be used for Phase II, according to the draft (page 4), will be based on the experiences of the first phase and will involve the expansion of successful demonstration schemes to cover the whole Governorate. Furthermore, the role of the project will be to provide technical assistance to support the establishment and development of the activities of EGA.

From these statements it can be inferred that the two key activities proposed for Phase II are the extension of RWSSP into all seven marakez of the Governorate, and the provision of technical assistance to support the establishment and development of the activities of EGA. However, the document does not consistently follow these two lines. In the chapter on Intervention (pages 12 to 21) only the 3 marakez which were involved in Phase I are indicated as the recipients of further improvements. It is not clear what exactly will be done in the other 4 marakez, nor is there any mention of planning how and when the extension of project components in the other marakez will take place.

In a section on "Main activities required for making the WS&WW systems sustainable" (pages 17 to 20) a number of activities are listed which would provide technical assistance to EGA. Most of these activities concern important organisational and financial aspects, for example giving a clear definition of the authorities and responsibilities of the Reorganised Markaz Units (RMU) in relation to EGA and the markaz administration (page 17), or planning of necessary procedures and effective follow-up of expenditure and income in the RMUs (page 18).

Very recently (2.10.1996) the Governor of Beni Suef issued a Decree establishing a committee to be responsible for setting up EGA and recruiting senior staff. It can be expected that it will take some time (the Mission has been told probably one to two years) before the new agency will be properly established at Governorate level. As a next step, equivalent organisations will be established at markaz level, for which RWSSP can then provide valuable technical assistance.

In general, the role of RWSSP in the establishment of EGA at markaz level, and its relation to EGA in the implementation of such project objectives as have been stated in the draft document, can only be fully realised after EGA is firmly in existence and is in the process of establishing itself as a self-sustained authority. At that time it will be necessary to redefine project objectives and activities which must be consistent with the requirements of the new agency.

The Mission obtained and reviewed background documentation for its work from MINISTRY. This documentation is listed in Annex 3.

A list of all documents prepared by the Project is presented in Annex 5.]

1.6 The Mission

The review of Phase I of the project and the appraisal of the Draft Project Document for Phase II were initiated as a normal procedure of the Project Cycle and in conformity with MINISTRY's rules and regulations.

The Mission consisted of five members, two Egyptians and three from IRC International Water Supply and Sanitation Centre. The composition of the Mission was:

(i) Mr. Heikki Wihuri, Team Leader, WSS Specialist
(ii) Ms. Mary Boesveld, Socio-Economic and Gender Specialist
(iii) Mr. Richard N. Middleton, Institutional Specialist
(iv) Mr. Hassan El Banna, Director, Housing Department, Beni Suef Governorate
(v) Dr. Ahmed Abdullatif, Head of Investments Office, Beni Suef Governorate

The Governor of Beni Suef nominated the governorate staff members of the Team on 29 September, to represent the Governorate in the Review and Appraisal Mission. They joined the Mission on 1 October and submitted their report (Annex 4) on 6 October. In addition they participated in the workshop held on 7 and 8 October.

The Mission was assisted by Dr. Wafaa A. Amer from Cairo University, Faculty of Regional and Urban Planning. She was nominated by the Embassy of Finland in Cairo on request of the Team Leader.

The purpose of the Mission was:

(i) to appraise the results and achievements of Phase I;
(ii) to recommend measures to be taken to finalise the plans for Phase II and first and foremost:
1) justify the continuation of the programme
2) define clearly the time frame for overall external interventions needed to achieve the objectives/purpose of the Finnish aid
3) determine well the proposals for the objectives
4) the contributions/shares from the financing parties; and
(iii) to prepare an Appraisal Report.

According to the Terms of Reference, the Mission was obliged to cover the following tasks:

(i) review the Project Document(s)for Phase I (including its extension) and the relevant documentation of the Project (Phase I), meet the relevant stakeholders, carry out field inspections, and assess the achievements of the project against the initial expectations;
(ii) draw conclusions and experience from Phase I for the proposed continuation of the project;
(iii) appraise the draft Project Document for Phase II, and assess the appropriateness of proposed objectives, strategy, approaches and activities, especially assess the ownership of the local authorities and their readiness for innovative approaches;
(iv) assess the local resources and capacity to implement the project and maintain the service level to be developed with the support of the project;
(v) identify and assess the risks associated with the implementation of the project and effective and sustainable materialisation of its benefits; and
(vi) analyse the feasibility of the continuation of the project and, if considered feasible, make detailed proposals for the finalisation of the Project Document.

Apart from review of the documentation provided to it, the main source of information for the Mission was extensive interviews with the Egyptian staff of the project, governorate officials, and the inhabitants of the three districts where the Project has been active. Four days were occupied by field visits, giving the opportunity for interviews with users of the facilities

provided and with other villagers, local officials, and project staff, supplemented by extensive field observations. The expatriate project staff were invited to participate in the review and appraisal process primarily to allow them to explain their special roles in the processes of Phase I, and to give their opinions on the current status of the project.

Towards the end of the Mission, a 2-day workshop was arranged, conducted primarily in Arabic, during which participants were encouraged to identify the main factors affecting the sustainability of the project interventions, and the actions which should be undertaken during Phase II to enhance sustainability. Details of this workshop are presented in Annex 11.

The Mission started its work in Cairo 23 and 24 September, collected material and analysed it in Beni Suef from 25 September to 12 October, and debriefed the Embassy of Finland on 13 October. The programme of the Mission is presented in Annex 2, which includes the names of the persons met and interviewed.

It turned out during the Mission that the time is not yet right for launching the second phase. There are a number of serious problems that need to be resolved before, in the opinion of the Mission, this could be done with confidence. The Mission therefore focused on identifying actions that should be taken during a bridging operation in order to consolidate progress made to date and lay a basis for subsequent extension and expansion. The Mission did not consider that any useful purpose would be served by continuing with an Appraisal of a theoretical Phase II, in the absence of a sound institutional basis for proceeding, and before sufficient results had been achieved by the first phase to allow a reasonable judgement to be made on the justification for further long-term involvement of the MINISTRY.

2. *Intervention*

2.1 Overall Objectives

The original overall objective was expressed in the form of development objectives as follows:

- The improvement of health conditions in the Beba, Fashen, and Sumusta districts in Beni Suef Governorate through provision of safe potable water and sanitation services with sufficient accessibility to the population.
- Appropriate management of water resources and environmental protection
- Integration of the private sector in the management, operation and financing of water supply and sanitation systems.
- Establishment of a financial policy for sector development for a shift of services towards cost recovery.

The internal evaluation carried out in October 1994 revised these objectives as follows:

- The restructuring of the water and sanitation sector of Beni Suef Governorate to enable the sector organisations to achieve health improvements in a sustainable manner.

2.2 Project Purpose

The purpose of the project was expressed in the original project document as four immediate objectives:

- Implementation of applied pilot schemes in the critical areas of water and sanitation, as identified in the problem analysis,
- Development of a long-term Sector Development Plan with alternative investment strategies,
- Management and institution-building through various support activities, and
- Human resources development by supply of training and technical assistance.

The internal evaluation also changed these purposes, and focused principally on restructuring:

- Establishing of one or more autonomous utilities to be responsible for the WSS sector services in Beni Suef Governorate,
- Adjusting the sector organisations to the new situation, and
- Development of management methods, technologies and human resources to meet the requirements of the autonomous utilities.

To operationalize these new approaches, the project was divided into five components:

- Pilot schemes
- Sector Planning
- Institution building/management development
- Human resources development, and
- Community participation/WID
- Immediate objectives were determined for all the components.

The new structure, formulation and content of the different levels of objectives indicate that the purpose of the project was to be a capacity-building process, where the physical

improvements served primarily for capacity-building, helping the stakeholders to improve their performance in their specific roles.

2.3 Results

The expected results are presented in the internal evaluation report, divided by component. The actual outputs achieved are presented in the project progress reports in detail, and these provide the project staff's own opinion of the project's achievements. The intention of the Mission has not been to verify the quantified outputs of the project, but rather to gain a better understanding of its performance and reasons for success or failure. The Mission concentrated on examination of the probable sustainability of the outputs, and their acceptance by the Egyptian administration at Governorate, Markaz and Village levels. The imprecision of this approach is evident, but the Mission considered it more practical as a means of reaching a valid judgement on the appropriate future for the project than relying on achievement indicators which might be irrelevant or incorrect (see Section 6.1 for a discussion of these indicators).

In the opinion of the Mission withdrawal of the support provided by the project at this stage could seriously endanger the progress achieved to date. It would also create a credibility problem for the officials of the Governorate, as some of the promised physical improvements have not been delivered yet, and so cancellation would leading to loss of trust of the people towards any development effort.

It became evident that the lower and middle level staff of the administrative structure of the Governorate which had been in direct contact with the project had become enthusiastic about the new approaches introduced by the project. However, the higher-level civil servants were not as motivated, so far. This may be due to disappointment at not having "business as usual", and at the same time to the existence of possible alternative additional resources. The sentiment may be supported by expectations of rather massive intervention by USAID, which seems to be rather investment-oriented.

A summary of the physical achievements of Phase 1, prepared by the Chief Engineer, Design, Mr. Hassan Abdel Atty, is presented in Annex 12.

2.4 Activities

Most of the activities of the project at governorate level lag behind the program, due to non-existence of a counterpart organisation. This has also hampered institutional development at markaz and village levels, although basic capacity-building has been possible. The state of affairs does not enable direct continuation before a parent organisation has been established and an institutional home for all the Phase II activities exists. On the other hand, if support is withdrawn now, the promising developments which have started to emerge will be lost.

Perhaps the strongest impact of the Phase I activities is seen in community participation. However, it appears that the approach so far has focused mainly on women. This may create difficulties in the future, in particular when more financial or other contributions will be asked from the users for building and maintaining improvements in water supply and sanitation in the village or at household level. Certainly, these contributions can not be provided by women alone. Therefore the Mission recommends to adopt a new gender-

sensitive approach instead of just a WID component, and this change should happen immediately (this issue is discussed in more details in Section 5.4).

The report of the Egyptian Appraisal committee, dated 6 October 1996, discusses the achievements of Phase I, and is attached as Annex 4.

3. *Assumptions*

3.1 Assumptions at Different Levels

The assumptions set out in the original Project Document are;

"- Dependence of National Decision-making
- Affordability of the Services
- Sustainability of the Services
- Participation of the Community to Development Costs
- Impact on Public Health and Sustainable Development
- Incorporation of Socio-Cultural Factor
- Local Component"

While it is possible to suggest clearer and more precise wording of some of these basic assumptions (for example, both "Dependence on National Decision-making" and "Local Component" could be more specific), but the general implications are clear and reasonable.

3.2 Risks and Flexibility

As means to mitigate risks in implementation of Phase I, the project document mentions the following:

"- Proper planning
- Good cooperation with the Egyptian counterpart
- Involvement of the Governorate and District officials in planning
- Needs assessment (to be done by the USAID support by the end of 1992)
- Proposed approach with studies and pilot schemes"

These again are all reasonable. However, it appears that the total risk analysis did not foresee a number of factors which have caused problems and delays during implementation. These include:

- the difficulties caused by the prolonged decision-making process
- the lack of proper maps and records
- the extent of cost escalation, both physical and price

However, the most significant problem, which could not have been foreseen at the time of the risk analysis, was the delay in the establishment of the EGA. This has caused considerable delays in the project. Upper level managerial and organisational development has been impossible due to the lack of a parent organisation to host the activities. In addition, the markaz and village level organisational capacity-building has been seriously hampered.

4. *Implementation*

4.1 General framework

The counterpart agency to the project is the Beni Suef Local Unit, the Governorate and the Housing Department. Guidance at the governorate level is given by a Coordinating Committee, comprising political leaders such as the markez chiefs as well as members of the governor's advisory staff and staff drawn from the technical departments. Overall guidance is provided through a Steering Committee, jointly chaired by the Governorate and MINISTRY, and including representatives of the governorate and EEAA.

It is not clear to the Mission how well this arrangement has worked in ensuring that the project performs its task effectively, or in redirecting its activities if necessary. The Mission has the impression that oversight and guidance was lacking at critical moments, and certainly some of the criticisms directed at the project suggest that difficulties were not effectively resolved by using the mechanisms set up with precisely this objective in mind. It is remarkable that neither draft of the Phase II project document has actually been cleared even at the Coordinating Committee level (the first draft was submitted to the committee, which did not have time to read it, so review was left to a sub-committee, which did not submit a formal report and was composed of project seconded staff, so it was hardly neutral). The Mission was therefore actually working with unofficial materials which might have been no more than expressions of individuals' opinions, without any general endorsement by higher levels. The Steering Committee also does not appear to have met very frequently, or on a regular basis.

In any extension of the project, it is important to ensure that these higher levels of management and policy-making are kept closely informed, and that these committees are used to build political consensus on the project's aims and activities. This mechanism should be carefully reviewed during preparation of a revised project document, and commitment secured at the governorate level to making the system work.

4.2 Project staffing

The project team comprises three categories: expatriate staff, seconded staff and "support staff". In addition, the lead consultant, Plancenter Ltd. of Finland, is associated with Chemonics Egypt and NSCE (North South Consultancy Exchange) an Egypt based company. However, staff from this associated firm did not appear to be playing an active role in current project work. It appears that there may have been some difficulties in obtaining experienced staff, or having them replaced too early by less experienced ones, from the Egyptian associate consultant company. It is also possible that there have been differences of opinion on the qualifications needed to execute the tasks, but the Mission is not in a position to evaluate or comment on these matters.

The first category, expatriate staff, consists of long-term advisers assisted as necessary by short-term specialist missions. The principle has been to reduce permanent expatriate staff by the use of short-term specialists and Egyptian professionals. The second category, seconded staff, consists of technical specialists provided from the governorate, principally from the Housing Directorate. The final category, "support staff", does not have the usual meaning

(secretaries, drivers, etc.); instead, it refers to Egyptian staff who have been directly engaged by the project, not seconded from the governorate.

There seems to be a number of problems associated with the present arrangements. One concerns some of the younger expatriate staff, whom the Egyptian staff consider to be less experienced than their counterparts, although their responsibilities are much higher. The Mission recommends a reclassification of expatriate staff , and ensuring that junior staff are strictly in task-oriented or research position, not supervising senior Egyptians.

(a) A second problem is the availability of seconded staff. Following the issuing of a special decree by the governor, these staff are available to the project three days a week. They are paid incentives on this basis, whether they actually work on the project or not. These incentives are paid from the funds provided by MINISTRY, not from the Egyptian contribution. It appears to the Mission that, in order to ensure the effective implementation of the project and its later sustainability: Seconded staff needed for a long-term assignment should be made available full-time (with their existing government position being held open in order to allow them to return after the project closes, and ensuring their eligibility to posts in EGA). Their full-time availability would avoid one excuse for not giving them sufficient responsibility: that part-time staff are not always available when needed for priority tasks.

(b) Seconded staff needed for short-term inputs should be paid for the time actually worked, not for some theoretical period of secondment.

(c) All incentives should be paid from the Egyptian contribution. This should help ensure that the EGA includes these items in its personnel and budgeting systems.

However, as there are differences in opinions in the Project and the Governorate concerning the position, availability and need of the seconded staff the matter needs close scrutiny.

The position of Project Director requires special attention. This person can obviously have enormous influence on the project, both by managing its activities and by creating, through contacts with his Egyptian colleagues, a favourable environment for its work and an appreciation of its achievements. This therefore demands a senior and experienced official, with a vision of the broader issues facing the governorate and of the ways in which the project can complement other development efforts. Inevitably, such people are in short supply and have many other demands on their time. Nevertheless, the Mission recommends that every effort should be made to identify a suitable person who could work full-time on the project (an appropriate rank would seem to be Deputy Director of EGA, or a similar position, on full-time secondment). As in the case of the other seconded staff, this position should be supported from the Egyptian contribution.

The support staff represent a somewhat different problem. They are drawn from the private sector, and are sometimes alleged to receive much higher salaries than the seconded staff. The limited data examined by the Mission suggests that this is not true; in fact, their salaries appeared to be in line with other jobs and not excessive in relation to the seconded staff, but there was insufficient time to confirm this. The important thing is that these rumours persist, and need to be dealt with. The Mission recommends that:

(a) All support staff should be engaged directly by the EGA, as the counterpart agency (once it exists and is operational), on terms and conditions to be negotiated between the two parties (which would probably involve payment of salaries at private sector levels). In the interim, the existing arrangements will have to be continued, since there seems to be no possibility of the Housing Department recruiting staff who would soon be transferred to EGA, nor will the Housing Department be able to pay competitive salaries.

(b) All payments to support staff should come from the Egyptian government contribution.

This report includes a number of references to the gap between the technical and social aspects of the project, which needs to be closed so that there is a truly inter-disciplinary approach. This gap also seems to exist between the staff in the project, and it is vital to address it. The expatriate social staff have not been present throughout the project, giving some continuity problems, and their counterparts have not the same seniority or experience, and so are not able to assume full responsibility for this important aspect of the work. EGA needs to consider whether the senior counterpart on the social side should be seconded or recruited under the "support staff" category; in either case, the position should be regarded as a career step towards a senior position in EGA's Consumer Relations Department. At the same time, Plancenter need to ensure a high-quality replacement when the present expatriate adviser leaves.

Another aspect of this problem is the future of the LWCs, who are at present paid out of MINISTRY funds. They need to be given an organisational position and career structure within EGA, and their skills should be improved through appropriate training in order to help them progress in the organisation. Their salary and incentives should come from the Egyptian contribution. This needs to be announced publicly as soon as possible, since the impression given in the workshop conducted by the Mission (see Annex 11) was that these key workers had no long-term future outside the project framework. The workshop participants did not only express their concern about this issue, they also pointed strongly to the importance of the community participation / consumer relations component in the project, and to the necessity of an integration of technical and social aspects. These insights may offer a good starting point for taking up the establishment of an organisational position for the LWCs, and their future male colleagues, at an early date.

The Mission believes that these measures would help to resolve some of the present uneasiness and tensions, both within the team and within the governorate. It is important that they should be frankly discussed in formulating proposals for extension or for any new phase of the project, and more "transparent" arrangements agreed.

4.3 Implementation procedures

There are two items only on which the Mission wishes to comment.

The first of these concerns procurement. During the interviews, project staff explained that they had introduced improved procurement procedures, using the FIDIC guidelines, and had been very satisfied with the results. The Mission welcomed this, but expressed two reservations:

(a) The FIDIC documents inevitably contain some loopholes or have some omissions. Use of them by contract officers who are not fully familiar with these problems may therefore give opportunities to more experienced but less scrupulous contractors to take advantage of the employer. Some continuing technical assistance in procurement may therefore be advisable.

(b) Apparently the FIDIC documents are generally compatible with standard Egyptian government procurement regulations; in general, they tend to be more restrictive, so the interests of the employer are well protected. However, there is a possibility that a contractor might claim that national standards should prevail over the FIDIC ones, and it is therefore desirable to obtain a ruling from appropriate authorities that FIDIC conditions (or similar ones modified to suit particular circumstances) may legitimately be used to replace the national standards.

The second relates to audit. Inevitably, as on any large foreign-funded project, there are some rumours that not all the project funds may have been disbursed properly. This was reinforced by a hostile article in a local newspaper during the Mission. The Mission has absolutely no reason to suspect that any improper actions have occurred, but the disbursement of very large sums (in comparison to local government pay scales) as incentives to seconded staff, as salaries to support staff, or as contracts for consulting services to Egyptian companies or individuals, can obviously lead to an atmosphere of mistrust, and accusations of favouritism. An audit conducted in the near future, by Finnish auditors in conjunction with an independent Egyptian firm or individuals, should dispel these doubts. This, combined with changes in personnel policy discussed above, should improve team relations in the future, and also protect the project as a whole from accusations of impropriety.

4.4 Timetable

The Project commenced in the beginning of August, 1993. It was expected that it would be completed by the end of 1995. However, in December 1995 the Steering Committee decided to extend Phase I until the end of 1996. The reasons for extension were partly the delay in establishment of the EGA, partly the delay in achieving the Phase I targets. The opinion of the Mission is that the extension decision was right.

4.5 Cost Estimate and Financing Plan

The Phase I budget was FIM 35 million equivalent over the period 1993-1995. The government of Finland was to contribute FIM 27 million, with the balance coming from the Government of Egypt and the beneficiaries. However, by the end of 1995 only FIM 16.6

million (61%) of the Finnish contribution had been disbursed, for the reasons discussed above (Section 3.2).

The financing plan, under which all the parties were expected to contribute towards a common effort, is welcomed by the Mission.

4.6 Special Conditions: Accompanying Measures Taken by the Government

The continuation of the Finnish assistance to the Project during 1996 was made dependent on certain conditions in the Project Document:

- Active community participation and beneficiaries' contribution
- Changes in tariff policy in order to cover 100 % of operation and maintenance costs of water supplies and at least 50 % of the operation and maintenance costs of wastewater collection and treatment. Again, this was to be implemented in line with national policy
- Timely availability of Egyptian funding for the project activities.

The first condition has been fulfilled, while the others are still pending. However, there are encouraging signs of development in the right direction.

5. *Factors Ensuring Sustainability*

5.1 Policy Support

An important aspect of sustainability is that there is a consistent overall policy and planning framework. This means that there must be some established consensus on matters such as the present situation, the needs to be addressed as priorities, and the resources to be allocated. Agencies responsible for implementation of projects, or for management of existing facilities, need to have confidence that they can plan their own activities over the medium-term without sudden unpredictable alterations in these matters.

This does not appear to be the case in Beni Suef. Apart from the uncertainties created by the ongoing transition from centralised subsidised services to local, commercialised ones, described above, there appear to be other conflicts and confusions, some outside the project's control, and some perhaps created by the project itself.

One potential cause of confusion which is outside the project's control is the existence of master plans that appear to be uncoordinated and contradictory. In particular, the approaches of a 1993 Needs Assessment for the governorate and of a recent NOPWASD National Plan appear to differ significantly (it is difficult to be precise, since the NOPWASD document is not yet final and is not available in English; however, some extracts were translated for use by a RWSSP planning mission in September, 1996).

Apart from working on different basic assumptions, the NOPWASD plan is based on the utilisation of the three new NOPWASD regional surface water supply schemes in the governorate, the production facilities for which are now being constructed (Masaret Nasan is in use, El Fashn is under test, and Beba is under construction). According to some project staff, there are likely to be hydraulic and control problems with these regional schemes, because they have been designed from the perspective of production requirements, not of transmission and storage compatibility with existing installations and planned future groundwater sources. It is therefore possible, although the Mission could not examine the issue in any detail, that EGA will inherit major production facilities that it did not design and which it will have difficulties running (and the operating costs of which may be much higher than those of local groundwater-based systems).

