

**SUSTAINABLE RURAL SANITATION SERVICES
PROGRAM FOR RESULTS**

**ENVIRONMENTAL AND SOCIAL SYSTEMS
ASSESSMENT**

FINAL REPORT

JULY 2015

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LIST OF ACRONYMS

APA	Annual Performance Assessment
BOD	Biochemical Oxygen Demand
CAS	Conventional Activated Sludge
CDA	Community Development Association
CEA	Country Environmental Analysis
COD	Chemical Oxygen Demand
CSO	Civil Society Organization
DLI	Disbursement-linked Indicator
EA	Extended Aeration
EEAA	Egyptian Environmental Affairs Agency
EIA	Environmental Impact Assessment
EMU	Environmental Management Unit
ESA	Egyptian General Authority for Land Survey
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESSA	Environmental and Social Systems Assessment
EWRA	Egyptian Water Regulatory Authority
GIIP	General International Industry Practice
GoE	Government of Egypt
GRM	Grievance Redress Mechanism
H&S	Health and Safety
HCWW	Holding Company for Water and Wastewater

ISC	Implementation Support Consultant
ISSIP	Integrated Sanitation and Sewerage Infrastructure Project
IVA	Independent Verification Agency
KPI	Key Performance Indicator
LGU	Local Governorate Unit
M&E	Monitoring and Evaluation
MoH	Ministry of Health
MoHUUD	Ministry of Housing, Utilities, and Urban Development
MoU	Memorandum of Understanding
MSEA	Ministry of State for Environmental Affairs
MWRI	Ministry of Water Resources and Irrigation
NOPWASD	National Organization for Potable Water and Sanitary Drainage
NGO	Nongovernmental Organization
NHBRC	National Housing and Building Research Center
NRSP	National Rural Sanitation Program
O&G	Oil and Grease
O&M	Operation and Maintenance
PAP	Program Action Plan
PBCG	Performance-based Capital Grant
PDO	Project Development Objective
PE	Population Equivalent
PER	Public Expenditure Review

PforR	Program for Results
PIAP	Performance Improvement Action Plan
PIU	Program Implementation Unit
PM	Particulate Matter
PMCF	Program Management Consultancy Firm
PMU	Program Management Unit
PPE	Personal Protective Equipment
PS	Pumping Station
RSU	Rural Sanitation Unit
SOP	Standards Operational Procedures
ToR	Terms of Reference
TSM	Technical Sustainable Management
UNICEF	United Nations Children's Fund
WSC	Water and Sanitation Company
WSP	Water and Sanitation Program
WWTP	Wastewater Treatment Plant

EXECUTIVE SUMMARY

INTRODUCTION

The Arab Republic of Egypt is a middle-income country with a rapidly growing population, high levels of unemployment, and a heavily skewed income distribution. The government of Egypt (GoE) has placed a high priority on providing drinking water and sanitation services. The GoE is currently implementing 1,400 projects and has a 2014/15 budget of LE 4.2 billion (US\$587 million). Most investment over the last 20 years has been on providing water supply and this has raised access to safe drinking water from 39 percent to 93 percent of the population whereas sanitation services have lagged behind and only about 12 percent of the population in rural areas are connected to piped sewerage systems with adequate wastewater treatment. Most people in rural areas use traditional permeable septic tanks which, due to the high water table in the Nile Delta, lead to sewage on the streets, the collapse of buildings, and high septage emptying costs. Rural sanitation is therefore now a major priority for the government, particularly in the low-lying and densely populated Nile Delta. The GoE has started implementing major sanitation programs and a major part of the current budget is allocated to sanitation.

The National Rural Sanitation Program (NRSP) was launched in 2014 with the goal of providing access to piped sewerage systems with adequate wastewater treatment for the rural population by 2037 and a development objective to “accelerate access to rural sanitation services and to ensure sustainable service delivery.” It has an estimated cost of LE 100 million (US\$14 billion) and will cover 4,700 villages and 27,000 satellite villages. The initial focus of the NRSP is to cover 769 ‘polluting’ villages in seven governorates that discharge untreated wastewater into surface watercourses that end up at the El Salam Canal and the Rosetta Branch Canal.

The World Bank Group will support the NRSP through the Program for Results (PforR) financing instrument, where funds are released on the achievement of results measured using Disbursement-linked Indicators (DLIs) rather than on the basis of expenditures. The PforR approach focuses Bank support on helping governments improve the design and implementation of their programs using country systems and directly linking achievement of results to the disbursement of Bank funds. The PforR (the Program) is designed to increase sustainable sanitation services and reduce pollution from wastewater in three of the seven governorates in the national program, namely Beheira, Sharkiya, and Dakahliya. The scale of the program is defined by the implementation budget of US\$1.1 billion, with US\$550 million in phase 1. In addition, there is a proposed US\$3.5 million grant for capacity building technical assistance and a transfer of US\$7 million from another Bank Group project, the Second Integrated Sanitation and Sewerage Infrastructure Project (ISSIP 2), for establishing a Program Management Unit (PMU) and associated services. The GoE is currently funding water and sanitation projects through the National Organization for Potable Water and Sanitary Drainage (NOPWASD) where a majority of the funds are being spent on sanitation in secondary cities and rural areas. The current planning for sanitation expenditures in the three governorates is LE 966 million (US\$400 million), which indicates co-financing of sanitation infrastructure of just over 22 percent.

This document, the Environmental and Social Systems Assessment (ESSA), has been prepared by the Bank team according to the requirements of Bank’s OP 9.00 for PforR financing for adequately managing the environmental and social effects of the program. The ESSA aims at reviewing the capacity of existing a

10 government systems to plan and implement effective measures for environmental and social impact management and to determine if any measures would be required to strengthen them.

The Bank's assessment team used various approaches to review the environmental and social systems that are relevant to the program. It included a review of legislation and guidelines, existing Water and Sanitation Company (WSC) procedures, and relevant documentation; review of similar projects; field visits to existing sanitation facilities in the program area; and analysis of different effects.

The preparation of the ESSA involved a series of consultation activities that targeted a wide range of stakeholders related to the sanitation sector. In addition to the consultation with the Holding Company for Water and Wastewater (HCWW) and the WSCs, a number of consultations were arranged with local stakeholders including villagers in the villages where the program is going to be implemented. Consultation activities were also extended to a number of communities that are served with formal sanitation systems and selected unserved communities. The team also conducted a number of transect walks and short semi-structured interviews with key informants from the visited villages.

Program Description

The Program Development Objective (PDO) is to strengthen institutions for increasing access and improving rural sanitation services in the three governorates of Beheira, Dakahliya, and Sharkiya in Egypt. The PDO-level outcomes include: (a) increased access demonstrated by the number of people provided with access to 'improved sanitation facilities' under the project; (b) annual performance assessment (APA) plans designed and implemented; and (c) strengthened institutional arrangements demonstrated by the adoption of a new National Rural Sanitation Strategy.

The program will be implemented over a period of five years and will focus on achieving three main result areas:

- Improved sanitation access (rehabilitated, extended, and new facilities): This result area encompasses the planning, design, and construction of new sanitation facilities, including new networks to maximize the capacity of existing wastewater treatment plants (WWTPs) or extended existing WWTPs that will connect an additional 833,300 people to piped sanitation systems that have effective wastewater treatment. To ensure that increased access supported through this results area is linked to more sustainable service delivery, the program will put in place a system of Performance-based Capital Grants (PBCGs) from the central government to the WSCs to support priority rural sanitation investments identified through the Five Year Plans and included in the Annual Capital Investment Plan of the WSCs.
- Improved operational systems and practices of the WSCs: The rationale for this result area is to ensure the sustainability of the sanitation investments and the provision of a long-term, high-quality sanitation service to the beneficiaries. The activities under this result area include improving investment planning, operations, and maintenance, as well as service delivery through the compensation and reward mechanisms built into the APAs. The APAs will be designed and implemented on a transparent and predictable basis centered on a formula taking into account four key dimensions: operational, financial, institutional, and stakeholder engagement.
- Strengthened National Sector Framework: The rationale for this result area is that the WSCs do not operate in a vacuum and there are several activities that are critical to ensuring the long-term sustainability of the program which need to be addressed at the national level by the PMU and

others. The activities in this result area include (a) the development of a tariff structure for water and sanitation services that would enable cost recovery; (b) the formulation of a revised and strengthened National Rural Sanitation Strategy and the creation of a Central Unit (that is, the PMU) which will be responsible for the coordination of the NRSP and implementation of the strategy; and (c) the finalization of the Standards Operational Procedures (SOP) for land acquisition. The DLIs relevant to the results are illustrated in Table 1.

Table 1. DLIs Relevant to the Result Areas

DLI	Purpose	Definition and measurement
Result Area 1 – Improved Sanitation Access		
DLI 1. Establishment and functioning of at least 167,000 new household (HH) connections to working sanitation systems in villages and satellites of which at least 10% of connections are in satellites.	Major DLI that measures the increased access to sanitation. Satellites percentage helps ensure that smaller often poorer households are included.	Household means the people served by a single water connection. Working sanitation facility means that systems are operational and discharges in compliance with quality standards.
DLI 2. Annual transfer of Performance Based Capital Grants (PBCGs) by MHUUC to eligible WSCs	To enhance transparency and accountability and ensure the financial incentive for improved performance of the WSCs.	PBCG are Fiscal Transfers from the Central Government that flow to WSCs annually providing certain requirements are satisfied, including performance indicators after the 3rd year of implementation.
Result Area 2 – Improved Operational Systems and Practices of WSCs		
DLI 3. Design and implementation of the Annual Performance Assessment (APA) system for WSCs, and WSCs achievement of the required APA threshold scores in accordance with the Program Operations Manual.	The APA is based on a formula including improved operational and financial performance, institutional strengthening, and citizen engagement, based on (but not limited to) KPIs already used by the WSCs. The first year for this DLI focuses on the PIAPs for WSCs being designed.	The performance improvement system will use existing measures and tools such as TSM and KPIs but focus on problem areas, in particular procurement, pro-poor citizen engagement, and operating ratio.
Result Area 3 – Strengthened National Sector Framework		
DLI 4. Preparation and approval of a new national tariff structure for water and sanitation services by MHUUC to allow for sustainable cost recovery.	Financial sustainability Foster affordability by the poor.	EWRA will need to evaluate what are the appropriate tariff level for cost recovery in the WSCs and establish gradual increases throughout implementation of the Program.
DLI 5. Establishment of PMU and	To ensure replicability and	To ensure sustainability and replicability of

DLI	Purpose	Definition and measurement
approval of a National Rural Sanitation Strategy by MHUUC.	scaling up of the rural sanitation program to all governorates.	the program, the strategy will include service delivery, decentralization, citizen engagement, appropriate technologies, cost recovery, and financing principles.
DLI 6. Approval of Standard Operating Procedures for Land Acquisition under NRSP by MHUUC.	To streamline the current complex process that involves many organizations.	Should include simplification of current regulations and mandates, not just documenting the current processes.

To serve the NRSP, the MHUUC has set up a PMU (NRSP-PMU). The PMU will be the formal implementing agency for the PforR but with day-to-day implementation delegated to the WSCs. The PforR activities will be carried out by a number of executing agents. The main executing agencies will be the WSCs (through Program Implementation Units [PIUs]) who will be responsible for Result Area 1 (sanitation access); the WSCs and HCWW will both act as executing agencies for Result Area 2 (operational improvements); and the MHUUC and others will act as executing agencies for Result Area 3 (enabling environment).

A Program Management Consultancy Firm (PMCF) will be attached to the PMU to assist in carrying out its preparation, oversight, coordination, and reporting tasks. The WSC implementation support consultants (ISCs) will be attached to a PIU in each of the three WSCs to assist the WSCs in carrying out construction planning and management and to improve their performance in this area.

The PMU will support the WSCs in measuring progress using a monitoring and evaluation (M&E) system and will collate the results to assess progress in achieving the DLIs. Once satisfied with the accuracy of the reporting, the PMU will present evidence of the DLI achievement to an Independent Verification Agency (IVA) which is tasked with verifying the results.

Description of the Existing Environmental and Social Management System

In general, the local legislations, policies, and guidelines address the environmental and social issues associated with the program. There are a number of gaps with regard to complying with those standards and integrating them in the procedures of the HCWW/WSCs. Limited institutional capacity is one of the main drawbacks in the existing procedures of the HCWW/WSCs. Many of the required environmental and social measures were carried out by the NOPWASD, which left the HCWW/WSCs with limited practical experience in those areas. Also, some issues such as sludge handling and health, safety, and environment issues require resources that are not readily available in the WSCs. Description of the current procedures and corresponding gaps in complying with national legislation, policies, and guidelines are discussed below.

Environmental Assessment

Environmental assessment for projects is included in Law 4/1994 modified by Law 9/2009 or the 'Law for the Environment' which is the main legislation regulating environmental protection in Egypt. It is being regulated by the Ministry of State for Environmental Affairs (MSEA) and its executive agency, the Egyptian Environmental Affairs Agency (EEAA). Since the law came into effect in 1994, significant improvements have been introduced to the environmental legal system based on the experience gained from implementing the law in the last 20 years. According to Law 4/1994, the Environmental Impact Assessment (EIA) is a licensing requirement for development projects that are likely to have an impact on the environment. The existing EIA Guidelines (modified in 2009) have detailed requirements for the EIA process, including social assessment and consultation, and are compatible with the Bank Group's environmental assessment requirements. The guidelines are even more stringent than many other international environmental assessment regulations as they consider any sanitation project to be from the highest assessment category, which is not the conclusion reached by the ESSA team as later indicated.

Regarding the procedures for environmental assessment, the EIA preparation and fulfillment of the EEAA requirements are well defined in the guidelines. Also, the EIA approval is well integrated in the licensing system for new projects—especially the sanitation projects.

For the sanitation sector, the NOPWASD used to take the lead for undertaking the EIAs as it is responsible for new investments. Therefore, the WSCs have limited capacity in conducting an environmental assessment and keeping an environmental register in compliance with Law 4/1994. This shortcoming has been addressed in the PAP.

Effluent Standards

Nile Protection Law 48/1982 is the main legislation regulating water quality in the River Nile, its two branches, canals, drains, and groundwater aquifers. Although the effluent standards indicated in Law 48/1982 are not highly stringent when compared to effluent standards in other countries, the application context in Egypt shows that it is actually very demanding; it is mainly due to the large uncovered areas with sanitation services and the amount of investments needed to connect those areas to secondary treatment with disinfection.

Most of the WWTPs in the program areas comply with Law 48/1982 standards of effluent quality. This is usually verified at the WWTP level by taking daily samples from the influent, effluent, and different points in the treatment stream. When some water quality issues arise, there would be direct coordination to improve the operation in the problem area and to return to the standards. Usually, such plants meet the effluent quality standards except for a few exceptional cases where some operational problems arise.

On the other hand, there are some WWTPs that are known for being noncompliant with the effluent standards for different reasons. The common reason is that those WWTPs require investments for major repairs or extensions to provide sufficient treatment. Some of the overloaded WWTPs which face operational problems tend to bypass the discharges to the drain if in excess of their effective capacity. This is not a documented procedure or a technical recommendation, but some WWTP managers tend to do that for maintaining their effluent quality to the extent possible, especially that the bypass line or the discharge outfall to the drain is not monitored. But inspection bodies usually take effluent samples from the effluent collection point after chlorination. Furthermore, some WSCs connect villages to the pumping stations (PSs) which are not connected to the WWTPs due to lack of funding for constructing force mains; so these PSs discharge untreated sewage to drains. This is defined as 'negative discharge' and is one of the shortcomings addressed by the PAP.

Handling of Sludge

The handling of sludge generated at the WWTPs is regulated through Law 93/1962 and the Executive Regulations by Decree 44/2000. According to the law, if the dried sludge is to be used as organic fertilizer, it should meet certain standards; otherwise, it should be landfilled or safely incinerated.

These standards are generally equivalent to international sludge standards. However, with regard to application, the WSCs do not monitor the sludge quality as required by Law 93/1962 and Decree 44/2000 before selling it as fertilizer. This has been addressed in the PAP.

Management of Sewerage Networks

Connecting households and other commercial industrial facilities to the sewerage networks is controlled under Law 93/1962 and Decree 44/2000. The law provides standards for wastewater parameters (that could be accepted in the network) so that industries and commercial establishments generating high load of wastewater install pretreatment units for their wastewater before discharging into the sewer. These standards are frequently monitored and inspected for industrial establishments but usually frequently inspected for commercial establishments and rarely inspected for animal barns and farm slurry, which is most relevant to the rural areas covered by the program.

The design and operation of networks and pump stations are regulated through the Engineering Codes issued by Decrees 286/1990 and 268/1997, respectively. The codes provide the standards that should be applied during design, construction, and operation of networks and the PSs to avoid blockage, seepage, structural collapse, and hydraulic and electromechanical malfunctioning. Private networks are not allowed except after having received a license from the regulatory authority and after fulfilling the requirement of the Engineering Codes. However, some villages still build private networks through self-initiatives that end up at watercourses. It is very difficult for regulating bodies to prevent these private networks.

Handling of Septage

The discharge of septage removed from individual septic tanks and cesspits to freshwater canals or drains is not allowed according to Law 48/1982. But, in terms of application, the implementation of these conditions showed little success due to difficulty in enforcement. Usually, the septage is removed from cesspits in unserved areas by local contractors using tankers and then they discharge the septage in the nearest location in an agriculture drain or even in freshwater canals. Furthermore, most of the WSCs do not allow septage in their sewers and WWTPs as there is no system in place to allow for regulating the septage received. The WSCs would usually be unwilling to accept septage with high organic loads that would add to the shock loads received in the WWTPs and may affect their performance and the quality of the final effluent. The lack of an official system to handle septage—although it helps in reducing shock loads at the WWTPs level—risks attaining the objectives of sanitation projects on surface water quality as the unregulated small-scale septage discharges to surface water will continue to be one of the major pressures on water quality. Accordingly, on-site sanitation including an official septage management system that would serve remote and satellite villages would be included in the result areas of the program. This system will be identified during the feasibility studies for each governorate.

Handling of Hazardous Substances

The handling procedures of hazardous substances and wastes are described in Law 4/1994 with adequate details. The handling of chlorine cylinders, which are the most common hazardous substances handled within the WWTPs, is further detailed in the Engineering Code for Wastewater Treatment Plants (Decree 169/1997). Also the Engineering Codes for fire protection provides sufficient measures for safeguarding against fire risks. However, with regard to the application, some of the facilities designs do not comply with these safeguards and sometimes safety issues arise during operation. The PAP comprises measures to address this issue by including health and safety (H&S) standards in the Terms of Reference (ToRs) for the design works and allowing H&S staff to review and verify the designs.

Solid Waste Management

Solid waste is usually accumulated in the screens of the WWTPs and PSs and removed from grit removal chambers. This separated solid waste should be adequately handled by the facilities. Solid waste management is regulated by specific articles of Law 4/1994 in addition to the General Cleansing Law 38/1967. With regard to application, the WSCs usually do not adequately collect and dispose of solid wastes at the licensed site. This gap has been addressed in the PAP.

Health and Safety

The Labor Law (Law 12/2003) is the main legislation regulating H&S issues. The law comprises a chapter on the working environment and H&S issues and also includes a comprehensive annex on the safety standards to minimize physical, dynamic, biological, and chemical risks. Following the law standards would minimize occupational H&S risks. With regard to application, the H&S departments in the WSCs do not have sufficient manpower to audit and follow up on the adherence of sanitation facilities to H&S standards. Also, many construction contractors do not usually comply with H&S requirements and close supervision is required to ensure construction safety. This gap has been addressed in the PAP.

Cultural Heritage

Law 117/1983 has been issued for protection of antiquities and culturally valuable sites. Being one of the richest countries in the world with antiquities from ancient civilizations, the GoE gives the law high importance and weightage. The law includes stipulations for structural protection of known and unknown antiquities through certain procedures for chance finds. The stipulations of the law would adequately safeguard against negative impacts during the construction phase of the program interventions and the Antiquity Authorities are closely inspecting the protection of registered sites.

Land Tenure and Related Laws to Land Expropriation in Egypt

There are three main forms of land ownership in Egypt: public or state land (*amlak amiriya*), private land (*mulk horr* in Arabic), and waqf land (land held as a trust/endowment for religious or charitable purposes). Article 33 of the 2014 Constitution provides that “the State shall protect ownership with its three types: the public, the private, and the cooperative.” Article 35 of the Constitution further provides that “private properties shall be protected, and the right to inheritance thereto is secured.” According to the Constitution (article 63), “all types of involuntary relocation using force or excessive violence is banned and whoever violating this article will be brought to court.”

Law 10/1990 concerning the expropriation of ownership for public interest was issued to regulate the cases where private land is needed for public interest projects. In addition, expropriation of property is further regulated by Law 59/1979 concerning the establishment of new urban communities and Law 3/1982 concerning urban planning. The term ‘public interest’ in the context of expropriation has been defined in article 2 of Law 10/1990. Water supply and sewage projects are among the projects identified by this article. Other laws and decrees added to the list of projects are stipulated under article 2 of Law 10/1990.

Law 10/1990 has described the expropriation procedures starting with a declaration of public interest pursuant to a Presidential Decree accompanied with a memorandum on the required project and a complete plan for the project and its buildings (Law 59/1979 and Law 3/1982 provide that the prime minister issues the decree). The decree and the accompanying memorandum must be published in the official gazette. A copy for the public is placed in the main offices of the concerned local government unit. A number of operational steps take place afterwards until the land is acquired.

At the central level, the governmental agency in charge of the implementation of the expropriation acts issued in public interest is the Egyptian General Authority for Land Survey (‘ESA’), except for projects handled by other entities pursuant to a law to be issued in this respect. As mentioned above, the ESA is charged with the formation of the expropriation and compensation committees. Usually, the executing body could be other ministries (for example, MoHUUD) or the governorate. This executing agency would be responsible for paying the compensation to affected groups through the ESA or under its supervision, offering alternative resettlement options, and implementing the resettlement project. At the local level, several local departments and directorates should be involved in the resettlement program depending on the type of program to be implemented and the nature of land ownership.

Although Law 10/1990 does not clearly specify lessees as entitled to compensation, they implicitly fall within the group of ‘rights holders’ referred to in the law. It is clear, however, that lessees may not have

recourse against the landlord for termination of their lease agreements as a result of the expropriation act. Another important issue that has not been addressed in Egyptian law is the right of squatters to be compensated in cases of displacement or resettlement. The Egyptian legislation framework has not recognized the rights of squatters. However, the Egyptian experiences in dealing with this issue have shown that due to political pressure and social dimension, the government has been forced to provide an alternative for those groups of households whether in terms of alternative shelter, cash liquidity, or other types of in-kind compensation (for example, jobs).

Land Acquisition Procedures

When a rural sanitation project is being planned and land is needed, priority is usually given to obtaining state-owned land as an avoidance strategy to prevent negative resettlement impacts on population. In case of unavailability of state-owned land, there are four other approaches to obtain the land for PSs and the WWTPs, including (a) voluntary land donation; (b) community contribution, which is a common approach for obtaining land for a PS; (c) willing buyer-willing seller; and (d) acquiring land by using eminent domain. The WSCs are not heavily involved in the process of finalizing land purchase (willing buyer-willing seller approach) for the PSs and the WWTPs because the part that relates to investment for the sanitation project is officially mandated to the NOPWASD. Although there is no legal obstacle for the WSCs to complete the process of acquiring land through both purchase and donations, the lack of resources for the WSCs usually limits their chances in land acquisition—specifically the purchase part. Accepting donated land or land obtained through community contribution for a PS is a more common area for the involvement of the WSCs compared to the purchase for the WWTP. The Properties Department under the Legal Department within the WSC is responsible for the land purchase (in the rare cases of the WSC's involvement in land purchase) and for accepting donated land or land obtained through community land contribution for the PSs. For the WWTPs, the lands are obtained mainly through the willing buyer-willing seller approach. The WSCs are reluctant to use eminent domain to acquire land as it may take a longer time.

Decrees and Procedures for Regulating Households' Connection Fees

According to Law 27/1978, regulating public resources for water and sanitation and covering the cost of the households' connection is the responsibility of the beneficiary. According to the WSCs, the exact amount that each household is requested to pay depends on the distance of the house from the main force, the number of houses participating in the communal inspection chambers, and the amount of works and material associated with each item. It is roughly estimated that each household should pay an average of LE 1,300 to LE 1,500 to get the building connected to the public sanitation network once a project is completed in the area. The connection fees can be as high as LE 3,000 in some cases.

Procedures for Engaging with Communities

Previously, the HCWW was not heavily involved in the planning and preparation of rural sanitation projects. The formal role of the HCWW and the WSCs is more about operation and maintenance (O&M). No structured mechanism is followed to carry out communities' needs assessment for sanitation projects or to engage the communities in the planning of the projects. In the cases when private land for the PSs or the WWTP is needed, the WSCs play a more technical and legal role. The social aspects related to land are not taken into consideration. During project construction (specifically the construction of the networks), the

WSCs play a supervisory role over the contractors. The monitoring of the construction process has a technical orientation by nature. The social issues that may arise (for example, damage in structures) are handled in a reactive manner. There is no local grievance system and systematic method for consultations with local communities during construction. During project O&M, the HCWW and the WSCs have a number of key mandates that involve community engagement in the project O&M. Awareness raising, measuring community satisfaction (which serve in project monitoring), and handling grievance mechanisms are the key relevant fronts for community engagement during project O&M. Water projects are significantly dominate the scope of work for these departments.