There is obviously need to establish a sound water and sanitation development strategy for the governorate which is based on the best data available and which is also as far as possible compatible with national strategies for water resources management. In the opinion of the Mission, it is not the proper function of the project to attempt to reconcile different views on the appropriate roles of NOPWASD and the EGA, but in principle it appears that the agency which should have prime responsibility for development and implementation of the governorate strategy is EGA, if it is to be autonomous and to accept responsibility for financial self-sufficiency.

One of RWSSP's tasks is to assist in the development of sound plans for the sector in Beni Suef. At the time of the Mission, RWSSP was preparing a sector plan, and anticipated producing a draft for comments in December 1996. This draft should be carefully reviewed as

part of the preparations for the extension, in order to decide the appropriate role for RWSSP in future.

Factors that should be taken into consideration include:

a) How soon the EGA is expected to become operationally effective
b) The scope of technical assistance to EGA to be provided through USAID
c) The quality of the draft, in each of the three sub-sectors in which RWSSP is active: water supply, sewerage and sanitation, and solid wastes management
d) The comparative advantage of RWSSP, in comparison with other technical assistance available to EGA
e) The resources likely to be available to RWSSP, and the priorities in use of these resources.

In principle the Mission believes that, while RWSSP has valuable experience and knowledge to contribute to sector planning, its strength lies in developing effective implementation and management mechanisms at the local level, which can serve as models for EGA's governorate-wide planning. RWSSP's experience over the past few years will help to ensure that EGA, supported by its consultants, adopts more realistic approaches to developing and implementing sustainable water supply and sanitation services. However, RWSSP has enough problems to resolve at the local level without diluting its efforts by also taking on more general sector planning, for which other resources should be available. The principal exemption to this is in the field of municipal solid wastes management, which does not fall within EGA's responsibilities, and where local-level planning is more appropriate in any case; here RWSSP could play a vital role in extending the lessons learned from the El Fashn pilot project.

The reference above to problems possibly due to the project itself reflects on the lack of a clear overall strategy for the project. The project document, and all associated progress reports, activity plans, etc., appear to have been designed very much with a "supply side" philosophy: a specific problem exists, resources are devoted to it according to a defined program, and a solution is reached. Adjustments, sometimes major ones, may be made in the course of execution, but essentially the project consists of a series of development modules which, once they have all been executed successfully, will lead to an integrated and satisfactory outcome.

This approach becomes questionable in the absence of a clear overall strategy. For example, it is remarkable that the project appears not to have extracted from the data available (including the 1986 national census conducted by the Central Agency for Public Mobilisation and Statistics, CAPMAS, and 1992 development indicators for the Governorate) a comprehensive statement of needs. Statistics on population, water supply service, latrine coverage, etc., could have been used to derive at least a village-by-village assessment of the likely past and future service deficiencies throughout the 3 project markez. This first round of estimates could then have been refined using the LWCs to estimate needs from the perspective of the potential users, but the statistical analysis by itself could have allowed an order-of-magnitude assessment of the problem.

At the most basic level, an approach such as this would have allowed the project team to formulate the project objectives in a more operational way. Starting from a detailed

knowledge of the existing situation in every village, and from monitoring response to the piloting in carefully selected locations, then the future sanitation workload can be predicted by observing how many additional village households adopt the concept and construct toilets using their own resources, how many households express the need for additional support (for example, through participation in a soft loan program to aid construction), and how many will not or cannot build latrines due to poverty, poor housing conditions, or other priorities. Appropriate delivery mechanisms can then be devised, and appropriate budget and staffing planned and allocated.

In parallel with this, a more sophisticated approach would have been to carry out a cluster analysis, which could have identified village characteristics, allowing the development of various typical categories of village, differing in demography, educational levels, environmental status, economic activity and development prospects (for example, as set out in the 1996 Development Plan for the governorate), etc.. This would have permitted the allocation of the demonstration and pilot activities to selected types of village, in the expectation that lessons would be learned that could be applied when designing a wider programme for extending the services to other villages falling within the same cluster. This cluster analysis would normally be supplemented by a needs assessment in sample villages, in order to obtain a more comprehensive picture of villagers' needs and priorities. For such an assessment a modern participatory methodology, with discussions in (separate) groups of women and men, talking not only about needs, but also about possible contributions, would be most appropriate because in this way superficiality of data can be largely avoided."

None of this appears to have been done. As a result, the project does not have any plans (or none that it explained to the Mission) for moving from this initial pilot phase to more extensive provision of service. This "going to scale" is the most critical and difficult point in this type of development project, since the technical resources per household served obviously fall; in particular, the critical software inputs become spread very thin over a larger population and a much wider geographical area, as well as having to deal with less enthusiastic customers than the "first adopters".

This omission must be rectified before any second phase can be considered.

5.2 Appropriate Technology

The water supply technology used in the Project is largely based on the prevailing technology in use in the Governorate.

Piped water supplies use surface water from the River Nile and the canals for sources. Purification is done using a Compact Unit, which is a standard package plant developed in the USA and manufactured in Egypt by an Austrian licensee. It is reported to be difficult to operate and the quality of water after the process is reported to have usually a high content of residual aluminium sulphate. This tends to settle in the network and cause serious problems later (an example is the difficult situation in respect of water supply for Sumusta; see Annex 8).

The other source commonly in use in the Governorate is shallow groundwater. Driven wells or even traditional wells are used to tap this aquifer. The driven wells are equipped with handpumps, which are locally available. The phreatic level of the shallow groundwater is close to the surface. This fact, combined with the intensive land use and lack of satisfactory sanitary facilities, has caused severe pollution of the water body. Several epidemics have been traced to this problem.

The Project has started a process of introducing the use of deeper aquifers as the source for piped water supply. The use of groundwater would enable a partial abandoning of the chemical treatment now in use. This in turn would lead to considerable savings and improvement of the treated water quality. Near Sumusta, a well was drilled to a depth of 70 metres on a site where there had previously been a well (see Annex 8). The quality of the water from the previous well had not been good. Even though the quality of the water from the new well is acceptable in technical and health terms it had not been accepted by the consumers, and the local authorities did not seem willing to take on the politically difficult task of public education. The purpose of the new source was in the first place to provide a source for a period of rehabilitation of one Compact Unit. The second purpose was to provide a pilot case to demonstrate the benefits of groundwater as a source. Unfortunately the technical approach was not sufficiently supported by social marketing, providing an opportunity for rumours to be spread about the dangers of using the new source, and possibly frustrating future attempts to use deep groundwater wherever available.

Some point sources have also been developed and implemented by the Project. They are using deep groundwater from the second or third aquifer. While their introduction to the Governorate is in an early stage, early indications point to a success.

The approach to on-site sanitation is based on double-pit pour-flush toilets. This technology has been refined and applied extensively in other countries, notably India, and has proved very acceptable and reliable under a wide range of conditions (for example, high groundwater or hard rock). Fortunately, the Finnish adviser on this topic has visited the Indian programs and is well aware of the possible range of solutions. The model being used in the RWSSP is similar to the Indian one, with some modifications to suit local conditions. While some criticism could be made on detailed design aspects of few of the installations visited, essentially the design is sound. The major outstanding technical issue is the emptying of pits when they have been filled and the contents allowed to decompose and dry out for a period of two years or more; householders have said that they are willing to do this, and will reuse the humus on their fields, but this remains to be tested. It is encouraging to see that householders, based on their initial experiences, are now building their own toilets, or modifying ones provided through the project, in order to match their needs more closely. The introduction/promotion approach appears to be sound, in spite of some initial difficulties. However, a question still to be answered is what priority villagers will give to improved sanitation, compared to other household improvements, if most or all of the costs have to be met from their own resources.

The project has also made some innovative experiments with evapotranspiration systems to dispose of excess wastewater and sullage. The Mission saw three gravel beds planted with reeds which had been constructed: at one mosque in Mazoura; adjacent to the Kom El Saaida washing area; and at the end of one of the alleys in Kom El Saaida where the women

customarily empty their sullage pots into the canal. This technology seems worth developing further, since sullage disposal is a problem where pour-flush toilets are used, and there is good experience of experimental reed bed systems in other parts of Egypt. However, the systems at present do not seem to be effective, and the underlying reasons may again be social rather than technical. The reeds are not growing well; the most probable explanation in Kom El Saaida is destructive grazing by goats (the project refused to erect higher brick walls around the beds, which would have prevented this), but there are walls around the bed in Mazoura and the reasons there are not clear. In each case, however, it seems probable that the people will not appreciate, use and maintain the system unless the crops produced are significantly more valuable than reeds. The Mission suggested exploring the use of cash crops that have a high water demand (tomatoes, cucumbers and squashes, melons, etc.), since the system should not present health risks, and also making one person responsible for maintenance in exchange for a share in the proceeds. However, the project staff reported rapid salinisation of the beds which interfered with the growth of desirable crops (possibly caused by a combination of low overall water use combined with high evaporation rates). This suggests that more trials will be needed in order to develop beds which are small enough to allow some discharge (thus flushing away excessive salts), which still providing adequate treatment and also allowing some revenue-earning crops.

5.3 Environmental Protection

The project activities have, due to their nature, a essentially positive impact on the environment. However, if failures occur in system planning or installation design, the impacts can be adverse. For example, a poorly-designed standpost easily creates a pool of stagnant water, with surrounding muddy areas, and an ideal breeding place for disease-vector insects. The pilot installations include a number of instances of such problems (see Annex 7). Similarly, the system of MSW management may collapse if the organisation is not in a position to continue, due to lack of budget, lack of staff, or both. At the moment the El Fashn experiment appears viable, but it is still in need of support.

Development in the sewerage sector is still in an embryonic stage. The project has not been able to address it. The plans for the project's continuation concentrate on sanitation and waste water treatment on site, which is natural because the project is conceived as being primarily a rural one. The EGA will have the piped wastewater as one of its duties, but the extent to which this technology will be relevant at marakez and village levels remains to be seen. If these settlements do eventually have piped systems (which should probably not be conventional systems, but rather simplified sewerage or solids-free sewerage, following models developed in other countries), then the project will have to be ready to respond.

5.4 Community Participation and Gender Issues

Involvement of the beneficiaries has been part of the project strategy, right from the start. In the Final Draft Project Document, 1992, it is stated that

> "Involvement of the final users of water and sanitation facilities is the cornerstone of sustainability."

and

> "In particular the women and more so the rural women form a specific target group as they play a crucial role in managing water and sanitation facilities within the household."

Accordingly, a Community Participation and WID component has been set up. Specific activities include:

- establishment of a network of Local Woman Coordinators (LWC)
- planning and implementing a home visit program
- public information and education
- promotion of participation of users in planning, implementation and operation of water supply and sanitation pilot schemes
- promotion of use of water supply and sanitation facilities
- monitoring the impact of the projects' activities on the communities concerned
- data collection for planning and monitoring purposes, according to the needs of other components (this subject has been added only recently).

At present, 60 LWCs are working for the project, 20 in each of the three marakez. Most of them are young and unmarried, but somewhat older and married women also participate. In principle they work in their own home village or town, where each has chosen between 20 and 30 households to visit regularly twice a month. During these visits they inform the housewife, and whoever else is present, about the activities of the project (such as the installation of standposts, latrine demonstrations, or possible installation of a washing place), and they talk about hygiene matters.

In August 1995 a revised system was set up to monitor the work of the LWCs, and at the same time collect data on the households which are being visited regularly. The data are on water use and storage, personal hygiene, and household hygiene, with some general notes on the health situation in the family and in the village, and on the water supply and environmental situation in the village.

Besides making house visits, the LWCs organise two times each month a meeting ("seminar") for all women of the village. In these meetings a specific theme is discussed, such as household hygiene, or child care. The introduction of demonstration latrines can also take place during these meetings. A new activity for the LWCs, which has been recently introduced, is holding a school seminar on hygiene. The Mission was present at the first of these seminars, in Kom El Saaida (an account of this visit is in Annex 10).

The LWCs report to the Village Coordinator, who draws their data together in a monthly report to the Markaz Coordinator. The purpose of this reporting is stated to be:

- for the Village Coordinator to propose actions needed to be taken by the local authorities;
- for the Markaz Coordinator to present proposals for actions needed by the Markaz/Governorate authorities.

In general, the work of the LWCs certainly can provide a channel through which opinions and requests of the villagers can reach the authorities at village and Markaz level, and in some instances the villagers may have succeeded, with the help of the LWCs, to get assistance in such activities as repairing public taps, providing collection of solid waste, etc. Still, the Mission has the impression that on the whole the reporting approach is rather top down, in particular as most of the data concern personal and household matters (of hygiene), whereas the reporting forms invite no inclusion of data on what the villagers themselves think about needed actions. In

addition, the whole mass of data (from 60 LWCs with about 25 families each, or 1500 monthly reports in total) is probably anyway not reliable enough to give sufficient insight into the needs and priorities of families for it to be used as a basis for actions to be taken (see Section 6.1 for a discussion of the monitoring indicators employed).

It should not be very difficult to adjust the present reporting in such ways that it reflects direct needs (e.g. for repairs, for help with cleaning the environment, etc.) as well as needs for longer term and sustainable improvements, at household as well as village level. A crucial condition for success is then, that the technical staff is able to repond without too much delay to the requests of the villagers. It may not be possible to meet every demand, but then this can be discussed in the villages, including the responsibilities and the contributions of villagers to build and maintain any desired improvements.

Although much is said, in project documents as well as by staff, on "needs assessment" and "participation of users", the practice seems to be that in particular the technical staff sees "community participation" primarily as a tool to persuade villagers that they need what the project is offering them. This may be illustrated by a photo-series, made by project staff, with the title "Community Participation", and mainly showing men digging trenches. There seems to be little awareness among technical staff, from the top level down to the village technicians, that people, both women and men, may have their own good ideas about what they want, and how they want it. To ensure success and sustainability of the project, their ideas, expectations, fears, should be discussed, as also the expectations from the projects' side should be made clear to them.

This communication may exist now between villagers and the community participation staff, but it the technical staff seems to be insufficiently involved in such discussions. One reason for this may be that there is still a gap between the technical and social components, the latter having perhaps less prestige within the project. It would probably considerably strengthen the village pilot projects if social and technical staff would work more closely together, at the offices as well in the villages. This may mean that the social staff, and probably the whole social component, has to be upgraded. It is also worth considering such apparently minor matters as location of individuals' offices; technical and social staff should not be separated by discipline, but specialists at the same level should have offices next to each other.

Another, important way of enhancing communication and cooperation between technical and social staff is to organize joint training; both groups can then learn about each others specific problems in the field, and together discuss possible solutions.

Training of female and male caretakers for new facilities built by the Project, is again another good way of establishing communication channels between technical and social staff on the one hand, and villagers on the other hand (see also Chapter 5.6). In general, the organisation of a caretaking programme with villagers, has been found to be an excellent basis for sustainable improvements. Crucial issues to be taken into consideration in such a programme are : support from the village government (the Local Units), good training, clear responsibilities, and support from the users in the form of some renumeration for caretaking work.

It may be necessary to review not only the monitoring system, but also the whole approach towards community participation. A new approach should focus more on needs and priorities

of the villagers themselves. This would also imply a shift from a women approach towards a gender approach, which would allow the specific interests and needs of men to be discussed and taken into account, next to those of the women. This approach could be even more successful. For this reason, the Mission proposes that the project should explore the possibility of employing male colleagues of the LWCs, who could then work with the men in the villages. The idea of including teachers and schoolchildren in the campaign also seems to be very promising.

This critique is not to say that the community participation component is not successful. The LWCs who were introduced to the Mission are certainly dedicated and involved in their work. A communal washing place has been built by the project for demonstration purposes in one of the villages. This has been supported by one of the LWCs, and it seems to be a great success (see Annex 10 for details). When the Mission visited some households together with a LWC, it was clear that hygiene messages are being received, and also put into practice. It should be kept in mind that the system started only a few years ago, and it probably needs a considerable time before attitudes and behaviour will change.

Such changes do not depend only on awareness raising; they also depend very much on appropriate and sustainable facilities being offered to the people. This again points to the necessity of an integrated approach: technical and social aspects should be combined. At present, the LWCs, and in fact the whole component, is somewhat isolated from the mainstream project, which has a very technical focus. As has been said before, more integration between technical and social aspects, between the work of the technicians and that of the LWCs, could enhance the positive effects of the project as a whole.

The LWCs do not receive a regular salary, but they get an incentive for every home visit and meeting, which adds up to about LE 100 per month (this about equals the lowest salary of an unskilled worker). This money is now paid by the project, which makes their position insecure: what will happen when the project ends?

The three experts/supervisors of the community participation program receive a regular salary: one of them belongs to the seconded staff, while the other two are support staff, so that their position is also insecure.

The problems experienced during the pilot activities are not uncommon, and in fact difficulties should be seen as opportunities to learn and refine designs and approaches rather than as some sort of failures to be concealed. However, since many of the remedies, and indeed the long term success of any improvement made, depend on a better understanding of the social context in which these improvements in service are taking place, it is absolutely vital that the community participation components not only be integrated fully into the project's activities but also that they should be firmly established on a sustainable basis within the EGA and the Local Units. They need to form a part of the regular organisation, with adequate resources, and with the same attention to HRD (in particular, to career structure) that is given to other parts of the new organisation.

5.5 Project Impact on Low-Income Groups

Although a number of difficulties, described in detail in the annexes (see, for example, Annexes 7 and 8) remain to be resolved, the project has the potential to be of great benefit to low-income people in a number of ways. Besides the most basic benefit - access to improved water supply and sanitation, with all the resulting implications for better health and improved quality of life, the project has introduced a number of approaches which should enhance villagers' incomes. Examples are:

(a) Village women have been trained to become LWCs, and have demonstrated their value in ensuring that water supply and sanitation improvements are socially and culturally appropriate. In the next stage, men from the village also need to be trained to be extension workers, and both men and women from the villages need to be trained to assume positions of greater responsibility and, if they wish, develop careers within EGA.

(b) Village women have been trained to make simple repairs to water standposts, and have performed this task well. Village women now have the possibility to earn some money by taking responsibility for standpost caretaking, maintenance and fee collection.

(c) On-site sullage disposal systems using evapotranspiration can allow villagers to earn money from cash crops by providing the land and looking after the beds, in exchange for which they may receive the crops and possibly fees. However, this needs further development as the evaporation/evapotranspiration system now introduced does not fulfil all requirements (salinisation problem)

(d) Communal washing facilities also offer the possibility for women to earn a small income by acting as caretakers. Others may take advantage of the clean facilities and good water supply to do laundry for others.

(e) Use of twin-pit toilets provides households with a source of safe, good quality humus, which can be used to raise productivity on their own land or sold to others for agricultural use. It also avoids the need for them to pay someone else to empty an unsafe shallow single-pit latrine.

In urban areas, some of these same benefits will also occur, especially in less highly developed peripheral areas where the same technology and the same general conditions apply. In addition, adoption of the MSW management system developed in El Fashn offers the chance of income generation through, for example:

(a) Employment as a collector (which would have been eliminated if collection using motor vehicles had been adopted).

(b) Better income for waste scavengers, through enhanced value of salvaged plastic (by 200%: from LE 500/T to LE 1,500/T), after washing and shredding using equipment provided by the project.

(c) Creation of additional arable land by using the compost to reclaim desert areas, helping to maintain farmers' incomes by reducing the increasing population pressure on the limited existing area of fertile land.

At this pilot stage, many of these benefits are largely theoretical, rather than directly demonstrable. However, the Mission sees no reason why they should not be fully realised, provided that some key conditions are met:

(a) Any defects in the pilot installations are quickly rectified, so that the existing installations become truly sustainable.

(b) The emphasis on appropriate technology is maintained, and not overwhelmed by supply-driven insistence on high technology solutions.

(c) The emphasis on the social aspects of development planning and implementation, which has been established in project operations, is not lost, but is firmly established within EGA.

5.6 Institutional and Management Capacity, and Training

As described above, the institutional framework for water supply and sanitation in the governorate is expected to undergo profound changes as a result of the establishment of the EGA. At the present time it is not possible to predict exactly what those changes will be, or how they will be implemented, because the EGA does not exist, and no timetable for creating it has been established.

Comprehensive proposals for the EGA structure, management tools and priority actions are set out in the 1996 Montgomery Harza report. The Mission is unable to say whether these will be achievable, but institutional reform on this scale is notoriously slow and difficult under the best of circumstances. Whether suitable staff exist at present within the governorate civil service, whether they will be transferred to the new EGA, or whether the EGA will be able to offer sufficiently attractive employment conditions to attract recruits from the private sector (especially if they have to relocate from Cairo to Beni Suef), are all matters of conjecture at this stage.

During its work, the Mission met a number of capable and energetic staff in the public sector. Whether there are enough such people available to make the new EGA effective in accordance with the Montgomery Harza model is doubtful, especially at the markaz level, which is where the RWSSP operates. Planning, design and implementation of all except minor works have in the past been reserved for NOPWASD, minimising knowledge transfer to the lower levels in the governorate. Budgeting and financial management of commercial operations are equally unfamiliar to existing staff. Even basic operations and maintenance have presented serious problems. Therefore the launch of the EGA will have to be accompanied by a massive training and reorientation effort. However, this has to await formal decisions on EGA structure, manning, staff transfers, and similar basic questions.

In the water supply sector the project has concentrated its HRD efforts essentially on training rather than on other aspects of HRD (such as conditions of employment, career structure, etc.), and this seems entirely appropriate in the present uncertain environment. However, improving the skills of, for example, operator-level staff will only have limited impact on performance until the entire institutional culture is changed. Proper evaluation of training (for example, were the lessons learned applied in practice? did the training lead to increased responsibilities?) is difficult if the general environment does not encourage better performance.

Since September 1993 until October 1995 a Training Expert was employed in the Project, and from January 1994 until January 1996 the Management and Financial Advisor was responsible for HRD. During these years the strategy was to provide training primarily in such skills as were urgently needed for the activities initiated by the Project. The following list is based on

information from the present HRD Advisor and the Training Specialist (who came to work for the Project only about 12 months and 6 months ago, respectively), and is probably not exhaustive:

(a) A number of technical courses and on-the-job training sessions have been organised for technicians of the three marakez on: leak detection, loss control, and, in particular, general maintenance, and maintenance of compact units. The courses were held in the NOPWASD training centre in Damanhur.