Procedures for Grievances Redress

The Hotline is one of the key formal grievance channels and the one which is meant, by design, to be the single official channel. The HCWW is working to strengthen the Hotline system—including the call centers within the WSCs—and is aiming, through this strengthening, to enable this channel to be the single official uptake modality. However, in practice, most complaints are still being communicated through other informal channels including verbally to laboratory staff, maintenance service staff, security, commercial personnel, or the media. There is no strict documentation and record of the complaints received through these informal channels.

Program Environmental and Social Benefits, Risks, and Impacts

Screening of Category A-type Interventions

The PforR instrument should not be used to finance activities that are likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented. These impacts may affect an area broader than the sites or facilities subject to physical works. This definition is believed to be inapplicable for program interventions. Within the context of Egypt, the largest WWTP within the program boundaries is 30,000 m³ per day, which is explicitly small compared to many large WWTPs in the country with capacities reaching 2 million m³ per day. Previous experience with Bank Group projects shows that sewerage interventions are classified as Category B projects. Also, projects that involve relatively small WWTPs such as the ones that are included in the program are classified as Category B. It is worth noting that there are a number of WWTPs such as the Gharb El Mansoura WWTP, currently under construction with a capacity of 185,000 m³ per day, which are a part of the government program but are not part of the PforR. There will be measures in the PAP to ensure that DLI 1 and DLI 2 are not measured against connections to this WWTP so that the boundaries of the PforR are clearly verified during implementation.

Risk Screening Against OP 9.00 Core Principals

A preliminary risk assessment has been carried out using the Environmental and Social Risk Screening Format included in OP 9.00 and the likely environmental and social effects have been addressed. Regarding the context, the program will be implemented in rural areas with health, economic, and psychological pressures and polluted watercourses in the downstream of the Nile. So the interventions are expected to effectively address these geographic shortcomings. No sensitive habitats are located within the program areas and the risk on culturally valuable sites is low. With regard to sustainability, the program is expected to enhance the sustainability of watercourses by improving their quality, the sustainability of agriculture

lands by alleviating the rising groundwater table problems, and improving the quality of irrigation water. In terms of institutional complexity, the environmental and social issues will be handled through different bodies under the umbrella of the MoHUUD and the system is expected to operate without complexity. Although institutional capacity is currently limited, the PAP helps identify measures for improving the capacity. There are no governance or corruption risks associated with the environmental aspects of the program. The overall environmental risks have been rated as Medium and the overall social risks have been rated as Substantial.

Environmental Benefits, Risks, and Impacts

The overall impact of the program is expected to be positive. The program will allow for adequately discharging and treating a considerable amount of sewage—according to the standards of Law 48/1982—which was being inadequately collected and discharged to watercourses before the program.

The environmental benefits are providing adequate treatment to about 90,000 m³ per day of sewage that used to be inadequately discharged to watercourses, improving health conditions of the program beneficiaries, helping in alleviating the rising groundwater table problem, and including septage management as part of the interventions.

The overall environmental risks are Medium. However, some individual risks are rated Substantial. The main environmental risks are risks of improper handling of sludge (Substantial); risks of improper handling of solid wastes separated at the WWTPS and PSs (Medium); risks of discharging noncomplying effluent (Medium); risks to the safety of workers and neighbors of the WWTPs from handling chlorine, diesel, and lab chemicals (Medium); risks of sewerage blockage or leakage during operation, especially private networks (Medium); risks on structural integrity of structures during dewatering operations (Medium); and risks of improper handling of chance-find culturally valuable objects (Low). Also, the limited institutional capacity of the WSCs poses substantial risk on program implementation.

The main environmental impacts are changing land use at the footprints of the PSs and WWTPs, temporary impacts during construction, and impacts on receiving waters from compliant effluent and on lands from sludge and solid waste. These impacts are considered to be of low significance.

Social Benefits, Risks, and Impacts

The implementation of the program will help in alleviating the negative impacts by providing sanitation services which are in high demand by the poor rural communities of the targeted governorates. The program is expected to help local communities attain a number of benefits and positive returns. Most important benefits include:

1. Economic saving at the household level;
2. H&S benefits;
3. Creating an enabling environment for community development at the village level;
4. Enhanced level of awareness regarding public hygiene; and
5. Special return and benefits for women and children.

The project will entail land acquisition for constructing the PSs and the WWTPs. If not handled carefully, land acquisition may have serious impacts on landowners and land users. At this stage, since the technical design of the program is premature, it is difficult to know the exact amount of land that will be needed. Consequently, it is also difficult to estimate the number of landowners and land users who will be affected by the land transaction process. The severity of the impact of land acquisition depends on a number of factors and a case-by-case analysis will need to be carried out by the WSCs before the program implementation to define the magnitude of the impacts, the affected persons, and the methods to mitigate the impacts. The main land-related risks identified are:

1. Limited capacities of the WSCs to manage land issues;
2. Potential delay in the time schedule as a result of land acquisition;
3. Lack of a consistent and transparent approach in managing land-related issues;
4. Livelihoods risk related to lands;
5. Potential emerging disputes over land that has been acquired before the start of the program; and
6. Poor management of the temporary impacts related to land acquisition.

The following are the key non-land-related risks identified:

1. Risk of damages associated with construction activities
2. Non-land-based livelihoods risks
3. Weak sense of demand for and/or acceptance and readiness for projects in certain communities
4. Risk of social tensions as a result of exclusion of certain villages
5. Risk related to affordability of poor households
6. Potential escalation of unresolved community concerns or complaints

On the impacts side, the construction phase is expected to generate a number of local job opportunities for the villagers who can engage with contractors in various activities associated with the construction phase. In the meantime, a number of negative impacts might result from the construction phase of the project. This most importantly includes:

- Temporary impacts on land including the temporary use of land for construction camps and materials' storage and the potential damage to crops;
- Permanent land acquisition and potential implication on the livelihoods of a number of rural families;
- Inconvenience to the local communities and potential implication on the local activities within the villages, including distracting local business; and
- H&S risks for workers and local residents in the project site.

Program Capacity and Performance Assessment and Gap Identification

Performance of the WSCs with Regard to the Legal and Regulatory Framework on Environmental Aspects

The main gaps could be summarized as follows:

- There are no clear guidelines that control the management of septage.

- Similar to the above issue, although there is legal prohibition to establish private sewers that discharge to watercourses, no enforcement mechanisms or alternative solutions are available to those networks. The networks achieve important benefits for the villages where they serve. However, the legal framework and technical guidelines do not allow for a sound solution for those networks. The program design would allow for connecting those networks with due diligence assessment of their conditions through the ISC and taking feasible measures to improve their condition.
- There are no explicit standards against land contamination. Also, there are no explicit requirements for ensuring secondary containment of hazardous substance storage tanks that cover 110 percent of the storage capacity and for taking adequate measures while filling the tanks. This gap would be bridged by including such requirements in the ToRs of site-specific Environmental and Social Impact Assessments (ESIAs) which will be prepared and supervised by the WSCs.

With regard to implementation of and compliance with the laws and standards, there are some weaknesses and gaps in the system, including:

- The strict punishment of noncompliant WWTP operators sometimes gives opposite results as they tend to bypass a portion of the received influent for meeting the effluent standards.
- Although the 'negative discharge' by the PSs is done as a last resort in the absence of sufficient finance, there should be an assessment of the advantages and disadvantages of starting the connections without having enough resources to discharge the collected wastewater in a WWTP.
- Most of the WWTPs do not keep a documented environmental register that is frequently updated according to the requirements of Law 4/1994.
- Most of the WWTPs do not handle sludge, solid waste removed by screens, or removed grit according to law requirements. This needs to be improved as indicated later in the PAP.
- The safety procedures need to be improved and integrated within the procedures for design, construction, and operation of networks and the WWTPs.

Performance of the WSCs with Regard to the Legal and Regulatory Framework on Land Acquisition

The existing laws and regulations have a number of positive sides in dealing with land acquisition. These most importantly include provisions related to compensation, sharing information with the affected persons, rights of affected persons to appeal, and provisions related to the temporary damage and associated compensation. In reviewing the legal and regulatory framework against international best practices, a number of gaps related to the following areas were identified:

- Consultation with affected individuals
- Identification of entitled categories
- Absence of proactive local-level mechanism for handling grievance
- Land valuation process
- Replacement cost
- Performance of the WSCs with regard to the legal and regulatory framework on grievance mechanism

Adequacy of Institutional Arrangements and Capacity on Land Acquisition

The analysis of the existing institutional arrangement and capacity for handling land acquisition issues showed a number of shortfalls and gaps that need to be addressed to allow for a more standardized approach for land acquisition. This most importantly includes the dominant nature of the technical and legal orientation in handling land acquisition in a way that compromises the social issues related to land acquisition. This could be attributed to a number of factors including the relative limited capacities of the WSCs (particularly in finalizing the willing buyer-willing seller process due to a lack of resources) and shortage in human resources. The absence of the inter-agencies' coordination role to facilitate the process of obtaining approvals is resulting in a huge delay in the process of finalizing land acquisition.

Adequacy of Institutional Arrangements for Handling Community Engagement Issues

The conducted institutional assessment for handling community engagement showed that existing resources and mechanisms for managing community engagement have a number of strengths that include availability of teams for awareness and communication at the governorate level. Teams are working under the agreed upon annual work plan, an M&E system for the performance of the WSCs is in place, there are a number of community-based monitoring techniques (for example, surveys), and solid awareness and communication guidelines exist and are applied.

In the meantime, a number of institutional gaps were identified. These could be summarized as:

- Limitations in the mandates of the WSCs' scope (for example, absence of planning, design, and construction) from the current mandates and accordingly limitations in the WSCs' capacity to handle community engagement related to these stages.
- Shortage in human resources and lack of staff representation at the *markaz* and village levels.
- High staff turnover rate.
- Lack of a monitoring system to measure the impacts and the efficiency of the implemented community-based activities, including the awareness.
- Lack of resources for logistical support.
- Inconsistency in the capacities of the assigned teams.

Adequacy of Institutional Arrangements for Handling Grievance Redress

The following are the main identified gaps related to the existing grievance mechanism, specifically the Hotline:

- Deficiencies in the mode of operation due to lack of automation for the system;
- Informal channels, including the direct complaints to technicians, are still more largely used than the Hotline;
- Problem in the monitoring system since monitoring is done only for selected cases because the HCWW does not have full access to all the calls due to database shortfalls;
- Time interval for resolving the complaints is not clearly communicated to the complainers; and
- The dominant orientation to the O&M and the absence of focus on grievance related to projects planning, design, and construction.

Recommended Actions to Address Identified Risks and Gaps

Actions to Address Identified Environmental Risks and Gaps

The institutional support for managing the environmental aspects of the PAP will be as follows:

- The main implementation responsibility of the PAP will be on the PIUs who should recruit an environmental specialist on a full-time basis. The three environmental specialists at the PIUs will be supported by an environmental specialist at the PMU level, who is expected to be recruited with sufficient environmental assessment and management experience (more than 10 years of experience). Also, the environmental specialist of the HCWW will provide support in reviewing the ESIA's and giving insight into the bottlenecks usually confronted in other projects and how they can be overcome.
- The ISC would support the environmental specialists of the PIUs on implementation and supervision of site-specific Environmental and Social Management Plans (ESMPs). The WSCs would take advantage of the ISC's role in construction supervision to overlook the environmental management of construction contractors.
- The Quality Sectors in the three WSCs should either introduce a new department for sludge quality or add the sludge quality to the mandate of the Effluent Quality Department. The WSCs should procure sufficient laboratory equipment in the labs of the WWTPs and the central labs at each WSC to analyze sludge.
- The Occupational Health and Safety Department should add the following responsibilities to its mandate: reviewing designs of new WWTPs and PS; ensuring that sufficient H&S measures are taken; and following up on the adherence of the WWTP and PSs staff to the H&S site-specific measures.
- The Operation Sector should prepare a documented O&M manual specific for each WWTP, including the environmental measures included as recommended by the environmental specialists, and should ensure that the WWTP managers adhere to such manuals.

The PIUs should assess the achievement of the DLIs based on the WWTPs within the borders of the program. Other clusters from the national program—especially clusters that include relatively large WWTPs—which might be considered as Category A should be excluded from the assessment.

The following measures are proposed for minimizing environmental risks and mitigating environmental impacts:

- The PIUs, with support from the PMU and the HCWW, should initiate the ESIA process for new clusters by preparing the ToRs for the ESIA's by giving sufficient weightage to covering issues identified in this ESSA and site-specific issues. A robust system should be in place for following up on the implementation of site-specific ESMP measures.
- Sludge analysis should be included in the regular operations of the Quality Sector in the WSCs. In case the sludge complies with the standards, it could be sold to contractors on a condition that the contractor would be responsible for making farmers aware of the application rate of sludge. This

responsibility should be reflected as an article in the contract. In case the sludge does not comply with the standards, it should be transferred to an adequate disposal site.

- The Operation Sector for each WWTP should prepare an O&M manual specific to each WWTP. The manual includes standard procedures to be followed under normal conditions as well as during emergency conditions. The manuals should include measures for reporting bypass incidents, adequate handling of solid waste, and ensuring effluent quality.
- The new code of rural sanitation should have measures that take rural shock loads into consideration when designing the WWTPs.
- The ISCs should provide sufficient site supervision of contractors during excavation works to report on any chance finds of culturally valuable objects. The ISCs should also ensure that H&S issues are adequately managed during construction and that dewatering operations are controlled.
- The Occupational Health and Safety Department should conduct a needs assessment for existing PSs and WWTPs to improve the H&S standards. The department should review the designs of new facilities and provide comments as needed. The department should conduct quarterly inspection of each WWTP and PS to ensure compliance with H&S standards.
- Connecting the PSs that are negatively discharging to drains and private networks should be calculated among the results of DLI 1, which will promote the environmental benefits of the program. In the case of connecting private networks, the ISC should assess their conditions and identify necessary measures to improve their quality to prevent or minimize clogging and leakage.
- The PMU and HCWW should establish a dialogue with the Ministry of Water Resources and Irrigation (MWRI) and the Ministry of Health (MoH) regarding the possible modifications to Law 48/1982. This would help in making the PMU technically and financially prepared for any future modifications of the law.

Actions to Address Identified Social Risks and Gaps

Developing a Standardized Approach for Land Acquisition

- Develop the ToRs for the SOP.
- Develop the SOP.
- Develop a memorandum of understanding (MoU) and associated mechanisms.

Enhancing the System for Engaging with Communities and Addressing Social Risks

- Develop the ToRs for the Procedural Guidelines for Community Engagement.
- Develop the Procedural Guidelines for Community Engagement.

Addressing Poverty and Affordability Issues

- Set and apply a strategy for assistance scenarios (including targeting techniques) to be provided to the poor households.

Crosscutting Measures

- Strengthen grievance mechanism to accommodate various issues.
- Establish a strategy for ongoing consultation with stakeholders across various stages.
- Establish transparent system for sharing and disclosing information.

Institutional Issues

- Assign the appropriate human resources for handling land acquisition.
 - ✓ Develop ToRs for the senior land acquisition officer at the central level and the land acquisition officer at the WSC level and obtain Bank approval.
 - ✓ Assign land acquisition teams.
- Assign the appropriate human resources for community engagement and handling social risk.
 - ✓ Develop ToRs for the senior community engagement officer at the central level, the community engagement officer at the WSC level, and the focal points at the *markaz* or branch level.
 - ✓ Assign community engagement teams.
- Enhance the performance evaluation system.
 - ✓ Establish a performance-based monitoring system to evaluate the teams that will be assigned.
 - ✓ Establish a strong reporting mechanism that allows for bottom-up flow of information and allow decisions to be made accordingly.

Implementation Support

Training and capacity building will be key prerequisites to enable the assigned teams to carry out their responsibilities as stipulated in their ToRs. The main areas of support for program implementation are described below.

For Land Acquisition

The SOP should be applications related to land acquisition. The implementation support in this regard will entail:

- Providing guidance and support to the PMU and the WSCs in the preparation of the ToRs for the responsibilities of the team, the SOP, and the Procedural Guidelines for Community Engagement.
- Providing training to the WSC teams working on land acquisition.¹

Initially Proposed Training Topics for the Teams Working on Land Acquisition

- International policies and best practices related to resettlement
- Legal and social aspects associated with resettlement

¹ Training should be initiated once the teams are assigned to enable them to carry out their tasks in a sound, diligent, and socially sensitive manner.

- Preparing resettlement assessments and action plans
- Monitoring land acquisition and resettlement impacts

For Community Engagement

The Procedural Guidelines for Community Engagement will set the foundation for the work of the community engagement team. The implementation support in this regard will entail:

- Providing assistance in the development of the Procedural Guidelines for Community Engagement.
- Supporting the WSCs in strengthening the grievance redress mechanism (GRM) system.
- Providing assistance to the WSCs to strengthen their M&E system in terms of service feedbacks.
- Providing training to the teams of the WSCs and relevant stakeholders on community-engagement-related aspects.

Initially Proposed Training Topics for the Teams Working in Community Engagement

- Social assessments
- Social risk assessment
- Participatory planning approaches
- Monitoring consultants and contractors

Crosscutting Modules for All the Teams

- Consultation and engagement with affected persons
- Information sharing and disclosure
- GRMs
- M&E
- Report writing

1 Introduction

1.1 Background

Egypt is a middle-income country with a rapidly growing population, high levels of unemployment, and a heavily skewed income distribution. Economic growth has averaged a relatively low 2 percent per year since 1980 and the economy has suffered in recent years due to the effects of the Arab Spring. Despite rapid urbanization over recent years, more than 50 percent of the population is rural; villages range from small satellite villages with less than 500 people to large urbanized villages with more than 10,000 people. Agriculture, one of the mainstays of the economy, relies on the Nile for irrigation and water resource management. Therefore, protection of water quality is a significant issue for the country.

The GoE has placed a high priority on providing drinking water and sanitation services. It is currently implementing 1,400 projects and has a 2014/15 budget of LE 4.2 billion (US\$587 million). Most investment over the last 20 years has been on providing water supply and this has raised access to safe drinking water from 39 percent to 93 percent of the population whereas sanitation services have lagged behind and only about 12 percent of the population in rural areas are connected to piped sewerage systems with adequate wastewater treatment. Most people in rural areas use traditional permeable septic tanks which, due to the high water table in the Nile Delta, lead to sewage in the streets, the collapse of buildings, and high septage emptying costs. Rural sanitation is therefore now a major priority of the government, particularly in the low-lying and densely populated Nile Delta. The GoE has started implementing major sanitation programs and a major part of the current budget is allocated to sanitation. In addition, there are several major donor-funded rural sanitation programs with a total budget of nearly US\$500 million.

1.2 The National Program

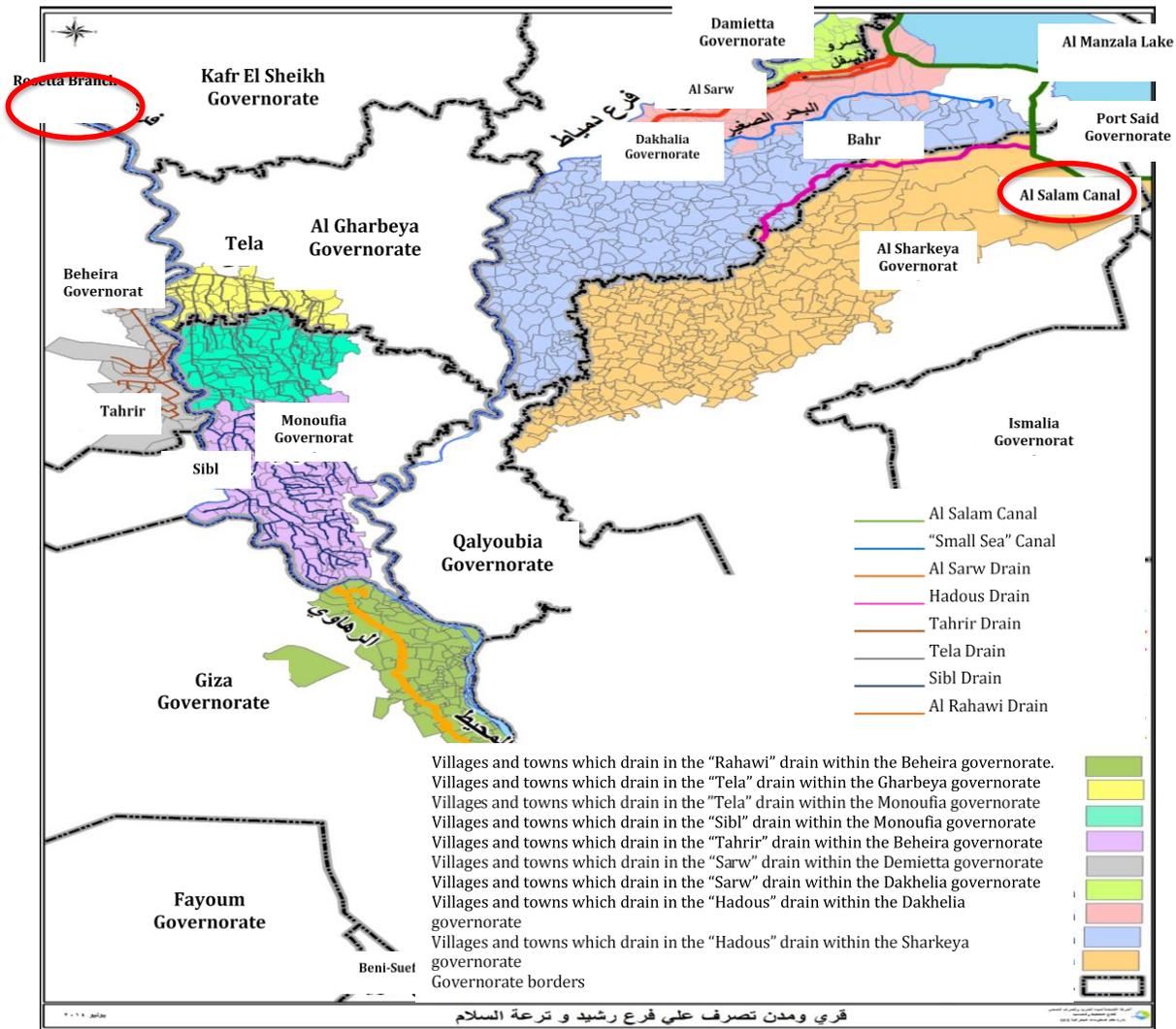
The NRSP was launched in 2014 with the goal of serving all the rural population by 2037 and a development objective to “accelerate access to rural sanitation services and to ensure sustainable service delivery.” It has an estimated cost of LE 100 million (US\$14 billion) and will cover 4,700 villages and 27,000 satellite villages. The initial focus of the NRSP is a program to cover 769 ‘polluting’ villages in seven governorates that discharge untreated wastewater surface watercourses that end up at the El Salam Canal and the Rosetta Branch Canal.² The seven governorates are Sharkiya, Dakahliya, Damietta, Giza, Menoufya, Gharbia, and Beheira. This initial program, which does not cover all settlements in the seven governorates but just the villages close to the two canals, aims to:

- Provide sanitation services to the target villages with associated health and service provision benefits.
- Reduce pollution in the two irrigation canals—reducing untreated wastewater discharge into the El Salam canal will reduce the fresh water mix needed for the planned irrigation extension in the Sinai as well as have wider environmental and health benefits.

The NRSP is informed by the National Rural Sanitation Strategy developed in 2008, Development Policies for the Water and Wastewater Sector in Egypt developed in 2010, and the national and governorate rural sanitation master plans. Figure 1 illustrates the geographic coverage of the initial stage of the NRSP in the watershed of the Rosetta Branch and the El Salam Canal.

² The main drains that discharge to the Rosetta Branch are El Tahrir Drain, Tala Drain, Sibl Drain, and the Rahawy Drain, while the main drains that discharge to El Salam Canal are the El Serw Drain and the Hadous Drain.

Figure 1. NRSP Interventions in 769 Villages in the Watershed of Rosetta Branch and El Salam Canal



Source: HCWW data.

1.3 The PforR Boundaries

The Bank Group will support the NRSP through the PforR financing instrument, where funds are released on achievement of results measured using DLIs rather than on the basis of expenditures. The PforR approach focuses Bank support on helping governments improve the design and implementation of their programs using country systems and directly linking achievement of results to the disbursement of Bank funds.

The program is designed to increase sustainable sanitation services and reduce pollution from wastewater in three of the seven governorates in the national program, namely Beheira, Sharkiya, and Dakahlya. The scale of the program is defined by the implementation budget of US\$1.1 billion, with US\$550 million in

phase 1. To ensure the sustainability of the program’s infrastructure investments, the program is designed to promote the WSCs to become more operationally and financially sound and also address some national-level constraints such as tariff levels.