(b) To introduce a computerised system for mapping (GIS), three engineers have been trained in the use of this system.

(c) An English language course has been organised for Egyptian project staff, seconded as well as support staff.

(d) The LWCs have received 3 short training courses, on communication skills, data collection and reporting (for the study on the latrine program; see Section 6.1), and on use of the monitoring system.

All training so far has been on an ad-hoc basis, and directly related to the immediate requirements of the project. A comprehensive training strategy has never been defined. It should not only include all components of the Project, but actually show relevant links between the different activities. An example of such a link could be the joint training of technical and social staff on subjects such as communication skills and maintenance of village standposts, washing places, and drains.

A comprehensive training strategy would be based on a definition of training needs. A manpower development plan, combined with task analyses and job descriptions, would provide a good framework for the identification of training needs. These subjects are included in the workplans of the project (Components D1 and D2), but have not yet been completed. The Mission recommends that these activities should be taken up as soon as possible.

Another unfinished item is the Beni Suef Training Centre for the Housing Directorate, for which the Directorate was expected to fund the building, whereas the project would provide furniture and equipment. Building started some time ago, but has been stopped because of lack of funds. This appears to be one of the unfinished items of business that should be dealt with as a priority during the proposed Phase I extension in 1997, since training will form a vital part of the creation of the new EGA.

Completely missing from the training programme is training for village women and men as caretakers of standposts, washing places, and other public facilities. They could also be trained in simple book-keeping to record contributions received from the users towards the care and maintenance of the facilities. Such training could contribute to the sustainability of the facilities, in particular when this work of villagers is taken seriously in the project, and their position and work has been discussed with the users through the LWCs.

The major success of the project in HRD seems to have been with the LWCs, perhaps because these did not fit within the institutional culture and were able to develop more freely. This group should be encouraged in future by giving more advanced training to those clearly able to take on a more responsible role (such as LWC manager), and a proper organisational location, career structure, etc., established. At the same time, the group needs to be broadened in order to

include males, as the extension programme should be able to communicate with equal facility with all members of the village community.

The best near-term strategy for the project appears to be to concentrate on lower-level training until the EGA is more clearly defined, and then to begin to develop the organisational structure at the markaz level and below. This must be done in close collaboration with whatever consultants are providing technical assistance at the central office level. The present activity of the project in preparing task analyses for likely positions at the markaz level appears to be a useful preparatory step.

On the assumption that MSW management remains a Local Unit responsibility, the most valuable contributions that the project can make in the short term seem to be:

(a) once the trommel screen and plastic shredder have been installed and commissioned at El Fashn, to train local staff in proper operation and maintenance

(b) to help the El Fashn Local Unit carry out an evaluation of the collection and disposal system, to determine the technical, financial or organisational reasons for any problems, and to help the Local Unit to put it on a self-sustaining basis

(c) to assist in demonstration and training activities for staff from other Local Units which want to adopt this model

(d) to begin to analyse the problems of poor solid wastes management in villages, and to identify ways in which they might be solved (since these wastes are mainly organic, primary attention should be given to appropriate composting and co-composting systems).

An important contribution by the project has been to provide English language training. It is evident that there will be substantial investment support and technical assistance to EGA in the future, and Egyptian staff need to have the language skills to take advantage of this opportunity. Communications skills within the project at the present moment, however, remain generally low, and this is to some extent a threat to sustainability, as there is a real risk that instructions will be misunderstood, operating or maintenance materials mis-translated, etc.. It also lessens the extent to which Egyptian staff and their expatriate advisers can freely exchange concepts, which hampers their personal relationships and, in a working context, can lead to misunderstandings, misplaced blame, and resentment.

5.7 Economic and Financial Analysis

In the opinion of the Mission, no meaningful economic or financial analysis of the RWSSP activities is possible at the present time. The reasons for this are as follows:

(e) The activities are not fully completed, and in any case are mainly being carried out as pilot trials, to identify possible approaches for wider application. Such activities can always be expected to cost significantly more, per person or household served, than full-scale operations of tested technologies.

(f) The project activities have not yet been absorbed into the normal organisational framework and budgeting system of the governorate. Until this has been achieved, the overall costs of service delivery will remain distorted by the presence of the project, in particular the costs of its expatriate staff.

(g) Financial analysis is not of great use in the absence of basic financial procedures. At present, because EGA is not yet operational, there is no guidance available on cost recovery policies, levels of charges, treatment of assets and depreciation, and many other matters which affect financial viability.

This does not mean that economic analysis should not be undertaken in the future. Four particular issues need to be examined:

(h) The economics of rehabilitating and upgrading the compact water treatment units, compared to replacing them with new units upgraded to comparable performance and reliability.

(I) The economics of rehabilitating water distribution networks compared to replacement, especially where sewerage is soon to be installed.

(j) The economics, sustainability and social feasibility of replacing village standposts with house connections and associated drainage, especially where densities are high or houses are of mud floor and mud brick construction

(k) The economics of regional water supply schemes, drawing on surface water, replacing compact units or deep wells. (This should be undertaken by EGA, since it probably falls outside the scope of the project, but it is relevant to the project's future activities in water supply).

6. *Monitoring and Evaluation*

6.1 Monitoring Indicators

An elaborate structure has been set up to monitor the progress of the Project. The Final Draft of the Project Document (December 1992) lists 149 achievement indicators for different project components. In the Annual Progress Report for 1995 these indicators have been broken down into more than 250 output specifications. For each indicator the actual measure of achievement is given by a percentage (for example, relevant governmental and other agencies listed and their roles clarified: 100%)

Where the indicators refer to technical output (such as an investigation of network conditions), or to activities with a visible and quantifiable result (such as building a specified number of standposts, or making a training plan), they may indeed give a good indication of what has been completed and what still needs to be done. Where the measure of achievement is not in technical improvements, or numbers, or visible output, but rather in content and effectiveness, this use of indicators and percentages of achievement can tell us nothing about progress in terms of successes and constraints in project components. For example, a design for standposts may have been completed, and 100% of the standposts installed, but problems in the design and the construction may lead to early breakdown. The present monitoring system does not reflect appropriateness, effectiveness, and possible problems coming up after an activity has been completed. The only qualitative indicators that have been included are on the impact of training.

Another difficulty appears in the system for collecting and reporting community participation data, and for monitoring hygiene improvements. The system depends on a number of standard questions asked by the LWCs during home visits twice a month. The questions concern use and storage of water, personal and household hygiene, and sanitary habits. Most people do not like to answer such questions, for obvious reasons, and if they do, they will certainly try to make a good impression. Data from interviews on hygiene and sanitary habits tend to be very unreliable. To get more valid results they should always be combined with data from observations, and preferably also with data from general questions on beliefs and values on cleanliness and dirtiness. At present, the monitoring indicators are unsuitable to measure any improvements in hygiene behaviour, because they provide unreliable data.

Sometimes studies can help to clarify and identify indicators for effective monitoring. Before the actual start of the project, in March 1992, a survey was executed on the ability and willingness of the people in Beni Suef Governorate to pay for the cost of services, and on their perception of environmental (sanitary) problems. The results of the survey were then further used as baseline data for project activities. Unfortunately, the methodology of the research has not been well devised: the gender distribution of the sample was unbalanced (93.2% of respondents were male, 6.8% female). Thus the data certainly do not reflect opinions and perceptions of "the people", only those of men, and they can not be used as a basis for project activities meant to reach women as well.

Another study was made for the project's latrine demonstration component. When the study was executed (July 1995), the project had built 151 demonstration household latrines, and it wanted to evaluate the effects of this demonstration, as well as to assess the motivation of

other villagers to build one. The data of the survey indicate the number of households (147) which have been included in the sample, but it is unclear who in the families has been interviewed, men or women. Because only families with a project latrine had been interviewed, no data is available on families without a demonstration latrine. The results of the study show clearly how difficult it is to get people talking about their sanitary habits. The answers are far from consistent: for example, in 25% of the families the latrine was not used, although 95% said that they were satisfied with it.

It is clear that unreliable and biased data does not provide a good basis for an identification of reliable indicators for monitoring. For studies which are executed within the framework of a project there are often practical time and money constraints which have to be taken into account, but this does not mean that they may be set up and executed in an unsatisfactory way. In particular where they are meant to provide indicators for monitoring and evaluation, the results should be made as valid and reliable as possible.

The Mission proposes that, for an extension and reorientation of the project, the general monitoring system should be carefully reviewed to include indicators which measure appropriateness, effectiveness, and sustainability of the different components and activities. Equally, changes should be made to the monitoring system for the community participation component, with a new focus on values and perceptions on hygiene issues, and on people's needs for improvements in their households and their environment.

For the monitoring and evaluation of health- and hygiene-related impacts an effort could be made to revive the relationship with the MINISTRY-funded Primary Health Care Project. Plans for close cooperation had been included in the RWSS Project Document 1992, but the PHC Project withdrew their representative in Beni Suef Governorate November 1995. The Cairo head office of the PHC Project could be approached, to explore the possibilities for cooperation.

6.2 Reviews/Evaluations

There are several tools mentioned in the project document which can be used to review the progress of the project. The decision to use annual work plans to guide the project is welcomed by the Mission. It gives the flexibility and control of the project which is necessary, especially in a capacity-building project.
The reporting structure, with its annual, quarterly and monthly reports, has been functioning. No complaints have been brought to the Mission's attention concerning the reporting.
There was no mid-term review as planned in the project document. It was replaced by an internal evaluation, which was probably more suitable, taking into consideration the progress of the project and the difficulties being experienced, which were better understood by those working in or directly monitoring the project than an external short-time review mission could have done. The Mission fully acknowledges the valuable contribution made by the internal evaluation.

7. *Mission Conclusions and Proposals for Future Action*

7.1 Conclusions

In the opinion of the Mission, although the first phase of the RWSSP has not resulted in all the physical achievements that had been anticipated, the Project has laid a good foundation for extending sustainable services in the governorate. It has addressed the many factors which go to determine sustainability, especially the appropriate level of technology and the involvement of users in the planning, design, operation and maintenance of services. However, this initial pilot stage has also served to reveal some weaknesses in the approach, as discussed above, of which the most important is the difficulty in ensuring total integration between the technical and non-technical aspects of the work, and the delay in response when it becomes evident that modifications to either technical or social approaches are needed.

There are also a number of more general important issues which still have to be resolved before a second phase of the RWSSP can be launched.

(l) The most important of these is the establishment of the EGA on a permanent basis. The first step towards this has been taken through the October 2 decree from the Governor establishing the temporary part-time committee to be responsible for setting up EGA and recruiting senior staff. Once this task (for which there is no fixed deadline) has been completed, the new agency needs to be established, fully staffed, and in the process of establishing policies and procedures at the governorate level, so that the next phase of RWSSP can assist in the establishment of the necessary equivalents at markaz and village level.

During its initial years of existence it seems certain that EGA will require significant technical assistance in areas such as planning, management and finance, and the presence of such assistance should also be a condition of the further phase of the RWSSP. In the absence of the basic framework for future sector development which will be created by the EGA, the RWSSP can make no useful long-lasting contribution in building institutional capacity.

(m) The second vital issue is ensuring the provision of sufficient funds for capital investments. Support from MINISTRY is necessarily limited compared to the overall needs of the governorate, and in the opinion of the mission the second phase of RWSSP would best be used to provide technical assistance (full-time and short-term specialist advice and support on technical, social, organisational, financial, economic and other issues, as needed), together with minor sums for immediate capital expenditures (for example, for demonstration purposes).

Therefore, investment funding needs to be secured from other sources, whether Egyptian (governorate funds, the Social Fund, allocations for Village Development, etc.), or external (in particular, anticipated assistance to EGA from USAID). These funds need to be readily accessible not only for the construction of facilities in the project area but also, if necessary, for subsequent adjustments in the light of experience, so that the facilities are

better suited to users' preferences and needs. There is a need for close cooperation between all parties concerned in order to ensure that the timing of various interventions is properly coordinated with the availability of funds, and vice versa.

(n) It is also important that there should be adequate and reliable funds for operation and maintenance. The financing of the sector is in transition, with central subsidies being replaced by revenues earned by commercialised EGAs. If facilities are allowed to deteriorate and the quality of service declines, there is a real risk that user' confidence will be shaken (and willingness to pay for operation and maintenance, or for the construction of new services, will be destroyed).

(o) Another critical element is decision on the future institutional framework for the second phase. The draft project document recommended that it should be located within EGA. This seems appropriate for water supply and sewerage activities, which fall within EGA's responsibility as set out in the decree. It may possibly also be appropriate for on-site sanitation, which forms the first stage in a progressive series of possible systems for disposing of human wastes and wastewater, and which might eventually be upgraded to a piped system. However, there are reasons (discussed above) for not risking overloading EGA, especially during its initial years. MSW services, the fourth component of the second phase, do not fall under EGA, and should not, and therefore further consideration has to be given to how best to support them through the RWSSP.
Given this division of responsibilities, the revised project document will need to contain separate budget items for the various elements, and specify clear responsibilities for management and funding of each element.
Accounting and audit procedures need to be specified accordingly, and it is also recommended that an independent audit, carried out by qualified Finnish and Egyptian auditors, should be carried out of the first phase operations, in order to ensure a smooth transition and transfer of assets to the new EGA .

(p) For the services with which RWSSP is concerned, the software aspects of project development and support are more important than the technical, at this stage. An important part of designing and implementing the appropriate institutional framework is therefore to ensure that it can deal effectively with these aspects. It is recommended above that the EGA create a strong Consumer Relations Department, and similar units need to exist in whatever institutions become responsible for on-site sanitation and MSW management.

7.2 Future Action

All these changes will take time to implement. Because EGA does not yet exist, there is no possibility of making them effective before the first phase of RWSSP expires, at the end of 1996. The Mission therefore recommends that:

(q) The first phase of RWSSP should be extended by a further 1 year, until the end of 1997.

(r) The emphasis during this extension should be on refinement and consolidation, rather than extending the project's scope.

(s) There should be a significant reorientation in project approaches. Matters requiring attention which were identified during the Mission are listed in Section 7.3 below, but it is quite clear that they cannot possibly all be addressed during the 1-year extension period. Careful prioritisation, and concentration on attainable objectives, are essential.

(t) During the extension period, the draft project document for the second phase should be revised to reflect the new approaches, and updated to reflect the current position in the governorate at the time.

(u) In approximately 12 months (i.e., September 1997), the situation should be further reviewed, to assess not only the achievements of the RWSSP during the intervening period, but also the extent to which the overall conditions for an "enabling environment", as discussed above, have been met.

(v) If this review is favourable, a second phase of the project could commence immediately succeeding the first, in January 1998.

The Mission believes that it is reasonable to consider a period of at least 10 years as necessary to achieve the degree of sector reform that is envisaged in the objectives of RWSSP and the other sector projects in the governorate. Assuming that the recommendations above are accepted, and that progress is such that a second phase is found to be justified, then the mission envisages that such a second phase could occupy the 4-year period 1998-2001 (with appropriate mid-term reviews and adjustments). A final concluding phase then might be considered, to allow for consolidation throughout the governorate.

7.3 Reorientation during the 1997 extension period

As mentioned above, the Mission's conclusion is that an extension of the first phase is justified and necessary in order to prepare for extension of activities under the second phase, but that the project approach needs significant reorientation if it is to contribute to establishing sustainable services in the governorate. The most important of these changes are the following:

(w) The project should not spend further time on broad sector plans for the governorate, which would be better handled by EGA's consultants who will be concerned with developing head office capacity and systems, Instead, the project team needs to spend much more time developing an overall strategy for its work (see Section 5.1).

(x) The problems being experienced by the project are social and political rather than technical. All future project activities should seek to build political support for the sector, and be designed to integrate social and technical aspects. The present division between "community participation" elements, carried out by one group of staff, and "technical" elements, carried out by another, needs to be eliminated. Technical and social aspects should be given equal institutional weight. The project needs to establish itself in a truly inter-disciplinary method of operation, and to create an awareness within the agencies that it is assisting that this approach is essential for sustainability. This would be assisted by arranging joint training for technical and social staff.

(y) A careful review of project-supported operations and policies should be made to ensure that there are no unintended adverse consequences due to lack of integrated development; for example, that water supply is not increased by promoting house connections without any parallel provision for improved drainage. This is clearly of particular concern in villages where houses are predominantly of mud brick, where floors may be damaged by spilled water, and where mud walls may deteriorate due to damp conditions.

(z) Project activities which would not have been completed by the anticipated closing date of the first phase (December 31, 1996) should also be carefully reviewed, in order to decide whether they should now be wound up, or carried through to completion. Any funds remaining from activities which are wound up should be reallocated to other continuing activities; there does not appear to be any justification for cancellation of funds.

(aa) As EGA begins to define its structure, procedures and policies, RWSSP will need, in parallel, to work at the markaz level in assisting in the establishment of viable water supply and sanitation operations. There will need to be direct continuous communication between EGA's central office, and EGA's consultants assisting in institution-building at that level, and the RWSSP, if conflicts and wasteful duplication of effort are to be avoided. RWSSP will need to pay greater attention to matters such as HRD for upper level staff, and broadening the technical assistance to cover topics

such as cost recovery and financial management, which until now have attracted little attention.

(bb) The project should broaden its understanding of "software". Its efforts to date seem to have been focused almost entirely on the LWC system: public and consumer relations have been neglected. The obvious example is Sumusta (see Annex 8), where lack of effective and timely response by the project threatens its credibility.

(cc) Regarding **standposts**: the pilot units have shown the need for significant redesign to improve features such as convenience of use, avoidance of damage to taps and other components, larger slab areas, and greatly improved drainage and sullage disposal facilities (see Annex 7). There are problems with both the number and, in some cases, the location of the new standposts, which suggests that there may have been some failure in the consultative process with the intended users (or possibly between the technical and social project staff involved). This needs to be rectified before additional installations are made.

(dd) Regarding **sullage disposal**, besides the concerns over house connections (see above), even with standpost water supplies here are problems to be solved: there are no well-thought-out ways for sullage disposal, and the innovations introduced by the project (disposal sumps discharging to evapotranspiration beds) do not appear to be popular, possibly because they are too complicated and do not benefit anyone (see the discussion in Section 5.2).

(ee) To ensure sustainability of the new or rehabilitated physical facilities, the project should ensure that the necessary support for operation and maintenance (workshops, spare parts, etc.) are provided at the same time, appropriate manuals developed, and the necessary training given to staff and village caretakers.

(ff) The WID approach, which has so far dominated project thinking, should be changed to a gender-specific approach, which means that both women and men's different needs and interests get attention. This has major implications for the staffing of extension activities, which will now need to include men also.

(gg) It will strengthen the village pilot activities if the community participation approach is changed, to make it less top-down, and more attention is paid to the needs and priorities of the village men and women.

(hh) Both the monitoring system for the project as a whole and that for the community participation component have certain defects. They need to be revised to make effective monitoring possible.

(ii) The extension workers (at present only the LWCs, but in future also including men) need training in modern partnership methodology, and need to have a defined career path and opportunities. This means that this class of staff need to be formally included in the EGA organisational framework, and treated on the same basis as any other employees.

(jj) HRD should be extended to the village level, for example by providing some technical training for the caretakers who look after standposts and washing places, and training in simple book-keeping so that village groups can administer and collect charges for the use of standposts and washing places. This is essential for sustainability. This training should also help to enhance the prestige of standpost systems in the eyes of the villagers (and also perhaps in the eyes of the technical planners).

(kk) Resource centres should be established, at least at markaz level, which would contain documentation and materials for village-level use (these of course should be supported through the recommended Consumer Relations Department within EGA). The semi-completed Training Centre in Beni Suef, which the RWSSP was to equip, should probably be considered as a potential location for the EGA central unit (see Section 5.6).

(ll) The MSW component, which shows great promise, should be strengthened.

(i) An institutional "parent" needs to be found for this component, so that it is put on a footing comparable with the others.

(ii) An evaluation should be made of the existing El Fashn operation, in order to determine why it is having problems with sustainability, since with proper management it seems to have the potential to be viable. This evaluation could include, besides RWSSP staff, representatives of other marakez, so that they could examine any issues relating to replicability in their districts.

(iii) Pilot MSW activities should begin in the villages, to complement the water supply and sanitation improvements and ensure full environmental and health benefits from the project. Most village wastes are organic, and recycling through composting or co-composting appears likely to be the most appropriate disposal system. Launching such activities will require finding suitable sites, identifying people who would be prepared to take responsibility, and devising some funding mechanism, through local government support, household contributions and/or sale of compost. in parallel, villages

should be encouraged to suggest other ways in which their living environment could be improved, and the project should be ready to support these ideas if found feasible.

(b) The composition of the RWSSP team should be substantially reformulated. The objective should be to shift towards all-Egyptian management and execution, which is obviously critical if the effects of the project are to last.

(i) The first significant change should be to ensure that as many Egyptian staff as possible are full-time, not part-time. Staff seconded from the EGA or other governorate organisations need to be released from their other duties for the duration of the project (while being guaranteed secure re-entry to their parent organisations). The most critical position in this respect is the National Project Director: he should be full-time, and should be the senior professional in the project, with his Finnish counterpart acting as his adviser.

(ii) All Egyptian staff other than those directly seconded should be engaged through EGA (or the appropriate organisation for MSW), and paid out of the Egyptian contribution. This would ensure that knowledge and experience derived from participation in RWSSP activities would remain, as far as possible, within the governorate. It would also help to eliminate the problems over inconsistent conditions of employment, which have been the subject of complaints during the first phase. At the same time, EGA should agree that it will provide staff of the calibre required, even if this means that EGA will have to engage staff from the private sector at salaries that are significantly higher than those it can offer to its own permanent employees.

(iii) Expatriates working on the project should be classified according to their duties, responsibilities and experience (adviser, assistant adviser, research associate, etc., or some other acceptable system). It is clearly causing concern when a younger, less well-qualified expatriate is placed over a senior Egyptian. In future, long-term expatriate staff should be senior and highly experienced, and in an advisory capacity to their Egyptian counterparts.; junior expatriates should be used as researchers or to conduct particular investigations, training courses, etc.

(iv) The system whereby "incentives" are paid out of external funds to seconded staff should cease. These additional payments should be paid from local funds (as is the case at present with water supply staff, who receive a 60% incentive in addition to their base salary). This will help to establish a system of payments based on merit and performance within EGA, which is essential if high-quality staff are to be recruited and retained.

The project should explore the possibility of establishing closer linkages with the health authority, which is operating in the governorate. This is desirable for two reasons: a general principle of using only one extension worker (the LWC) to convey health messages in the

villages, rather than having a series of workers (RWSSP, PHC, family planning, etc.), and a specific objective of using the specialised expertise of the health authority to establish baseline health conditions and assist in monitoring any health improvements that may be attributable to the project.