Table 2 provides an outline of the NRSP and an indicative outline of the PforR based on the first application of program-level selection criteria. The nominal program assumes an average construction cost of US\$550 per capita (using current populations to calculate per capita costs). In addition, 9 percent is added to cover the cost of design, construction supervision, and land purchase that is a total unit cost of US\$600 per capita which allows 833,300 people (500,000,000/600) to be served. The actual content of the PforR work will be developed during project preparation using project-level selection criteria.

Table 2. General Scope of the National Program and the PforR Program

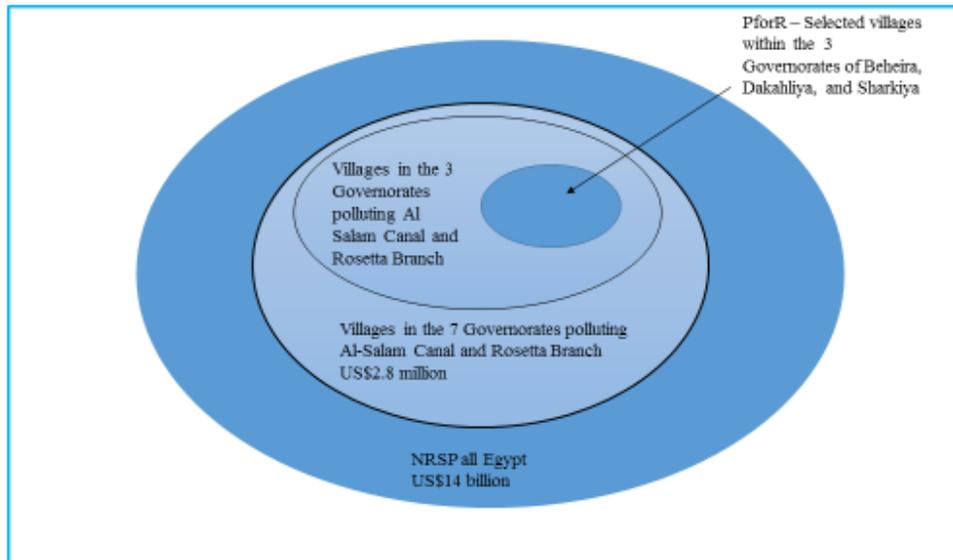
Governorate/WSC	Beheira	Sharkiya	Dakahliya	Total
NRSP				
Total polluting villages	14	218	279	511
Total clusters	2	45	58	106
Estimated cost (LE, millions)	387	6,436	7,024	13,848
Estimated cost (US\$, millions)	54	900	982	1,937
PforR Program				
Total polluting villages served by other programs	9	83	29	121
Remaining unserved polluting villages ³	5	135	250	390
Villages to be served under PforR phase 1	5	46	104	155
Clusters to be served under PforR phase 1	1	11	25	37
Population to be served under PforR phase 1	18,300	350,500	464,100	833,300
Program distribution by population (%)	2	42	56	100

The program will be funded by a US\$1.1 billion loan from the Bank Group split into two equal phases. In addition, there is a proposed US\$3.5 million grant for capacity building technical assistance and a transfer of US\$7 million from another Bank Group project, the ISSIP 2, for establishing the a PMU and associated services. This assessment deals with the first phase of the program which has a total budget of US\$550 million. The GoE is currently funding water and sanitation projects through the NOPWASD where a majority of the funds are being spent on sanitation in secondary cities and rural areas. At current rates, the estimated funding over the five-year period is over US\$2.5 billion. The current planning for sanitation expenditures for the three governorates is about US\$400 million, which indicates a co-financing of sanitation infrastructure of just over 22 percent.

Figure 2 illustrates the boundaries of the NRSP, the initial phase of the NRSP in the watershed of the El Salam Drain and Rosetta Branch, the government program in the three phase 1 governorates, and the PforR program.

³ More details about the remaining villages are illustrated in the annexes.

Figure 2. The Boundaries of the National Program and the PforR Program



1.4 Objectives of the ESSA

This document, the ESSA, has been prepared by the Bank team according to the requirements of the Bank's OP 9.00 for PforR financing for adequately managing the environmental and social effects of the program.

The ESSA aims at reviewing the capacity of existing government systems to plan and implement effective measures for environmental and social impact management and to determine if any measures would be required to strengthen them. The specific objectives of the ESSA are to:

- Identify potential environmental and social benefits, risks, and impacts applicable to the program interventions.
- Review the policy and legal framework related to the management of environmental and social impacts of the program interventions.
- Assess the institutional capacity of the environmental and social management system within the program system.
- Assess the program's system performance with respect to the core principals of the PforR instrument and identify gaps.
- Describe actions to be taken to fill the gaps that will input to the PAP.
- Describe the consultation process for the preparation and implementation of the program.

1.5 Methodology of the ESSA

1.5.1 Screening of Environmental and Social Effects According to the O.P 9.00 Tool

A preliminary risk assessment has been carried out using the Environmental and Social Risk Screening Format included in OP 9.00, and the likely environmental and social effects have been addressed. Regarding the context, the program will be implemented in rural areas with health, economic, and psychological pressures and polluted watercourses in the downstream of the Nile. So the interventions are expected to effectively address these geographic shortcomings. No sensitive habitats are located within the program areas and the risk to culturally valuable sites is low. With regard to sustainability, the program is expected to enhance the sustainability of watercourses by enhancing their quality, the sustainability of agriculture lands by alleviating the rising groundwater table problems, and improving the quality of irrigation water. In terms of institutional complexity, the environmental and social issues will be handled through different bodies under the umbrella of MoHUUD and the system is expected to operate without complexity. Although institutional capacity is currently limited, the PAP helps identify measures for improving the capacity. There are no governance or corruption risks associated with the environmental aspects of the program. The overall environmental risks have been rated as Medium and the overall social risks have been rated as Substantial. More details are given in chapter 4.

1.5.2 Timeline and Approach to Consultations

The Bank's assessment team used various approaches to review the environmental and social systems that are relevant to the program. It included a review of legislation and guidelines, existing WSC procedures, and relevant documentation; review of similar projects; field visits to existing sanitation facilities in the program area; and analysis of different effects.

The preparation of the ESSA involved a series of consultation activities that targeted a wide range of stakeholders related to the sanitation sector. In addition to the consultation with the HCWW and the WSCs—which took the form of meetings in Cairo and the concerned governorates or *markazes*—a number of consultations were arranged with local stakeholders in the villages, including villagers, where the program is going to be implemented. Consultation activities were also extended to a number of communities that are served with formal sanitation systems and selected unserved communities. Consultations with local communities and village-level stakeholders were conducted through focus group discussions and semi-structured interviews. To ensure convenience to the local communities and allow for participation from women, village-level consultations took place in the villages with the Bank team reaching out to the targeted served and unserved communities. Consultations took place in the communities' event halls, *omda's* (mayor's) house, and Local Governorate Units (LGUs). The team also conducted a number of transect walks and short semi-structured interviews with key informants from the visited villages.

Figure 3. Selected Pictures for the Conducted Consultations



Table 3 summarizes the main consultation events during the process of the ESSA preparation. It also presents the consultations timeline including the dates of the key conducted activities and the number of participants including a breakdown for women representation.

Table 3. Summary of the Key Consultation Events Including Timeline

Date	Aim of the consultation meeting	Targeted participants of consultation	Participants (number)	Women (number)	Location(s)
January 28, 2015	Consultation for the ESSA preparation (land issues)	WSCs and HCWW	11	1	HCWW, Cairo
January 29, 2015	Consultation for the ESSA preparation (community participation)	WSCs and HCWW	16	3	Conrad Hotel, Cairo
February 15, 2015	Consultation for the ESSA preparation with Dakahliya WSC	WSC	10	4	Kafr El Zayat, Dakahliya
	Consultation for the ESSA preparation with served local communities	Village-level stakeholders, including local communities	18	5	Santamay village, Dakahliya
	Consultation for the ESSA preparation with unserved local communities	Village-level stakeholders, including local communities	13	3	Karf El Noaman village, Dakahliya
February 16, 2015	Consultation for the ESSA preparation with the Beheira WSC	WSC	6	1	WSC, Damanhour
	Consultation for the ESSA preparation with unserved local communities	Village-level stakeholders, including local communities	17	1	Kom El Nasr, Beheira
February 17, 2015	Consultation for the ESSA preparation with the Sharkiya WSC	WSC	10	5	WSC, Zakazik
	Consultation for the ESSA preparation with served local communities	Village-level stakeholders, including local communities	4	–	El Zalankon, Sharkiya
	Consultation for the ESSA preparation with unserved local communities	Village-level stakeholders, including local communities	14	3	Kom El Helein, Sharkiya
February 26, 2015	Verification session with the Awareness Department in the HCWW	Team of the Public Awareness and Customer Service Department in the HCWW	5	2	HCWW, Cairo

Date	Aim of the consultation meeting	Targeted participants of consultation	Participants (number)	Women (number)	Location(s)
March 23, 2015	Verification session with the Awareness Department in the HCWW	Team of different relevant departments in the HCWW and WSCs	16	3	HCWW, Cairo
April 21, 2015	Consultation on the draft finding of the ESSA	Wide range of stakeholders from the Sharkiya Governorate	47	18	WSC, Zakazek and Sharkiya
April 22, 2015	Consultation on the draft finding of the ESSA	Wide range of stakeholders from the Dakahliya Governorate	32	8	WSC, Mansoura and Dakahliya
April 23, 2015	Consultation on the draft finding of the ESSA	Wide range of stakeholders from the Beheira Governorate	81	14	WSC, Damanhur and Beheira

Annex 3 includes the registration sheets of the conducted consultations and annex 4 includes the photo log of the consultations.

1.5.3 Summary of the Main Consultation Activities

A) Consultation Activities During the Preparation of the ESSA

1. Consultative meetings with the HCWW and the WSCs

The ESSA team had a number of meetings and small workshops with the relevant departments in the HCWW and the three WSCs in the targeted governorates. At the HCWW level, the team met with the Public Awareness and Customer Service Department, the Legal Department, and the PIUs of the rural sanitation Bank-financed projects. At the WSCs level, the team consulted the members of:

- The Public Relations and the Awareness Raising Department;
- The teams of the Customer Service Department;
- The Properties Department;
- The Citizens' Service and Hotline Department
- Sanitation Sector;
- Quality Sector; and
- Occupational Health and Safety Department.

A total of around 40 staff from the HCWW and the WSCs were consulted to collect information about:

- The current system, resources, and mechanisms for acquiring land, community engagement, handling grievance and complaints, effluent quality control, sludge- and septage-handling systems, H&S procedures, and interaction with other stakeholders.
- The shortfalls in the existing systems.
- The proposed actions and recommendations to improve the existing system.

2. Consultative meetings with community members and other stakeholders from the served communities

The team met with local community members and stakeholders within the served communities as follows:

- Santimay village, Dakahliya: A total of 18 community members (both men and women), community development associations (CDAs), and community leaders (*sheikh balad*, *omdas*, and religious leaders) participated.
- Kom El Nasr village,⁴ Beheira: A total 17 community members (both men and women), CDAs, and community leaders participated.
- El Zankalon village, Sharkiya: A total of four community members (only men) participated.

The consultation with community members and local stakeholders helped the team gain a better understanding of the following:

- The impacts of the implemented projects at the households' level (domestic activities, health, and households' expenditure).
- Households' contributions to get the project implemented.
- How grievances are currently being handled.
- The main recommendations from the local stakeholders for better planning of the rural sanitation projects.
- Land-related issues including how the process of land acquisition was managed, impacts of land acquisition, and how the process could be improved.

3. Consultative meetings with community members and other stakeholders from the unserved communities

The team met with local community members and stakeholders within the unserved communities as follows:

- Kafr Noaman, Dakahliya: A total of 18 community members (both men and women), CDAs, agriculture associations, and community leaders (*sheikh balad*, *omdas*, and religious leaders) participated.

⁴ Although the village was introduced to the team by the WSC as 'served' because the treatment plant and the PSs are completed, the meeting revealed that the households do not have connections to the service yet.

- Kom Hellini, Sharkiya: A total of 14 community members (both men and women), CDAs, agriculture associations, and community leaders (*sheikh balad*, *omdas*, and religious leaders) participated.

The consultation with community members and local stakeholders helped the team gain a better understanding of the following:

- The current situation and the strategies for handling sanitation issues at the households' and village levels.
- The impact of this situation at the households' level (including expenditure, health, and impacts on women, children, and the elderly).
- Willingness to contribute to new sanitation projects, including contribution with land.
- Key recommendations for engaging with local communities along the various project stages.
- Land-related issues including availability of land for the PSs and treatment plants, willingness of local communities to contribute with land, and the potential anticipated impacts related to land acquisition.

B) Field Observations and Transact Walks

The team conducted a number of field visits and walks including informal interactions with villagers to record observations and listen to communities' description and diagnosis of the sewage problem within the villages. Community members played a leading role in guiding the walks and advising on the places to visit. The following are the key sites visited in the villages.

- PS in Santimay, Dakahliya
- Graveyard adjacent to highly populated residential areas in Kom El Nasr, Dakahliya
- Models of poor households in Kom El Nasr, Dakahliya
- Streets and commercial areas in El Zankalon, Sharkiya
- Streets, households, and un-operational PS in Kom Hellinin, Sharkiya
- WWTPs of Kom Hamada, Sahragt, and El Qenayat

C) Verification Activities

In addition to the consultation activities to prepare the ESSA, a number of verification sessions were conducted with the PMU, the HCWW, and the WSCs to verify the main findings of the ESSA, including the impacts, risks, gaps, and the measures needed to prepare the PAP.

The first verification session was conducted on February 26, 2015 with the team of the Public Awareness and Customer Service Department in the HCWW to verify the findings related to community engagement and Hotline dimensions. A second session was conducted on March 23, 2015 with the PMU, HCWW, and WSCs (departments of public relations, properties, health and safety, and labs). The findings from these verification activities were incorporated in this draft of the ESSA.

D) Consultation Activities After Drafting the ESSA

After drafting the ESSA, three consultation events were conducted in the three targeted governorates. The consultations took place between April 21 and April 23, 2015. The WSCs supported during the preparation of the consultation events. They prepared invitations and distributed them along with the Executive Summary of the ESSA in Arabic. They also hosted the events in their premises. As indicated in Table 3, around 160 participants attended the three consultations with representation from women (40 participants) and significant participation from the youth. The main categories of the participants included:

- Relevant departments in the WSCs (Public Relations and Awareness Raising, Hotline, Properties, Labs and Quality Control, H&S, Sludge Management),
- Departments from the HCWW (the General Department for Public Relations and Awareness Raising, Customer Service Department, and the Hotline Department)
- Representatives from the LGUs,
- Representatives from the CDAs and other local-level institutes (youth centers and awkaf),
- Directorates of Irrigation,
- Directorates of Health,
- Directorates of Agriculture,
- Directorates of Labor and Manpower,
- Environmental Management Unit (EMU) in the three project governorates,
- Cleansing and Solid waste Management Unit in the three project governorates,
- Regional branch offices of the EEAA (in Zakazek, Mansoura, and Damanhur),
- Antiquity Inspection Unit,
- Directorate of Social Solidarity,
- Representatives of local communities, and
- Universities of Zakazek, Mansoura, and Damanhur.

The consultation sessions were managed in a highly participatory and interactive manner. A presentation in Arabic was delivered on the key environmental and social findings of the ESSA. This was followed by open discussions where the participants were encouraged to give their feedback about the ESSA findings. Comments were carefully recorded and reflected, where possible, in the revised version of the ESSA. Comment sheets were also distributed to participants who wished to leave comments in writing. Annex 5 includes details about the received comments which could be summarized as listed below.

Environmental Comments

- The private networks cause many operational problems. Rehabilitation of such networks could be an option to connect these communities.
- Receiving septage should be accounted for in the design of the projects (so that the WWTPs can receive high loads of septage). Some of the WSCs are already accepting septage and this needs to be expanded so as to have good geographic coverage.

- Representatives from the Antiquity Authority indicated that the authority can participate in protecting the antiquity sites during the design phase by clearing selected sites and during construction by providing site supervision of sensitive sites.
- There should be a dialogue between the WSC and Directorates of Health and Irrigation to give the WWTPs that are overloaded grace periods for compliance.
- The exclusion of the Gharb El Mansoura WWTP (originally was 135,000 m³ per day and now 185,000 m³ per day after reviewing the plans) should be only for the WWTP while the networks ending at this WWTP should not be excluded as the networks are separate from the relatively large WWTP. Including these villages, which are located near the Nile, will maximize the benefits of the program.⁵
- H&S requirements are very important, but the main obstacles for full compliance with such requirements are the budget and the awareness/training of workers. Providing the budget and capacity building for H&S are key factors.
- The WWTPs which are located in or near residential settlements should be given priority to improve their performance.
- Noncompliant sludge should be disposed in hazardous waste landfill, but there are no such landfills in the governorate. It might be beneficial to have such sites in the governorate.
- The handling of hazardous materials and hazardous waste (including used containers of chlorine) should be included in the environmental register of the WWTPs.
- There should be capacity building for the environmental staff in the EMU (along with the WSC staff) among the program activities.
- One of the university representatives recommended to raise the risk on structures from dewatering operations to Medium according to their practical experience.⁶
- Control on industrial discharges to the network (by monitoring for Law 93) is very important in controlling the quality of the sludge and the quality of the final effluent.
- Using existing capacities of the WWTPs, the increase of population from existing served communities should be considered.
- There should be consideration for establishing a fertilizer plant based on the WWTPs' sludge.
- The existing WWTPs are overloaded and under-maintained and in many cases need urgent renovation.
- Sometimes, in private networks, the level of water supply pipes is lower than sewerage gravity networks, which elevates the risk of drinking water contamination.

⁵ This comment has been carefully assessed by the World Bank. It was concluded that it is important to exclude such large WWTPs and their networks to maintain the boundaries of the program.

⁶ This comment has been addressed in modified versions of the ESSA.

Social Comments

- Law enforcement is critical to minimize the risk of major violations of illegal dumping in agricultural drains.
- The readiness of the communities should be taken into consideration. Communities with readily available land and designed facilities should be given priority. This is important for the program's credibility.
- The program is excellent and highly needed. However, there is still a long way to go with regard to raising the awareness of local communities to mobilize local resources to contribute to or finance rural sanitation projects.
- Land is a critical challenge. The idea of signing the MoU among ministries is very good but it will need to be supplemented with actions like a 'one-stop-shop' or a 'Higher Committee' that will be in charge of coordinating all the approvals in fast track mode.
- Governors should be key partners in signing the land MoU.
- Community participation is a critical part of the program. If not done properly, the implications will go beyond not meeting a DLI. Other DLIs (including those related to service delivery and the review of the tariff structure) will not be met without community participation.
- The awareness departments have serious challenges related to the limitations in human resources working in community mobilization.
- It would be beneficial to the program if the land price is included in the capital cost. This would mitigate potential risk related to limitation of resources.
- Upper Egypt WSCs have good experience (Sohag Governorate) in making connection fees affordable to poor households. The program should benefit from this experience in designing the pro-poor strategy.
- The media should play a more critical role in raising awareness at the national level, particularly since the program is a priority for the government.
- There is a difference in the scope of the awareness as carried out now by the WSCs and the level of community engagement and community participation that the program is aiming for. This shift will require capacity building.
- To launch a revolving loan for targeting poor households, the program may need to seek grants from different donors.
- The role of different actors including nongovernmental organizations (NGOs), youth centers, and religious establishments is very important in mobilizing communities.

2 Program Description

2.1 Program Development Objectives

The PDOs are strengthening institutions for increasing access and improving rural sanitation services in three participating governorates in Egypt. The PDO-level outcomes include: (a) increased access demonstrated by the number of people provided with access to ‘improved sanitation facilities’ under the project; (b) APA plans designed and implemented; and (c) strengthened institutional arrangements demonstrated by the adoption of a new National Rural Sanitation Strategy.

2.2 Program Scope and Interventions

The program will be implemented over a period of five years and will focus on achieving three main result areas: improved sanitation access (rehabilitated, extended, and new facilities), improved operational systems and practices of the WSCs, and strengthened National Sector Framework. The activities under each result area are described below.

2.2.1 Result Area 1: Improved Sanitation Access (Rehabilitated, Extended, and New Facilities)

The program is structured to incentivize the provision of access to sanitation to about 833,300 people living in the three governorates of Dakahliya, Sharkiya, and Beheira, with each governorate serviced by a separate WSC. Improved access is determined by a connection to a sewer network that is linked to a wastewater treatment facility which meets Egyptian treatment standards or to any other acceptable sanitation solution (including decentralized treatment facilities). The program targets 167,000 new connections or approximately 833,300 people living in a specified geographic area which covers about 200 priority villages which routinely dump their sewerage into the Nile River system as well as the satellite villages around them.

The program will include free household connections and support a pro-poor strategy. The cost related to individual household connections (except for internal plumbing) is included in the unit cost of the connection and is therefore provided free of charge to the households. This is justified because of the positive economic externalities related to providing sanitation services; the more there are households that connect to proper sanitation systems, the greater the positive externalities or the lower the negative externalities of having unsanitary neighbors. Free household connections are also justified with regard to being pro-poor; it has been repeatedly demonstrated throughout the world that subsidies for access are more pro-poor than consumption-based subsidies. Further, the program provides additional incentives to the WSCs to reach out to satellite villages—areas generally on the distant outskirts of the main villages—as these satellite villages are on average poorer and have been excluded from services in the past.

To ensure that increased access supported through this result area is linked to more sustainable service delivery, the program will put in place a system of PBCGs from the central government to the WSCs to support priority rural sanitation investments identified through the Five Year Plans and included in the Annual Capital Investment Plan of the WSCs. It should be noted that the introduction of the PBCG system

would be a key contribution of this program as it would promote a culture of transparency and accountability in the fiscal transfer system.

The PBCGs will be allocated to the WSCs on a per capita basis and will be determined by the ability of the WSC to meet the performance standards set by the MHUUC and measured by a set of minimum conditions and performance targets with increasing level of ambition throughout implementation of the program. The program will start with a base grant allocation for the first two years that will be available to the WSCs upon the satisfaction of the minimum conditions. From the third year, in addition to the base grant, a performance-based top-up grant will be provided to the WSCs. The PBCGs will be programmed into the national budget annually and structured as unconditional fiscal transfers that will flow from the national budget into the annual budget of the WSCs, which the WSCs can use to finance the investment projects prioritized in their Annual Capital Investment Plans. In case any of the WSCs do not receive the performance top-up, it would be reallocated into the total grant pool available to the WSCs for investment (related to Results Area 1). Performance targets would include operational, financial, institutional, and stakeholders' engagement indicators.

2.2.2 Result Area 2: Improved Operational Systems and Practices of WSCs

Participating WSCs will be explicitly incentivized to improve investment planning, operations, and maintenance as well as service delivery through the compensation and reward mechanisms built into the APA. The APAs will be designed and implemented on a transparent and predictable basis centered on a formula taking into account four key dimensions: operational, financial, institutional, and stakeholder engagement. These performance standards will relate to measures demonstrating performance including, for example:

- Operational - Comprising indicators measuring (a) non-revenue water, (b) percentage of functioning WWTP in compliance with the Egyptian law and standards, and (c) septage management.
- Financial - Comprising (a) operating ratio and (b) collection efficiency.
- Institutional - Addressing areas such as (a) efficient procurement processes and (b) implementation of environmental and social safeguard measures.
- Stakeholder Engagement - Addressing areas including (a) communication and engagement with citizens in the WSC processes and (b) effective grievance-handling measures.

By introducing concrete indicators on O&M of the systems as well as on stakeholder engagement, the program intends to address key issues that currently undermine the performance of the WSCs. Moreover, it should be highlighted that the GoE has agreed to allocate significant resources to strengthen these dimensions in the proposed service delivery model. By strengthening the overall capacity of the WSCs to ensure effective O&M, the sustainability of all investments including those directly financed through the program will be enhanced.

Cost recovery will be one of the critical factors in determining the performance score of the respective WSCs. The performance improvements put in place as well as the APA score will help support and incentivize each WSC to improve efficiency and reduce costs. Because the program is results-based and therefore does not prescribe any specific technology (although following Egyptian standards), it is expected

that unit costs should eventually decrease. Also, because the program places the investment planning responsibility with the WSCs, it is expected that the WSCs, HCWW, and the MHUUC will strive for more cost-efficient solutions that would bring operating costs down by better aligning investment choices with feasible and efficient operating procedures.

Accountability to citizens will form a critical pillar of the APA ‘formula’ described above and of performance improvements supported more broadly through the program. Citizen engagement through beneficiary feedback surveys, awareness campaigns, strengthened communications systems of the WSCs, and the development of a strategy for serving the poor are all integral to the program. They are incorporated either directly through results-based incentives and required measures or through capacity-building programs. Engaging and including women will be an important element of stakeholder engagement activities. Women play a key role in setting and shaping health and sanitation attitudes in the household and women, therefore, must be at the center for any citizen engagement strategy to be successful.