The proposals for reorientation listed above are far too ambitious to be achieved within a 1-year extension period. They have however been included in order to illustrate as comprehensively as possible the problems perceived by the Mission, and possible actions that might be taken to correct them. In the course of preparing detailed proposals for the objectives and activities in he extension period, these various proposals should be carefully considered, feasible ones identified, priorities set, and resources allocated. Some proposals may have to be deferred until the second phase, however undesirable this may be, but this should be done on the explicit understanding that there will then be residual problems still to be addressed as soon as it is possible to do so.

It should be noted that this reorientation will radically change the nature of the project and its method of operations; the present draft of the project document for the second phase will need comprehensive revision and restructuring to reflect this.

Preparation of the document for the proposed extension will provide a valuable opportunity for reviewing the status of project funds, the justification for continuing or cancelling activities not yet completed, and the staffing and budget implications of the proposed reorientation. That will then permit a better assessment to be made of the desirable funding during the extension period, both from MINISTRY and the Egyptian government, and of any funds required over and above those remaining undisbursed or uncommitted from Phase I.

THE ARAB REPUBLIC OF EGYPT

National Organization for Potable Water and Sanitary Drainage NOPWASD
Governorate of Bein Suef

THE REPUBLIC OF FINLAND

Ministry for Foreign Affairs,
Department for International Development Cooperation

Review of Phase I and Appraisal of Phase II of Regional Water Supply and Sanitation Project in Beni Suef Governorate

REPORT OF THE REVIEW AND APPRAISAL MISSION

Annexes

November 21, 1996

ANNEX I

MINISTRY FOR FOREIGN AFFAIRS OF FINLAND
Department for International Development Cooperation

15.8.1996

TERMS OF REFERENCE

FOR REVIEW OF PHASE I AND APPRAISAL OF PHASE II OF REGIONAL WATER SUPPLY AND SANITATION PROJECT IN BENI SUEF GOVERNORATE

Background

The Regional Water Supply and Sanitation Project in Beni Suef Governorate, Egypt, was mobilised in August 1993. The first phase of the Project was initially planned to be completed by the end of 1995. It was later decided to extend Phase I by one year to be completed by the end of 1996.

The Project area covers the districts of Beba, Fachen and Sumusta in Beni Suef Governorate. The primary objective of the Project is the strengthening of provision of safe potable water and sanitation services with sufficient accessibility to the population. The Project has been divided into five components:

(i) pilot schemes;
(ii) sector planning;
(iii) institution building and management development;
(iv) human resources development; and
(v) community participation and involvement of women.

The Project budget, the budget of which is totalling to about FIM 40 million, has been financed by the beneficiaries (5%), the Government of Egypt (28%), and the Government of Finland (67%).

A draft Project Document has been prepared by the Government of Egypt for possible continuation of the Project by Phase II.

Purpose of the Mission

The purpose of the Mission is:

(i) to appraise the results/achievements of Phase I;
(i) to recommend measures to be taken to finalise the plans for Phase II and first and foremost
    1) justify the continuation of the programme
    2) define clearly the time frame for overall external interventions needed to achieve the objectives/purpose of the Finnish aid
    3) determine well the proposals for the objectives
    4) the contributions/shares from the financing parties; and
(iii) to prepare an Appraisal Report.

Scope of Work

In order to achieve its objectives, the Mission shall cover but not necessary limit itself to the following tasks:

(i) review the Project Document(s) for Phase I (including its extension) and the relevant documentation of the Project (Phase I), meet the relevant stakeholders, carry out field inspections, and assess the achievements of the Project against the initial expectations;
(ii) draw conclusions and experience from Phase I for the proposed continuation of the Project;
(iii) appraise the draft Project Document for Phase II, and assess the appropriateness of the proposed objectives, strategy, approaches and activities, especially assess the ownership of the local authorities and their readiness for innovative approaches;
(iv) assess the local resources and capacity to implement the Project and maintain the service level to be developed with the support of the Project;
(v) identify and assess the risks associated with the implementation of the Project and effective and sustainable materialisation of its benefits; and
(vi) analyse the feasibility of the continuation of the Project and, if considered feasible, make detailed proposals for the finalisation of the Project Document.

Specific Subjects to be Addressed

When analysing the feasibility of the proposed Phase II of the Project, the Mission shall, in particular, address the following subjects:

(i) the logical consistency and comprehensiveness of the problem analysis and the proposed intervention;
(ii) the consistency of the proposed objectives in comparison with the actual demand (involving the ability and willingness to pay) and available resources, as well as with the substantive goals of Finnish development co-operation;
(iii) the appropriateness of the proposed objectives and verifiable indicators;
(iv) the status of the enabling environment, including legal and policy framework;
(v) the realism of objectives and strategies for commercialisation and financially viable development of water supply and sanitation services;
(vi) consumer relations of water undertakings including specific gender issues;
(vii) the role of the Project during Phase II and possibly beyond in the context of the entire sector development in Beni Suef Governorate; and
(viii) the need for TA and its role.

Composition of the Mission

The Ministry for Foreign Affairs of Finland has assigned the following team to undertake the tasks of the review and appraisal Mission:

(i) Mr. Heikki Wihuri, Consultant, Team Leader;
(ii) Ms. Mary Boesveld, Consultant, Socio-Economic and Gender Specialist, and
(iii) Mr. Richard N. Middleton, Consultant, Institutional Specialist.

The Government of Egypt is invited to assign Egyptian specialists to the Mission.

Timetable and Reporting

The field mission is scheduled to be carried out between September 23, 1996 and October 13, 1996. The Mission shall debrief the representatives of the Government of Egypt, and submit its draft report to them and to the Embassy of Finland in Cairo by the end of the field mission. The Appraisal Report shall be submitted to the Ministry by October 25, 1996. Prior to the field mission and after the submission of the Appraisal Report, the Team Leader shall have a briefing and a debriefing meeting at the Ministry in Helsinki.

Mandate

The Mission will carry out its tasks in close co-operation with the local authorities and beneficiaries. It is entitled to discuss with the relevant authorities any matters related to this assignment, but is not authorised to make any commitment on behalf of the Ministry for Foreign Affairs of Finland.

Heidi Pihlatie
Director
Unit for Asia, Latin America and Mediterranean

ANNEX 2

Programme of the Appraisal team during the period 23.9 - 14.10.96

23.9 Monday
The Appraisal Team arrives at Cairo as follows:
- Mr. Wihuri, ETA Cairo 00.50 (from Amsterdam)
- Ms. Boesveld, ETA Cairo 21.40(from Rome)
- Mr. Middleton, ETA Cairo 22.35; Sunday 22.9 (from London)

Meetings:
- from the hotel 09.00

1. - 09.30 Embassy of Finland; Mr. Garth Castren, the Ambassador and Mr. Olli Sotamaa, Counsellor
2. - USAID; Mr. Thomas Marr, Project Development Officer, Mr. Adel Halim, Consultant and Mr. Mustafa Dahi, Consultant
3. - EEAA; Mr. Serag El Din Enab, Member of the Steering Committee

24.9 Tuesday
4. - Netherlands Embassy; Mr. Peter Flik; First Secretary
5. - DANIDA; Ms. Kirsten Rasmussen, Counsellor Environment
Mr. Aly El Kerdany, Senior Technical Adviser

- travelling to Beni Suef / Fayoum. Accommodation in Auberge, Fayoum.

25.9 Wednesday
- Beni Suef; office

26.9 Thursday
- 11.00 meetings in the Governorate
  -- H.E. Sabrey El-Kady, the Governor of Beni Suef
  -- Mr. Houssien Abdel Kawy, Secretary General and National Director of the RWS&S Project
  -- Mr. Mohammed Said, Liaison Officer of the RWS&S Project
- 12.00 meetings with the Project Staff (Governorate large meeting room or auditorium)
- 14.00 lunch with H.E the Governor

27.9 Friday
Technical site visits (with Advisors)
- 08.00 departure Auberge
- 09.15 Mazoura (WS scheme No.3) & sanitation (Ruohonen & Efraimson)
- 09.45 Sumusta compact unit site (Leppanen)
- 10.30 Sumusta storage site and site office (Leppanen)
- 11.15 Sumusta borehole well & maintenance workshop (Leppanen)
- 12.00 Kom El Saaida, sanitation (Efraimson)
- 13.00 El Fashen, composting (Efraimson)

* lunch 14.00 - 15.00 in Beni Suef

- 15.45 Gezira El Sharqiya (WS scheme 1 & sanitation; Ruohonen & Efraimson)
- 17.00 Ghaiada El Sharqiya (" 2 " " "
* 18.00 - 18.30 interview Mr. Juhani Efraimson (he will travel on 1st October)

- 18.30 - 20.00 Fayoum, Auberge

28.9 Saturday

Beni Suef; interview of Egyptian Project staff, mainly seconded staff
- 08.00 departure Auberge
- 09.45 Ms. Reem (Comp E)
- 11.00 Mr. Hassan Abdel Atty (Comp A2-3)
- 12.30 Mr. Adel Abu Taleb (Comp A1)
- 13.30 Mr. Mohammed Soliman (Comp A4-5 and 7)
- 14.15 Mr. Anwar Manaf (Comp A6)
* 15.10 - 16.00 lunch
- 16.00 Ms. Dina Omar (Comp A1)
- 16.50 Mr. Mohammed Nagi (Comp A1)
- 17.30 Mr. Hassan Anwar (Comp A1)
* 18.10 departure for Fayoum
- Mr. Houssien Dawoud and Mrs. Fayza at 20.00 in Auberge

29.9 Sunday

Beni Suef; review - orientation in the field (technical T and social S separate)
* 08.00 departure Auberge
- 10.00 Kom El Saida (sanitation / T + S); Mr. Mohammed Soliman & Ms. Fayza
11.00 - 13.30 seminar for children and home visit (S); Ms. Fayza
- 11.00 - 13.30 Sumusta (T)
  - interview: Mr. Ahmed Abdel Wahed, Manager of Utilities
    Mr. Khalifa, Chief of compact unit
* 13.30 - 14.30 light lunch in Sumusta office (S + T)
- 14.30 - 16.00 home visits in Sumusta (S); Ms. Wafaa Bahgat
- 14.30 - 17.00 - borehole well & maintenance workshop; Mr. Adel Abu Taleb
  - network rehabilitation; Mr. Adel Abu Taleb
  - compact unit & laboratory site; Ms. Dina Omar
* 17.00 Auberge via office

30.9 Monday

Beni Suef; review - orientation in the field (technical and social mixed)
* 08.00 departure Auberge
* 10.00 - 12.00 El Fashen (solid waste collection system & composting), Mr. Mohamed Soliman & Ms. Reem (T+S)
  - interview: Mr. Mohammed Tawfeek, City and Markaz Chief
    Mr. Ramadam, Supervisor of Composting scheme
* 12.00 - 13.30 Monthly meeting with LWCs, VCs, VSs etc (S), Ms. Reem Galal
* 12.00 - 13.30 Sumusta (T)
  - interview: Mr. Mohammed Ibrahim, City and Markaz Chief
    Mr. Nimr Dahshan, Deputy markaz chief

* 13.30 - 14.30 light lunch in Sumusta office (T+S)
* 14.30 - 16.30 Water supply scheme 3; Mr. Hassan Abdel Atty (T+S)
  - interview: Mr. Tag El Deen, Village Chief of Mazoura
* 16.30 departure Sumusta for Auberge via desert road

1.10 Tuesday

Beni Suef; review - orientation in the field (technical and social mixed)
* 08.00 departure Auberge
* 10.30 - 13.30 Gezira El Sharqiya; Mr. Adel Abu Taleb, Mr. Mohammed Soliman and Ms. Fayza
  - interview: Mr. Maher, Chief of Gezert Beba village
* 13.30 - 14.30 light lunch in the field
* 14.30 - 16.00 Ghaiada El Sharqiya; Mr. Adel Abu Taleb, Mr. Mohammed Soliman and Ms. Fayza
  - interview Mr. Fayez Iskander, Workshop Manager
* 17.30 departure Beni Suef to Auberge
* H.E. the Governor nominated
  - Mr. Hassan El Banna, General Director of Housing Department
  - Dr. Ahmed Abdel Latif, Consultant to the Governorate
  - Mr. Saad Radwan, Administrator of the RWS&S Project

to be members of the Appraisal Team.
  - Mr. Saad Radwan refused because he is challengeable when working in the RWS&S Project as an administrator

2.10 Wednesday

Auberge, Fayoum
- 08.00 - 17.00 review what has been seen and heard
- 17.00 - 18.30 interview of Ms. Urpu - Liisa Airaksinen, Mr. Houssien Dawoud and Mr. Adel Abu Taleb

3.10 Thursday

Beni Suef; Discussions in groups; with governorate level
* 08.00 departure Auberge
- 10.30 - 14.00 review what has been seen and heard
-- participants (coordination committee without Project Coordinator)
- 14.00 - 15.30 interview **Mr. Houssien Abdel Kawy**, Secretary General and National Director of the Project
  Mr. Mohammed Said, General Manager of Planning and Follow up
* 15.30 - 16.30 lunch

4.10 Friday

the Appraisal Team will move by its own (Transportation from the RWS&S Project). Mr. Sameh
* 10.00 from Auberge; for instance Beni Suef, Maidun, Hawara and Fayoum

5.10 Saturday

Auberge Fayoum
- 08.00 - 17.00 Preparation of workshops, substance
- 10.00 Dr. Ahmed Abdel Latif, site visits

6.10 Sunday

Beni Suef
* 08.00 Departure Auberge
- 09.30 Preparation of Workshops, substance and logistics
* 14.00 - 15.00 Lunch
- 15.00 - 17.00 Preparation of Workshops, logistics .. to be continued..

7.10 Monday

Beni Suef
* 07.30 Departure Auberge for Beni Suef
- 09.00 - 15=2.00 workshops with participants as per Annex No. 1
* 15.00 - 16.00 lunch
- 16.00 - 21.00 analyze of the days results and preparation of next day
* overnight in Beni Suef

8.10 Tuesday

Beni Suef
- 08.00 - 9.00 preparation for workshop
- 09.00 - 15.00 workshops ing and wrap-up, closing the Workshops
- 15.00 - 16.00 lunch
* 16.00 Beni Suef departure for Auberge

9.10 Wednesday

- the Appraisal Team writes its report in Auberge, Fayoum

10.10 Thursday

- the Appraisal Team writes its report in Auberge, Fayoum

11.10 Friday

- the Appraisal Team writes its report in Auberge, Fayoum

12.10 Saturday

- the Appraisal Team writes its report in Auberge, Fayoum
* 08.00 departure Auberge to Beni Suef
- preparation for debriefing and copying of report
* debriefing in Beni Suef at 14.00
* 16.30 departure Beni Suef to Cairo, Marriot hotel

13.10 Sunday

- debriefing & draft report in Cairo, Embassy

14.10 Monday

- the Appraisal Team departure from Egypt

Documentation Obtained by the Mission

Work Plans

Plancenter Ltd; Chemonics Egypt; NSCE.
Regional Water Supply and Sanitation Project in Beni Suef Governorate :
-- : Work Plan August - December 1993. Cairo, Egypt. Plancenter Ltd
-- : Work Plan 1994. Beni Suef. Egypt, Plancenter Ltd
-- : Work Plan 1995. Beni Suef, Egypt. Plancenter Ltd
-- : Work Plan 1996. Beni Suef, Egypt. Plancenter Ltd

Project Documents

Governorate of Beni Suef. Egypt.
Regional Water Supply and Sanitation Project in Beni Suef Governorate :
-- : Project Document, Final Draft. December 1992. Beni Suef. Egypt.
-- : Project Document 1996. May 1995. Beni Suef. Egypt
-- : Summary of Project Document 1996. May 1995. Beni Suef. Egypt.
-- : Draft Project Document for Phase 2. August 1996. Beni Suef. Egypt
-- : Draft Project Document for Phase 2. 16. september 1996. Beni Suef. Egypt

Evaluations

Plancenter Ltd.
Regional Water Supply and Sanitation Project in Beni Suef Governorate : Internal Evaluation, Final Report. December 1994 . Beni Suef. Egypt.

Governorate of Beni Suef. Egypt.
Regional Water Supply and Sanitation Project in Beni Suef Governorate : Internal Evaluation, Final Report. December 1994.

Proposals

Plancenter Ltd; Chemonics Egypt; NSCE
Regional Water Supply and Sanitation Project in Beni Suef Governorate : Technical Proposal Main Volume, Volume I/III. February 14, 1993. Helsinki, Finland.

-- : ANNEX 3 : Comments on the Project Document.
-- : ANNEX 4: Work Plan.
-- : ANNEX 6: Job Descriptions.

Progress Reports

Governorate of Beni Suef. Egypt
Regional Water Supply and Sanitation Project in Beni Suef Governorate :
-- : Annual Progress Report 1993. February 1994.
-- : Annual Progress Report 1994. January 1995.

-- : Annual Progress Report 1995. April 1996.
-- : Quarterly Progress Report I/96, January - March 1996. May 1996.
-- : Quarterly Progress Report II/96, April - June 1996. September 1996.
-- : Quarterly Financial Report I/96, January - March 1996. May 1996.
-- : Quarterly financial Report II/96, April - June 1996. May 1996.
-- : Monthly Progress Report 7/96, August 1996.
-- : Monthly Progress Report 8/96, September 1996.

Reports

Plancenter Ltd
Regional Water Supply and Sanitation Project in Beni Suef Governorate :
-- : Report on Options Available for the Rehabilitation of the Water Supply System of Sumusta City, August 1994.
-- : Design of Rehabilitation of Compact Unit Type Water Treatment System in Sumusta District, Basic Study Report, February 1995.
-- : Appraisal of Financial Statement in Sumusta Markaz, Report of the Econoomist, April 1996.
-- : Sector Planning, Report of the Short Term Consultant Heimo Ojanen, September 1996.

Other Documents

Government of Egypt. Cairo. Egypt
Official Journal - Issue No. 5, 3 february 1994
-- : Law Number 4 for Year 1994, Law for the Environment.

ANNEX 4

Report of the Egyptian Appraisal Committee

This is the English language translation of the original Arabic report.

The report has been translated by:

Mr. Hany William Fahmy
translator / intepretor
teacher of simultaneous Translation and Intepretation at the
ASD/CACE/American University in Cairo

No editing has been made. The original is available at the Embassy of Finland in Cairo.

IN THE NAME OF GOD ALMIGHTY
REPORT

EGYPTIAN APPRAISAL COMMITTEE - 6 OCTOBER 1996
Prof. Dr. Ahmed Abdullatif — Development Advisor
Eng. Hassan Al Banna — Housing General Director

Name of the Project : Regional Water Supply and Sanitation Project in Beni Suef Governorate
Foreign Aid Agency : Finnish Government co-jointly with the Egyptian Government

A bird's eye view on the Project Area

Two of the trec Markazes are situated to thc South part of the governorate and the third Markaz, Sumusta, is on the South Eastern side. The estimated population of each of these Markazes is as follows:
Sumusta : 145570 approx. (January 1996)
Beba : 270300 (January 1996)
Al Fashen : 269180 (January 1996)
Total : 694050
Since Governorate total population amounts to approx. 1885000 (January 1996), therefore above populations are equivelant to 35 % of total Governorate population devided on the following areas of land:
Sumusta : 135.37 Km2
Beba : 175.26 Km2
Al Fashen : 54387 Km2
Total Governorate area : 13215 Km2
N.B. : A desert land area of 5848 Km2 was added in accordance with Presidential Decree No. 24 of 1994 increasing the total area to 71695 Km2
All Markazes share nearly the same charachteristics more or less with the rest of the Governorate. The following is a comparison between them and those of the Governorate:

Beni Sueif Governorate

Administrative devisions:

Markazes	Cities	Rural Local Units	Villages	Ezbas
7	7	38	220	286

Total sqm. area	7169 Km2
Sqm. Area % relative to the rest of Egyt	0.7 %
Place among Governorates according to sqm. Area	13
Average population density/ Km	1627 /Km2
Average population relative to whole of Egypt	992 /Km2
Estimated total population in January 1996	1885000
Males %	51.8 %
Females %	49.2 %
Population % relative to Total population in Egypt	13.3 %
Place of Beni Suif among other Govenoates	16
Population increase rate	2.5 %
Average population increase in Egypt	2.1 %
Quantity of daily water produced	158000 cu.m./day
Per capita water share	84 Litres/day
Average per capita share in Egypt	203 litres / day
Place of Beni Suif among Governorates (p.c.water share)	21
Sanitary Drainage capacity	45000 cu.m. / day
Governorate per capita sanitary drainage	24 cu.m / day
Average per capita sanitary drainage in Egypt	135 cu.m. / day
Place of Beni Suif among Governorates (p.c. sanitary drainage)	19

Beba

Cities	Rural Local Unit	Villages	Ezbas
1	6	46	87

Total sqm. area	175.26 Km2
Sqm. Area % relative to rest of the Governorate	13.26 %
Place among GovernorateMarkazes according to sqm. Area	5
Average population density/ Km	1768 /Km2
Average population density relative to Governorate	1627 /Km2
Total population	270300
Population % relative to Total population in Egypt	14.34 %
Place among other Markazes	3
Population increase rate	2.6 %
Average population increase in Governorate	2.5 %
Quantity of daily water produced	23045 cu. m./day

Place among markazes (p.c.water share)	4
Sanitary Drainage capacity	Zero cu.m. / day
Governorate per capita sanitary drainage	24 Litres / day
Place among Markazes (p.c. sanitary drainage)	5

Sumusta

Cities	Rural Local Unit	Villages	Ezbas
1	4	21	49

Total sqm. area	135.37 Km2
Sqm. Area % relative to rest of the Governorate	10.24 %
Place among GovernorateMarkazes according to sqm. Area	10
Average population density/ Km	1284 /Km2
Average population density relative to Governorate	1627 /Km2
Total population	154570
Population % relative to Total governorate population	8.2 %
Place among other Markazes	7
Population increase rate	2.0 %
Average population increase in Governorate	2.5 %
Quantity of daily water produced	14516 cu. m./day
Sumusta per capita water share	94 Litres /day
Governorate per capita water share	84 Litres / day
Place among markazes (p.c.water share)	2
Sanitary Drainage capacity	Zero cu.m. / day
Governorate per capita sanitary drainage	24 Litres / day
Place among Markazes (p.c. sanitary drainage)	6

Al Fashen

Cities	Rural Local Unit	Villages	Ezbas
1	5	33	118

Total sqm. area	233.24 Km2
Sqm. Area % relative to rest of the Governorate	17.65 %
Place among GovernorateMarkazes according to sqm. Area	1
Average population density/ Km	1319 /Km2
Average population density relative to Governorate	1627 /Km2
Total population	269018
Population % relative to Total governorate population	14.28 %
Place among other Markazes	4
Population increase rate	2.6 %
Average population increase in Governorate	2.5 %

Quantity of daily water produced	16857 cu. m./day
Al Fashen per capita water share	63 Litres /day
Governorate per capita water share	84 Litres / day
Place among markazes (p.c.water share)	7
Sanitary Drainage capacity	Zero cu.m. / day
Governorate per capita sanitary drainage	24 Litres / day
Place among Markazes (p.c. sanitary drainage)	7

SOURCE : Information and Decision Making Support Center

The above data indicate:
- Higher population density than the rest of Egypt
- Higher population increase rate than the rest of Egypt except in Beba
- Lower per caita potable water share than the rest of Egypt
- Absence of sanitary drainage in those Markazes

From the above it is evidently important to extend the project in the Governorate for a second phase and the need of those Markazes for further support and development.