Centralized organizations such as the HCWW will provide necessary guidance and technical and advisory support to the WSCs to design and implement the PIAPs for addressing managerial and operational gaps and weaknesses, and thereby enable the WSCs to achieve better scores on their APA. The PIAPs would include measures to improve performance across the areas described above (that is, operational, financial, institutional, and stakeholder engagement). In line with their role as the holding company of the WSCs in Egypt, the HCWW will coordinate the program support for strengthening institutional capacities and improving institutional performance of the WSCs. The HCWW and the three WSCs will identify gaps and weaknesses in the existing systems and processes of the WSCs with a focus on the areas measured under the APA. Based on these assessments, the HCWW and the WSCs will work together to prepare the PIAPs. The HCWW will also provide implementation and advisory support, as necessary, to the WSCs to execute the PIAPs. The Egyptian Water Regulatory Authority (EWRA) is expected to play a critical role in the assessment of the WSCs’ performance, which will be strengthened given its appointment as the program’s IVA. The Water and Sanitation Program (WSP)⁷ support to EWRA will provide specific technical and financial resources for publication of the WSCs’ performance and establishment of a national benchmarking system that will ensure that the citizen engagement dimension of the program is enhanced in the participating WSCs.

2.2.3 Result Area 3: Strengthened National Sector Framework

The MHUUC will coordinate the program activities for strengthening the enabling environment that will allow for more efficient and accountable rural sanitation service delivery and lend more fluidity to future scaling-up. This includes (a) the development of a tariff structure for water and sanitation services that would enable cost recovery; (b) the formulation of a revised and strengthened National Rural Sanitation Strategy and the creation of a Central Unit (that is, the PMU) which will be responsible for the coordination of the NRSP and implementation of the strategy; and (c) the finalization of the SOP for land acquisition. These measures are critical elements for the long-term sustainability of the sector. A series of consultations and citizen engagement will help embed these institutional changes more firmly into the sector. The PforR program being implemented in the three governorates will in particular rely on these institutional changes to support the deeper changes in service delivery mechanisms being implemented. These broader

⁷ One of Bank Group’s Global Practice programs.

institutional reforms and national strategy developments will in turn enable replicability and scalability of the new service delivery mechanisms being piloted by the program.

The MHUUC will also undertake or commission relevant policy and analytical studies to inform the policy-making process in the sector. Support will also be provided to the EWRA to enhance its capacity to build and sustain an effective regulatory and oversight framework. Additionally, support will be provided to oversight agencies such as the Central Auditing Organization of Egypt to conduct regular and timely financial audits of the WSCs and carry out performance audits of the program under their mandate. The WSP will be carrying out a Public Expenditure Review (PER) in coordination with the program. The findings of the PER will inform the broader sector policy dialogue within the government and between the government and the development partners with regard to policy choices and financial sustainability in the sector. With the decision of the government to move to a more decentralized model of service delivery, these policy and regulatory initiatives will set the stage for providing a strong enabling framework for empowering the WSCs to become efficient and accountable service delivery institutions. This will also clarify the current overlap of institutional roles and responsibilities that act as a deterrent to clear institutional accountabilities.

2.3 Institutional Set-up

To serve the NRSP, the MHUUC has set up a PMU (NRSP-PMU). The main responsibilities of the PMU will be:

- To prepare, oversee, and report on the NRSP;
- To coordinate, monitor, and report on external support to the NRSP and the Bank-financed PforR; and
- To spearhead consolidation of the sector reforms.

The PMU will be the formal implementing agency for the PforR but with day-to-day implementation delegated to the WSCs. The PforR activities will be carried out by a number of executing agents. The main executing agency will be the WSCs (through the PIUs) who will be responsible for Result Area 1 (sanitation access); the WSCs and HCWW will both act as executing agencies for Result Area 2 (operational improvements); and the MHUUC and others will act as executing agencies for Result Area 3 (enabling environment). The principle of subsidiarity will apply; meaning that all those functions that can be done better or as well at a lower level will be undertaken at the lower level. The PMU will be supported by a PMCF that will be attached to the PMU to assist in carrying out its preparation, oversight, coordination, and reporting tasks. The WSC ISCs will be attached to a PIU in each of the three WSCs to assist the WSCs in carrying out construction planning and management and to improve their performance in this area. The ISCs attached to each WSC will be responsible for:

- Feasibility level and detailed design;
- Tendering and procurement support services for all relevant works (contractors, construction supervision services, and time-bound operator services where relevant);
- Construction supervision services;

- Endorsement and confirmation of adherence to contract conditions for invoices of all relevant works (contractors, construction supervision services, and time-bound operator services where relevant); and
- Follow up on the implementation of the ESIA measures during project implementation.

The structure and staffing of the PIU will depend on the preferences of the WSC. Some have indicated a preference for seconding specialist staff from the sanitation and other sections; for example, legal. Others have indicated that they prefer to staff the PIU with project managers in charge of a batch of projects with access to legal and other specialist inputs within the WSCs. The structure of the PIU in each WSC will be one of the PAP actions and will be based on a standard but dependent on the circumstances and preferences of the WSC.

The PMU will support the WSCs in measuring progress using the M&E system and will collate the results to assess progress in achieving the DLIs. The results across the program region will be aggregated as the basis for meeting the DLIs. Once satisfied with the accuracy of the reporting, the PMU will present evidence of the DLI achievement to an IVA which is tasked with verifying the results. To validate the disbursement request submitted by the PMU, the IVA will verify all DLI target indicators through a desk review and physical inspection.

2.4 Disbursement-linked Indicators

The results framework to support the PDO is structured into three results indicated in Table 4.

Table 4. Program Result Areas and DLIs

DLI	Purpose	Definition and measurement
Result Area 1 – Improved Sanitation Access		
DLI 1. Establishment and functioning of at least 167,000 new household (HH) connections to working sanitation systems in villages and satellites of which at least 10% of connections are in satellites	Major DLI that measures the increased access to sanitation. Satellites percentage helps ensure that smaller often poorer households are included.	Household means the people served by a single water connection. Working sanitation facility means that systems are operational and discharges in compliance with quality standards.
DLI 2. Annual transfer of Performance Based Capital Grants (PBCGs) by MHUUC to eligible WSCs	To enhance transparency and accountability and ensure the financial incentive for improved performance of the WSCs.	PBCG are Fiscal Transfers from the Central Government that flow to WSCs annually providing certain requirements are satisfied, including performance indicators after the 3rd year of implementation.

Result Area 2 – Improved Operational Systems and Practices of WSCs		
DLI 3. Design and implementation of the Annual Performance Assessment (APA) system for WSCs, and WSCs achievement of the required APA threshold scores in accordance with the Program Operations Manual.	The APA is based on a formula including improved operational and financial performance, institutional strengthening, and citizen engagement, based on (but not limited to) KPIs already used by the WSCs. The first year for this DLI focuses on the PIAPs for WSCs being designed.	The performance improvement system will use existing measures and tools such as TSM and KPIs but focus on problem areas, in particular procurement, pro-poor citizen engagement, and operating ratio.
DLI 4. Preparation and approval of a new national tariff structure for water and sanitation services by MHUUC to allow for sustainable cost recovery.	Financial sustainability Foster affordability by the poor.	EWRA will need to evaluate what are the appropriate tariff level for cost recovery in the WSCs and establish gradual increases throughout implementation of the Program.
Result Area 3 – Strengthened National Sector Framework		
DLI 5. Establishment of PMU and approval of a National Rural Sanitation Strategy by MHUUC.	To ensure replicability and scaling up of the rural sanitation program to all governorates.	To ensure sustainability and replicability of the program, the strategy will include service delivery, decentralization, citizen engagement, appropriate technologies, cost recovery, and financing principles.
DLI 6. Approval of Standard Operating Procedures for Land Acquisition under NRSP by MHUUC.	To streamline the current complex process that involves many organizations.	Should include simplification of current regulations and mandates, not just documenting the current processes.

3 Description of the Existing Environmental and Social Management System

3.1 Policy and Legislation

In general, the local legislation, policies, and guidelines sufficiently address the environmental and social issues associated with the program, with a few gaps as identified in the following sections.

3.1.1 Environmental Assessment

Environmental assessment for projects is included in Law 4/1994 modified by Law 9/2009 or the ‘Law for the Environment’ which is the main legislation regulating environmental protection in Egypt. It is being regulated by the MSEA and its executive agency, the EEAA. Since the law came into effect in 1994, significant improvements have been introduced to the environmental legal system based on the experience gained from implementing the law in the last 20 years.

The Country Environmental Analysis (CEA) report for Egypt, issued by the Bank Group in 2005, indicates that historically the enforcement of environmental laws in Egypt has not been very successful mainly due to fragmentation among regulatory institutions, licensing agencies, and police authorities. The CEA further clarifies that since 2003, there have been substantial efforts to improve this situation as “major institutional and organizational reforms have taken place within the Environment and Surface Water Police of the Ministry of Interior. The Central Department for Environmental Inspection and Environmental Compliance in the EEAA was further strengthened. Periodic monitoring and inspections are carried out by this directorate, especially for controlling air emissions and wastewater discharges. Furthermore, the preparation of environmental registers and compliance action plans has increased as a result of the continued monitoring of the various commercial and industrial establishments.”

According to Law 4/1994 the EIA is a licensing requirement for development projects that are likely to have an impact on the environment. The EEAA issued guidelines for preparing the EIAs in 2005. These guidelines were modified in 2009 and are currently being reviewed for another possible modification.

The CEA indicates that the features of the Egyptian EIA system are generally compatible with the corresponding features of the Bank’s OP 4.01, but with few gaps regarding the preparation and follow up of the Environment Management Plans and the consultation, disclosure, and dissemination of the EIA reports. However, the CEA mentioned that since 2004 there have been serious efforts by the EEAA to improve EIA information dissemination through the design of an EIA database. After 2005, when the CEA was issued, there were significant improvements to the EIA systems that have to a great extent bridged those gaps. The requirements for consultation and dissemination of EIA reports have been officially added to the EIA requirements in the new guidelines issued by the EEAA in 2009. These guidelines have been drafted with support from the Bank and in compliance with its general requirements. The social aspects have also been integrated in the new guidelines. The definition of the EIA according to the guidelines reads, “the EIA process is the systematic examination of consequences of a proposed project, aiming to prevent, reduce or mitigate negative impacts on the environment, natural resources, health and social elements as well as capitalize on positive impacts of the project.” The social aspects are integrated in the guidelines through

the EIA screening process, description of baseline conditions, assessment of impacts, analysis of alternatives, and preparation of management plans.

Currently, the EIA Guidelines classify projects into classifications according to their expected impacts.

- Class C, which includes high-impact projects (equivalent to Category A, according to Bank Group classification) requiring full-fledged EIA. According to the 2009 Guidelines, the WWTPs and sewerage networks fall under this category.
- Form B projects, requiring Form B EIA with less level of details than Class C EIA.
- Form A projects, requiring Form A EIA with less requirements than Form B projects.
- Special condition projects which do not require the EIA but will be licensed given that the project developer will comply with certain standard requirements.
- Projects that are not subject to the EIA and environmental licensing system

The classification of all wastewater facilities (treatment and networks) as one of the highest impact class was introduced in the 2009 Guidelines. In the older guidelines of the EIA, the WWTPs with more than 1,000,000 population equivalent (PE) were classified as the highest category while WWTPs between 1,000 and 1,000,000 PE were classified as B and WWTPs with less than 1,000 PE were classified as A (the least category).

It is worth noting that classifying all sanitation facilities in the highest assessment category is more stringent than the requirements in many other environmental assessment legislation or standards, including the Bank Group’s safeguard policies as discussed in further detail in chapter 4. Most environmental assessment screening of projects depends on subjective evaluation of the project impacts based on its size, location, zone of influence, and sensitivity of receptors. However, some countries use quantitative criteria to show threshold size of projects that trigger mandatory comprehensive environmental assessment. Table 5 shows the screening criteria used in the environmental assessment legislations of some countries.

Table 5. Environmental Assessment Screening Category in Legislation of Some Countries

	Highest impact category	Middle impact category	Lowest impact category
European EIA Directive (85/337/EEC), amended by Directive 2011/92/EU	WWTPs > 150,000 PE. Requires mandatory EIA	WWTPs < 150,000 PE and sludge deposition sites. Requirement of the EIA to be identified by member states on a case-by-case basis based on screening criteria. For example, in U.K., the WWTPs exceeding 1,000 m ² and sludge deposition sites with an area more than 0.5 ha are identified as requiring EIAs.	There are only two EIA categories. Other projects do not need to carry out the EIAs.

	Highest impact category	Middle impact category	Lowest impact category
Belarus Environment Law	The WWTPs with discharge exceeding 5% of the receiving water body	Other developments may require EIA on a case-by-case basis.	There are only two EIA categories. Other projects do not need to carry out the EIAs.
Saudi Arabia Environment Protection Law	The WWTPs and sewerage networks and their extensions. Requires detailed EIA.	No sanitation projects	No sanitation projects
Lebanon (Decree 8633 for Environmental Assessment)	WWTPs and outfalls	Sewerage networks	There are only two EIA categories. Other projects do not need to carry out the EIAs.
Jordan (Law 37/2005)	No sanitation projects	All infrastructure projects	There are only two EIA categories. Other projects do not need to carry out the EIAs.

It is worth noting that, during the preparation of this ESSA, the Bank's team met with MSEA officials responsible for the EIA system and knew that the EIA Guidelines and the EIA screening criteria were currently under review by the MSEA/EEAA, including the screening criteria for sanitation projects. Regarding the procedures for environmental assessment, the EIA preparation and fulfillment of the EEAA requirements is well defined in the guidelines. Also, the EIA approval is well integrated into the licensing system for new projects, especially sanitation projects.

3.1.2 Effluent Standards

Nile Protection Law 48/1982 is the main legislation regulating water quality in the River Nile its two branches, canals, drains, and groundwater aquifers. The law sets certain standards for ambient water quality in freshwater bodies, drains that are discharging to freshwater bodies, and effluents that are discharged (from the WWTPs and industrial and tourist facilities) to freshwater bodies and drains. The law prohibits the discharge of WWTP effluent to freshwater bodies and only allows it to be discharged to drains if it meets the standards shown in Table 6.

Table 6. Effluent Standards for the WWTPs Discharging to Drains under Law 48/1982 According to the Latest Modifications in 2013

Parameter	Allowable limit	Parameter	Allowable limit
pH	6–9	Chromium (mg/L)	0.1
Temperature	<3°C above receiving watercourse	Copper (mg/L)	0.5
Biochemical Oxygen Demand (BOD) (mg/L)	60	Nickel (mg/L)	0.5

Parameter	Allowable limit	Parameter	Allowable limit
Chemical Oxygen Demand (COD) (mg/L)	80	Zinc (mg/L)	2
Dissolved Oxygen (mg/L)	>4	Iron (mg/L)	3.5
Oil and Grease (O&G) (mg/L)	10	Total coliform (Most Probable Number/100 mL)	5,000
Total Dissolved Solids (mg/L)	2,000 In coastal areas: 5,000	Aldrin and dieldrin (mg/L)	0.015
Total Suspended Solids (mg/L)	50	Alachlor (mg/L)	0.1
Sulfates (mg/L as H ₂ S)	1	Aldicarb (mg/L)	0.5
Free cyanides (mg/L)	0.1	Atrazine (mg/L)	0.1
Phenols (mg/L)	0.05	Bentazone (mg/L)	0.15
Mercury (mg/L)	0.01	Carbofuran (mg/L)	0.35
Lead (mg/L)	0.1	Chlordane (mg/L)	0.01
Cadmium (mg/L)	0.003	2,4-Dichlorprop (mg/L)	0.5
Arsenic (mg/L)	0.05	Fenoprop (mg/L)	0.5
Selenium	0.1	Mecoprop (mg/L)	0.45

The law also stipulates that treated effluent should be disinfected through chlorination, where the remaining free chlorine in the effluent should be between 0.5 and 1 mg per liter.

The law has been modified many times since its issue; the latest modifications were in 2009 and 2013 (which is the current version). In the 2009 version, nutrients (total nitrogen and total phosphorous) were added to the standards where the maximum limit for total nitrogen was 10 mg per liter and that of phosphorous was 2 mg per liter. The 2013 modifications have removed those nutrient standards but indicated in article 54 that within two years from the activation of the latest modifications, total nitrogen, total phosphorous, ammonia, and Ascaris eggs will be reviewed. The law is regulated mainly by the MWRI while effluent samples are taken, according to the law, by the MoH.

Although the effluent standards in Law 48/1982 are not highly stringent when compared to effluent standards in other countries (as indicated in Table 7), the application context in Egypt shows that it is actually very demanding. This is mainly due to the large uncovered areas with sanitation services and the amount of investments needed to connect those areas to secondary treatment with disinfection. Also, some WWTPs which are overloaded require further investments to meet the effluent standards set by the law through capacity extensions. Within this context, the introduction of nutrient standards in 2009—which is currently under review—would have required many improvements in the existing WWTPs to allow for nutrients removal which would have required extra investments.

Table 7. Effluent Standards in a Number of Countries

	Law 48/1982	Clean Water Act in Unites States - secondary treatment standards	EC Directive 91/271/EEC concerning urban wastewater treatment	Saudi Arabia Environment Protection Law	National environmental quality standards in Pakistan
BOD	60 mg/L	30 mg/L based on 30-day average with removal efficiency > 85% and 45 mg/L based on 7-day average	25 mg/L and minimum reduction in the WWTP is 70–90%	25 mg/L	80 mg/L
COD	80 mg/L	n.a.	125 mg/L and minimum reduction in the WWTP is 75%	150 mg/L	150 mg/L
Suspended Solids	50 mg/L	30 mg/L based on 30-day average with removal efficiency > 85% and 45 mg/L based on 7-day average	35 mg/L for PE > 10,000 with minimum reduction in WWTP 90% and 60 mg/L for PE < 10,000 with minimum reduction in WWTP 70%	15 mg/L	150 mg/L
Phosphorous	Under review	n.a.	For sensitive water bodies only: 2 mg/L for PE 10,000—100,000 and 1 mg/L for PE > 100,0000	1 mg/L	n.a.
Nitrogen	Under review	n.a.	For sensitive water bodies only: 15 mg/L for PE 10,000—100,000 and 10 mg/L for PE > 100,0000	5 mg/L	n.a.

The existing watercourses suffer from many pressures from untreated sewage discharge (from uncovered areas with sanitation), solid wastes, agriculture wastes, and industrial wastes, which have led to low surface water quality. Many of those watercourses do not comply with the ambient water quality standards of Law 48/1982 and some drains have deteriorating water quality even lower than the effluent standards of the WWTPs. Accordingly, complying with the existing effluent standards is reducing pressures on existing drains as significant amounts of pollutants are removed by the WWTPs to comply with the law. Making the effluent standards stricter may, theoretically, yield environmental benefits with regard to more pollutants being removed. But practically this would lead to a situation where many WWTPs might be uncompliant unless they receive additional funds for treatment capacity or else they might bypass a portion of the influent to keep the standards, which might lead to a cumulative negative impact on surface water quality.

3.1.3 Handling of Sludge

The handling of sludge generated at the WWTPs is regulated through Law 93/1962 and the Executive Regulations by Decree 44/2000. According to the law, sludge should be stabilized through aerobic, anaerobic, thermal treatment, addition of lime, co-composting with solid waste, or laying in drying beds for

six months. The laying of sludge in drying beds should be done in 15 cm layers with a maximum of three layers. The drying beds should be adequately isolated from the subsurface soil and groundwater. If the dried sludge is to be used as organic fertilizers, it should meet the standards shown in Table 8; otherwise, it should be landfilled or safely incinerated.

Table 8. Sludge Standards That Should Be Met before Utilization as Fertilizer

Parameter	Allowable limit	Parameter	Allowable limit
Zinc (mg/kg)	2,800	Molybdenum (mg/kg)	18
Copper (mg/kg)	1,500	Selenium (mg/kg)	36
Nickel (mg/kg)	420	Arsenic (mg/kg)	41
Cadmium (mg/kg)	39	Faecal coliforms (cells/gm dry weight)	1,000
Lead (mg/kg)	300	Salmonella (cells/100 ml at 4% dry weight)	3
Mercury (mg/kg)	17	Ascaris eggs (live egg/100 ml at 5% dry weight)	1
Chromium (mg/kg)	1,200	Ascaris (no. of species)	3

The law puts further limitations on the sludge distributor or user when he applies the sludge, including limitations for the lands that will receive the sludge, the crops that will be cultivated, the transportation or handling procedures, and the rate of application according to soil type (8–14 m³ per feddan per year for thick soil, 10–16 m³ per feddan per year for medium soil, and 12–20 m³ per feddan per year for light soil).

The above standards are generally equivalent, and more stringent in some parameters, to the sludge standards set in the United States Environmental Protection Agency.⁸ However, the application of such standards by the WSCs has many gaps as indicated in section 7.2.3.

3.1.4 Management of Sewerage Networks

Connecting households and other commercial industrial facilities to the sewerage networks is controlled under Law 93/1962 and Decree 44/2000. The law stipulates that the final inspection chamber of sewage at the household should be adequately designed and leveled to smoothly convey the sewage discharge to the sewer at the road. Commercial and industrial units (including car service facilities, bakeries, mills, animal barns, and other facilities that produce non-regular wastewaters) should install solids settlement and/or oil separation chambers before discharging to the public sewer. The law provides standards for the wastewater parameters (as indicated in Table 9) that could be accepted in the network. So industries and commercial establishments generating high loads of wastewater should install pretreatment units for their wastewater before discharging to the sewer.

Table 9. Standards for Wastewater Received in the Network

⁸ 40 CFR 503 Subpart D.

Parameter	Allowable limit	Parameter	Allowable limit
pH	6–9.5	Settleable solids (cm ³ /L after 30 minutes)	15
Temperature (°C)	43	Total heavy metals (mg/L)	5
BOD (ppm)	600	Chromium ⁺⁶ (mg/L)	0.5
COD (ppm)	1,100	Cadmium (mg/L)	0.2
TSS (ppm)	800	Lead (mg/L)	1
O&G (ppm)	100	Mercury (mg/L)	0.2
Sulphates (ppm)	10	Silver (mg/L)	0.5
Total Nitrogen (ppm)	100	Copper (mg/L)	1.5
Total Phosphorous (ppm)	25	Nickel (mg/L)	1
Cyanides (ppm)	0.2	Arsenic (mg/L)	2
Phenols (ppm)	0.05	Tin (mg/L)	2
Settleable solids (cm ³ /l after 10 minutes)	8	Boron (mg/L)	1

The design and operation of networks and pumping stations are regulated through the Engineering Codes issued by Decrees 286/1990 and 268/1997, respectively. The codes provide the standards that should be applied during design, construction, and operation of networks and the PSs to avoid blockage, seepage, structural collapse, and hydraulic and electromechanical malfunctioning. Private networks are not allowed except after having received a license from the regulatory authority and after fulfilling the requirement of the Engineering Codes.

3.1.5 Handling of Septage

The discharge of septage removed from individual septic tanks and cesspits to freshwater canals or drains is not allowed according to Law 48/1982. Also, the discharge of septage to land is not allowed according to the General Cleansing Law 38/1967 and it should, according to the law, be disposed in locations identified by the Local Authority. With regard to application, the implementation of these conditions showed little success due to difficulty of enforcement.

3.1.6 Handling of Hazardous Substances

The handling procedures of hazardous substances and wastes are included in Law 4/1994 with adequate level of details. These procedures include identification, segregation, labeling, documentation, monitoring, and emergency response. Such procedures are generally in conformity with the requirements of the environmental health and safety (EHS) of the Bank Group (General EHS Guidelines) according to the General International Industry Practice (GIIP).

The handling of liquid fuels, usually stored at the WWTPs and PSs for backup generators and also used during construction, is generally regulated by Law 4/1994. The law stipulates that the storage should be according to adequate engineering requirements but does not specifically demand having an impervious secondary containment of 110 percent of storage tank volume as required in the EHS Guidelines.

The handling of chlorine cylinders, which are the most common hazardous substances handled within the WWTPs, is further detailed in the Engineering Code for Wastewater Treatment Plants (Decree 169/1997). The code includes design specifications and operational guidelines for handling chlorine cylinders that consider minimizing the risk and adequate response to emergencies. Law 4/1994 (annex 8) gives detailed thresholds for allowable concentrations of certain chemicals in the work environment, where the maximum threshold for chlorine is 0.5 ppm for eight hours of exposure and 1 ppm for short exposure (15 minutes). These are the same limits given by the United States Occupational Safety and Health Act but it is worth noting that the permissible exposure level according to the United States National Institute for Occupational Safety and Health is 0.5 ppm for a maximum exposure of 15 minutes.