OUTCOME

Regional Project for water Supply and Sanitation in Beni Suif Governorate

1- Project team composition

It has been pointed out by Engineers seconded from the Governorate and by the Project staff in page No.2 of the Project Document revised on 16/9 that: It is worth mentioning that the project work team of Egyptian engineers and Finnish experts have worked in a team spirit to complete phase one as achieved.

According to all project staff the aforesaid objective, which is the first, has not been accomplished as described. It was debated by many and severely contradicted by some because the foreign managemnet has taken decision making into their hands without reviewing with project staff or the coordination committee (financial decisions in particular). Decisions favoured some and neglected others creating a gap in wages and salaries despite equal experience. This was reflected on feelings of friendship among staff and upon descrimination of the foreign management against some of the staff and favouring of others.

2- Project Components for Phase 1

Phase 2 components are similar to those of phase 1 which indicates that they are an extension to the previous phase these components are:
- Pilot projects
- Sectoral development
- Institutional Building and Management
- Human Resources Development
- Community articipation and Developing women's role in Development

By the issuance of the Presidential decree establishing water suly and sanitation EGA in Beni Suif Governorate it becomes one oth second phase objectives extending technical support through the Finnish grant (25 million F.M.) Equivelant to 17.5 Million Egytian pounds in order to direct investments for replicating Phase 1 successful projects at the Governorate level.(the 7 Markazes)
Project staff can also operate as Governorate consultants on water supply, sanitation and the development of Solid waste Management in the cities and villages of the governorate as well as the development of village sanitation projects and foregrounding community particiation and WID.

It becomes important for the Egyptian apraisal team to:
- Follow-up technical support plans and programs executed by the project during 1993/1996. Such technical assistance was directed in Phase 1 to :

1- Improving water supply and sanitation services
2- Developing solid waste collection transfer and disposal through recycling.
3- Replicating sanitary drainage limited models in some villages
4- Stressing women's participation in community develoment

The following is a report on pilot and investment projects negetive and positive aspects and recommendations on phase 1 and the proposed phase 2:

Project title:
Rehabilitation of the Sumusta water network

Purpose of the project:
Suplying the city of Sumusta with potable water. The city previously was suuffering from permenant turbidity of potable water due to dead ends in additional pipelines due to network low water pressure.

Deliverables:
Execution of most of the project components by connecting loose pipeline ends and solving turbidity problem caused by preciitations at the pipelines dead ends and preparing a digital map for the whole city identifying network fire taps, meters, washing meters, numbering junctions and fire taps in order to facilitate easy access and leakage control.

Remarks:
Water network problem was solved by connecting the network externally to insure continious water flow inside the pipes which in turn would clean up the pipes and eliminate turbidity. No rehabilitation though has been done for internal network lines.

Recommendations:
- Prearing udated maps for all Governorate seven cities indicating networks and connections using similar method followed in Sumusta.
- Rehabilitation of network internal lines consecutively

Project title:
Rehabilitation of two compact units in Sumusta

Purose of the project:
Units suffered from leaking tanks - deterrioration of plastic sedimentation sheets - corrosion of pipe connections between station components - wearing of electrical connections and cables suplying power to the compact units - inefficiency of allum injection pumps. All these problems had evident effects on produced water quality.

In the light of these problems the Finnish side ehabilitation study was based on:

a- Designing a new water source on Bahr Youssef by erecting a bridge that goes into and up to the third of the waterway to replace the old source on the bank of the river which was always clogged by weeds in addition to the low water level durring the winter block.

b- Redesigning sedementation sheets using PVC and stainless steel to ensure longer operational lifetime and higher efficiency.

c- Redesigning allcomponents and rehabilitation and shifting turbid water passage to the new sedimentation tank and disconnecting mediator pumps to decrease their problems.

d- reviewing of the units hydraulic inclination and uplifting the tanks.

e- Treatment of corrosion on the inside of filters.

f- Digging six experimental wells to compensate lack of water during rehabilitation of the two compact units. Of the six wells thc best water quality well was thc one near the old tank. A production well was therefore dug there fitted with on/off automatic pump.

Deliverables:
the production well is pumping water to the city (rehabilitation of the two CUs not completed though execution period is nearly at an end)

Remarks:
During appraisal we have remarked the following:
- Rehabilitation costs are too high comared to the costs of 2 new units
- Fluctuation of water quality in the production well after sampling. When washed and tested, water quality satisfied Egytian potable criteria. After pumping 20000 m3 and re-analysing the water it was noticed that the rate of minerals has increased (which is not hazardous to health according to the Finnish project in Sumusta)

Recommendations:
Finnish side studies, though exerimental, must include costs in order to work accordingly.(whether to rehabilitate or replace or find alternatives)

Project title:
Maintainance and rehabilitation supporting projects

Purpose of the project:
- Establishing central workshop near the site of the old tank consisting of main workshop, pumps testing basin and a car-wash with accessories.
- Establishing a storehouse for the water network tanks at the location of thc new tank.
- Produced water quality control by establishing a central lab at the location of Sheik Abed water station to serve Beba , Sumusta and Al Fashen.

Deliverables:
Most works have been completed except providing the equipment for the central workshop which is still undergoing final finishing works. No equipment were seen stored in the workshop.

Remarks:
The central workshop should be provided by needed equipment and tools so that it becomes self-sufficient and integrated in order not to refer any required repairs to Beni Suif.

The appraisal committee noticed that the lab duely completed does not serve its purposes for lack of coordination with Health directorate and water ad hoc authorities up to now.(All water analysis are unofficially done by the lab as the Health directorate is legally and officially responsible for approving such tests.)

Recommendations:
-Relicating central workshos on Markaz level and providing them with all required equiment and tools and setting up an O&M plan for each Markaz seperately.
- Replicating central labs in all Governorate Markazes to Maximise roduced water quality control particularly after establishing the EGA.

Project Title:
Water Supply to Al Gezira Al-Sharkia and Ghaiada east of the Nile in addition to 4 Ezbas in Mazoura.

Purpose of the project:
Suplying clean water to deprived villages and Ezbas.

Deliverables:
- Al Gezira Al Sharkia village was provided with a network 8 kilometers long, with different diameters and 12 drinking connections serving areas around Al Gezira Al Sharkia(Al Zara - Al Dahaiba - Al Sha'abania). The network was suplied with water for the first time. The villages of Ghaiada Al Sharkia, Mohamed Owais, Beni Khalil, Gabal Al nour , Abou Alnour east of the river Nile were also provided with a ten kilometer long networks and 16 drinking connections to serve these areas for the first time. Also four Ezbas in Mazoura village, Sumusta Markaz, were provided with 17 kilometers networks and 23 drinking connections .Networks are still being constructed in the villages and Ezbas of Al Gendi, Al Saida, Kom Nosair, Al Kom Al Homr. Only Al Saida village has been provided with water.

- Updated survey maps for all project components were preared.
- PVC pipes were introduced to the first time in the project.
- A computer was provided for operations and reports.

Remarks:
Although the project had many positive asects such as supplying deprived villages and Ezbas with clean water which is considered a healthy sign yet the apraisal team would like to oint out to some remarks such as:
1- Women had an effective participatory role in selecting projects and their locations yet we would like to remark that that role was not from the technical point of view.(Some locations are better technically chosen and should not depend on Women community participation).

2- Some water connections have no rperly lanned water drainage and help in increasing wet and dirty areas around the connections. Wider drainage pipes should have been used.

3- Meter rooms are directly located in front of water connections exposing meters to damage by flushing water.

Recommendations:

1- Raising public awareness to maintain water taps and drainage systems.
2- widening the implimentation of water connections through a better study of the exericnce gained and improving multi-tap systems in each connection instead of overcrowding the taps
3- Establishing an O&M system for these connections and a cost recovery scheme after EGA full operation.

General Remarks on Phase 2:

1- Decreasing administrative expenditures of the Finnish side.
2- Minimising funds diversions due to improer studies and using them for their set purposes
3- Maintaining a balance between between wages and technical expenditures that serve Egytian investments.
4- To set as phase 2 first component the duly completion of all phase 1 projects through a work plan and a timetable to achieve hase 1 set objectives which are:

a- Completeing the rehabilitation of 2 Cus in Sumusta
b- Defining suitable solutions for the roduced water quality problems at the production well in Sumusta.
c- Completeing Sumusta workshop and all its components
d- Solving the Mazura village sanitary drainage funding problem presented by Beni Suif Housing Directorate and undergoing current consideration.
e- Resuming funding the training center established by the project at the Housing directorate maintainance center but which has stopped due to lack of finnancial allocations.
f- Focusing on providing and using updated digital maps Governorate wide identifying existing water networks (as a part of O&M plan)
g- Stressing the use of Computerised Data Bank for adding any changes or developments as a correct start point for the EGA.
h- Focusing on training programs for personnel in different sectors such as O&M or any other sectors serving EGA and providing ad hoc training specialists.
I- Establishing an accounting system (sectoral budget and revenue collection)
j- providing leakage detection devices in all Markazes to facilitate network O&M.
k-Aplying deep wells schemes for bad quality water areas in all the governorate 7 cities.
l- Completion of networks in the four Mazoura Ezbas and digging an Atizian well nearAlGendi
m-Designing imroved modern drinking taps
n-Governorate seconded engineers to undertake implementation of the project phase 2 after having gained the required experience in phase 1 that qualifies them to do so.

Dr. Ahmed Abdullatif objected to project evalution through interviews done by the Finnish appraisal team for the following reasons:

1- The Finnish apraisal team is mult- national with American, Italian, and Finnish members whose cultures are different from Egyptian rural culture in particular.

2- Different languages used that need interpretation to the english which is again a second langage of the italians or Finnish members.
3- The Egytian kind nature that cares for the feelings of others makes Egyptians hide their true views before foreigners for fear of hurting anyone's feelings this caused the Egyptian appraisal team to work alone in order to avoid any influence imposed by foreign presence.

A- Sumusta citizens expressed their appreciation for having water reach high buildings and for solving turbidity roblems , but they complained from water taste and salinity.

B-Village sanitary drainage
1- Sanitation pilot roject:
Funds allocated till 1994:
934000 L.E. Finnish grant
634000 L.E. Egyptian participation
66000 L.E. communitiy participation

Total: 1634000 L.E.

2- Sanitary water on-site collection and disposal:
Funds:
320000 L.E. Finnish grant
280000 L.E. Egyptian particiation
67000 L.E. community particiation\

Total: 667000 L.E.

The following have been established :

- 170 pilot latrines x 250 L.E	= 42500 L.E.
- 12 public latrines in mosques x 800 L.E.	= 9600 L.E.
- 5 private washing places x 200 L.E.	= 1000 L.E.
- 2 on-site treatment units x 4000 L.E.	= 8000 L.E.
- 1 public washing place x 5000 L.E.	= 5000 L.E.
Total:	= 66100 L.E.

In view to the total funding of this component
1634000 L.E. Sanitation pilot project
667000 L.E. Sanitary water on-site collection and disposal

The total becomes: 2301000 L.E.

What has been actually sent from the above total is 33% of the allocated funds

This shows that all the investments targeting any project were not used completely inspite of the previous extention of the project for one year.

Any specialised consultancy should maintain implementation timetable and should complete projects execution in order to test their viability and importance. From what has been completed so far 182 publicand pilot latrines have been established whereas the No. Of villages and Markazes in the project area are as follows:

MARKAZ	VILLAGE	EZBA
Sumusta	21	49
Al Fashen	33	118
Beba	46	87
Total	100	254

This is half the No. Of villages in the Governorate (200 villages). Also there is a low number of private washing places (only five and one public washing place.)

This indicates that what has been established so far has no revenue, nor experimental potentials due to the fact that they are not enough in number and not properly geographically distributed along villages to reach the level of pilot models that ought to be followed. Moreover some of the public drainage units which women cordinators aided in selecting do not adhere to health or needs criteria such as those in Al Saida Ezba and Sumusta Markaz; they are located next to a mosque and surrounded by houses which led the inhabitants in the area to cease using them and rendered them useless ; another example is the compact unit in Kom El Saida.

On the other hand latrines inside houses which we have visited and inspected gained the approval of people. This was evident from their upkeep and cleanliness.
Aforementioned investment ought to have targeted more number of villages and inhabitants. Moreover, lack of public awarness is evident and the project depent on rural coordinators for dissiminating information which is a good system, but more community mobilisation is needed to urge the people to stand for their own interests and health. This can be done through various means, only one of which, rural coordinators, is being used by the project.

3- Imroving solid waste management in Al Fashen:
Funds submitted in 1994 budget:

627000 L.E. Finnish grant
707000 L.E. Egyptian participation
134000 L.E. communitiy participation

Total : 1468000 L.E.

Actual amount spent :
323000 L.E. Finnish grant
350000 L.E. Egyptian particiation

Total: 673000 L.E. equivelant to 45 % of the total Funds allocated. Some equipment are still missing in addition to the withdrawal of the Finnish side leaving the project without enough funds to enable it to proceed and develop and reach targeted sustainability secially when some works have not been completed such as:

1- Improving the main dumpsite near Beni Saleh
2- Establishing the management organisational structure
3- lack of required training programs
4- Lack of communication and follow-up means and arrangements for the like.

From the above mentioned it becomes clear that:

1- the project has extended technical assistance in many needed areas such as prearation of updated maps using modern techniques with indications of water networks as well as designing O&M programs that would assist the initiation of the EGA.

2- The project did not adhere to projects execution timetables and did not considered the changing conditions that would hinder their implementation and therefore had to transfer unused funds to new timetables or periods having also different and changing conditions. This would definitely lead to incrementing costs, manifold losses and revenue decrease.

3- the roject has been extended for a one year period to complete the unfinished projects and up to now they haven't been completed yet. It is very important to accurately set the timespan needed for the project in order to save time and investments.

4- Maximising the role of the coordination committee and the importance of its participation in decision making pertaining to financial expenditures to ensure proper management of funds for attaining the set targets and achieving development in Egypt, to enhance cooperation and boost the spirit of friendship and fruitful development between the Finnish and Egyptian governments that was felt and apreciated by the people and leaders of Beni Sueif.

5-In spite of the extension of the project for another year, its slow advancement led to many uncompleted projects, as aforementioned, and to the relocating of funds. This necessitates taking no one-sided action without consulting the coordination committee and the full completion of all projects.

6- The appraisal committe would like to extend its thanks and gratitude to all the project staff for the efforts exerted and to point out that all what has been mentioned in this report is not personally targeted against any person, but it aims at upgrading performance and clearing the vision to enhance cooperation and the spirit of love between the Egyptian and Finnish peoples.

Signed: (Eng. Hassan Al Banna - Housing general director)
(Prof. Dr. Ahmed Abdullatif - Development Advisor).

Date : 7/10/1996

Written by the RWSSP, situation 30 september, 1996

ANNEX 5

CUMULATIVE LIST OF REPORTS ISSUED BY THE PROJECT

Project Workplans

1. Workplan August-December 1993, October 1993. Also in Arabic.
2. Draft Workplan 1994, November 1993. Also in Arabic.
3. Workplan 1994, February 1994. Also in Arabic.
4. Workplan 1995, December 1994. Also in Arabic.
5. Workplan 1996, December 1995. Also in Arabic.

Progress Reports

1. Monthly Progress Report, July-August 1993. Also in Arabic.
2. Monthly Progress Report, September 1993. Also in Arabic.
3. Annual Progress Report 1993, February 1994.
4. Quarterly Progress Report I/94, January-March 1994, May 1994.
5. Quarterly Progress Report II/94, April-June 1994, July 1994.
6. Monthly Progress Report 8/94, July-August 1994, September 1994. Also in Arabic.
7. Quarterly Progress Report III/94, July-September 1994, October 1994. Also in Arabic.
8. Monthly Progress Report 11/94, October-November 1994, December 1994.
9. Annual Progress Report 1994, January 1995.
10. Monthly Progress Report January 1995, February 1995.
11. Monthly Progress Report February 1995, March 1995.
12. Quarterly Progress Report I/1995, April 1995.
13. Monthly Progress Report April 1995, May 1995.
14. Monthly Progress Report May 1995, June 1995.
15. Quarterly Progress Report II/1995, July 1995.
16. Monthly Progress Report July 1995, August 1995.
17. Monthly Progress Report August 1995, September 1995.
18. Quarterly Progress Report III/1995, October 1995.
19. Monthly Progress Report October 1995, November 1995.
20. Monthly Progress Report November 1995, December 1995.
21. Annual Progress Report 1995, February 1996
22. Monthly Progress Report January 1996, February 1996. Also in Arabic.
23. Monthly Progress Report February 1996, March 1996. Also in Arabic.
24. Quarterly Progress Report I/96, January-March 1996, May 1996. Also in Arabic.
25. Monthly Progress Report April 1996, May 1996. Also in Arabic.
26. Monthly Progress Report May 1996, June 1996. Also in Arabic.
27. Quarterly Progress Report II/96, April-June 1996, September 1996. Also in Arabic.
28. Monthly Progress Report July 1996, September 1996. Also in Arabic.
29. Monthly Progress Report August 1996, September 1996. Also in Arabic.

Financial Reports

1. Quarterly Financial Report III+IV/93, July-December 1993, April 1994.
2. Quarterly Financial Report I/94, January-March 1994, June 1994.
3. Quarterly Financial Report II/94, April-June 1994, July 1994.
4. Quarterly Financial Report III/94, July-September 1994, Version 2, October 1994.
5. Quarterly Financial Report IV/94, October-December 1994, January 1995.
6. Quarterly Financial Report I/95, January-March 1995, April 1995.
7. Quarterly Financial Report II/95, April-June 1995, July 1995.
8. Quarterly Financial Report III/95, July-September 1995, October 1995.
9. Quarterly Financial Report I/96, January-March 1996, May 1996
10. Quarterly Financial Report II/96, April-June 1996, September 1996

Technical Reports

1. Report on the water supply to Sumusta City, November 1993.
2. Report on the Project orientation Workshop, November 14-15, 1993. Also in Arabic.
3. Computer Map of Beni Suef Governorate made for Plancenter, Reference and data listing. North South Consultant Exchange, December 1993.
4. Report on the First Orientation Workshop for Local Women Representatives and Coordinators from Beba, Sumusta and El Fashen Districts, March 1994.
5. Sector Development Plan, Report of the Short Term Consultant Osmo Purhonen, April 1994.
6. Living conditions and the environment in relation to the water supply, sanitation, sewerage and solid waste management program, Report of the Short Term Consultant Pasi Lehmusluoto, May 1994.
7. Options for the solution of increasing storage capacity of the Sumusta water supply system, July 1994.
8. Report on the options available for the rehabilitation of the water supply system of Sumusta City, August 1994.
9. Community Participation in Water Supply and Sanitation Projects in Egypt. A preliminary assessment of the community participation component in five water supply and sanitation projects in Egypt. NSCE July 1994.
10. Draft Report. Identification of behavioral aspects and willingness and ability to pay for water supply and sanitation services. NSCE April 1994.
11. Disposal of Gray Wastewaters Through Evapotranspiration. Mohammed Saiyed Abd El Hameed, February 1995.
12. Report on testing of leak detection equipment and methods to be used in Sumusta. Tapio Tolvanen, June 1995.
13. Revision of the system for collecting and reporting community participation data. Short term consultant Ulla Parviainen August 1995.
14. Report of the short term visit to RWSS Project, Beni Suef. Short term consultant Antti Ala-Kurikka, September 1995.

15. O&M Consultants report I. Findings and recommendations of a survey of water sector units in Sumusta Markaz 13.11.-16.12.1995. Eero Makinen, December 1995. Also in Arabic.
16. O&M Consultants report II. Immediate physical improvements, working procedures, training 13.11.-16.12.1995. Eero Makinen, December 1995. Also in Arabic.
17. Summary of findings and recommendations regarding village water stations and workshops. Report of the O&M consultant, Mr. Eero Makinen, December 1995. Also in Arabic.
18. Report of the Utility Advisor on management information system, revenue collection system and reduction of physical losses 2.1 - 9.2.1996. Unto Tanttu, February 1996. Also in Arabic.
19. Findings and recommendations on developing water supply in Sumusta 2.1 - 9.2.1996. Unto Tanttu, February 1996. Also in Arabic.
20. Appraisal of financial statement in Sumusta markaz. Jorma Nummenpaa, May 1996. Also in Arabic.
21. Report of implementation of public washing place and waste water disposal and treatment system at Kom El Saida ezba, Beba. Mikko Siivonen, August 1996
22. Report on the evaluation of the demonstration latrine programme. Ulla Parviainen, September 1996. Also in Arabic.
23. Sector Planning. Draft report of the short term consultant Mr. Heimo Ojanen, September 1996

Other Reports

1. Internal Evaluation. Draft Report, November 1994.
2. Project Document 1996. Draft. April 1995.
3. Institution Seminar, Seds, Beba, Beni Suef 26-27 March 1995, July 1995. Also in Arabic.
4. General View on Ongoing Activities, July 1996. Also in Arabic.
5. Seminar on Establishment of Beni Suef Water and Wastewater General Economic Authority in Beni Suef Governorate, 16 - 18 July. August 1996. Also in Arabic.
6. Seminar on Establishment of Beni Suef Water and Wastewater General Economic Authority, Case Study. August 1996. Also in Arabic.
7. Seminar on Establishment of Beni Suef Water and Wastewater General Economic Authority, Final Report on the Seminar. August 1996. Also in Arabic.
8. Draft Project Document, Phase II, 1997-2000, August 1996. Also in Arabic.

Written by Richard Middleton and Heikki Wihuri

ANNEX 6

El Fashn Solid Waste Collection and Recycling System

The RWSSP in Beni Suef has developed a solid waste collection and recycling system in El Fashn, which is located in El Fashn Markaz (District). The system is based on sorting of waste in households to two categories, organogenic waste and other waste, daily collection, composting and recycling of plastic and other resyclable materials.

A campaign was launched to rise awareness of the population of the benefits of proper solid waste management, from households to the final stage, sanitary landfill or reuse. Local women village coordinators were trained and a cleaning exercise of the streets and squares carried out.

The Project has provided households of two areas, Bahr El Azab and Maushet Nasser, in El Fashn town with two buckets. The households are required to put organogenic waste into the first of the buckets and other household waste into the other. A donkey chart collects the waste daily and takes it to a collection station. From the collection station the non compostable waste is transported by a tractor pulled trailer to land fill. Recyclable materials, plastic and other marketable matrials are sorted, washed, shred/gridded at the composting station. The intention is to pack and sell the treated plastic, other marketable waste material and compost. It was reported that there is a demand and a market price for the products.

A donkey chart has a capacity to take two cubic meters of waste at one go. There are five collecting points for the 20 donkey units, each serving five units. The capacity of the tractor trailer is eight cubic meters. Each donkey unit serves 300 families in the morning and the same number of families in the afternoon.

The composting and recycling centre is located in a relatively crowded place, near to two apartment houses and between rails and a canal. It has turned out that the area is too small for the composting. A new area for the purpose is going to be allocated. The sorting and processing of the plastic is waiting for installation of the needed machinery, which is being assembled now. The market price of the processed raw material plastic is LE 1500 a ton. Untreated plastic waste value is LE 500 a ton. The absorption capacity of the market should be large enough. The intention is to make the treatment and marketing a private business which will pay a rent of facilities to the Local Unit.

Source separation was introduced for a 6-month trial period in late 1995. Incentives were given by the project (approximately LE 30/month to the collectors, on a base salary of LE 150-200, and approximately LE 60/month to the Coordinators, on a base salary of LE 200 - 300; this may be compared to government incentives of a standard 60% of base salary paid to the water supply staff). All staff were employed by the Local Unit. The mission was informed that the trial was successful, but separation ceased once the operation was handed back to the Local Unit and incentives were discontinued.

It seems probable that, with good management, this system could be sustainable (or at least would compare favourably with other means of managing municipal solid waste, MSW, in the cities). The present charges are LE 1/month to a household, and LE 2/month to shops (market and street cleaning is the responsibility of the Local Unit in any case; at present no imputed fees

are charged for this work and credited to MSW management costs). El Fashn contains approximately 10,500 households and 3,500 shops, giving a potential revenue of LE 17,500/month. Collections have been as high as 80% (in July 1996); more commonly, they would be 60%, giving actual revenues of about LE 10,500/month.

Additional revenues could be anticipated from the sale of compost, which is much in demand for desert reclamation. Waste generation is estimated at approximately 0.5 kg/household/day, and the total residential wastes at 40 T/day; adding the wastes from shops and markets brings the total to about 60 T/day, of which 40% is organic and suitable for composting. Conservatively, the project estimates a production of 5 T/day of screened compost, or approximately 100 m^3/month. Farmers need about 5 m^3/feddan/year to maintain soil fertility, so 240 feddans (say, 100 ha, not a large area) would absorb the annual output of the process. The selling price (collected from the plant) is estimated at LE 20/m^3, so monthly revenues of about LE 2,000 might be feasible. The total monthly revenues from fees and compost sales would then be LE 12,500 with only 60% collection, and could be nearly LE 20,000 with better fee collection or higher sales.

Against this, should be set the costs of collection, processing and disposal. Collection was done by 20 donkey drivers, using carts provided by the Project. The cost of each was LE 4/day for the driver and LE 3/day for the donkey, so the total cost was only 7 x 20 x 30 = LE 4,200/month, or perhaps one-third to one-quarter of total revenues. There is no readily available information on the costs met by the Local Unit: supply of collection carts; transfer stations; trucks from transfer stations to the landfill area; operation and maintenance of the trommel screen; etc.. However, it seems likely that the operation could be largely self-financing (even omitting plastics recycling). This needs serious analysis during the next stage in Project operations, especially if this model is to be exported to the remaining marakez.

The sustainability of the operation is not sure for the moment. There is a risk of a collapse if the external support is withdrawn immediately. At least TA must be continued. However, there are already some signs of genuine interest of both the beneficiaries and the Local Unit to continue the activity. The host organization (parent) after establishment of the planned EGA is not clear. The way of funding is not guaranteed.

(Source: M. Soliman, 29/9) TRAINING

ANNEX 7

VILLAGE STANDPOSTS

The project has introduced a standardized design for village standposts, which is certainly an improvement on earlier concrete or cast iron designs, but which could still be substantially improved to increase its life and make it more suitable to the way in which it is used (acceptability as such appears not to be a significant problem, since the new standposts represent such an improvement over the previous situation, when the village had no supply or at best a remote standpost; however, this is no reason for perpetuating a problem design).

Areas for technical improvement noted by the mission are:

(a) The standposts do not have enough spouts, so that there is a lot of crowding (this would be relieved considerably if the full number of standposts requested were to be built, and brought into use simultaneously).

(b) The valves are locally manufactured, and have weak handles that are easily broken, especially if a heavy water container is hung by its handle over the spout. Solutions could include replacing the handle by a solid wheel, or repositioning the valve so that it is separate from the spout, and mounted, for example, on the back or the side of the standpost structure (it could even be recessed slightly into the structure, to avoid vandalism by small boys).

(c) The stands for the water vessels are sometimes too low, or too small. Probably a range of heights needs to be offered.

(d) The drainage slab is far too small for the number of people using the standpost, and the surrounding area therefore becomes muddy. Where the standpost is located on sloping ground (for example, near the river bank), the ground around the slab quickly erodes, leaving the slab unsupported so that structural problems will occur sooner or later. The solution may be to keep the existing pattern of slab, but perhaps raising the perimeter walls to reduce splashing, and then construct an additional slab around it (this might also act as a the cover of an improved soakaway; see below).

(e) Disposal of waste water (from washing out vessels, losses through splashing, etc.) is quite inadequate. Drains leading from the slab are not kept clear, surface channels quickly fill with sand, and soakaways do not have the capacity to handle the flow. One possibility might be to build the extended slab (see recommendation above) over a soakaway; the rock filling the soakaway would provide a good foundation for the new slab, and the area could be quite large because the slab would provide a protective cover and peripheral walls.

These improvements should be piloted on the existing standposts as soon as possible, and then, as a result of this work and discussions with the users, an improved design developed for use on new construction.

There also seems to be a need to address some problems in the planning and implementation process:

(a) Although the villages have been consulted by the LWCs about their preferences in standpost location and number, these have not been respected during implementation. In one example, the village apparently requested 25 standposts, but this was reduced subsequently on technical grounds to only 15, of which 13

were eventually constructed (a request for the remaining 10 standposts is still pending). This illustrates the need for both the extension workers (the LWCs) and the technical staff to be present at the same time during community discussions, so that any technical constraints can be explained and alternative solutions found.

(b) The standposts are brought into use a few at a time, not all together. This immediately results in overcrowding at the functioning standposts, and thus in excessive amounts of spilled water to be handled by the already inadequate drainage system. The area around the standposts becomes muddy and unhygienic, and the demonstration effect is spoiled.

(c) Most seriously, here appears to be a lag in response between the times when the problems discussed above first appear, and the times when they are rectified. In a pilot activity such as this, the LWCs should inspect every standpost regularly, and immediately report any failures; appropriate remedial action should then be decided in joint meetings between all parties concerned: the technical staff and extension workers from the project, and the users themselves.

A more efficient and effective use and, in general, improved sustainability of standpost water supply could be obtained by involving the villagers (not only their official representatives, but in particular also the actual standpost users) from the planning stage right up to operation and maintenance.

(d) In **planning** it is important to show the potential users where their water will come from. A visit to the treatment plant or borehole and pumping station, and an indication of where the pipes to their village are, will help to inform them of the importance and the costs of the basic facilities needed to supply them with clean water.
This information will then help them to understand the need for some cost recovery to help pay for these technical installations, as well as giving them a greater respect for the technical considerations which might affect the feasible locations for their standposts.

(e) The users should be directly involved in the **design** of the standposts. They could assist the technicians with building one or more mock models in some villages, carefully assessing alternative arrangements for number of outlets, valve locations, standing space, stands for vessels, suitable drains, etc.. On the basis of this, a real working model could be designed, and tested in a number of villages.

(f) The users can be made responsible for **daily operation and caretaking** of their standpost. There should be a users' meeting (or perhaps two meetings, one for the women and one for the men), in which a male and a female caretaker are chosen. They will be responsible for keeping the standpost and drain clean, and for making small repairs. For this work they should receive a small monthly allowance in cash or kind from the users. To ensure a good performance, and to give their work prestige in the village, they should receive a short training course; the course curriculum and materials should be developed with the assistance of project.

(g) Users' responsibility for the condition of their standposts and for responsible water use (avoiding waste and losses) can be stimulated by introducing some **cost**

recovery. Right from the start the users should pay a regular small amount (weekly or monthly) towards maintenance and the metered water consumption. This money can be collected and administered by one of the caretakers, who should receive some training in simple book-keeping.

At present, village contributions are almost entirely limited to providing labour for trench-digging (as illustrated by the photo-series called "community participation" shown to the mission). While participation in construction should increase villagers' sense of "ownership", the additional steps outlined above are also, in the opinion of the mission, essential in order to encourage sustainability.

Written by Richard Middleton and Mary Boesveld

ANNEX 8

SUMUSTA WATER SUPPLY

The RWSSP has been extensively involved in the rehabilitation of the water supply to Sumusta City, but there seems to be general disappointment with the results achieved. The situation is complicated, and the mission does not want to attempt to assign blame to any party rather than another - the mission's concern is that what started as an honest attempt to improve very poor service has resulted in recriminations and dissatisfaction.

The water supply to the city used to be from wells drawing on shallow groundwater. This water was contaminated and of poor quality, with high iron and manganese content. In due course, the groundwater supply was replaced by surface water, abstracted from the Bahr Yussef canal and treated at an adjacent "compact plant" at El Sheikh Abbed. However, because of a number of problems with the compact plant (poor initial design, lack of proper control of chemical dosing and non-availability of the needed polyelectrolytes, and poor standards of operation and maintenance), the quality of treated water leaving the plant was often worse in some respects than that of the raw water; for example, it had higher turbidity, and high levels of residual aluminum, due to the inefficient coagulation process. This poor quality water led to heavy deposits throughout the distribution system, probably consisting mainly of carried-over floc, but also including iron and manganese from the earlier low-quality groundwater.

The project recommended taking the compact plant out of service to rehabilitate it. At that time it was not appreciated how much rehabilitation and redesign would be needed (and some deterioration - for example, the pressure filters were almost rusted through - could not be detected until the plant was dismantled), and the work has taken much longer and cost more than originally anticipated. One factor leading to both delay and cost was the failure of the first round of tendering for the rehabilitation work: the contractor submitting the lowest responsive bid refused to sign the contract, on the grounds that he had forgotten some costs, and another contractor had to be chosen.

Meanwhile, an alternative source of water was needed. The project constructed a new borehole at the old groundwater station, but this time drawing on the deep aquifer (abstraction level: - 70 m). The borehole was also properly constructed (with the casing sealed against any polluted water tending to seep downwards from the poor quality shallow aquifer. The water does not require treatment, and is of high quality in almost all respects. It does, however, contain levels of sodium, hardness and TDS which exceed national standards.

Local preference appears to be for surface water, whether from the canal or from shallow wells. The latter often produce water with a high iron content and (to outsiders) a most disagreeable taste, but people have become accustomed to it. The borehole water, which is noticeably saline and quite hard, is not so acceptable. In retrospect, it seems to have been a bad decision to locate the new borehole on the same site as the earlier shallow borehole, which had a reputation for producing bad quality water.

Also, knowing that the new source would have quite different taste and other characteristics, and knowing people's preference for surface water, the project should have taken steps to test

what water would be acceptable (for example, the preferred blend of water produced from the new borehole and the rehabilitated compact plant). Since the compact unit had to be taken out of service for rehabilitation as soon as the new borehole was ready, and since the network deposits still resulted in quality problems in the water delivered to consumers, this taste test could not have been done with water as delivered, but there seems to be no reason why a panel of consumers could not have been invited to sample various blends and give their opinions on whether they were acceptable for drinking, tea-making, cooking, laundry, bathing, etc..

In this way the project could have "marketed" its activities, explaining that the use of the borehole was a temporary expedient until the new blend could be introduced. This would probably have reduced the volume of complaints received. Instead, project staff have been called repeatedly to appear before the People's Council, to explain their intentions.

The situation is complicated by the poor condition of the existing water distribution network. This is mainly of asbestos cement pipe, although some older sections are cast iron. When the project commenced work, there were no accurate records of the network, and so a comprehensive mapping program had to be undertaken to locate all the pipes and valves. This revealed that the network included a number of dead ends, as well as pipes in which the flow was so low that the water stagnated. The result, as noted above, was extensive deposition.

Given these defects, the project, in parallel with the upgrading of water sources, started rehabilitating the water distribution network. There was evidently a misunderstanding of what was intended or promised under the title "rehabilitation": local officials expected a complete replacement of the network.
As well as the rehabilitation of the network, the project attempted to remove the accumulated deposits. However, this was not totally effective for at least two reasons. The first is that the technique used was hydraulic flushing (by opening hydrants or wash-out valves), and this does not necessarily develop enough velocity to clean the system completely; physical means ("swabbing", using a foam plastic plug pushed through by water pressure) may be needed. The second is that while the rehabilitation is still going on (and especially when not all the pipes have even been located), there is always a risk that deposits in one part not yet cleaned may be pushed by the changed flow patterns into some section already cleaned. The laboratory records of the highly variable water qualities measured during flushing support the hypothesis that water quality problems are due to disturbed sediments, not to poor water quality at source. If this is true, the problem will not disappear until rehabilitation and cleaning is complete, and until that time consumers will continue to experience times when their water is of extremely poor quality.

Critical comments made to the mission include:

(1) *The compact plant should have been replaced with a new one, not rehabilitated; the consultants' recommendations were wrong.*
This seems questionable.
- The extent of damage could probably not be fully assessed initially (for example, with sealed filter units), and laboratory facilities were not initially available to evaluate the process efficiency.
- More importantly, any economic comparison between units and new ones should take into account the extensive upgrading that was included in the rehabilitation; this seems to have been ignored by critics (and it is remarkable

that NOPWASD is now installing a third, unimproved compact unit at the El Sheikh Abbed plant, as well as in other locations in the governorate; there is evidently considerable pressure for adoption of these Egyptian-manufactured units).

In the opinion of the mission, further installation of these units is a mistake. They were designed originally for use only as temporary facilities, for use in conditions such as refugee camps where any unit has to cope with unknown raw water quality and still produce safe water. The unit has also be designed so that it can readily fit into a container for rapid shipment. This means that the units have features that give problems (such as over-dimensioned chlorinators), or are over-simplified (such as not elevating the primary clarifiers), which could be avoided by a purpose-designed plant.

(2) *The water from the new borehole is a threat to public health.*
This seems highly questionable. The sodium level is 272 ppm compared to the 200 ppm standard, hardness is 520 compared to 500, and TDS 1440 compared to 1200 (in 1995, the standard was 1500; the 1200 limit applies from 1996 onwards). The Mn level is above the standard for surface water (0.01 compared to 0.1), but well within the standard for blended supplies (1.0 ppm for surface plus groundwaters). However, these are not of great health significance, especially for a temporary source that will in due course be blended with water produced by the El Sheikh Abbed plant.
In fact, the treated water from the compact plants is likely to be a greater long-term threat to health. Apart from high aluminium levels as a result of poor processes in the non-rehabilitated plants, the laboratory does not have the facilities needed to detect very dangerous contaminants in the raw water such as pesticides or fertilizer residues, which are quite likely in this area - and the plants have no means of removing such contaminants even if they were detected.

(3) *The water distribution system should have been analyzed using modern computer programs. When the mapping is being done using advanced mapping techniques and programs such as AUTOCAD, it is ridiculous to use outdated programs for hydraulic analysis.*
This criticism seems justified. The program used, LOOP, was developed in the early 1970s through a World Bank research project. It can produce good results, but reflects the limitations of portable computers at that time. Programs in use today can be linked to GIS, and this seems entirely appropriate for Sumusta. Perhaps more importantly, by using modern graphics, 3-D displays, and other available refinements, and doing the work in the Sumusta Local Unit office, local officials could have been closely involved in the process, and some of the misunderstandings could have been avoided. However, the aspect of avaiable computer hardware and software may justify an interim step of using old programme to introduce the idea of computer aided network analysis. A follow-up activity, modernizing the planning tools is necessary to build-up capacity of the EGA (and Local Unit).

(4) *The network should have been replaced, not rehabilitated.*
This seems to be wrong, reflecting a misunderstanding at the start of the work. The asbestos cement pipes, although not used now because of the possible health hazards (especially to workers cutting and shaping the pipes during installation), can be expected

to have a long life unless the water is highly corrosive, which is not the case in Sumusta. Rehabilitation, with limited replacement where necessary, appears to be the correct approach (it is also probable that local officials had no concept of the massive disruption to normal city life that would be caused by complete removal and replacement of the water system).

An additional reason for coming to this decision is the likelihood that sewerage will be installed in the city in the near future. The water mains are laid in the centre of the roads and lanes, and, especially in the narrower streets, it seems most unlikely that deep sewers and the necessary house connections can be laid, and the trenches backfilled, without causing considerable damage to the fragile asbestos cement pipes and the water supply connections. The appropriate time to consider more comprehensive replacement should therefore be when the sewerage system is being installed.

(5) *The poor water taste is due to the new borehole.*
For the reasons explained above, this seems to be most unlikely. The borehole has undoubtedly introduced water of an unfamiliar quality, but it is doubtful if anyone could guarantee to produce water of specified characteristics, even with carefully controlled sources, given the present state of the network.

(6) *The water from the standpost is unsafe; it comes straight from the canal without any treatment* [comment from villagers living near El Sheikh Abbed].
This is not technically true, since all water drawn from the canal is treated by the compact plant. However, it illustrates two interesting aspects: firstly, the villagers were aware of the problems in ensuring good water quality as a result of the poor operation of the compact plant, and secondly, the project or the local authorities had failed to ensure that consumers were kept closely informed about the plans to improve their water supply, and the difficulties that would have to be expected during the transition period.

The mission has obviously not been able to carry out sufficient investigations to determine whether the technical approach adopted by the project was correct in all respects, but overall it seems a sensible way to deal with the technical problems of rehabilitating a severely neglected water supply system. However, with the benefit of hindsight it is quite evident that there was a serious neglect of consumer relations. The blame for this can probably be shared. On the one hand, the project seems to have lost the confidence of the markaz officials, through a failure to explain precisely what was intended or why works were delayed. Equally, local officials do not seem to have taken any initiatives to keep consumers adequately informed (probably for two reasons: the absence of a consumer affairs group in the Local Unit, and a long tradition of blaming outsiders - typically NOPWASD - for problems, rather than dealing with them directly). Consumers should have been informed of any temporary disruptions or difficulties which would have to be endured in the interests of long-term improvements. Failure to do so has put local officials in a difficult position when dealing with consumers' complaints.

The Sumusta experience demonstrates the absolute necessity of having a Consumer Relations Department within the new EGA, with corresponding subsidiary units at local level.

Written by Mary Boesveld

ANNEX 9

HOME VISITS

1. Sumusta

Accompanied by the local coordinator there were two visits for two different houses.
The first one was a two-storey house, consisting of two different zones. The first zone, or the part used by the family, occupied the front side of the building. It includes four toilets, with a shower in each, two on each level. The second zone, at the backside of the house is partially isolated and devoted to the domestic animals and storage.
Obviously this was a relatively wealthy family. The house was in a very good condition, having all the facilities needed with a good arrangement, for example in addition to the four bathrooms there were two washstands in the dining area. In fact, at least as a personal impression there was no need at all for the visits of the local coordinator, especially as the family included women from the same level of education as the coordinator, maybe even higher.

The second visit was to a different kind of house, different social class, different quality of life, and for sure, different physical environment.
This house consists of a small living area and another single room for living, sleeping, and storage. The family consists of 13 persons : father, mother, and eleven children.
It was obvious that the local coordinator responsible about that area, gives the same attention to all the cases she has, regardless of different needs of different families.

The vast gap between the two examples we visited in Sumusta, bring into light some important remarks :

* The role of local coordinators needs to be better specified.

* Different cases should be handled differently, according to the existing quality of life.
  Although it might be said that rural people are in the same conditions of lack of facilities, within a village there are usually real differences in wealth, and also there are differences between villages in housing conditions, access to facilities, etc.
  A kind of simple social area analysis can be very useful in dertermining the real needs of the households and the best approach for interventions.

2. Gezira El Sharqiya

In this vilage one of the houses (the residence of the Chief of the village) had been visited. The house which is close to the standpost, has one latrine.
There is no local coordinator in the village. Considering the real need of the village people to social help, especially as the village is completely isolated by the Nile, the absence of local coordinators gives an idea of the random distribution of local coordinators in the project. The village, although it is one of the demonstration villages of the project, and standposts from the project have been built there, has clearly been neglected by the community participation component.

On the Nile bank, and at about 10 metres distance from a standpost, there were some women washing clothes in the Nile. It was clear that nobody had talked to them about that issue. One of the women said that her father had forbidden her to use water from the tap, because they think that Nile water is cleaner.

3. Ghaiada El Sharqiya

Some local modifications had been done for the standposts in Ghaiada by the people of the village. They put big blocks of limestone to change the height between the tap and the slab to a level which is more suitable for filling their containers.

Although everybody talks about "asking the people what they want", it seems that nobody has asked these women about their practical use of the standpost. Some investigation to determine their real needs, would have brought out the most suitable and efficient design.