3.1.7 Solid Waste Management

Solid waste is usually accumulated in the screens of the WWTPs and PSs and removed from grit removal chambers. This separated solid waste should be adequately handled by the facilities. Solid waste management is regulated by specific articles of Law 4/1994 in addition to the General Cleansing Law 38/1967. Both laws require waste generators to place their waste in allocated locations identified by the Local Authority. This is consistent with the EHS Guidelines which require the management of waste in a way which is consistent with the waste characteristics and conforms to local regulations. However, the EHS Guidelines give examples for the suitable facilities for waste disposal as engineered landfills, composting plants, safe incinerators, or bioremediation sites. This is not usually available in the Egyptian context, especially in rural areas. However, best available technologies should be employed to ensure safe disposal of solid waste. Usually, the available option in rural areas is to safely collect, transport, and dispose the waste in a site approved by the Local Authority. Although sometimes this site could be an open dump site, this is the available method of disposal that would have the least environmental impacts.

3.1.8 Air Quality

Ambient air quality standards of Law 4/1994, according to the latest modifications of 2012, include acceptable limits for SO₂, CO, NO₂, O₃, particulate matter (PM), PM₁₀, PM_{2.5}, Pb, and NH₃. The Bank Group General EHS Guidelines⁹ include guideline values for all these parameters while CO, Pb, and NH₃ regulated in Law 4/1994 are not included in the EHS Guidelines. Law 4/1994 limits generally meet the

⁹ These are also the WHO ambient air quality guidelines.

interim targets of the EHS Guidelines¹⁰ with few exceptions while they are much less stringent than the guideline values. This gap is not expected to be triggered as the program interventions have very little effects on the ambient concentrations of the parameters included in the EHS Guidelines as the sources of fuel combustion will only be temporary during construction and operation.

For air emission from point sources, Law 4/1994 provides certain standards for height of stacks as well as allowable limits for PM, CO, SO₂, and NO_x. Stack height standards of Law 4/1994 relates to the height of adjacent structures. While it does not use the GIIP equation used in the EHS Guidelines, the stack height requirements in Law 4/1994 could be more stringent as they require the height to be 2.5 times the height of adjacent buildings, with a minimum height of 18 m. Law 4/1994 limits for PM and NO₂ meet, or are more stringent than, the EHS Guidelines limits.

It is worth noting that there are no specific regulations for odor control and the allowable ambient concentration of ammonia (120 µg/m³). However, the detection and recognition thresholds of ammonia are much lower. Therefore, the regulation of odors mainly depends on the complaints of the neighboring areas of wastewater facilities and the documentation of those complaints in the environmental register as required by Law 4/1994. Also, the MoH has introduced a condition that the WWTPs should be at least 500 m from the nearest official settlements to safeguard against odor and vermin impacts (Decree 27/1997).

3.1.9 Noise

In addition to standards of occupational noise and correspondent exposure periods, Law 4/1994 includes standards for ambient noise during night and day. The ambient noise standards match the correspondent EHS Guidelines, but the latter includes an additional requirement that noise caused by any activity should not raise the background noise by more than 3 dB. The program interventions are not associated with noisy equipment during operation as most pumps and blowers are indoors and usually no major noise impacts are detected at the boundaries of wastewater treatment facilities.

The maximum occupational noise allowed by Law 4/1994 for establishments that have been licensed before 2011 is 90 dBA for eight hours. This is slightly higher than the maximum occupational noise indicated in the EHS Guidelines, which is 85 dBA for eight hours. However, such a gap is not expected to be triggered by the program interventions because usually workshops at the WWTPs or PSs only include minor works that do not extend for several continuous hours.

3.1.10 Health and Safety

The Labor Law (Law 12/2003) is the main legislation regulating H&S issues. The law comprises a chapter on the working environment and H&S issues and also includes a comprehensive annex on the safety standards to minimize physical, dynamic, biological, and chemical risks.

The physical risks identified by the law include heat stress, cold conditions, noise and vibrations, light intensity, explosion, radiation, and pressure. The noise standards have the same limits as stipulated in Law 4/1994. The light illumination standards are given in the law for different types of work and they are more stringent than the minimum illumination limits given in the EHS Guidelines. Other physical risks indicated in the law have little relevance to the program.

¹⁰ The interim targets are considered a stepped approach for achieving the guideline targets.

The dynamic risks are related to moving objects and collision risks. The law provides details of the required precautions to be taken during construction and demolition activities, especially the safety requirements for working at heights, scaffoldings, stairs, elevators, demolition works, excavation works, and access to work sites. Electric risks are also considered in the law among the dynamic risks and there are requirements to ensure adequate insulation of live electric conductors and instruments. The law includes stipulations for a safe working environment for construction labor, including providing safe working conditions against dynamic risks and necessary personal protective equipment (PPE).

Biological risks are related to working in areas exposed to pathogens. The law identified certain requirements for safeguarding against infections. These requirements include having a system for safe handling of food in designated areas within the establishment, regular vaccination for the workers against correspondent pathogens, providing adequate PPE, carrying out adequate cleaning and housekeeping, providing facilities for personal hygiene, providing health care and first aid equipment, and providing training. The law also stipulates that establishments where workers are handling unclean materials that may contaminate their clothes and bodies should be provided with areas for washing and changing their contaminated clothes before they leave.

Chemical risks are related to the exposure to harmful chemicals, where the most relevant chemical to wastewater facilities is chlorine—which has been discussed earlier.

The law also comprises stipulations for regulated establishments for taking measures to protect against fire risks. The establishments should abide by the requirements of the Civil Defense Department, including installing fire detectors and adequate extinguishing equipment. Furthermore, the National Housing and Building Research Center (NHBRC) has issued the Egyptian code for protecting structures from fire in four parts detailing the measures that should be taken during design, finishing, and operation of different buildings to safeguard against fire risks. The code has been prepared, as indicated in its introduction, according to international standards such as the United States National Fire Protection Association and British standards.

The law also requires regulated establishments to prepare emergency plans and tools for preventing accidents and handling casualties in emergencies. The law stipulates comprehensive standards that minimize occupational H&S risks.

3.1.11 Natural Habitats

Natural habitats are regulated in Egypt by Law 102/1983. In addition to 144 islands along the River Nile, 28 areas have been declared as protected areas. The law restricts the establishment of structures and roads and agriculture, industrial, or commercial activities unless a permit is granted from the competent administrative authority. None of the protected areas are located within the program boundaries.

In addition to the protected areas regulated by Law 102/1983, the EEAA has identified 34 areas as important bird areas; some of them coincide with the protected areas and some do not. The identification of important bird areas is meant to be guidance for planning authorities, including the EEAA in clearing the EIAs and for taking measures for protecting birds, especially rare and endangered ones. Lake Manzala is the

only important bird area located within the program's geographic boundaries and it is known for being the route of the migratory birds during autumn.

3.1.12 Cultural Heritage

Law 117/1983 has been issued for protection of antiquities and culturally valuable sites. Being one of the richest countries in the world with antiquities from ancient civilizations, the GoE gives the law high importance and weightage.

The law defines antiquities as "each structure or movable object produced by different civilizations." The definition includes productions of arts, science, literature, and religions from ancient ages up to 100 years ago. The definition also includes corpses of humans and other species which have remained from the ancient ages. All discovered antiquities are registered by the Decrees of the minister of Antiquities. The law includes stipulations for structural protection of known and unknown antiquities through certain procedures for chance finds. The stipulations of the law would adequately safeguard against negative impacts during the construction phase of the program interventions and the Antiquity Authorities are closely inspecting the protection of registered sites.

3.1.13 Land Tenure and Related Laws to Land Expropriation in Egypt

A) Land Tenure

There are three main forms of land ownership in Egypt:

- Public or state land (*amlak amiriya* in Arabic) which is divided into the state's public domain that cannot be alienated and the state's private domain which can be alienated generally through sale, lease, *takhssiss* (that is, transfer of ownership conditional on meeting certain criteria such as keeping the land use unchanged and paying the remaining instalments of the land price), or *haq intifaa* (that is, usufruct);
- Private land (*mulk horr* in Arabic), which may be alienated or transferred freely; and
- Waqf land (land held as a trust or an endowment for religious or charitable purposes) which is often subject to covenants on transfer or use and which is typically transferred through leasehold or usufruct.

B) Egyptian Constitution

The Egyptian Constitution recognizes three main types of ownership. Article 33 of the 2014 Constitution provides that "the State shall protect ownership with its three types: the public, the private, and the cooperative."

Article 35 of the Constitution further provides that "private properties shall be protected, and the right to inheritance thereto is secured. It is not permissible to impose guardianship thereon except in the cases

defined by law and by virtue of a court judgment. Expropriation shall be allowed only in the public interest and for its benefits, and against fair compensation to be paid in advance according to the law.”

According to the Constitution (Article 63), “all types of involuntary relocation using force or excessive violence is banned and whoever violating this article will be brought to court.” According to this article, it is understood that amicable procedures for private property expropriation is guaranteed by law. The competent jurisdiction shall be entitled to take cognizance of the lawsuits raised by individuals against the administration for appropriate compensations.

C) Other Relevant Laws and Regulations

As mentioned above, the Constitution prohibits the expropriation of private property except for public interest against compensation determined pursuant to the law. Law 10/1990 concerning the expropriation of ownership for public interest was issued to reflect this constitutional mandate. In addition, expropriation of property is further regulated by Law 59/1979 concerning the establishment of new urban communities and Law 3/1982 concerning urban planning.

The term ‘public interest’ in the context of expropriation has been defined in article 2 of Law 10/1990. The article specifies the acts that are considered for public interest. These include:

- Constructing, widening, improving, or extending roads, streets, or squares, or the construction of new districts;
- Water supply and sewage projects;
- Irrigation and drainage projects;
- Energy projects;
- Construction or improvement of bridges, crossroads for railway, and tunnels;
- Transportation and telecommunication projects;
- Urban planning purposes and improvements to public utilities; and
- Other acts considered as acts for public interests mentioned in other laws.

In addition, other laws have also added some acts which are described below.

- Law 3/1982 concerning urban planning added to the foregoing list acts aiming at the establishment of green areas and public parking.
- Prime Ministerial Decree No. 160 of 1991 added to the list the establishment of government educational buildings.
- Prime Ministerial Decree No. 2166 of 1994 further added fishery farms established by ministries, governmental departments, local government units, and public authorities.

Article 2 of Law 10/1990 delegates the cabinet of ministers to add other acts to the foregoing list. Expropriation may not be limited to those land or buildings directly subjected to the previous acts but it could also include any other neighboring properties that are deemed useful for the acts.

Law 3/1982 for physical planning, in its sixth chapter concerning district renewal (this also applies for slums' redevelopment or resettlement projects), has obliged the concerned local body entitled to renewal to first plan and prepare the proposed relocation sites where the occupants of the original area under renewal or redevelopment would be resettled. The concerned local body should first prepare these relocation sites so that they are suitable for housing and preceding different activities of the relocates before their transfer to the new site.

Article 40 of this law stated that the resettlement should not commence at least one month before officially notifying the affected groups about their new destination. Any occupant, who will be subjected to the resettlement and will receive a new housing unit, has the right to complain of the housing unit's unsuitability—within 15 days of receiving the notification—to a specialized committee formulated by the concerned governor. The committee should reach its decision concerning the complaint within a maximum period of one month. However, the right to complain does not include the location of the new resettlement site; rather it is only limited to the unit itself.

D) Expropriation Procedures

Law 10/1990 described the expropriation procedures as given below.

The procedures start with a declaration of public interest pursuant to a Presidential Decree accompanied with a memorandum on the required project and a complete plan for the project and its buildings (Law 59/1979 and Law 3/1982 provide that the prime minister issues the decree). The decree and the accompanying memorandum must be published in the official gazette. A copy for the public is placed in the main offices of the concerned local government unit. Based on that, the operational steps are as follows:

- The entity requesting the expropriation of the ownership of a real property for public interest ('Expropriating Entity') submits a memorandum with the request to the president or the prime minister (if a delegation of authority by the president is granted). The ESA has been defined as the Expropriating Entity, except for projects handled by other entities pursuant to a law to be issued in this respect.
- The memorandum would explain the reasons for the request, stating the compensation to be offered to the concerned owner of the property together with evidence that the compensation amount has been issued in the form of a bank check in favor of the ESA.
- The compensation is usually determined in accordance with the prevailing price for land surrounding the expropriated land (the market price). These prices are taken from recorded contracts in the Real Estate and Authentication Offices. However, this usually entails a crucial problem that always faces such expropriation projects as these prices are, in most cases, not real since the parties to the contracts usually state lower prices to reduce charges and fees decided on the basis of data recorded in the contracts. Also, it should be noted that the representatives of the ESA are assumed to be experts in evaluating land prices.
- If approved, the president or the prime minister will issue the required decree declaring the property in question appropriated in public interest and authorizing taking the property pursuant to direct enforcement procedures by the Expropriating Entity.

- Once the authorizing decree is published, the concerned Expropriating Entity is authorized to enter into the property in question in the case of long-term projects and after giving notice of its intention to do so for other projects. The objective of such immediate authorization is to conduct necessary technical and survey operations, position landmarks, and obtain information on the property.
- The Expropriating Entity will communicate the authorizing decree to the ESA together with information on the project to be executed and a drawing of the full project and the real property needed to take steps for expropriating the property in question.
- According to article 3 of the executive regulation of Law 10, a committee will be formed to determine the properties required for public interest. The committee will comprise:
 - A representative of the ESA;
 - A representative of the local government unit within which jurisdiction the project is located; and
 - The treasurer of the local area in question.
- The committee will declare its activities to the public 15 days before the commencement of its works.
- The Land Survey Department will verify the information collected by the committee—referred to in the preceding paragraph—by comparing such information with that which is found in the official records.
- The General Department for Appraisal within the ESA will inspect the property of the project in question and examine and complete the appraisal maps and lists of transactions concerning the property within the area of the project. It shall also prepare a consultative report with the estimated compensation for consideration by the Compensation Estimation Committee within the ESA.
- After depositing the compensation amount by the Expropriating Entity within the ESA (the concerned local office), lists of all real properties and facilities being identified, their areas, location, description, names of owners and holders of property rights therein, their addresses, and the compensation determined by the Compensation Estimation Committee shall be prepared.
- The ESA will thereafter officially notify the property owners, other concerned parties, and the Expropriating Entity with the dates on which the lists—prepared in accordance with the preceding paragraph—will be presented to them, at least one week before such a presentation. These lists will be posted for a period of one month in the offices of the concerned local government unit and will also be published in the official gazette and two widespread daily newspapers.
- Owners of the properties and holders of rights therein will be officially notified with an evacuation request within a period not exceeding five months from the date of their notification.
- The holders of rights include owners of beneficiary rights, using rights, housing rights, mortgaging rights, and concession rights.

- Court of Cassation decisions have resolved that rights holders are those who hold rights on the tenement and that, accordingly, the holders of leasing rights are regarded as rights holders since they are holders of personal rights.
- Article 26 of Law 577/1954 states, “All the real suits shall not stop the procedures of the expropriation and shall not stop its results. The rights of the rights holders are transferred to the compensation.”

E) Institutional Arrangements

At the central level, the governmental agency in charge of the implementation of the expropriation acts issued for public interest is the ESA, except for projects handled by other entities pursuant to a law to be issued in this respect. As mentioned above, the ESA is charged with the formation of the expropriation and compensation committees.

Usually, the executing body could be other ministries (for example, MoHUUD) or the governorate. Accordingly, this executing agency would be responsible for paying the compensation to affected groups through the ESA or under its supervision, offering alternative resettlement options, and implementing the resettlement project.

At the local level, several local departments and directorates should be involved in the resettlement program depending on the type of program to be implemented and the nature of land ownership.

- **Directorate of Housing and Infrastructure.** This department will be responsible for providing alternative resettlement options for the affected group and participating in all operational procedures concerning defining compensation and setting improvement actions within informal settlements.
- **Department of Physical Planning.** This department will be responsible for preparing detailed plans for areas subjected to resettlement and providing all detailed maps and documents required to define the affected groups.
- **Department of Amlak.** This department will be responsible for providing all required documents for ownerships or tenure status within the affected areas with all attached historical documents for those properties that show the different transactions of the properties.
- **Department of Land Surveying.** This department is the main responsible body for defining the size, area, and locations of different ownerships to be affected by the resettlement. It is also responsible for defining the compensation mechanisms and values in cooperation with the ESA and other relevant local bodies.
- **Department of Social Affairs.** This department will be responsible in some cases for conducting all field surveys required to define the affected groups, their socioeconomic status and affordability level, their preference for different resettlement options, and compensation mechanisms. Another major role to be played by this department will be to mitigate the negative impact of resettlement, whether during or after resettlement, by preparing rehabilitation programs for those affected groups and monitoring the impact of the process.

- **Department of Legal Affairs.** This department will deal with legal issues related to tenure and ownerships and resolve disputes between different parties.
- **Head of District (LGU),** where the resettlement project takes place, will manage the overall project.

F) Issue of Tenants and Squatters

Although Law 10/1990 does not clearly specify lessees as entitled to compensation, they implicitly fall within the group of ‘rights holders’ referred to in the law.

It is clear, however, that lessees may not have recourse against the landlord for termination of their lease agreements as a result of the expropriation act.

Another important issue that has not been addressed in Egyptian law is the right of squatters to be compensated in cases of displacement or resettlement. The Egyptian legislation framework has not recognized the rights of squatters—whether state private land (where adverse possession applies after 15 years of peaceful visible and uninterrupted possession) or state public land (where no adverse possession applies irrespective of time) was occupied. However, the Egyptian experiences in dealing with this issue have shown that due to political pressure and social dimension, the government has been forced to provide an alternative for those groups of households whether in terms of alternative shelter, cash liquidity, or other types of in-kind compensation (for example, jobs).

3.1.14 Decrees and procedures for regulating households’ connection fees

According to Law 27/1978, regulating public resources for water and sanitation and covering the cost of the households’ connection is the responsibility of the beneficiary. According to the WSCs, the exact amount that each household is requested to pay depends on the distance of the house from the main force, the number of houses participating in the communal inspection chambers, and the amount of works and material associated with each item. It is roughly estimated that each household should pay an average of LE 1,300 to LE 1,500 to get the building connected to the public sanitation network once a project is completed in the area. The connection fees can be as high as LE 3,000 in some cases. This should cover the cost of engineering measurements by the WSC, installation of an inspection chamber, installation of the communal chamber (normally two to three houses get connected to the chamber), and the associated labor. The measurements and the supervision of works are delegated to the WSCs’ technical department. If the contractor does not carry out the works for the households’ connection, the beneficiary has to provide the labor needed for this process.

3.2 HCWW/WSCs Environmental and Social Management Procedures

Although the legislation, policies, and guidelines covering environmental and social issues sufficiently capture the issues with few gaps as identified above, many improvements need to be introduced with regard to management procedures complying with those standards. Limited institutional capacity is one of the main drawbacks in the existing procedures of the HCWW/WSCs as many of the required environmental and social measures were carried out by the NOPWASD, which left the HCWW/WSCs with limited practical experience in those areas. Also, some issues such as sludge handling and health, safety, and environment

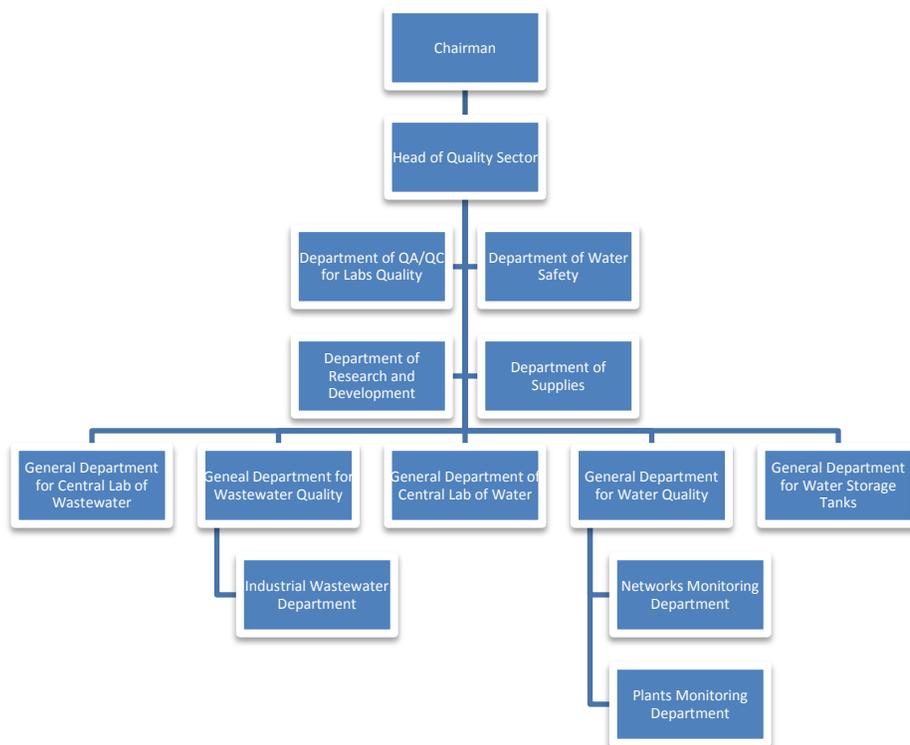
issues require resources that are not readily available in the WSCs. Description of the current procedures and correspondent gaps in complying with national legislation, policies, and guidelines are discussed below.

3.2.1 Organizational Set-up for managing the environmental and social issues

A) Environmental Issues

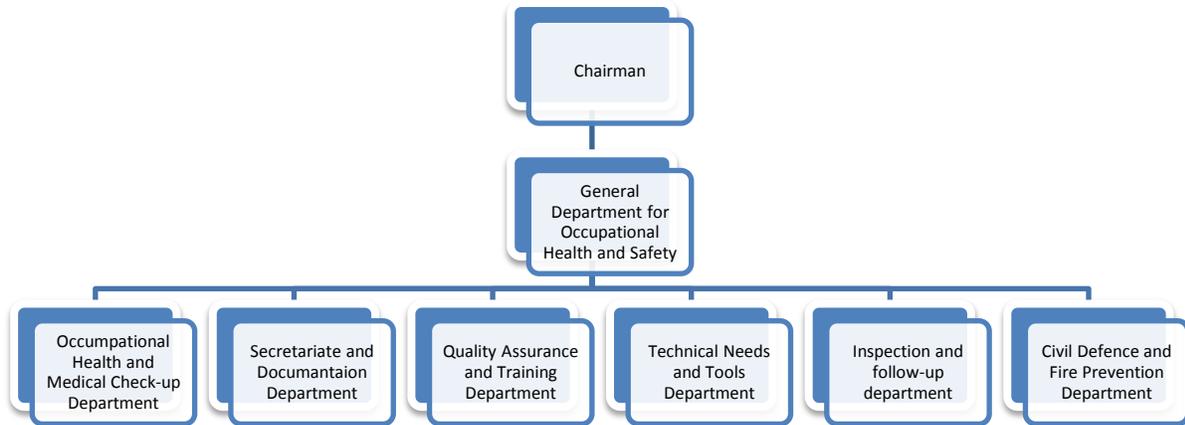
The management of environmental issues related to the sector is usually carried out by different departments in the WSCs. The effluent quality in the WWTPs is supervised by the General Department for Sewage Effluent Quality and Environmental Affairs, which is under the Quality Sector as indicated in Figure 4. The H&S issues are managed through the General Department for Occupational Health and Safety under the chairman as indicated in Figure 5. The HCWW also includes the Quality Sector and the General Department for Occupational Health and Safety that provides support to the peer departments at the WSCs.

Figure 4. Organizational Chart for the Quality Sector including the Effluent Quality Department



Note: QA - Quality Assurance; QC - Quality Control.

Figure 5. Organizational Chart for the General Department for Occupational Health and Safety



B) Social Issues

Social issues related to sanitation projects, more specifically, handling land, engaging with communities (for example, consultations with communities and awareness raising), and handling grievance are done through a number of departments at the level of the HCWW and the WSCs.

1. Departments in Charge of Issues Related to Land Acquisition

The Properties Department within the WSCs is the key department in charge of assets and properties management and supervision of actions and procedures related to the WSC properties. This also includes taking actions and coordinating with the Legal Department to acquire land for various projects and ensuring that the acquired land is protected against any illegal occupancies or uses. In some cases, the Properties Department reports to the General Department for Administrative Affairs under the Human Resources and Administrative Sector within the WSC (for example, in the Beheira Governorate). In other cases, it reports to the Legal Department of the WSC (for example, Dakahliya Governorate).

Job Description of the Properties Department

The Properties Department in the WSCs has a number of mandates relating to defining, supervising, and protecting the WSC's assets including buildings and other structures. The department's responsibilities include the following main key relevant responsibilities with regard to land acquisition:

- Follow up on the procedures for allocating new structures for the companies to establish new projects.
- Follow up on the WSC's land along with the authorized maps and take all administrative and legal actions to prevent violation against this land in coordination with the Legal Department.
- Coordinate with the relevant department to update the WSC land property database regularly.
- Maintain records and maps related to the WSC properties.
- Update the WSC property database.