KOM EL SAAIDA

1. Seminar for children

A presentation given by one of the local coordinators to children (boys aged from 9 to eleven). They only available media was the posters. In a very simple, and clear way, the local coordinator had explained to the children some rules for personal hygiene. Although this was the first seminar to be held at school, the response of the children - also the teachers who were watching, sometimes participating - was strongly positive.
The local coordinator, responsible for the presentation, is one of the best (according to my personal observation). This means that this seminar can be looked upon as a real scale for the success of the experiment.
The posters used for explanation are old, not interesting at all, and their small size makes it difficult for some children to concentrate.
At the end of the seminar, there was a suggestion for the children to draw a sort of colour drawing that expresses their response to the seminar. An exhibition can be held for the drawings, and there should be a prize for the best ones. The second suggestion is to begin to make small groups of children trying to apply some rules they had learned within the boundaries of their village (on the scale of house, street, etc.).
We had a look at the toilets of the school, which were not very clean. There was then a discussion with the coordinator and the teachers about the necessity to have a very clean school when you want to teach the children the rules of hygiene.

Recommendations :

* developing a sort of more advanced training for the local coordinators, allowing them to use different skills for explanation

* developing a different kind of training for the teachers, allowing them to give some information and advice during and between classes

* opening some channels between the project and other agencies (like UNICEF) to find a complementary source for all kinds of media, and also for the exchange of ideas and experiences.

2 The washing place

In Kom El Saaida a washing place was built close to one of the standposts. That washing place is just a rectangular room divided into a number of equal areas where concrete washing slabs were built. During the visit there were more than 10 women washing clothes and dishes. It was obvious that they enjoyed this collective activity. They said that they were very happy to have this washing place, instead of having to carry the water for washing to their houses, causing much trouble with drainage, especially because their houses have mud floors.

They had asked for taps inside the washing place, instead of having to bring the water from the standpost outside. In their opinion it would the place made even better. The technicians of the project did not install the taps, because they thought that the women then would use too much water. But they would not do this, because the washing place has a women caretaker, who said she was responsible for cleaning it, and for looking after waste of water. The place was indeed very clean. However, the standpost, around the corner, was not improved and in poor condition. Improving the standpost would have made it possible for the caretaker to keep it clean and dry, and by that support the hygiene of the place.

Written by Mary Boesveld and Richard Middleton

ANNEX 11

REPORT OF THE WORKSHOP ON IMPROVING SUSTAINABILITY OF WATER SUPPLY AND SANITATION SERVICES IN BENI SUEF GOVERNORATE 7 and 8 October 1996

To stimulate an open discussion and get the comprehensive views of all parties concerned, and to identify practical recommendations for improving sustainability of Project activities, it was decided to organize a 2-day workshop.

The following objectives of the workshop were stated :
First day

* To identify the best ways to improve the sustainability of water supply, sanitation, and solid waste management services in Beni Suef, terms of :
  * appropriate technology
  * appropriate responsibilities, and
  * appropriate financing

Second day

* To identify new approaches and to make recommendations on possible reorientation of RWSSP strategies, which would be needed to put into effect the priorities actions identified on the first day.
* In so doing, to assist the team reviewing the first phase of RWSSP in formulating its recommendations to FINNIDA.

A programme was made up and distributed to the participants, together with the objectives of the workshop, and a summary of a theme paper on sustainability by Mr. Richard Middleton. The programme is attached in Annex 1.

Invited as participants were :

- the Project staff
- Seconded staff
- Beni Suef Governorate representatives
- City and Markaz Chiefs
- Utility engineers
- Representatives of the Local Woman Coordinators
- the Appraisal Team (two members of the Team acted as facilitators of the workshop)
- Interpreters and a secretary.

A total of 43 participants attended the workshop. A full list of participants is attached in Annex 2.

Workshop proceedings

After the opening of the workshop by the National Director of the Project, Mr. Hussein Abdel Kawy, the leader of the Mission, Mr. Heikki Wihuri explained the objectives of the RWSSP review mission, and gave a brief overview of its work.
One of the facilitators informed the participants of the workshops' methodology, encouraging them to focus specifically on practical issues in their discussions.

Finally, the concept of sustainability was explained by Mr. Richard Middleton. He identified the three "appropriate ingredients" of sustainability, which he said would be the starting points for the discussions.

After these introductions the participants were asked to form 5 workgroups, to encourage everybody's active involvement. All 5 groups worked on problems of sustainability and on priorities for improvement. The results of these discussions were written on charts, and presented by each group to the plenary. During and after presentations all participants commented and discussed the results. The conclusions of the first day were drawn together by the facilitators, and presented to the participants the next day as a hand-out.

The second day participants formed four discussion groups, each with a different assignment :

- organization and planning
- personnel and information management
- community participation and consumer relations
- technical issues.

These subjects were based on the results of day one.
As on the first day, the conclusions of the discussions were written on charts, and commented upon in plenary sessions.
The final outcome of the workshop consists of a list of recommendations, which will be taken up by the Mission in its Report.

The workshop was officially closed by the National Director, who expressed his pleasure with the interesting conclusions and results. He congratulated the participants with their active contributions.

WORKSHOP ON

IMPROVING SUSTAINABILITY OF WATER SUPPLY AND SANITATION SERVICES IN BENI SUEF GOVERNORATE

Beni Suef,
7 and 8 October, 1996

PROGRAMME

THOUGHTS ON SUSTAINABILITY

The idea behind "sustainability" is simple: that any improvements in services such as water supply and sanitation should continue to provide benefits to the users over the long term. Too many investment projects fail within a few years, wasting national resources and leaving the users disappointed and cynical, but there are ways to avoid this. It is therefore important, as we consider the next steps in the RWSSP, that we make sure that the approaches we use are designed, as far as possible, to ensure long-term success.

There are many different ways of looking at this issue. One way, which we suggest as a starting point for discussions in this workshop, is to say that services must include three "appropriate ingredients". These are:

- ***appropriate technology***
- ***appropriate responsibilities***, and
- ***appropriate financing***.

Appropriate technology means that the technology used

* fits the local situation
* is socially and culturally acceptable
* is affordable
* can be operated and maintained locally, and
* is reliable.

Appropriate responsibilities means that each of the various persons involved clearly understands and accepts their role in ensuring that the system works. This applies at all levels: from the potential users in the village, right up to the Chairman of EGA!

Appropriate financing means that all parties know what funds will be needed for new investments, for rehabilitation or replacement, and for operation and maintenance, and how these funds will be obtained. They also need to have confidence that these arrangements will work:

* agreed investment funds will indeed be allocated on time
* recurrent funds (whether from the users themselves, or from the village or markaz level) will be available
* methods of collecting revenues are fair and suit people's household budgets, and
* revenues really will be used for the purposes intended.

Each of these aspects demands extremely close collaboration in two directions: in a "vertical" direction, between the user in the village up to the EGA or other governorate agency, and in a "horizontal" direction, between, for example, engineers, extension workers, financial planners, and with people representing the users (for example, at the EGA level, the Customer Relations Department; at the village level, the users themselves). Without this collaboration any improvements, however good they may sound on paper, are likely to fail sooner rather than later.

There is no unique ideal solution to this problem of sustainability. The general ideas may be helpful, but ultimately the solutions have to be designed by the people directly affected, both the potential users and the agencies serving them, to suit their particular situation and problems. We hope that this workshop will be an important contribution towards reaching such solutions in Beni Suef.

WORKSHOP OBJECTIVES

FIRST DAY:

- To identify the best ways to improve the sustainability of water supply, sanitation and solid waste management services in Beni Suef, in terms of:
    - appropriate technology
    - appropriate responsibilities, and
    - appropriate financing

SECOND DAY:

- To identify new approaches and to make recommendations on possible reorientation of RWSSP strategies, which would be needed to put into effect the priority actions identified on the first day.
- In so doing, to assist the team reviewing the first phase of RWSSP in formulating its recommendations to FINNIDA.

WORKSHOP ON IMPROVING SUSTAINABILITY OF WATER SUPPLY AND SANITATION SERVICES IN BENI SUEF GOVERNORATE

FIRST DAY - 7 October, 1996

9.15 - 9.30	Welcome and opening.
9.30 - 9.45	Aims and objectives of the RWSSP review mission, and brief overview of its work so far.
9.45 - 10.00	General introduction of workshop objectives and methodology.
10.00 - 10.45	Theme introduction: what do we mean when we speak of sustainability?
10.45 - 11.15	Break for refreshments.
11.15 - 12.00	***Group discussions*** : what are, at present, our main problems with the sustainability of water supply, sanitation and solid waste disposal services?
12.00 - 12.45	***Plenary session*** : identification of main sustainability problems. Group presentations, followed by plenary discussion.
12.45 - 13.30	***Group discussions*** : what are priorities for an improvement of sustainability?
13.30 - 14.00	Break for refreshments.
14.00 - 14.45	***Plenary session*** : identification of priorities. Group presentations, followed by plenary discussion.
14.45 - 15.00	Wrap-up: what did we agree upon?
15.00	Lunch for participants.

SECOND DAY - 8 October, 1996

9.30 - 10.00	Review of the first day's sessions.
10.00 - 10.45	***Group discussions*** : what new approaches can we adopt to implement the priorities as identified on the first day?
10.45 - 11.15	Break for refreshments.
11.15 - 12.15	***Plenary session*** : identification of new approaches. Group presentations, followed by plenary discussion.

12.15 - 13.00	***Group discussions*** : what practical and feasible recommendations can we make for the implementation of new approaches and a possible reorientation of the RWSS Project towards improved sustainability?
13.00 - 13.30	Break for refreshments.
13.30 - 14.30	***Plenary session*** : practical recommendations. Group presentations, followed by plenary discussion.
14.30	Closing of the workshop.
15.00	Lunch for participants.

ISSUES FOR DISCUSSION IN WORKGROUPS

The first day's discussions raised a number of extremely interesting issues. We have tried to summarize these below, divided into four main groups of topics.

Because of the way the discussions developed, we propose that the working sessions today follow a pattern rather different from that in your programs.

We suggest that the first session should be devoted to the theme:

Which of these various issues can be addressed right now, by the project, during the time while the EGA is being set up and before it can become fully effective?

Then the second session will go on to consider:

How can these issues be handled?

We want you to come up with feasible and practical recommendations! As we said right at the beginning of this workshop, these will be included in our report to FINNIDA.

1: ORGANIZATION AND PLANNING

Organizational framework and structure for rural coordinators
Establishing a data bank and Information Centre
Establishing a Maintenance Department, both centrally and at markaz level, including adequate stores and inventory control
Establishing financial and administrative systems for donor-supported projects compatible with local systems
Neglect of long-term planning and lack of a comprehensive strategy for WSS development
Lack of financial monitoring
Lack of field follow-up for projects being executed
Proper allocation of funds (e.g., inappropriate diversion of investment funding, inadequate O&M funding)
Concentration of pilot projects in one area to create a "model village"
Better revenue collection
Establishment of the EGA on a permanent basis
Inconsistency between plans for augmenting water supply and associated sanitary drainage, and lack of inter-agency coordination
Institutional responsibility for on-site sanitation
Improved procurement procedures, reconciling FIDIC with national procedures

2A: PERSONNEL

Determination of training needs
Improvement of training system
Fair performance-related employment, salary and incentive system
Meeting special personnel needs (e.g., lack of laboratory technicians)
Experience exchange inside and outside the project
Lack of a comprehensive program for O&M
Definition of personnel responsibilities

2B: INFORMATION MANAGEMENT

Establishing a data bank and Information Centre
Collection of information on appropriate solutions at village level
Preparation of up-to-date and accurate maps, using modern techniques, including GIS
Experience exchange inside and outside the project

3: COMMUNITY PARTICIPATION AND CONSUMER RELATIONS

Creation of an organizational framework and career structure within EGA for rural coordinators, to institutionalize this cadre
Improved training of LCWs and supervisors
Increasing public awareness of WSS through a wide range of media and making use of all relevant local institutions
Increased attention by planners and technical staff to community participation and mobilization
Mobilizing community contributions towards the costs of water used, maintenance of public facilities, etc.
Devising and testing systems for caretaking and maintenance by communities
Training community members
Identification of reasons for rejection of apparently suitable solutions, and testing of alternatives

4: TECHNICAL ISSUES

Establishing a Central Maintenance Department at central and markaz level, including adequate stores and inventory control
Finding technical solutions for maintenance
Monitoring of quality of surface and ground waters
Lack of field follow-up for projects being executed
Training
Lack of a comprehensive program for O&M
Preparation of up-to-date and accurate maps, using modern techniques
Testing of latrines
Modification of pilot designs to reflect experience
Inconsistency between plans for augmenting water supply and associated sanitary drainage
Improved cost recovery, especially reduction of non-revenue water through improved consumer registration, meter installation and maintenance, more accurate meter reading and recording, etc..

PARTICIPANTS IN THE WORKSHOP ON 7-8.10.96 ON

IMPROVING SUSTAINABILITY OF WATER SUPPLY AND SANITATION SERVICES IN BENI SUEF GOVERNORATE

A. Project staff

1. Mr. Pentti Ruohonen, Project coordinator
2. Ms. Ulla Parviainen, Human recourse and community participation advisor
3. Mr. Jukka Leppanen, O&M advisor
4. Mr. Jockum Runeberg, Sanitation and solid waste management advisor
5. Ms. Reem Galal, Sector assistant
6. Ms. Wafaa Bahgat, Community participation expert
7. Mr. Saad Radwan, Administrator

B. Seconded staff

1. Mr. Hassan Abdel Atty, Chief engineer design
2. Mr. Adel Abu Taleb, Mechanical engineer
3. Mr. Hassan El Anwar, Electrical engineer
4. Mr. Mohamed Nagi, Chief engineer construction
5. Mr. Fayez Iskander, Workshop manager
6. Ms. Fayza Abdel Rahman, Community and WID expert
7. Mr. Mohammed Soliman, Environment/solid waste engineer
8. Mr. Anwar Manaf, Waste water and sanitation engineer
9. Ms. Dina Omar, Chemist
10. Mr. Ahmed Taha, Training specialist

C: Egyptian Government representatives

1. Mr. Houssien Abdel Kawy, Secretary General and National director of the RWS&S Project
2. Mr. Mohammed Said, General manager of planning and follow up
3. Mr. Abu El Khier Abdel Aliem, General manager of rural development department
4. Mr. Esam Abdel Qader, Water projects from social funds

D: City and Markaz Chiefs

1. Mr. Mohamed Taher, Chief of Beba city and markaz
2. Mr. Mohamed Tawfik, Chief of El Fashen city and markaz
3. Mr. Mohamed Ibrahim, Chief of Sumusta city and markaz
4. Mr. Mohammed Abdel Aziz Sharabash, Chief of Beni Suef city and markaz
5. Mr. Ahmad Gaber, Chief of Ehnasia city and markaz
6. Mr. Ahmad Shawky, Chief of Nasr city and markaz
7. Mr. Efat El Sagheer, Chief of El Wasta city and markaz

E: Utility Engineers and others

1. Mr. Mohammed Metawaly, Utility engineer, Beba
2. Mr. Adel Metni, Utility engineer, El Fashen
3. Mr. Ahmed Abdel Wahed, Utility engineer, Sumusta
4. Mr. Ramadan Ahmed Ali, Solid waste supervisor, El Fashen

F: Local Woman Coordinators

1. Ms. Nagat Mohammed Alwani, Beba
2. Ms. Amal Abdel Latif, El Fashen
3. Ms. Souad Abdel Wahab, Sumusta

G: Observers

1-2. Dutch Project, Fayoum
3. Mr. Houssien Dawoud, Consultant
4. Miniya, Chairman of the new EGA

H: Appraisal Team (nominated by FINNIDA)

1. Mr. Heikki Wihuri, Program Officer, Team Leader
2. Ms. Mary Boesveld, Socio-Economic and Gender Specialist
3. Mr. Richard N. Middleton, Consultant, Institutional Specialist
4. Dr. Wafaa Amer, Cairo University, Counterpart

I: Team members (nominated by the Governor)

1. Mr. Hassan El Banna, General Director of Housing Department
2. Dr. Ahmed Abdel Latif, Consultant to the Governorate

K: Interpreters & secretary

1. Mr. Hani Williams
2. Mr. Abdelhamid
3. Mr. Abdel Nagi Aboud
4. Ms. Gihan Ramadan (Secretary)

Total 7 + 10 + 4 + 7 + 4 + 3 + 4 + 4 + 2 + 4 = **49 persons**

given by Hasan Abdel Atty.

ANNEX 12

SUMMARY OF ACHIEVEMENTS REACHED BY COMPONENT A2-3

I- MAIN PURPOSE

To supply a glass of underground potable water with least coast in the regions which lack this service because of mountainynature and for the locations that make it difficult to supply them with water.

II- SUB AIMS

1- Exploring new underground potable water sources along the project area.

2- constructing networks of P.V.C. pipes for the first time in Beni Seuf Governorate.

3- Establishing pre-casted public taps for the first time, too.

4- Application of maintenance system by common people participation and maintain technicians.

5- Local community participation in collaboration with local coordinators.

III- ACHIEVEMENTS DURING PHASE 1 OF THE PROJECT; COMPENENT A-2-3

1- Many experimental wells have been drilled in the project reigns.

a- In El-Gizera El-Sharquih, Beba District..... Scheme 1
b- In Ghaydhah Al-Sharkih, Biba District.....Scheme 11
c- Mazoura Ezabs-Sumusta District and Sumusta City...Scheme 111
This has been done in order to be able to depend on underground water sources after analysing samples.(percentage of achievements 100%)

2- Recent area maps have been made to replaced the old maps by consultant office in the reigns of
a- In El-Gizera El-Sharquih, Beba District..... Scheme 1
b- In Ghaydhah Al-Sharkih, Biba District.....Scheme 11
c- Mazoura Ezabs-Sumusta District and Sumusta City...Scheme 111
(percentage of achievements 100%)

3- preparing designs, tenders documents, specifications and drawings for the project reigns. (100 % achievement)

4- Tendering the works of purchasing P.V.C. pipes for the first time in Beni Seuf Governorate in order to uses for potable water purposes(100% achievements)

5- Tendering the works of manufacturing and pre-casting concert taps (53 taps) in the regions of
a- In El-Gizera El-Sharquih, Beba District..... Scheme 1

b- In Ghaydhah Al-Sharkih, Biba District.....Scheme 11
c- Maseru Ezabs-Sumusta District and Sumusta City...Scheme 111
(100 % achievement)

6- Preparing tender doc. and specifications for the works of constructing supply networks in regions of:
a- In the El-Gizera El-Sharquih, Beba District..... Scheme 1
b- In Ghaydhah Al-Sharkih, Biba District.....Scheme 11
c- Mazoura Ezabs-Sumusta District and Sumusta City...Scheme 111
(100 % achievement)

7- The works of constructing networks and public taps have been completed scheme 1 in the regions of El gizyrah Al.Sharkia to supply
AlDhavbia
Al Zarah
Al Gazirah
Al Shabaniah

and the drainage system has been modified. (100% of achievement)

8-Completion of constructing net works and public taps in Ghadyh Al Sharqiah . Scheme 11 in order to supply water to
- Ghadyh Al Sharqiah .
- Mohamed Ewiss.
- Bani khail.
- Gabel El Nour.
(100 % achieved)

9- Networks and public taps are under construction in Mazoura Ezabs:

- AlKom Al Ahmer.
- Al Saidh.
- El Gendi
- Nosair
(30 % acheived)

10- Cost Recovering System is being applied and handling the public taps to select guide by people and the local council
A report was made by the community participation section in cooperation with the local unit.

11- Participation in Sanitary drainage project:
a- Tendering procedures through Housing department.
b- Current evaluation process of the tender.
12 - Local Community participation in Collaboration with Local Coordinators before chose the place of Tapes and pathes of pipes.
13-preparing the modified Draft for project documents for (phase II
WATTER SUPPLY SECTOR

C E D

Ms. Kirkeby

ANNEX 12a

REGIONAL WATER AND SANITATION PROJECT IN BENI SUEF GOVERNORATE

Beni Suef, 2.10.1996

DESCRIPTION OF THE PROJECT PHYSICAL ACHIEVEMENTS, WHICH HAVE BEEN IMPLEMENTED OR COMMENCED

A: BEBA MARKAZ

1. Component A2-3

1.1 Implementation of water supply scheme No.1 in El Gezira El Sharqiya in Gezert Beba Village

Implementation period: March 95 - June 96 (3 months)
Total cost: 157 000 EGP (Egyptian contribution)

This includes construction of new water supply pipelines about 8 km (diam. from 63 mm to 200 mm), implementation of 12 public taps and 3 fire hydrants. The villages and ezbas included are as follows: El Gezira El Sharqiya, El Gezira, El Dahaiba and El Shabania. The mapping has been carried out by a Survey consultant company, Cairo.

Purpose: To ensure people the access to safe potable water. The methods when designing and implementing this scheme were the normal ones used in the Housing Department. The Housing Department was also the implementing agency.
The main purpose of the water supply schemes is to introduce new methods to the seconded staff for design, documentation and contracting procedures.

1.2 Implementation of water supply scheme No.2 in Ghaiada El Sharqiya in Gezert Beba Village

Implementation period: April - October 96 (7 months)
Total cost: 300 000 EGP (Egyptian contribution)

This includes construction of new water supply pipelines about 11 km (diam. from 63 mm to 200 mm), implementation of 18 public taps and 4 fire hydrants. The villages and ezbas included are as follows: Ghaiada El Sharqiya, Mohammed Eweis, Bani Ghalil and Gabal El Nour. The mapping has been made by a Survey consulting company, Cairo.

Purpose: To ensure people the access to safe potable water. The design and preparing the contract documents of this scheme were carried out by the RWS&S Project staff. The implementing agency is the Housing Department.
The main purpose of the water supply schemes is to introduce new methods to the seconded staff for design, documentation and contracting procedures.

2. Component A4-5

2.1 Implementation of demonstration latrines (67 pcs)

Implementation period: February - August 95 (7 months, not continuously)
Total cost: 50 000 EGP (Finnish contribution)

This includes design and construction of 77 demonstration latrines, two on-site wastewater treatment system and one public washing place. The villages and ezbas involved are as mentioned in the following table No. 1.1. The latrines were supposed to be built mainly to public buildings such as mosques, schools, health units etc but local units refused this principal because of the severe maintenance problems in those public places.

Purpose: To give people possibilities to build a working latrine, which they can afford. The Project has trained small local contractors to build latrines so that they could easily advice and help local people to adapt the same method. The Project has implemented latrines only up to the floor level. Beneficiaries has participated excavation works and supplying some cheap materials. Beneficiaries should implement walls, door & roof structures. Other households should adapt this method if they find it viable. Latrine sites have been selected in cooperation with our LWCs and they have had very essential role in awareness of sanitation and hygiene education programmes.

Table No. 1.1 Villages/ezbas having demonstration latrines

Village	No of latrines	No of on-site treatment for gray wastewater
Gezert Beba		
EL Sheikh Sharaf	5	
EL Dahaiba	1	
Nazlet EL Nour	1	
Ghaiada EL Sharqiya	40	1
Gabal EL Nour	9	
Bani Ghalil	2	
Mohamed Eweis	9	
Gezert Sedes		
Kom EL Saaida	10	1

B: EL FASHEN MARKAZ

1. Component A1

1.1 Aerial mapping of El Fashen city

Implementing period: September 96 - December 96 (4 months)
Total cost: estim 230 000 EGP (Finnish contribution)

This will include proper and accurate maps, scale 1: 1 000 consisting the city area only, being about 500 hectares. The aerial photography has been carried out at the same time than for Sumusta and other markaz capital cities in the governorate.

Purpose: The maps are needed for all design purposes and to mark all information concerning sanitation& water supply in an accurate maps. Maps will be in digital format and they can be modified by Auto Cad program in the computer. This is an essential part of all technical and other design in the society.

2. Component A4-5

2.1 Implementation of demonstration latrines (60 pcs)

Implementation period: September 96 - November 96 (3 months)
Total cost: estim. 50 000 EGP (Finnish contribution)

This will include design and construction of 60 demonstration latrines. The villages and ezbas have been selected to be as follows: Aabssog, Akfahes, Delhanes, Talt and El Fant. The houses will be selected in close cooperation with LWCs and local people.

3. Component A7

3.1 Implementation of solid waste management (solid waste collection and composting system)

Implementation period: December 94 - November 96 (33 months)
Total cost: 250 000 EGP (Finnish contribution) + 70 000 EGP (Egyptian contribution)

Solid waste management has been developed in various steps in El Fashen. This component includes now and area (about 10 hectares) with several buildings, machineries and material for instance storage & office & sanitary buildings, transfer station, donkey charts, water supply and irrigation network, tractor with necessary equipment, grinder machine for plastics, washing containers etc..
This component includes also two more transfer station and dumping area.

Purpose: Solid waste management system has been developed to keep El Fashen city clean. Local unit is running the system with a close cooperation with the Project. The idea is based on recycling and machineries / equipment is supposed to lease for a small private contractor to start and run recycling business.

C: SUMUSTA MARKAZ

1. Component A1

1.1 Renovation of the old existing building for the use of Central Laboratory

Implementation period: October 95 - June 96 (8 months)
Total cost: 160 000 EGP (Finnish contribution)

This includes renovation of the building, furnishing of the rooms and purchasing of the needed equipment and chemicals.

Purpose: To make it possible to have the proper follow up of the water quality in community water supply systems in Sumusta and neighboring Markazes.

1.2 Rehabilitation of the existing water supply network in Sumusta City

Implementation period: November 95 - June 96 (8 months)
Total cost: 900 000 EGP (Finnish contribution)

This includes construction of new pipelines about 10 km, rehabilitation and changing of 110 pcs old valves, rehabilitation and construction of 50 pcs of new fire hydrants and implementation of 12 pcs of valve and water meter chambers.
This will be included also some additional pipe lines; length about 1 km, value about 150 000 EGP and contract period being from August to November 96.

Purpose: To solve the problems of water quality and to improve the efficiency of the water supply system. The methods and procedures used in rehabilitation, as well as experiences gained during implementation will be documented in such a form that they could be applied also in other locations.

1.3 Rehabilitation of 2 existing Compact Unit type water treatment Plants in Sumusta City

Implementation period: June 96 - November 96 (5 months)
Total cost: 1 550 000 EGP (Finnish contribution)

This includes rehabilitation of two old compact units with changing all necessary machinery and equipment, renovation of old generator and electric board house, construction of new raw water supply intake with supply bridge and intake pumping station, improving facilities for more proper operation and maintenance and construction of new access roads, foot baths, green areas and finishing of landscaping.

Purpose: To prolong the remaining lifetime of the existing compact units and to solve the problems of the water quality by improving the treatment process and the efficiency of the system. Experience gained during implementation will be documented also in such a form that it could be applied also in other locations.

1.4 Construction of the emergency borehole well for Sumusta city

Implementation period: January 96 - June 96 (5 months)
Total cost: 85 000 EGP (Finnish contribution)

This includes drilling of the well, piping of the well, well head constructions and electrical installations with instrumentation for automatic control of the well operation.

Purpose: To serve as a emergency water source for Sumusta water supply during break downs of the treatment units and for balancing system capacity during peak periods. One of the main targets is to introduce new sources of raw water.

1.5 Renovation of the old existing building for the use of Markaz Maintenance Center

Implementing period: July 96 - August 96 (2 months)
Total cost: 150 000 EGP (Finnish contribution)

This includes renovation of the old building for the use of workshop, renovation of office room for the shaft of old elevated tank, electrical installations and construction of washing slab, septic tank with reed bed and testing sump for the pump repairing. Workshop will be facilitated with needed equipment stored in Tal Naruz water plant.

Purpose: To serve as Maintenance Center for the water stations within the Markaz.

1.6 Aerial mapping of Sumusta city

Implementation period: April 95 - June 96 (14 months)
Total cost: 260 000 EGP (Finnish contribution)

This includes proper and accurate maps, scale 1: 1 000 consisting the city area only, being about 450 hectares. The implementing stage took so long time because of the aerial photography and security checking by Air Force.

Purpose: The maps are needed to mark all information concerning water supply in an accurate maps. Maps are in digital form and they can be modified by Auto Cad program in our computer. This is an essential part of all technical and other design in the society.

1.7 Implementation of network store

Implementation period: March - August 96 (6 months)
Total cost: 25 000 EGP (Finnish contribution)

The network store is situated close to the new water tower. It has been built using two containers and the roof has been made on the containers. There is also small workshop area

between the two containers. The implementation took long time because the contractor was busy also in his other working site.

Purpose: The network store is for the maintenance of the water supply network only. The storage is easy to update and the shortage of any items can be found.

1.8 Renovation of site office and stores in Sumusta city

Implementation period:	October 94 - January 96 (4 months)
Total cost:	12 000 EGP (Finnish contribution)

This includes proper site office and two storage rooms. The office is equipped with normal office facilities and computer and telephone.

Purpose: The office is a site office mainly for the rehabilitation of the existing water supply network. later on it can be used for the maintenance office for water supply network or some other specific activities. The target is to show how it is work when the facilities are existing.

2. Component A2-3

2.1 Implementation of water supply network in four ezbas in Mazoura

Implementation period:	June 96 - December 96 (7 months)
Total cost:	400 000 EGP (Egyptian contribution)

This includes implementation of water supply network for the following ezbas: El Gendi, Nosair, Kom Al Ahmr and Al Saaida. Total length of PVC pipes will be about 15 kms (diam. from 63 mm to 200 mm), implementation of 23 public taps and 4 fire hydrants.

Purpose: To ensure people the access to safe potable water. The design and preparing the contract documents of the scheme were supposed to be done by the Consultant but because he refused to finalize his assignment so the RWS&S Project finalized this stage. The implementing agency is the Housing Department.
The main purpose of the water supply schemes is to introduce new methods for design and contracting to the seconded staff.

3. Component A4-5

3.1 Implementation of demonstration latrines (80 pcs)

Implementation period:	August 95 - December 95 (5 months, not continuous implementation)
Total cost:	35 000 EGP (Finnish contribution)

This includes design and construction of 80 demonstration latrines and two on-site wastewater

treatment systems. The villages and ezbas involved are as mentioned in the following table No. 3.1.

Purpose: To give people possibility to have proper, working latrine, which they can afford. The Project has trained small local contractors to build latrines so that they could easily advice and help local people to adapt the same system. The Project has implemented latrines only up to the floor level. Beneficiaries has participated excavation works and supplying some cheap materials. Beneficiaries should build walls, door and roof structures. Other households should adapt this system if they find it viable. Latrine sites have been selected in cooperation with our LWCs and they have had very essential role in awareness of sanitation and hygiene education programmes.

Table No. 3.1 Villages/ezbas having demonstration latrines

Village	No of latrines	No of on site treatment for gray wastewater
EL Saaida	48	1
EL Kom EL Ahmr	22	
Nosseir	5	
EL Gendy	5	

4. Component A6

4.1 Implementation of waste water collection system and waste treatment plant in Mazoura village

Implementation period: December 96 - May 98 (18 months)
Total cost: 12 000 000 EGP (Egyptian contribution)

This will include design & implementation of waste water collection system in Mazoura village with needed pumping stations and waste water treatment plant in desert area.

Purpose: This will give people of Mazoura village good sanitation environment. This is normal method to take care of sanitation problems in the cities and the target is to find out if this is the right way to solve sanitation problems also in small cities (villages) in rural area in Beni Suef Governorate.

Mr. Richard Middleton

ANNEX 12 b

REGIONAL WATER AND SANITATION PROJECT IN BENI SUEF GOVERNORATE

Beni Suef, 2.10.1996

DESCRIPTION OF THE PROJECT PHYSICAL ACHIEVEMENTS, WHICH HAVE BEEN IMPLEMENTED OR COMMENCED

SUMMARY

A: BEBA MARKAZ

1. Component A2-3

*** Implementation of water supply scheme No.1 in El Gezira El Sharqiya in Gezert Beba Village**

Implementation period:	March 95 - June 96 (3 months)
Total cost:	157 000 EGP (Egyptian contribution)

*** Implementation of water supply scheme No.2 in Ghaiada El Sharqiya in Gezert Beba Village**

Implementation period:	April - October 96 (7 months)
Total cost:	300 000 EGP (Egyptian contribution)

2. Component A4-5

*** Implementation of demonstration latrines (67 pcs)**

Implementation period:	February - August 95 (7 months, not continuously)
Total cost:	50 000 EGP (Finnish contribution)

B: EL FASHEN MARKAZ

1. Component A1

1.1 Aerial mapping of El Fashen city

Implementation period:	September 96 - December 96 (4 months)
Total cost:	estim 230 000 EGP (Finnish contribution)

2. Component A4-5

2.1 Implementation of demostartion latrines (60 pcs)

Implementation period: September 96 - November 96 (3 months)
Total cost: estim. 50 000 EGP (Finnish contribution)

3. Component A7

3.1 Implementation of Solid waste management (solid waste collection and composting system)

Implementation period: December 94 - November 96 (33 months)
Total cost: 250 000 EGP (Finnish contribution) + 70 000 EGP (Egyptian contribution)

C: SUMUSTA MARKAZ

1. Component A1

1.1 Renovation of the old existing building for the use of Central Laboratory

Implementation period: October 95 - June 96 (8 months)
Total cost: 160 000 EGP (Finnish contribution)

1.2 Rehabilitation of the existing water supply network in Sumusta City

Implementation period: November 95 - June 96 (8 months)
Total cost: 900 000 EGP (Finnish contribution)

1.3 Rehabilitation of 2 existing Compact Unit type water treatment Plants in Sumusta City

Implementation period: June 96 - November 96 (5 months)
Total cost: 1 550 000 EGP (Finnish contribution)

1.4 Construction of the emergency borehole well for Sumusta city

Implementation period: January 96 - June 96 (5 months)
Total cost: 85 000 EGP (Finnish contribution)

1.5 Renovation of the old existing building for the use of Markaz Maintenance

Center

Implementing period: July 96 - August 96 (2 months)
Total cost: 150 000 EGP (Finnish contribution)

1.6 Aerial mapping of Sumusta city

Implementation period: April 95 - June 96 (14 months)
Total cost: 260 000 EGP (Finnish contribution)

1.7 Implementation of network store

Implementation period: March - August 96 (6 months)
Total cost: 25 000 EGP (Finnish contribution)

1.8 Renovation of site office and stores in Sumusta city

Implementation period: October 94 - January 96 (4 months)
Total cost: 12 000 EGP (Finnish contribution)

2. Component A2-3

2.1 Implementation of water supply network in four ezbas in Mazoura

Implementation period: June 96 - December 96 (7 months)
Total cost: 400 000 EGP (Egyptian contribution)

3. Component A4-5

3.1 Implementation of demonstration latrines (80 pcs)

Implementation period: August 95 - December 95 (5 months, not continuous implementation)
Total cost: 35 000 EGP (Finnish contribution)

4. Component A6

4.1 Implementation of waste water collection systen and waste water treatment plant in Mazoura village

Implementation period: December 96 - May 98 (18 months)
Total cost: 12 000 000 EGP (Egyptian contribution)

ANNEX 13

Code 55E

LEES

Decree of The President of The Arab Republic of Egypt No. 281 of The Year 1995 Setting Up a Public Economic Authority For Potable And Waste Water in Some Governorates

L.E. 10
Serial No. 45

DECREE OF THE PRESIDENT OF THE ARAB REPUBLIC OF EGYPT

No.281 of the year 1995

Setting up a Public Economic Authority for potable and waste water in some governorates

THE PRESIDENT OF THE REPUBLIC

After cognizance of the Constitution;

And Law No.308 of the year 1955 concerning administrative attachment;

And Law No.93 of the year 1962 concerning the disposal of the liquid residues;

And Law No.61 of the year 1963 promulgating the public authorities law;

And Law No.44 of the year 1965 concerning the organization of Accounts Control Departments of the Public Authority, the organizations, the companies, the establishments and societies affiliated thereto;

And Law No.53 of the year 1973 concerning the State's general budget ;

And Law No.47 of the year 1978 promulgating the law related to the statute and system of the State's Civil Servants ;

And Law No.43 of the year 1979 promulgating the local administration system law and its executive statute;

And Law No.48 of the year 1982 concerning the protection of the river Nile and the water courses from pollution;

And Law No.9 of the year 1983 promulgating the law organizing the adjudications and biddings ;

And Law No.5 of the year 1991 concerning the leading civil employments in the State's administrative entity and the public sector;

And Law No.4 of the year 1994 concerning environmental protection ;

And the Presidential decree No.4723 of the year 1966 ratifying the unified accounting system;

And the Presidential decree No.2420 of the year 1971 organizing the governmental entity;

And after Cabinet approval;

And what has been deemed by the State Council ;

HAS DECREED

(Article One)

Public Economic Authorities shall be set up in the governorates of Aswan, Minia, Beni Souef, Fayum, Dakahlieh, Gharbieh, Sharkeya, each of which shall be attached to the competent Governor, whose premises shall be the capitol city of each governorate. Each of them shall have its own corporate personage and the provisions of the Public Authorities Law shall apply thereto.

(Article Two)

Each one of the Authorities stipulated upon in the previous article shall be the entity responsible for, and in charge of the projects and works of potable and waste water in the governorate involved. It shall be in charge of the running and operating and maintenance of the potable and waste water networks, and to each shall devolve all the establishments attached or annexed or complementary thereto as administered at present by the water and waste water departments in the governorate, and it shall have exploitation rights thereof.

To this effect, it shall be in charge of :

1- The preparation of the general and detailed plans of the projects and works connected with potable water and waste water within the belt-range of the governorate.

2- The administration and operation and maintenance of the establishments of the potable water and waste water utilities, and the performance of what that would require in terms of expanding and giving support to the Utility, together with providing the local materials and equipments necessary for the operational and maintenance works.

3- The undertaking of those research studies and works of applied nature, together with the economic and funding studies related to the potable water and waste water projects.

4- The laying down of the designs of the projects therewith concerned together with supervising the implementation thereof in accordance with the programmes it sets down, and to undertake the relative contracting procedures.

5- The announcement of projects under tenders and biddings and to effect local and foreign transacting operations, and to decide thereupon, and to enter into respective contracts and supervise the implementation thereof.

6- Participation with the entities concerned as to the laying down of the standardized criteria of potable water and those of the drainage of liquid residues.

(Article Three)

The Board of Directors of each Authority shall be constituted as follows:

- Chairman of the Board.
- Deputy Chairman of the Board for Technical Affairs.
- Head of Department in charge of the water affairs at the Authority.
- Head of Department in charge of the waste water affairs at the Authority
- Head of the Department in charge of the financial and administrative affairs at the Authority.
- The Head of the legal counsel competent Department.

- Administration Manager for housing and utilities in the governorate.
- Financial Administration Manager in the governorate.
- Hygienic Affairs Administration Manager in the governorate.
- Representative of the General Authority for Regional Planning as selected by the competent Minister.
- Representative of the Ministry of Public Works and Water Resources as selected by the competent Minister.
- Representative of the governorate as selected by the Governor.
- Representative of the National Authority for Potable and Waste Water as selected by the competent Minister.
- Two experienced persons in the field and affairs of potable and waste water as selected by the Governor, appointed for the period of two years renewable as per the candidature of the Chairman of the Authority.

(Article Four)

The Board of Directors of each Authority is the supreme authority predominating its affairs and handling its operations according to the provisions of the Public Authorities law. It is entitled to undertake what is deemed suitable and necessary in terms of resolutions to achieve the purpose for which the Authority has been established. It shall especially be entitled to :

1- The proposal of the general policy of the utilities which are managed by the Authority and exploited by it, within the limit of the State policy and general plan.

2- The proposal of the projects related to the utilities development at the Authority, together with the implementation programmes .

3- The laying down of the internal rules and regulations and the organizational resolutions related to the financial and administrative

affairs connected with the Authority and the staff members therein without being confined to the governmental rules and systems.

4- The approval of the annual budget draft and the final accounts as well as the balance sheet and the investment budget of the Authority.

5- The setting up of training centres to up productive efficiency of the administration, operation and maintenance in the two fields of water and drainage.

6- Contracting loans and the acceptance of grants, donations and bequests in accordance with the provisions of the law.

7- The follow up of the periodical reports presented as to work progress in the Authority, and its financial position.

8- Looking into what the competent Governor or the Chairman of the Board may deem necessary to submit to the Board in terms of issues fallin within the competence of the Authority.

9- Proposing the rules and the pricing tariff of the sale of potable water and the waste water drainage services in such a way as to achieve balance between revenues and expenses in accordance with the local programmes set down by the Board. This tariff shall be issued under strength of a Cabinet Decree.

(Article Five)

The Board of Directors may delegate some of its discretionary competences and authorities to a committee from amongst its members or to the Chairman or to one of the Managers in the Authority. It may also delegate one of the Managers in the Authority to undertake a specific assignment.

(Article Six)

The Chairman of the Board shall represent the Authority as regards

its relationships with third parties and vis-a-vis the courts.

(Article Seven)

The Board of Directors shall meet under its Chairman's invitation letter to convene, once monthly at least, and whenever the Board shall deem this necessary. The competent Governor shall also be entitled to invite the Board of Directors to convene for meeting, and he shall have the right to attend the meetings of the Board, and shall have the chairmanship thereof. The meeting of the Board shall not be valid except with the presence of the majority of members. Resolutions shall be issued by majority of votes and opinions of the attendants. Upon evenness the side wherein the Chairman shall prevail. The deliberations which shall take place in the meeting sessions and the resolutions adopted by the Board shall be entered into minutes to be signed by the Chairman.

(Article Eight)

The Chairman of the Board of the Authority shall advise and transmit the Board resolutions to the competent governor within seven days from date of their issuance. These resolutions shall not be operative except after approval thereof by the governor or after expiry of thirty days from date of their arrival thereto without objecting against them, apart from those issues which require issuance of a resolution from part of another authority.

(Article Nine)

The Chairman of the Board of the Authority shall undertake the task of its management and handling of its affairs and operations in accordance with the provisions of the Public Authorities Law, with this Decree and with those programmes ratified by the Board of

Directors. He shall be responsible of implementing the general policy set down for the achievement of the objectives of the Authority, and for the implementation of the Board resolutions. He shall be entitled to delegate one Manager or more as regards some of his competences.

(Article Ten)

The resources of each Authority shall consist of :

1- The revenues resulting from the management and exploitation of the utilities administered by it.

2- The appropriations which may be allocated in the State Budget or in the Government Budget.

3- Whatever loans it may contract in accordance with the provisions of the law.

4- The grants and donations which shall be accepted by the Board.

The funds of the Authority shall be considered as public funds.

(Article Eleven)

The provisions of the laws and the decrees issued as regards the auditing and control of the accounts of the public authorities shall apply in respect of the auditing and control of the accounts of each authority.

(Article Twelve)

Each Authority shall have an independent budget and annual final accounts, in the preparation of which shall be followed those provisions related to the budgets and accounts of the economic public authorities. The financial year shall start with the start-up date of the financial year of the State, and end up with the expiry thereof. The funds of each Authority are to be deposited in a special account in the name of the Authority, and shall be consecrated for expenditure thereof

to serve its purposes and objects. The Authority shall also hold regular accounts as per the requirements of the unified accountancy system.

The final accounts and the balance sheet of the Authority for each financial year shall be submitted to the Board of Directors for approval at the time limits stipulated and determined for that.

(Article Thirteen)

All staff members working in the service of the Potable Water and Waste Water entities in the competent governorate in which exists the operational activity of the Authority shall be transferred to each respective Authority in their present conditions as from the date of the enforcement of this decree.

There shall apply, in their respect, the system of the civil servants in the State, until the Board of Directors of the Authority shall set down whatever systems it may deem suitable to the nature of its operational activity in accordance with the provisions of this decree.

There shall also be transferred to each Authority all the financial appropriations related to the transferred staff members thereto, as well as the appropriations connected with operation, maintenance and also the investment appropriations related to the works of potable water and waste water, in total separation from the budget of the Government Administration, the Housing Administration and the Utilities Administration in the Governorate and the National Authority for Potable and Waste Water.

(Article Fourteen)

The provisions of the system of the State civil staff members and the decrees issued to that effect shall apply to the staff members of each Authority. The Board of Directors shall be entitled to set

down whatever systems it may deem suitable to the nature of its operational activity.

(Article Fifteen)

All the waste water and potable water stations and networks as well as the establishments and installations attached, annexed or affiliated thereto in the Governorate shall devolve to each Authority in that Governorate wherein established.

Similarly, there shall be transferred to each Authority all the fixed assets, movable assets, rights or dues and liabilities or obligations related to these stations, networks and establishments until the revaluation of these assets is undertaken by decree from the Minister of Finance.

(Article Sixteen)

The Authorities shall be entitled, towards the collection and settlement of their dues and rights, to undertake the administrative attachment and implementation procedures in accordance with the administrative attachment law.

(Article Seventeen)

Each and every provision contravening this decree shall hereby by cancelled.

(Article Eighteen)

This decree shall be published in the Official Journal, and shall be enforced as from date of its publication.

Issued at the Presidency on 8th of Rabi' the last, 1416 H.

(Agreeing with 4th September 1995 A.D.)

HOSNI MUBARAK.