The job description of the WSCs does not explicitly include the responsibility of land acquisition, although they have the legal mandate of land acquisition for the construction of the WWTPs, PSs, and sewage networks. As indicated in several sections, the WSCs' role starts after the investment is completed by the NOPWASD. This is the reason why the roles related to land acquisition and handling of land are not of substantive weight for the Properties Department.

2. Department in Charge of Community Engagement

Currently, the responsibility of engaging with communities is divided among a number of departments within the WSCs. The General Department for Public Relations and Awareness¹¹ is one of the main departments in charge of engaging with the customers through surveys, awareness raising campaigns, and other outreach activities. Public relations work including arranging events and coordinating with the media is still a core mandate for this department.

Apart from this institutionally formal mechanism as part of the WSCs, Rural Sanitation Units (RSUs) were created in governorates where Bank-financed projects are operating, namely Sharkiya and Beheira. The RSU members are usually seconded from their original departments (for example, the Sanitation Department or the Public Relations and Awareness Department). Teams of the RSUs are mandated to ensure various measures are in place, including mechanisms for consultations with local communities and designing grievance mechanisms. The RSUs indicated that one key difference between the responsibilities of the RSU and the other concerned departments (for example, the Public Relations and Awareness Department) under the WSCs is that the RSU mandates include engaging with local communities before the start of the sanitation projects.

Job Description of the Public Relations and Awareness Department

The analysis of the mandates of the Public Relations and Awareness Department across the targeted WSCs revealed that the announced job description for the departments and its mapped staff is not consistent

¹¹ The name 'General Department for Public Relations and Awareness' is used in this report to refer to the department within the WSCs which is mandated with community engagement and awareness. The name of the department varies from one WSC to the other. The most common name for the department is the 'General Department for Public Relations and Awareness,' which is being used here in this assessment.

across the WSCs. While the orientation of the job description of certain departments was more on public relations aspects (for example, Dakahliya WSC), other WSCs' job description involved more awareness and community mobilization activities. However, this discrepancy in formal job descriptions is not reflected in the actual work plan of the WSCs. Generally, there is consistency in the type of activities and the objectives of various Public Relations and Awareness Departments as will be elaborated below. According to staff consulted within the WSCs, the Public Relations and Awareness Department used to focus on the functions of public relations tasks¹² until they received guidance from the HCWW requesting attention to be given to the awareness component. However, in practical terms, the public relations tasks are still given priority because they deal with maintaining a corporate image.

Box 1. Sample of the Job Description of the Public Relations and Awareness Departments (Selected Tasks Related to Water and Sanitation from Beheira Governorate)

- Continue to raise awareness to bring behavioral change.
- Carry out customer satisfaction surveys.
- Communicate with various stakeholders including religious institutions, schools, agricultural associations, youth centers, and clubs to raise awareness about sanitation issues.
- Highlight successful models for sanitation in villages and present it to citizens and societies for implementation.
- Conduct field visits in an attempt to change the environmental behaviors of citizens and clarify the impact of sanitation on general health.
- Identify the sources of pollution and spread awareness to limit their impact.
- Spread awareness through seminars, publications, audio, and audio-visual media and conduct visits to the WWTP and PSs.
- Conduct surveys inside the company to identify employees' needs and the problems they face.
- Run awareness sessions for company staff to educate them about the company's mission and policy.
- Develop a database showing the number of families and population and prepare statistics related to the areas served with sanitation services by the company and those implemented through community contributions as well as the areas without any sanitation services.

Reporting Lines for the Public Relations and Awareness Department

The teams of the General Department for Public Relations and Awareness at the WSC level are working together to cover the dual nature of activities—public relations and awareness raising—that they are handling without clear division of responsibilities. The same teams report to two separate lines within the HCWW. For the public relations aspects, they report to the General Department for Public Relations and Media which in turn reports directly to the chairman. Public relations aspects are also being reported on a daily basis to the WSCs' chairman. In the meantime, the part related to awareness raising within the WSCs is being reported to the General Department of Public Awareness and Customers' Service of the HCWW which in turn reports to the Performance Upgrade Sector. In practical terms, public relations responsibilities always outweigh awareness responsibilities due to the link to the corporate image and the

¹² Examples on these tasks include arranging workshops and various events and connecting with the media.

fact that public relations issues are reported directly to the top managerial level within the WSCs and the HCWW.

3. Department in Charge of Grievance Mechanism

There are a number of channels for receiving complaints related to the water and wastewater services. Hotline '125' was established in 2004 to be the key channel meant to streamline grievance from various sources. In practice, there are other operational channels including customer service, laboratory staff, maintenance service staff, WSC receptions, and commercial personnel who also received complaints and grievances which were not strictly documented. Moreover, other channels like the media, the governors' offices, and the prime minister's office receive various types of complaints related to different sectors. Phased improvements are being introduced to the Hotline to enhance service, allow for better monitoring and supervision, and systemize and unify hotline work across all WSCs. Because each of the WSCs have been in charge of financing their own improvements (for example, introducing a database and connecting to the HCWW database), the progress in the improvements is not moving at a fast pace. Progress is largely dependent on the financial capabilities and the capacity of the WSCs which are not consistent.

Also, there are 'Customer Service Centers' which are located at the level of all branches (*markazes*) in all the governorates. A total of 400 centers operate across the country with over 5,000 staff. Although the Hotline is reachable by all customers across the country, the Customer Service Centers are the only official mechanism at the *markaz* level that allow direct interaction with the teams of the WSCs and the branches. The centers receive different types of complaints but their core operation objective is more oriented to issues related to billing and connecting new customers (subscription). The centers' operation mode is widely on a manual basis and no automated service is available in the centers yet.

Reporting Line for the Hotline (Key Grievance Mechanism)

The department in charge of receiving complaints formally at the level of the WSCs is the Citizens' Service and Hotline Department. A total of 600 staff who are employed in call centers across Egypt operate through 115 seats or lines across the 25 WSCs. The department reports to the Department of Public Awareness and Customers' Service at the HCWW level. Nine staff at the HCWW Public Awareness and Customers' Service Department are dedicated to monitoring the call centers. On a daily basis, the WSCs send reports to the HCWW documenting the number of grievances received, the actions taken, and progress in resolving the complaints. They also send a sample of the recorded calls. There are two kinds of monitoring checks that are carried out on a daily basis by the Public Awareness and Customers' Service Department at the HCWW:

- **Quality of Hotline service/customer's quality of service survey.** 10 percent of the customers who called the Hotline are called back to check the quality of service they received and if their complaints was resolved. Complaints relating to water quality are usually given higher priority in

the check process, with 50 percent of the calls related to water quality being checked on a daily basis.

- **Quality of calls/calls review.** 10 percent of the recorded calls that are sent to the HCWW are checked for quality of service offered by the Hotline operator. Emails with feedbacks from the HCWW are sent to the operators with a copy to the other WSCs to share lessons and feedbacks.

The HCWW produces regular reports on the types of complaints received and this report is used to inform the decision-makers.

The following are the main criteria that the HCWW General Department of Public Awareness and Customers' Service uses to monitor the performance of the Citizens' Service and Hotline Department within the WSCs:

- Feedback of the customers during the call;
- Regularity in sending reports to the HCWW;
- Quality of service through the recorded calls;
- Modernizing the call center;
- Receiving calls 24/7;
- Responsiveness to the complaints;¹³
- The records of the host company to check the number of completed calls against the number of unanswered or busy calls.

Table 10. Key Indicators from the 2014 Evaluation Report (Performance Related to the Hotline)

Key indicators related to the complaints system	Beheira	Sharkiya	Dakahliya
Number of Hotline staff	45	15	11
Number of complaints received through the Hotline	16,762	45,923	11,033
Water complaints: ¹⁴ Sanitation complaints ¹⁵	13,266 : 179	23,458 : 15,182	3,106 : 6,816
Percentage performance of the WSCs' Hotline teams	56.4 (graded 19 on 25)	66 (graded 11 on 25)	62.2 (graded 15 on 25)

Source: The General Department of Public Awareness and Customers' Service, 2014.

¹³ Evaluated by following up with the customers through a random check.

¹⁴ Water complaints include water cut-off, pipe breaks, and water quality and they are classified in the tracked complaints.

¹⁵ Sanitation complaints were mentioned to include sewage overflow, uncovered inspection holes, and blockages. The tracked complaints for sanitation are not classified in the HCWW.

The Customer Service Centers report to the Commercial Sector which is represented at the level of the branch, the WSC level, and the HCWW. However, the Public Awareness and Customers' Service Department at the HCWW level has key responsibilities or mandates toward the Customer Service Centers. They specifically include providing technical assistance, supporting in branding and in unifying the look of the centers, and building a database and automating their system.

4. EWRA (the Key Authority for Monitoring the Performance of the HCWW/WSCs)

The EWRA has been established pursuant to Presidential Decree No. 136/2004. It is considered as an independent legal entity subordinate to the minister of Housing, Utilities, and Urban Development. According to the presidential decree, some of EWRA responsibilities are as follows:

- Regulate, follow up, and audit everything related to drinking water and wastewater activities for all customers, both those performed by governmental projects and projects that commit to other authorities by the country in this field according to laws or drinking water and wastewater units that are established by the private projects in a manner that enables and encourages these projects to achieve the highest level of performance which ensures service sustainability in required quality and efficiency and provides the service to customers in a satisfactory and affordable manner.
- Ensure that purification, desalination, transportation, distribution, and sale activities of drinking water and activities of collecting, treating, and safe discharging of wastewater and industrial discharge that are performed by governmental authorities and the authorities that the country commits to work in this field are according to law and assure that drinking water and wastewater units that are established by private projects are performing according to laws and regulations applied in the Arab Republic of Egypt (A.R.E), especially those concerning quality and environment protection.
- Audit consumption, purification, desalination, transportation, and distribution of drinking water plans and collecting, treating, and safe discharging of wastewater and industrial discharge plans periodically, including necessary investments to ensure the availability of these plans to achieve the country's policy in this field.

Despite the critical importance of monitoring the environmental and social impacts and risks related to the construction of new projects, the EWRA currently does not have any mandates in this regard. Environmental and social impacts and risks related to construction are also not within the mandates of the EWRA. It is also not within the supervision scope of the EWRA over the WSCs to monitor the performance of the WSCs in handling environmental and social impacts and risks.

3.2.2 Environmental Licensing and Follow-up Procedures

The preparation of the EIAs for sanitation projects is currently being supervised by the NOPWASD as it is responsible for new investments. Under the ISSIP 1 and 2, the PIU and RSUs in the HCWW and WSCs, respectively, took the lead for recruiting consultants to carry out the EIAs and follow up on the licensing

procedures of the EEAA. However, the main supervision of those EIAs was done centrally by the HCWW with relatively limited contribution from the WSCs.

The WSCs currently do not have an institution set up for initiating and following up on the ESIA, except for the RSUs established under ISSIP 1 and 2 (in Beheira and Sharkiya).

The approval process by the EEAA is well integrated into the licensing system. The EEAA usually grants the approval if the EIA is compatible with the requirements of the EIA Guidelines and after securing the approval of other concerned ministries such as the MoH after fulfilling the 500 m buffer zone between residential areas and the WWTPs, the Ministry of Agriculture, Civil Defense Department, Antiquities Authority, and the Local Authority. The EEAA approval will be granted only if the EIA demonstrated that the project facilities comply with applicable laws and regulations. If there are site-specific issues, the EEAA grants a conditional approval on implementing adequate measures to manage those issues. The EEAA approval usually emphasizes on the importance of having an updated environmental register for the facility.

The EEAA regional branch offices carry out inspections of the operating WWTPs to check their compliance with environmental legislation. Usually, the inspection focuses on taking samples from the final effluent (which is being done by many other bodies as indicated in section 3.2.5) and making observations regarding nuisance and noise. According to the visits carried out by the Bank's team during the preparation of this ESSA, each WWTP receives an inspection from the EEAA once a year.

During the visits, the Bank's team noticed that many WWTPs were not maintaining a consolidated environmental register, which is one of the gaps that would be addressed in the PAP.

3.2.3 Land Acquisition Procedures

A) Land Acquisition Approaches

Generally speaking, when a rural sanitation project is being planned and land is needed—and to avoid the implication of resettlement and the associated costs—the avoidance strategy is followed by considering obtaining state-owned land as a favorable option. In case of unavailability of state-owned land, there are four other approaches to obtain land for the PSs and the WWTPs, including (a) voluntary land donation; (b) community contribution, which is a very common approach for the PSs; (c) willing buyer-willing seller; and (d) acquiring land by using eminent domain. The WSCs are not heavily involved in the process of finalizing land purchase (willing buyer-willing seller approach) for the PSs and the WWTPs because the part that relates to investment for the sanitation project is officially mandated to the NOPWASD. Although there are no legal obstacles for the WSCs to complete the process of acquiring land through both purchase and donations, the lack of resources for the WSCs usually limit their chances in land acquisition—specifically the purchase part. Accepting donated land or land obtained through community contribution for a PS is a more common area for the involvement of the WSCs compared to the purchase for the WWTP.

The Properties Department under the Legal Department within the WSC is responsible for the land purchase (in the rare cases of the WSCs' involvement in land purchase) and for accepting donated land or land obtained through community land contribution for the PSs. If the land for the PSs cannot be obtained through community contribution in a few cases, it will be obtained through willing buyer-willing seller approach. For the WWTPs, the lands are obtained mainly through willing buyer-willing seller approach. The WSCs are reluctant to use eminent domain to acquire land as it may take a longer time.

B) Land Acquisition Procedures¹⁶

1. Voluntary Land Donation

In certain cases, landowners (specifically well-off owners) are willing to donate their land for the various components of the projects. The following are generally the key steps that are normally taken for voluntary land donation:

Step 1: Identify land donor. When the WSC decides to implement a sanitation scheme in a village, the WSC reaches out to communities using various tools that may involve engaging CDAs, the LGUs, and community leaders or issuing advertisements in local newspapers to call for landowners to willingly donate their land for the project.

Step 2: Identify the site for a PS based on technical criteria. When the WSC receives a few offers from the willing sellers, they will assign a technical consultant to identify the most technically feasible site for the PS based on technical criteria. When the donation approach is used, the power of choice is, by definition, one key prerequisite. Several locations are usually identified and if the land of the person who is willing to donate proves to be compatible technically, the process of donation moves forward.

Step 3: Reach agreement with land donor. A person (or a group) offer to donate his/their land for the project with no monetary return. The only return for the donor in this case is receiving a connection to the sewer network. The person who donates the land is normally well-off and the amount of land offered constitutes only a small share of his or her land holding. The person who donates the land may also have non-land-based sources of income.

Step 4: Sign an initial agreement with the land donor. Once the site for the PS is identified by the technical consultant, the WSC will—through the LGU—sign an initial agreement with the landowner to use the land for the PS.

Step 5: Obtain various approvals. When the PS land is obtained through voluntary land donation as explained above, it is usually the responsibility of the LGU to secure the approvals.

¹⁶ The procedures listed on the ESSA for the various land acquisition approaches are not based on official documentation but rather the discussion with the WSCs. There is a possibility that individual variances in the procedures exist between one WSC and the other. The illustration of this section is made to the best of the ESSA team's understanding.

Step 6: Transfer the land title. The donor goes to the Notary Department to issue a waiver that states his or her donation of the land for the interest of the LGU. A 'Donation Contract' is signed between the landowner (who voluntarily donated his land) and the LGU. The LGU then transfers ownership of the land to the WSC by following the relevant legal procedures.

2. Community Contribution

This is a very common approach for acquiring the PSs. However, some cases were also introduced for the WWTP. Few differences in the procedures for land donation exist among governorates. However, the following are generally the key steps that are normally taken for community land donation.

*Step 1: Identify willing sellers.*¹⁷ When the WSC decides to implement a sanitation scheme in a village, the WSC reaches out to communities using various tools that may involve engaging CDAs, the LGUs, and community leaders or issuing advertisements in local newspapers to call for landowners to willingly sell their land.

Step 2: Identify the site for a PS based on technical criteria. When the WSC receives a few offers from the willing sellers, they will assign a technical consultant to identify the most technically feasible site for the PS based on the technical criteria.

Step 3: Reach agreement with landowner on the land selling (called in the contract 'donation') price. Led by one of the trustworthy delegated figures (*omda* and religious leader), the project village will negotiate with the landowner on the land price. The price is informally valued based on the prevailing prices in the area and the requested value is communicated with local communities through a community trustworthy figure.

Step 4: Collect the shares of households 'contribution. Through a community-led process, the average share of a household is calculated along with any special arrangement to exempt poor households.¹⁸ A trustworthy figure within the community is appointed as the key channel¹⁹ for the collection of the donations from households. The whole process including money collection, following up, and documentation is managed through local communities and largely through the community figure who was identified and delegated to lead the process. The WSC is generally not involved in this process.

¹⁷ The word 'seller' is being used here under community contribution because the process actually involves selling land by an individual/few individuals to the village community at large. Community members here are the real donors (contributors) who provided cash to secure the land. In the contract (which is the official documentation of the process), the person(s) who sold the land is regarded as the 'donor' and the community members are not mentioned formally.

¹⁸ As part of villages' social solidarity, exempting poor households from paying is a very common arrangement in most of the villages.

¹⁹ This channel is dependent on the local context within the villages. While some of the examined cases depended fully on natural leaders like *omdas* who manage the process through mutually trusted word-of-mouth, other villages have managed money collection through a CDA that opened a special bank account for this purpose and collected contributions against payment receipts.

Step 5: Sign an initial agreement with the landowner. Once the site for the PS is identified by a technical consultant, the WSC will—through the LGU—sign an initial agreement with the landowner to use the land for the PS.

Step 5: Obtain various approvals. When the PS land is obtained through community contribution as explained above, it is usually the responsibility of the LGU to secure approvals.

Step 6: Transfer the land title. The donor (who is a seller to the community in this case) goes to the Notary Department to issue a waiver that states his or her donation of the land for the interest of the LGU. A ‘Donation Contract’ is signed between the landowner (who sold his land to local communities) and the LGU. The LGU then transfers ownership of the land to the WSC by following the relevant legal procedures.

3. Willing buyer-willing seller Approach²⁰

Step 1: Identify WWTP sites. The WSC assigns a design consultant to nominate appropriate sites for the WWTP based on technical criteria and in coordination with the LGU as representing government authority and other community representatives.

Step 2: Obtain initial interest from the landowners to sell the land for project use. When the WWTP-nominated sites are identified, the WSC in collaboration with the LGU communicate with the landowner(s) to get his or her initial interest in selling the land voluntarily for construction of the WWTP. This step helps in screening out the sites whose owners are not willing to sell. During this stage, landowners also roughly state the price they expect to obtain from selling their land. The received financial offers along with the technical specifications of the land allow the WSC to prioritize their preferences among the various assigned plots.

Step 3: Sign a ‘Coordination Contract’: A coordination contract is signed between the landowner of the selected best offer and the WSC.

Step 4: Determine the purchase price of the land. A committee is formed by the chairman of the HCWW (or the NOPWASD if it is the agency that will purchase). The committee comprises various relevant authorities (surveying department, technical department in the WSC, and representative from the LGU) to determine the price of the land. The purchase price is usually determined based on the prevailing market price of the land in the project area.

Step 5: Get approval from line ministries. While the committee is determining the purchase price, the WSC (or the NOPWASD if it is the agency that will purchase) starts getting all approvals from relevant line ministries for changing land use. Normally, the WSC needs to get approval from three ministries (Ministry

²⁰ This approach is mainly used for the WWTPs and it is largely done by the NOPWASD according to their legal mandates. The WSCs can still follow the same procedures to purchase land for the WWTP but the case is that they now rarely do because of limitation in resources. The above describes the willing buyer-willing seller general procedures.

of Agriculture, Ministry of Environment, and the MoH). The WSC (or the NOPWASD if it is the agency that will purchase) needs to send a request to these three ministries. To provide approvals, these ministries will check the selected land with regard to their own criteria and the impacts of the selected site on their facilities and infrastructure within the site.

Step 6: Negotiate with the landowner(s). Once the price is determined by the committee and the approvals are obtained from the line ministries, the WSC (or the NOPWASD if it is the agency that will purchase) informs the landowners of the price determined by the committee. If the landowner(s) agree with the price, it will proceed to the next step. If not, another location will need to be identified starting from step 1.

Step 7: Purchase the land. Once an agreement is reached with the landowner(s) on the purchase price, the land price is paid directly to the landowner.

Step 8: Transfer the land title. Land title is transferred to the WSC (or the NOPWASD if it is the agency that will purchase) by following legal steps. The payment is made to the landowners based on the agreed purchasing price and the legal procedures are processed to transfer the land to the WSC. Payment could be made in instalments depending on the agreement with the landowners.

4. Acquiring Land by Using Eminent Domain

The process of acquiring land by using eminent domain is mainly based on Law 10 regulating “the Expropriation of Real Estates for Public Interest” issued in 1990. According to the law, water and sanitation projects are classified as public interest projects.

Eminent domain will be used to acquire land when a mutual agreement cannot be reached with the landowner(s) on the purchasing price. In such a case, the governor will (a) issue a land expropriation decree based on the maps received from the Surveying Agency (affiliates to the Ministry of Water Resources); (b) deposit the money in an escrow account based on the value determined by the High Committee (with the leadership of the land acquisition department under the Surveying Agency); and (c) issue a permit to the WSC to provide access to the land and start construction. This step is taken after the Notary Department issues an official contract that replaces the name of the owner with the name of the WSC.

In such a case, the landowner(s) can appeal through the court. Then the WSC is obliged to pay the landowner(s) the value determined by the court, even if the value is higher than what has been previously determined by the High Committee.

3.2.4 Procedures for Connecting Sewers

As indicated above, the households’ connection is the responsibility of the beneficiary (household). The WSC carries out the ‘measurement’ associated with the household’s connection. The WSC collects the fees for the measurements and provides the needed material to the beneficiary. The WSC also provides direct

supervision of the workers who install the household connection to ensure that they are following the technical requirements.

The households' connection fees are normally paid directly to the WSCs in cash. In dealing with poor households who cannot afford to pay the full amount in cash, it was observed that each WSC is handling this aspect as seen appropriate. While Sharkiya offers an instalment scheme to all interested beneficiaries, Beheira WSC mentioned that they do not apply this and the only instalment mechanism they offer is through the Housing and Development Bank which top up some interest above the actual cost of connection on the beneficiaries. Dakahliya WSCs indicated that they cooperate with the CDAs and community leaders to identify the cases that need support and they offer them instalments. According to the meetings with the WSCs, the choice of offering an instalment to the beneficiaries on the water bill is always available to the WSCs but it is their decision to choose to apply it.

Some villages which are not connected to a public sewer, construct—through local initiatives—private sewerage networks that usually end at an agricultural drain. Such networks are not legally licensed and usually do not conform with adequate engineering specifications. Therefore, the WSCs do not usually favor connecting such private networks to their system as they are subject to many operational problems such as blockage and leakages.

3.2.5 Procedures for O&M Affecting Water Quality

The WSCs work to comply with effluent standards through two main strategies: (a) the control of discharges received in the network eliminating high loads and (b) the operation control of the WWTPs.

With regard to protecting the network, the wastewater standards stipulated in Law 93/1962 (Table 9) are frequently monitored and inspected for industrial establishments, especially in industrial cities and for those industries which transfer their wastewaters to the sewerage networks via tankers. This inspection is usually not carried out frequently for commercial establishments and rarely done for animal barns and farm slurry, which is most relevant to the rural areas covered by the program. The shock loads from animal barns are reported to be one of the reasons for reducing the efficiency of the WWTPs in rural areas. This is usually managed by maneuvering the influent among parallel lines to distribute the load and to operate idle treatment capacities (in the WWTPs with extra design capacity). The regulation of such shock loads through inspection on upstream waste generators is difficult to accomplish as such generators are typically households with annexed small barns.

Most of the WWTPs in the program areas comply with Law 48/1982 standards of effluent quality. This is usually verified at the WWTP level by taking daily samples from the influent, effluent, and different points in the treatment stream. When some water quality issues arise, there would be direct coordination to improve the operation in the problem area to return to the standards. Usually, such plants meet the effluent quality standards except for a few exceptional cases where some operational problems arise.

On the other hand, there are some WWTPs that are known for being noncompliant with the effluent standards for different reasons. The common reason for this is that those WWTPs require investments for major repairs or extensions to provide sufficient treatment. Table 11 illustrates the number of WWTPs in the above categories in the WSCs and the number of WWTPs that will be included in the NRSP. Annex 1

includes further details about the technologies, discharges, receiving drains, and additional discharges through the program interventions.

Table 11. Status of Existing WWTPs in the Program Areas

Status of existing WWTPs		Dakahliya	Sharkiya	Beheira
No. of existing WWTPs	Total	48	29	25
	Included in NRSP	23 ²¹	19	1
	To be included in PforR	23 ²²	11	0
No. of existing WWTPs that are working with no common operational problems	Total	36	21	21
	Included in NRSP	18	15	0
	To be included in PforR	18	10	0
No. of existing WWTPs that are having common operational problems and need expansions/modifications to meet the standards	Total	11	8	4
	Included in NRSP	5	4	1
	To be included in PforR	5	1	0

In addition to the self-monitoring by the WWTPs, effluent quality is regularly monitored by the MoH as stipulated in Law 48/1982. Usually, each WWTP receives an inspection visit from the MoH once every three months. When identifying noncompliance, in some cases, the MoH opens a dialogue with the WSCs to overcome this. In other cases, the MoH initiates litigations against the managers of the WWTPs who would face accusations and may end up paying fines or even face imprisonment. Furthermore, effluent quality is monitored by the EWRA on an annual basis and by the EEAA as well as indicated earlier.

Some of the overloaded WWTPs which face operational problems tend to bypass the discharges to the drain in excess of their effective capacity. This is not a documented procedure or a technical recommendation, but some WWTP managers tend to do that for maintaining their effluent quality to the extent possible, especially that the bypass line or the discharge outfall to the drain is not monitored. But inspection bodies usually take effluent samples from the effluent collection point after chlorination. Furthermore, some WSCs connect villages to the PSs which are not connected to the WWTPs due to lack of funding for constructing force mains. So these PSs discharge untreated sewage to drains. This is defined as 'negative discharge' and is one of the shortcomings that is expected to be addressed by the PAP.

With regard to monitoring ambient water quality, usually the National Water Research Center, through its Drainage Research Institute, is responsible for monitoring the drains' water quality while the Nile Research Institute is responsible for monitoring the Nile and freshwater canals.

It is worth noting that most of the agriculture drains, especially in the Delta Region, face significant environmental pressures from different sources including discharge of septage, wastewaters from illegal private networks, industrial wastewaters, domestic solid wastes that usually accumulate on the banks of

²¹ In addition to the 23 WWTPs, some villages in Dakahliya will be connected to the Zarka WWTP in the Damietta Governorate.

²² As above.

canals and drains due to lack of collection system in most rural areas, and agriculture drains loaded with agrochemical remains. According to baseline surveys carried out under the ISSIP in the past two years, water quality in all monitored drains exceeds the ambient water quality standards for drains that could be mixed with freshwaters. For example, the ambient BOD and COD standards are 10 and 15 ppm, respectively. The BOD and COD in some monitored drains under the ISSIP reached about 70 and 300 ppm, respectively.

3.2.6 Procedures for the Management of Septage

Usually the septage is removed from cesspits in unserved areas by local contractors using tankers. They then discharge the septage in the nearest location in an agriculture drain or even in freshwater canals. Although such conduct is not allowed according to Law 48/1982 and Law 38/1967, monitoring and enforcement on a large number of tankers is difficult and sometimes impossible. Furthermore, most of the WSCs do not allow septage in their sewers and the WWTPs as there is no system in place to allow for regulating the septage received. The WSCs would usually be unwilling to accept septage with high organic loads that would add to the shock loads received in the WWTPs and may affect their performance and the quality of the final effluent. However, some WSCs such as Dakahliya allow for receiving domestic and industrial wastewater from plants not covered by the sewerage services against a certain fee (LE 70 per m³ in Dakahliya).

The lack of an official system to handle septage—although it helps in reducing shock loads at the WWTPs level—risks attaining the objectives of sanitation projects on surface water quality as the unregulated small-scale septage discharges to surface water will continue to be one of the major pressures on water quality. Accordingly, on-site sanitation including an official septage management system that would serve remote and satellite villages would be included in the result areas of the program. This system will be identified during the feasibility studies for each governorate.

3.2.7 Procedures for the Management of Sludge

The sludge is collected in the drying beds of the WWTPs and stays for six months for stabilization by drying and exposure to sun. Afterwards, the sludge is sold to organic fertilizer contractors who usually distribute this sludge for use in new reclaimed lands east and west of the Nile valley. The selling of sludge is carried out through a tendering process by the WSCs. The winning contractor signs the contract with the WSCs, pays the price, and then arranges to collect the sludge from the WWTP identified by the WSC.

The Quality Sector and laboratories, either in the WSCs or in the WWTPs, do not monitor the sludge quality as required by Law 93/1962 and Decree 44/2000. Accordingly, the WSCs do not check the adequacy of selling the sludge. The contracts with sludge contractors usually include a general requirement about the safe use of sludge indicating that it is the responsibility of the contractor to ensure this. Sludge handling in the WWTPs is one of the gaps that is later addressed in the PAP.

3.2.8 Procedures for Engaging with Communities

Along the life cycle of a rural sanitation project, interaction with local communities takes place during different phases using different approaches. The following section briefly presents the existing procedures

and mechanisms to engage with communities along various stages of the project. More details on the procedures and capacity assessment are presented in sections 5.1.3 and 5.2.3.

- **Procedures for Engaging with Communities in the Preparation and Planning Stage**

Previously, the HCWW was not heavily involved in planning and preparation of rural sanitation projects. The formal role of the HCWW and the WSCs is more about O&M. No structured mechanism is followed to carry out communities' needs assessment for sanitation projects. Decisions on implementing projects in certain villages largely depend on the severity of the problem in the village which is manifested either through high levels of pollution or complaints and requests from the villagers communicated through various channels—most importantly the media. Also, there is no mechanism to engage the communities in the planning of the projects and in deciding on the appropriate technology.

In the cases when private land for the PSs or treatment plants need to be acquired, interaction with landowners (in cases of willing buyer-willing seller) or the land donors or landowners and a larger spectrum of local communities (in case of community contribution or voluntary land donation) is done by the WSCs as explained above. However, the WSCs play a more technical and legal role in this regard. The social aspects related to land are not taken into consideration. In the case of community donation, the role of the WSCs is minimal and the process is heavily delegated to communities with trivial supervision or follow up from the WSCs.

- **Procedures for Engaging with Communities during Project Construction**

During project construction (specifically the construction of the networks), the WSCs play a supervisory role over the contractors. Through their teams and supervision consultants, the WSCs have the role of supervising the work related to extending networks. The implementation of measures to address the environmental and social issues is the responsibility of the WSCs. Under Bank-financed projects, the implementation of the ESMP was the responsibility of the WSCs (specifically the RSUs). In governorates without the RSUs, it was strongly observed that the monitoring of the construction process has a technical orientation by nature. The social issue that may arise (for example, damage in structures) is left to the contractor to handle. There is also a tendency to handle the social impacts related to construction in a reactive manner. The absence of a local grievance system and systematic methods for consultations with local communities results in a high probability of unresolved complaints. Although the Department of Public Relations and Awareness Raising has a role to play with the water and wastewater customers, this role does not cover engaging with communities during the construction phase.

- **During Project O&M**

As will be elaborated below in more detail, the HCWW and the concerned departments within the WSCs have a number of key mandates that involve community engagement in project O&M. Raising awareness, measuring community satisfaction, and handling grievance mechanisms are the key relevant fronts for community engagement during a project's operation. These functions are not limited to sanitation projects. Water supply and the associated topics are actually dominating the attention and the scope of work of the WSCs, as will be elaborated in detail below.

- **Project Monitoring**

Of the activities that are conducted during project operation, some activities feed into the monitoring of the project. Most important among these activities are the community satisfaction survey and the awareness campaigns. The assessment of the procedures, however, showed that the process of monitoring the performance of these activities is largely done on the basis of measuring the completion of the activities to assess the performance of the Department of Public Relations and Awareness Raising teams of the WSCs. The impacts of these activities on the beneficiaries/customers (for example, change in knowledge and level of awareness) or whether the findings of the activities have informed the decision-making process are not measured systematically.

3.2.9 Procedures for Handling H&S Risks

The WSCs have H&S departments in their organizational charts, as indicated above. The human resources and equipment available for these departments—although they vary between different WSCs—usually need to be improved for minimizing the risks.

Although the Engineering Codes for the WWTPs and for fire protection include sufficient measures for safeguarding against chlorine leakages and fire risks, some of the facilities designs do not follow these safeguards and sometimes safety issues such as not having a disposal basin for chlorine bottles, not allowing for mechanical handling of those bottles, and not having enough space for access of fire trucks arise during operation. Interviewed H&S personnel are aware of these shortcomings, but they usually do not intervene during the design phase—which is usually done by the NOPWASD—and during the operation, changing the design would be rather difficult. The PAP in chapter 6 includes measures to overcome this issue by including H&S standards in the ToRs for the design works and allowing H&S staff to review and verify the designs.

At the procedural level, the WWTPs seldom receive inspections from the Ministry of Manpower and Employment and this may negatively reflect on the degree of compliance with the H&S standards of Law 12/2003. This is more magnified during the construction phase as the H&S culture among local contractors is usually poor with little legal monitoring and enforcement. These issues are addressed in the PAP.

3.2.10 Procedures for Grievances Redress

As explained in section 3.2.1, the Hotline is one of the key formal grievance channels and the one which is meant, by design, to be the single official channel. The HCWW is working to strengthen the Hotline system including the call centers within the WSCs and is aiming, through this strengthening, to enable this channel to be the single official uptake modality. However, in practice, most complaints²³ are still being communicated through other informal channels including verbally to laboratory staff, maintenance service staff, security, commercial personnel, or media. There is no strict documentation and record of the complaints received through these informal channels.

²³ Estimated by the WSCs to be around 65 percent.

Box 2. Summary of the Hotline Procedures

- Through the Citizens' Service and Hotline Department within the WSCs, complaints are received using various modalities. The Hotline (phone calls) is the main and most common modality. The department also receives complaints through fax, in writing, emails, and verbally.
- Grievances are grouped into drinking water and wastewater. Drinking water is subcategorized into 24 categories of complaints. Wastewater is subcategorized into 16 types of complaints; most importantly, overflow, main force break, stealing sewers cover, requesting a vacuum tank, query related to sanitation, asphalt cracks, complaint from a driver, leakage, illegal connection to the network, pollution, and unserved areas. Each subcategory takes an identification code. Normally, water quality complaints are the most common.
- Complaints are then diverted to the relevant department (for example, maintenance, sanitation, and water networks billing) to be technically handled.
- There is a specified time interval for handling each type of complaint. The Hotline team is internally aware of it (for example, four hours for breakages, 24 hours for pollution, and two days for commercial complaints). However, the teams indicated that due to lots of technical challenges, these intervals are not fully adhered to. Accordingly, they do not share this information with the complainers and they only promise to resolve the case as soon as possible.
- All calls are recorded for quality control.
- For tracking purpose, for complaints received through phone calls, the complaint tracking number is the phone number and/or the complainer ID. For complaints that are received via other modalities, a tracking number for the complaint is shared with the complainer.
- Complainers are called back by the Citizens' Service and Hotline Department to ensure that the complaint is resolved. A sample of the complainers are called back by the Awareness Raising and Customers' Service Department of the HCWW.
- Monitoring is done by the HCWW General Department of Public Awareness and Customers' Service as indicated above.

Box 2 briefly presents the procedures followed as part of Hotline system.

4 Program Environmental and Social Benefits, Risks, and Impacts

This section presents the assessment of environmental and social benefits, risks, and impacts of the program. An assessment of the program interventions has been carried out to exclude any Category-A-type interventions (according to the requirements of OP 9.00), a screening of the program risks against the core principals of OP 9.00 has been presented, and an identification of different environmental and social effects has been provided.

4.1 Screening of Category-A-Type Interventions

The program interventions include construction of sewerage networks for connecting unserved villages, PSs, force mains, and a few new WWTPs. The program boundaries, as described earlier in chapter 2, are limited to networks and relatively small-scale WWTPs.

According to OP. 4.01, a proposed project is classified as Category A if it is likely to have 'significant adverse environmental impacts that are sensitive, diverse, or unprecedented. These impacts may affect an area broader than the sites or facilities subject to physical works.' This definition is believed to be inapplicable to program interventions and the reasons are described below.

Significance of Impacts

The magnitude or consequence of impacts is proportional to the scale of the project and the type of impacts. The impacts of sewerage networks and pump stations are usually small-scale and site-specific. Most of these impacts are only temporary during the construction phase and could be prevented through mitigation measures that are usually locally available. Although the Egyptian EIA Guidelines classify sewerage works among the projects with the highest significance as indicated earlier in chapter 3, the common practice of Bank Group projects is that construction of sewerage networks are not classified among the highly significant projects considering their limited impacts. This is illustrated in Table 12 showing examples of operating Bank Group sanitation projects where all projects that only involve sewerage networks are classified as Category B, indicating relatively low significance of impacts.

For the WWTPs, the significance of their impacts is usually proportional to their size. Large WWTPs are usually associated with impacts that largely exceed their footprint. For example, if one of the large WWTPs faced an operational problem that required bypassing the influent for a certain period, a large stretch in the downstream direction of the receiving water will be affected. In small WWTPs, usually, the affected stretch is rather short and the oxygen rebuilds in the watercourse within this stretch. Similarly, if an operation problem occurred in a large WWTP and odor was generated, the affected area will be much larger compared to a small WWTP.

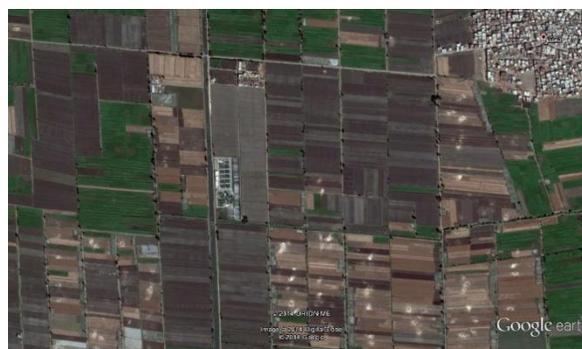
Within the context of Egypt, the capacity of the WWTPs under the program is relatively small. The largest WWTP within the program boundaries is 30,000 m³ per day, as further illustrated in annexes 1 and 2. If compared to other large WWTPs in the country (such as the El Gabal El Asfar - more than 2 million m³ per day, Abo Rawash - 400,000 m³ per day, Zenien - 330,000 m³ per day, Alexandria West - 550,000 m³ per day,

and Alexandria East - 690,000 m³ per day), the scale of the WWTPs under the program is explicitly small. Figure 6 illustrates this comparison.

Figure 6. Comparison between Large and Small WWTPs in Egypt



Note: Large WWTP in Cairo - 2 million m³ per day (Google Earth)



Note: Typical WWTP in the program area (less than 30,000 m³ per day) (Google Earth)

Table 12 shows that, according to the procedures of the Bank Group, some projects involving construction or extension of the WWTPs are considered as Category B and some others are considered as Category A. The latter projects involve relatively large WWTPs (145,000 and 480,000 m³ day capacity), a relatively large sludge digestion facility (150 tons per day), or rehabilitation of a 30 ha lake. Other projects presented in Table 12 involve construction of new WWTPs with capacities reaching 30,000 m³ per day and 37,000 PE—with regard to size and significance of impacts—which were classified as Category B.

Table 12. Classification of Some Operating Bank Group Sanitation Projects

Project	Country	Description	Category
Second Optimization of Lima Water and Sewerage	Peru	Rehabilitation of water supply and sewerage networks.	B
Water Supply and Sewage Systems Improvement	Gaza	Improvement of water supply systems; upgrading, rehab, and maintenance of wastewater networks and PSs; desludging of six anaerobic lagoons located in three WWTPs; and mechanical rehab and procurement of chemicals in the WWTPs (capacity 8,400 m ³ /d).	B
Second Regional and Municipal Infrastructure Development Project	Georgia	Infrastructure development including rehabilitation of sewerage networks and WWTPs.	B
Guilin Integrated Environment Management	China	Water supply infrastructure, upgrading of five WWTPs (capacities ranging between 20,000–145,000 m ³ /d), including sludge digestion facility of 150 tons/d.	A

Project	Country	Description	Category
Second Ho Chi Minh City Environmental Sanitation Project	Vietnam	8 km long and 3 m diameter wastewater interceptor and construction of a WWTP with a capacity of 480,000 m ³ /d.	A
North Gaza Emergency Sewage Treatment Project	Gaza	Completion of a WWTP with a capacity of 35,600 m ³ /day, decommissioning of another WWTP, remediation of a lake that used to receive wastewater (accumulated volume of water is 2 million m ³ over 30 ha), and protection of surroundings from flooding.	A
Zhejiang Rural Water Supply and Sanitation Project	China	Improving water supply and sanitation services for about 260 villages, including rehabilitation of the WWTPs of different capacities reaching 30,000 m ³ /d.	B
Water Supply and Sanitation Project	Belarus	Development and rehabilitation of water and wastewater infrastructure, including construction of rural WWTPs with capacities serving up to 37,000 PE.	B
Urban Water Supply and Sanitation Project	Ethiopia	Development of water supply and wastewater infrastructure in Addis Ababa and secondary cities, including extending the WWTP of Addis Ababa from 10,000 to 100,000 m ³ /d.	B
ISSIP	Egypt	Construction of sewerage networks, PSs, and WWTPs (ranging from 500–12,000 m ³ /d) and using existing WWTPs (with capacity reaching 90,000 m ³ /d).	B

It is worth noting that there are a number of WWTPs such as the Gharb El Mansoura WWTP, currently under construction with a capacity of 135,000 m³/d (later the design was modified and the capacity increased to 185,000 m³ per day), which are a part of the NRSP but are not part of the PforR. There will be measures in the PAP to ensure that DLI 1 and DLI 2 are not measured against connections to this WWTP so that the boundaries of the PforR are clearly verified during implementation.

Sensitivity of Impacts

According to OP 4.01, an impact is defined sensitive if it may be irreversible (for example, leads to loss of a major natural habitat) or raises issues covered by OD 4.20, Indigenous Peoples; OP 4.04, Natural Habitats; OP 4.11, Safeguarding Cultural Property in Bank-financed Projects or OP 4.12, Involuntary Resettlement. None of the expected impacts are considered irreversible, even though in the unlikely event that quantities of noncompliant effluent were discharged to a drain the impact would still be reversible and the drain will self-purify the organic load after returning the effluent back to compliance.

None of the program interventions are located in a natural habitat site, cause impacts on indigenous people, or are located near a known culturally valuable site²⁴ that would impact any project classified as 'sensitive'.

The project will entail land acquisition for constructing the PSs and the WWTP. The examination of the current practices and procedures related to land acquisition revealed some gaps in consultation with landowners and users, the methods of information sharing, the monitoring and documentation practices, and the approach of handling complaints related to land. If not handled carefully, land acquisition might result in serious impacts on landowners and land users. The PAP will include establishing a 'diligent and inclusive system for land acquisition.' The application of this system will ensure that affected individuals are meaningfully consulted and that international policies and best practices are followed in acquiring land.

Diversity of Impacts

The impacts of sanitation projects, without additional components, are mainly on water quality in receiving bodies. Other impacts on air quality, noise, flora and fauna, H&S, land, and other environmental and social receptors are relatively minor. Therefore, the impacts could be regarded non-diverse if the project is not associated with other activities.

Precedence of Impacts

There are plenty of sanitation projects operating and under construction in the program area. Therefore, none of the program interventions will cause unprecedented impacts.

Impacts Area of Influence

Usually, the area of influence of small-scale WWTPs are only limited to the footprint of the project. The area of influence could slightly cross the borders of the WWTP fence if some operational problems were caused, such as:

- Generation of odors affecting neighboring sites;
- Noncompliant effluent was discharged causing organic load in the receiving drain and thereby reducing dissolved oxygen for a limited distance downstream; and
- Accidental leakage of hazardous substances (such as chlorine or diesel) affecting limited neighboring areas.

All the above risks, if they materialize, will only cause temporary effects that can be mitigated and reversed after overcoming the subject operational problem.

According to the above assessment, the program interventions are not considered as Category-A-type projects and accordingly the PforR instrument could be applied.

²⁴ Although the Sharkiya Governorate is rich in antiquity sites and the locations of the new WWTPs have not yet been defined, Law 117/1983 stipulates that any antiquity site should have a sufficient buffer zone surrounding it and no development can take place in this zone. The Antiquity Authority is sufficiently empowered to implement the law as indicated in chapter 3.

4.2 Risks Screening against OP.9.00 Core Principals

A preliminary risk assessment has been carried out using the Environmental and Social Risk Screening Format included in OP 9.0. The assessment is highlighted in Table 13.

Table 13. Screening of the Program’s Environmental and Social Impacts

Risk	Environmental risk screening	Social risk screening
<p>Associated or Likely Social and Environmental Effects</p>	<p>The overall impact of the program is expected to be positive. The program will allow for adequately discharging and treating considerable amount of sewage according to the standards of Law 4, which was before the program being inadequately collected and discharged to watercourses. The assessment indicates that no Category-A-type interventions are included.</p> <p>There are some environmental risks and impacts. The main risks and impacts are:</p> <ul style="list-style-type: none"> - Change of land use at the footprints of the PSs and WWTPs; - Risks of improper handling of sludge leading to impacts on public health and contamination of receiving lands (substantial risk according to existing practices); - Risks of improper handling of solid wastes of the WWTPs leading to land contamination at receiving sites (medium risk); - Risk of discharging noncomplying effluent affecting receiving water (medium risk); - Risks to the safety of workers and neighbors of the WWTPs from handling chlorine, diesel, and lab chemicals (medium risk); - Risks on structural integrity of structures during dewatering operations (medium risk); - Risks of improper handling of chance find culturally valuable objects (low risk); and - Temporary impacts during construction. <p>The risks of environmental effects are generally medium risks, except for the sludge-handling risk which could be rated as substantial taking the existing situation into consideration. According to the system assessment and gap identification, a PAP has been proposed to mitigate the above risks and minimize them.</p>	<p>The program has a number of potential positive impacts that will help in improving the health and hygiene conditions of the targeted communities. The program will contribute to better quality of life in the targeted communities and will bring major benefits to the vulnerable groups of women and children.</p> <p>A number of potential negative impacts were identified. The most significant impacts are the ones related to land acquisition and the implications on the livelihoods of the families.</p> <p>In the meantime, a number of social risks were identified by the ESSA; most importantly, the risk related to the poor management of land issues, the potential conflict among villages in cases of excluding villages, and the inability of poor families to afford the cost of the connection.</p>

Risk	Environmental risk screening	Social risk screening
Environmental and Social Context	<p>The program will be implemented in three governorates in the watersheds of El Salam Canal and Rosetta Branch. The program area is characterized as being highly populated with urban areas encroaching on agriculture land. The PSs and new and extended WWTPs will most probably be constructed over agriculture land as the empty urban lands are scarce. Given that the footprint of project facilities is relatively small, the risk is rated as medium. The PAP includes measures to employ treatment technologies that would minimize the footprint of the WWTPs.</p> <p>Surface watercourses in the program area suffer from high pollution pressure. Accordingly, the program will positively impact the reaches of canals and drains in the program areas.</p> <p>No natural habitats exist in the program area. The program governorates (especially Sharkiya) are known for being rich in culturally valuable sites. The risks of affecting such sites are low, as indicated above. However, measures need to be taken to adequately manage chance finds.</p>	<p>The program will be targeting rural areas in the Nile Delta region in Egypt. The absence of appropriate sanitation systems in the targeting villages is putting tremendous health, economic, and psychological pressure on the rural families. Poor households are more vulnerable to the implications of a poor sewage system. They encounter significant costs to cope with the problem.</p>

Risk	Environmental risk screening	Social risk screening
Program Strategy and Sustainability	<p>The program has been designed according to the National Sanitation Strategy and master plans. The program is considered one of the urgent development needs identified by the GoE in rural areas deprived of adequate sanitation services that fall in the downstream of the River Nile where most upstream pollution pressures accumulate, leading to poor surface water quality and high groundwater levels that cause considerable environmental degradation. The program will explicitly contribute to alleviating these environmental pressures. The program will help in maintaining the sustainability of watercourses and lands that suffer from a rising groundwater table which will contribute to preserving such resources for future generations. There are some challenges to ensuring that the highest environmental benefits of the program are achieved—mainly the unserved remote communities and the private networks that may not be connected to the sewerage system. Generally, these sustainability risks are rated as medium risks and the DLI design and the PAP have taken these factors into account to minimize such risks.</p>	<p>The sustainability of the program is highly dependent on a sense of ownership and communities’ commitment to support the new project. In particular, in the areas where decentralized schemes will be implemented, the sustainability of the systems is highly dependent on communities’ willingness to pay and affordability and capacity to operate and maintain the systems. A number of measures were identified under the PAP and the DLIs to ensure that communities are engaged in the process. Guidelines for community engagement and consultation will be developed and applied. This will set the standards to allow for an engaging and inclusive system for all stakeholders during various project stages. It will also set the rules related to the various methods for engaging various groups (including the poor, women, and the elderly). A pro-poor strategy will be developed to ensure that poor households are well integrated within the program and have equitable access to the benefits. Gender mainstreaming and engagement of women will be ensured across the measures. Efforts should always be made to ensure that the measures (including the GRM and the pro poor strategy) are designed in a manner that ensure that there is no limitation for women to fully benefit from the program and women are not more vulnerable to negative impacts.</p>

Risk	Environmental risk screening	Social risk screening
Institutional Complexity and Capacity	<p>The institutional set-up for the management of environmental issues is already included in the organizational structure of the WSCs through the Laboratories, Quality Control, and Environment Department (for environmental issues) and the H&S Department (for H&S issues). The HCWW Environmental Department is providing support to the WSCs and the newly established PMU will also provide support to the PMU, especially in the preparation of the ESIA. All these bodies are within the MoHUUD and the system used to operate without complexity. Adding the PMU is not expected to add a complexity layer, but rather technical support through the environmental expert of the PMU.</p> <p>The institutional capacity of the WSCs is limited with regards to preparing the ESIA as it was usually prepared through the NOPWASD (and the HCWW for ISSIP governorates). There are also some capacity limitations with regard to available staff and equipment to monitor environmental performance of the operation as indicated earlier in chapter 3. The PAP includes measures to strengthen the capacity of the WSCs to bridge the gaps in the current system through the support of the PMU, HCWW, PMCF, and ISC.</p> <p>The institutional risk, given the existing conditions, is substantial; but the PAP measures detailed in chapter 6 are designed to minimize those risks.</p>	<p>The WSCs will play a lead role in the implementation of the project. The WSCs have a good role to play in reaching out to communities and in managing complaints related to O&M. However, the current mandates of the WSCs are largely focused on O&M. The WSCs have limitations in capacity when it comes to issues related to land acquisition, consultation, and grievance handling.</p>
Reputational and Political Risks Context	<p>There are no governance or corruption risks associated with the environmental aspects of the program. Rural sanitation is known to be a priority and there is no known environmental controversy about the government program and setting its initial stage in the three governorates.</p> <p>The only political environmental risk is the possibility of modifying the effluent standards and making them more stringent, which might require review of the WWTPs under the program and their improvement to comply with more stringent legal requirements. The risk is considered medium and the PAP includes measures to establish strong contacts with other ministries and regulatory authorities to have good preparation before any proposed legal requirements.</p>	-

Risk	Environmental risk screening	Social risk screening
Overall Assessment	The assessment indicates that the program does not include Category-A-type activities. Accordingly, the PforR instrument is suitable for financing the program. The overall environmental risk for the program is medium. The implementation of the recommended PAP would effectively minimize the risk.	The program has substantial social risks and the ESSA set forth the measures needed to address and mitigate those risks.

4.3 Environmental Benefits, Risks and Impacts

4.3.1 Environmental Benefits

The program will result in many environmental benefits as the sanitation sector by definition helps in maintaining a healthy environment and improved living conditions. The government program is mainly meant to help in improving freshwater quality in two important watercourses in the Delta region, the Rosetta Branch and the El Salam Canal, by alleviating one of the important environmental pressures on those watercourses which is uncontrolled disposal of sewage. The program will provide sanitation services to about 900,000 people in the three governorates. Wastewater generated by the program beneficiaries is collected in cesspits that leach to the ground with frequent collection by tankers that discharge to nearby canals and drains, collected by gravity networks that end to pump stations that negatively discharge²⁵ to drains, or collected in private networks that also discharge to watercourses. More details about unserved villages in the program areas are given in annex 3.

The main environmental benefits of the program include:

- Providing adequate wastewater treatment to about 90,000 m³ of wastewater per day²⁶ that used to be discharged uncontrolled in freshwater canals, drains, lakes, and open lands. This treatment is expected to remove the 53 tons of BOD per day that used to be discharged to the environment.²⁷
- Preventing the inappropriate process of 'negative discharge' of untreated sewage directly from the PSs to the drains. The program is expected to connect villages which are currently negatively discharging directly to drains. Also, the program will help in solving compliance issues with effluent standards and the subsequent bypass of untreated sewage in overloaded WWTPs.
- Improving health conditions for the program beneficiaries. The poor sanitation in these villages usually leads to many health risks such as waterborne diseases and vector-transmitted diseases.
- Helping in preventing the rising groundwater table caused by leaching of sewage from impervious cesspits. The rising water table leads to many problems in the rural environment such as affecting efficiency of agriculture drainage and soil fertility, affecting stability of shallow foundation buildings, and causing unhealthy ponds of stagnant water in depressions and low-elevation lands.
- The program includes a component for septage management, which is a result indicator that is not a DLI, which will extend the environmental benefits to small remote hamlets that cannot be connected to the WWTPs. In addition to the direct benefits of preventing appreciable quantities

²⁵ Negative discharge refers to the collection of sewage in a pump station that is not connected to a WWTP and discharge of that sewage directly to drains. Negative discharge is mainly reported to be in the Dakahliya Governorate.

²⁶ Assuming wastewater generation of 100 liter per c per day according to the Egyptian Engineering Code for wastewater treatment.

²⁷ Assuming a BOD generation of 65 g/c/d (according to the Egyptian Code) and treatment efficiency of 91 percent to comply with Law 48/1982 standards.

of septage from being inadequately discharged to the environment, this system could serve as demonstration for large similar areas in the country.

- The PAP, described later in this ESSA, includes measures to improve the existing system in terms of sludge handling, handling of solid wastes, handling of hazardous substances, and improving safety, monitoring, and documentation. These improvements could also serve as demonstrations to be followed by other WSCs.

4.3.2 Environmental Risks

The following environmental risks have been identified:

- Risks on land resources receiving sludge and solid wastes separated at the PSs and WWTPs screens and grit removal chambers. Currently, there are no sludge analyses being carried out to check its suitability for use in agriculture and there are no current systems for adequate collection and disposal of solid waste. The PAP introduces measures to initiate effective compliance with sludge-handling standards and the requirements for adequate solid waste management. Any leakage risks in violation of the PAP would be minimum if adequate monitoring and a follow-up system is in place.
- Risks of poor operation of the PSs and WWTPs leading to inadequate effluent quality. The overall impact on surface water quality is expected to be positive as the noncompliance incidents, if they happen, are not expected to have more discharges than the estimated 53 tons of BOD per day that is currently being discharged to the environment. However, there are some risks that some individual WWTPs could have operational problems that affect the final effluent quality standards and reduce the program benefits in correspondent areas. The main factors for possible noncompliance are:
 - o Overloading the WWTPs above their design capacities and leading to either noncompliance or to bypassing excess influent to avoid noncompliance.
 - o Shock loads resulting from strong organic wastewater from animal slurries and septage received from remote areas.
 - o Inappropriate operation by WWTP staff due to lack of maintenance or lack of trained personnel.

The issues mentioned above have been taken into account in the PAP design.

- Hygiene and occupational health risks. Although the PAP includes measures to significantly improve the H&S performance in existing facilities and in construction sites, there are still risks of resistance to change among workers in construction and operation of different facilities. The institutional strengthening and monitoring measures under the PAP are designed to minimize such risks.
- Risks on physical culture resources, especially in the Sharkiya Governorate that is rich in such sites, during the construction phase. As indicated earlier, the existing supervision system is

effective which makes this risk quite minimal. The monitoring and follow-up measures of the PAP will further reduce such risks.

- Risks on the stability of shallow foundation structures during the construction of sewer lines and the PSs. The main risk would arise from dewatering operations that could cause differential settlements for those foundations. Also, the dewatering operations could lead to inundated lands receiving the dewatering discharges. The design and construction supervision of the ISC should make sure that such issues are adequately handled as indicated in the PAP.
- Risks of sewers blocking or leaking during operation. Such risks would be minimized if the design, construction, and operation of such sewers are according to the engineering standards which would be enhanced through the support of the ISCs as indicated in the program design and emphasized in the PAP. The risk would be higher in the case of connecting private networks that are usually not designed and constructed according to the engineering standards. Because the environmental risk of leaving these networks to continue discharging untreated sewage to drains is much higher than the correspondent risks of connecting them and suffering from blockages during operation (which will happen anyway), it is recommended in the PAP that the program should consider connecting those private networks and carrying out, in case they are connected, a technical assessment of their status by the ISC and identifying measures to improve these networks and ensuring their compliance with engineering standards.

Generally, the above risks are not significant or site-specific and can be mitigated and reversed. Again, the PAP discussed later in this ESSA includes measures to mitigate these risks during program implementation.

4.3.3 Environmental Impacts

The following are the main environmental impacts of the program:

- Temporary impacts during construction including noise, emissions from machinery exhaust, dust generation during earthworks, access difficulties in village streets, and handling/disposal of construction waste. Besides being temporary and minor impacts, usually the benefits expected by beneficiaries make them highly tolerant to such temporary impacts. The PAP includes requirements for the ISC to ensure that the contractors are complying with the requirements of the site-specific ESIA developed for each cluster.
- Changing land use over the footprint of the program interventions. Most of the available lands in the program areas are agriculture lands. Constructing PSs and WWTPs will affect the fertility of those lands and will reduce the green cover and its benefits of carbon uptake. The benefits of the program are believed to outweigh the loss of this area. However, the PAP includes requirements for PS and WWTP designers to minimize land use as feasibility could be attained.
- Impacts on disposal sites receiving wastes generated from the project facilities, such as screenings wastes, grit, and other garbage generated during the construction and operation of these facilities. The impacts are expected to be minor as the contribution of such waste volume to the domestic solid wastes received at these sites is relatively low. The absence of engineered landfills in the program areas is an environmental issue nationwide and the environmental

problems at the existing disposal sites cannot be related to the program interventions. The disposal of solid wastes at uncontrolled disposal sites that are licensed by Local Authorities is believed to be the most suitable option for the program facilities. Also, discharging effluents to existing drains will add—even if the effluent is compliant—to the pollution loads received at these drains, but this load could be regarded as negligible considering the current status of drains in the program areas which suffer from significant pollution loads as indicated earlier.

The impacts mentioned above are minor and the program benefits highly outweigh them. The PAP includes measures to mitigate such impacts.

4.4 Social Benefits, Risks, and Impacts

4.4.1 Social Benefits

Brief Overview on the Current Situation and Its Implications

As part of preparing the ESSA, and as explained in section 1.5, a number of consultation activities were conducted to provide more insight on the rural sanitation issues including communities' benefits from being connected, the problems posed by the absence of an appropriate sanitation system, and the anticipated risks and impacts of the project.

In general terms, there was large consensus among the various stakeholders on the pressing need for the program and the large social, economic, and health benefits anticipated from improving the sanitation system. Particularly in the Delta region, the absence of appropriate rural sanitation systems associated with the high underground water table are creating serious health and environment hazards for individuals and properties.

Currently, large segments of unserved local communities²⁸ are using a number of survival strategies to try to cope with the implications of the absence of a sewage system. Those strategies include, but are not limited to, constructing community networks,²⁹ illegally connecting dispose sewage to agriculture drainage, raising the ground level of houses during construction, frequent emptying of septic tanks, reducing the amount of water disposed of in the septic tank by using alternative methods for disposing certain types of wastewater (for example, emptying water used for washing and domestic activities in the street), abandoning the ground floors in houses, and carrying out frequent maintenance and renovation activities to remedy the spillages and cracks occurring on the walls of structures.

Community members were highly vocal in spelling out the negative implications that they are currently encountering as a result of the poor sewage systems. The following are the main negative impacts raised on the current situation:

²⁸ 83 percent of the rural population in Dakahliya, 80 percent in Sharkiya, and 70 percent in Beheira is unserved.

²⁹ Community networks are illegally constructed as an alternative sanitation model. These types of networks do not include any level of treatment and largely allow houses (specifically those adjacent to the drains) to get rid of their sewage directly in the drain. This type of network is usually of very poor quality and low technical standard. It generates a lot of problems for the communities including frequent blockages and overflow.

- **Financial load encountered by the household to cope with the problem.** This mainly includes:
 - ✓ **The frequent need for emptying septic tanks.** The amount that each household pays for emptying septic tanks largely depends on the size of the tank, the number of family members it serves, and the level of the house in relation to the ground level. It was estimated that each household is paying on an average LE 120 to LE 150.³⁰ The amount paid also depends on the width of the street, distance of the house from the main street, and the number of households that order the septic tank evacuation vehicle.³¹
 - ✓ **The frequent and escalated need for repairs and maintenance of the structures.** The unserved communities largely emphasized the negative impacts on the walls of their houses and the various social service institutions within the villages (for example, schools, youth centers, and health units). Repairs for the structures need to be done each year. It is estimated that each square meter of wall requires around LE 30 to LE 40 to complete repairs. This includes removing the external layers of the walls, drying the leakage by using chemicals and drying machines, and fixing new external layers to the walls. The floors of the ground level also need annual repairs.
 - ✓ **Costs associated with health problems.** Communities associated certain diseases like diarrhea for children with the inappropriate sanitation system. It was challenging for mothers to specify exact incidents and cash spend in such health treatment. Communities in served areas also indicated that the incidence of certain pollution-related diseases still occur because there are other problems like the poor solid waste collection and disposal services.
 - ✓ **Reducing the value and lifetime of the various structures.** Reducing the value of land and structures was mentioned to be one key issue resulting from the lack of sanitation, high depreciation, and safety threats to the structures.
- **Health and physical risks due to frequent overflow on the streets, malodorous, and the leakages inside houses.** Children and the elderly were mentioned to be more exposed to these risks.

“Layers of the leaked wall fell on my kids while they were asleep.”

- A lady from Kafr El Noaman, Dakahliya

- **Clashes among neighbors and escalated social tensions in the villages.** The disposal of wastewater on the street is perceived to be a key reason for accidents and clashes among neighbors, particularly in winter.

“We used to fight every day with our neighbors before the sanitation project.”

- A man from El Zankalon village, Sharkiya

³⁰ The average cost per load is LE 25 to LE 30 and it was estimated that each septic tank needs to be emptied twice a month and each time requires around two loads.

³¹ Normally, the vacuuming vehicle serves between 20 and 30 households in one transfer load. If the vacuuming vehicle is ordered by fewer number of households, the charge is usually higher than normal.

- **Additional domestic load on women.** Managing the amounts of water that is disposed into the septic tanks and working to rationalize these amounts using other mechanisms (for example, disposal on streets) add large workload on women as part of their domestic activities.
- **More serious implications on the poor households.** Well-off houses are managing the mentioned costs with difficulty. The wider majority of poorer households in the villages are much more vulnerable to the associated costs as well as the safety and health hazards because they cannot afford to pay for the different mentioned items.
- **Negative physiological and well-being implications resulting from the unhealthy and distressful living environment.** The absence of sanitation is contributing to the unhealthy, less appealing environment inside the villages that is affecting the daily life of villagers on different fronts, including psychologically.

“In the village graveyard, we have a pump that sucks groundwater and it is operating every day. Without that, we find water inside the burial slots. We had to build a second level to be alternatively used in burying. We know this is not right but what else can we do.....I asked my husband not to bury me here when I die...”

- A lady from Kafr El Noaman, Dakahliya

Potential Benefits of the Program

The implementation of the program will help in alleviating negative impacts by providing sanitation services which are in high demand by the poor rural communities of the targeted governorates. The program is expected to help local communities attain a number of benefits and positive returns. Most important benefits include:

1. **Economic saving at the household level.** As explained above, significant budget at the household level is being dedicated to emptying tanks, repairing structures, and covering cost of health care treatment. The economic benefits of increasing property value (land and structures) and the savings on the households’ expenditure are expected to far outweigh the households’ contributions to the project (for example, contribution to land, the households’ connection fees, and the surcharge on water consumption).
2. **H&S benefits.** The program will contribute to a better environment and better living conditions which will positively impact the health of the family members, particularly vulnerable groups like children. Villages are suffering from unsafe and unhygienic conditions as a result of the absence of a sanitary sewage disposal system. As explained above, the safety of houses and structures is threatened so is the safety of individuals. Improving the sanitation system will eliminate this risk. Improved rural sanitation will also reduce the current threat of pollution for drains and waterways that is being encountered as a result of lack of control over the discharge

of human waste. Improving the quality of water in drains will have positive impacts on health, quality of water, and quality of crops.³²

3. **Creating an enabling environment for community development at the village level.** The improved conditions within the villages will boost the sense of well-being of the villagers and will contribute to minimizing the cases of out-migration and stimulate other development activities in the village.
4. **Enhanced level of public hygiene awareness.** To achieve a reduction in health risk as a result of the project, hygiene and awareness campaigns are essential to bring about the desired change in practices and to achieve the positive impacts. The implementation of such campaigns will result in improving the level of local communities' knowledge and awareness related to public hygiene, water, and wastewater-related issues.
5. **Special return and benefits for women and children.** Women are among the key community groups to gain substantial benefits from the project. Key benefits for women include saving time, reduced domestic work, and improved and more hygienic management of household activities. Children, specifically below five years, are more vulnerable and exposed to health implications from unsanitary conditions of the villages. They are more likely to suffer from diarrhea, skin diseases, eyes diseases, and other water-related diseases. This category will benefit from less exposure to these health risks.

4.4.2 Social Risks

The project will entail land acquisition for constructing the PSs and the WWTPs. If not handled carefully, land acquisition may have serious impacts on landowners and land users. At this stage, since the technical design of the program is premature, it is difficult to know the exact amount of land that will be needed. Consequently, it is also difficult to estimate the number of landowners and land users who will be affected by the land transaction process. It is usually the case that an average of around 16,000 m² is needed for establishing a WWTP and 450 m² is needed for the PSs.³³ For the extension of an existing WWTP, the amount of land needed will be determined on a case-by-case basis. Some extensions will not require land and will only entail adding equipment. The severity of the impact of land acquisition depends on the percentage amount of the land to be taken compared to the total amount of land that the farmers own/use, whether the main source of income of the affected person is land-based, and if the affected person will be able (through compensation and the other types of support that could be provided) to restore his income to the level before the program. Land shares and land holdings in Egypt are generally characterized by unequal distributions. A share of less than five feddans represents 88 percent of the number of land holdings in Egypt and 40 percent of the total owned agriculture area in Egypt. Shares of more than 50 feddans do not exceed 1.5 percent of the total number of land holdings

³² The various consultations conducted as part of the ESSA indicated that the quality of water in the agriculture drains is drastically deteriorating as a result of the random discharge of various pollutants including human waste. With seasonal water shortage in canals, and for farmers to rescue their crops, they are sometimes obliged to irrigate using water from the drains.

³³ These estimates are drawing upon the experience in previous projects.

and two-fifths of the total owned agriculture area in Egypt.³⁴ It should be noted that land holdings are generally fragmented and this is the case in the Delta. The case will be likely that each of the privately owned land for a PS will be owned by one farmer while the privately owned land for a WWTP could be owned by one farmer or more. Apart from the landowners, tenants might be using the land through different types of contractual arrangements with the owners.³⁵ Case-by-case analysis will need to be carried out by the WSCs before program implementation as will be elaborated in more detail below.

- **Land-related risks**

Limited capacities of the WSCs to manage land issues. The WSCs do not have sufficient experience and capacity to manage land acquisition and the associated social impacts. Land acquisition, as explained above, is not a core responsibility for the Properties Department which is currently handling land issues in the cases where the WSCs are charged with the land acquisition responsibility.

Potential delay in the time scheduled as a result of land acquisition. Securing land has proved to be a key bottleneck for a majority of the infrastructure projects. Sanitation projects are not exempt from the challenge and risk of securing land. As indicated above, the process of land acquisition for the treatment plants and the PSs involves lengthy steps that usually take longer than expected. The project's timely implementation could be jeopardized in cases when securing the land takes a long time.

Lack of a consistent and transparent approach in managing land-related issues. The process of land acquisition through willing buyer-willing seller or community contribution approaches entails some practices that lack consistency and transparency. For instance, there is lack of meaningful consultation with people affected when the land is acquired through mandatory procedures by following relevant laws and regulations in Egypt. The process tended to be of unilateral nature and this weakens the sense of credibility in the minds of individuals who are affected by land acquisition. When land is acquired through community contribution and despite the positive arrangement of the community-led process for land donation and the fact that it reflects real demand for the project, the process is not transparently defined in the official contract for the land transaction. The individuals who are defined in the contract as 'donors' are actually 'sellers'. A review of model contracts also showed some concerns on how the conditions within the contracts are phrased.

The poor documentation of the donation process under the community contribution approach is another risk on project credibility. Even with the minimal role of the WSCs in the process (because it is community-led), the project's credibility could be easily questioned if the appropriate measures are not carefully taken to organize the donation process. There is also a lack of clarity over the actual steps and procedures that are taken to acquire land. This could be attributed to a limitation in the information sharing process.

³⁴ International center for agriculture studies, 2013.

³⁵ According to the conducted consultations, the most dominant type of agriculture land lease contracts is for the duration of one year renewable.

Livelihoods risk related to lands. On the livelihoods dimension, there is also the risk that certain landowners and users might get impoverished as a result of the land acquisition process. Apart from the official owners of the land, there might be other groups that could be making a living out of the land both legally (formal tenants) or illegally (informal tenants or squatters). These categories are sometimes invisible in the land transaction process and their rights and the impacts on them are not taken into account. Although the common practice of the WSCs is to tackle such cases through a contractual article that imposes all responsibility on the official land seller, this practice is still risky and may result in serious social and economic implications on the individuals and families without legal titles.

Potential emerging disputes over the land that has been acquired before the start of the program. Based on experience of past practice, pending disputes might exist for the land already acquired. In the cases where land acquisition was completed before the start of the program, some risks related to drawbacks in land transaction may emerge (for example, problems in the valuation of land, multiples owners, illegal users, delay in paying payments, and coercion).

Poor management of the temporary impacts related to land. Extending sanitation pipelines and networks and setting up construction camps are potential activities that likely result in temporary disturbance to the use of land (for example, occupying land temporarily) or damage to land-based assets (for example, damaging crops). The common practice of the WSCs is to assign the responsibility of handling such impacts to the contractors. In several cases, the poor quality of the contractors' performance along with weak supervision from the WSC increase the potential risk of leaving affected persons from these impacts without fair compensation.

- **Risk of damages associated with construction activities**

The operations of digging machinery in narrow streets of villages may result in substantial risk to the fragile houses and other structures. As the case for temporary impacts related to land, the process is heavily delegated to contractors for handling. In the cases where the measures are not explicitly indicated in the contract and in cases of weaknesses in the supervisory role over the contractor, the potential risk from such cases may escalate.

- **Non-land-based livelihoods risks**

Currently, the septic tanks vacuuming service is largely operated by the informal and civil sectors within the villages. This includes individuals working as freelance operators and/or CDAs that offer the service. It is expected that after the operation of the project, the need for the vacuuming service will become obsolete. The livelihoods of the current operators might be negatively affected as a result of decreased demand for the service. The previous experience with other villages that got connected suggests that those individuals did not encounter drastic negative impacts because the vacuum vehicles were being upgraded to be used for other purposes (for example, for agriculture purposes).

- **Weak sense of demand for and/acceptance and readiness for projects in certain communities**

As clearly indicated in the assessment above, having a hygienic sanitation system in the rural areas of the targeted governorates seemed to be highly in demand and a pressing priority for the villagers. Despite the fact that this is usually the case in most of the rural areas in the Delta Region, the previous experience showed that this should not be treated as a uniform generalized assumption of all the villages. The sense of demand for the improved system is largely dependent on how the villagers are currently managing the current status and what cost and other troubles does it entail for them. In certain cases, villagers are not sensing the severity of the problem because the price and problems encountered are limited. For instance, in the cases where the community networks are functioning well, villagers do not care too much about the pollution of the drains specifically because they are not fined for polluting the drain. In such a case, the immediate demand for the project and accordingly the sense of ownership might be weak for the following reasons:

1. The limited cost associated with the operation and maintenance for a number of informal communities' networks.
2. The limited level of awareness about the health and environmental implications of discharging in the drains and the absence of linkages between pollution and the negative health impacts at the households' level;
3. Lack of law enforcement in fining violating households; and
4. Potential high startup (including land cost in the case of community donation and the cost of households connection) and/or operation cost (specifically in the case of the decentralized model) to convert to a legal proper sanitation system under the project.

In the meantime, the nature of the communities including their size and remoteness from the sanitation facilities (for example, the WWTP) are technically determining factors for which technology could be applied. In certain cases, small and unconventional decentralized schemes are the only feasible option to connect some remote communities. The scope of the communities' contributions and their role in the projects' management is determined based on the selected technology. In certain decentralized schemes, the role of the local communities and the local CDAs goes far beyond the conventional model of being the 'service recipient' to more of operators of the service. The cost of O&M in the decentralized schemes is higher than the standard cost paid by customers for the conventional networks. In such cases, the role of early consultations and engagement with the communities is of critical importance to ensure that the proposed technology will work. There is a big risk that certain technologies might not be accepted by communities for multiple reasons. Local communities need to be aware of the details related to the rationale behind selecting technologies, the cost that they will bear, the benefits of the project compared to the current situation, and their role in operating the system. Communities should have a say in the design and operation model of these schemes to avoid the risk of weak acceptance and low participation.

Moreover, for the communities that would be served through decentralized schemes, a certain level of capacity is always needed to ensure the success and sustainability of these schemes. This capacity

includes the existence of CDAs/NGOs with technical and financial capabilities to operate and maintain the project as well as clarity in the specific roles and responsibilities of each local stakeholder, including communities (that is, their obligation to pay and O&M). This kind of prerequisite is not available for every community. The risk of limited capacities to manage decentralized schemes may pose a serious threat to the success and sustainability of these schemes.

Handling the project through a 'one model fits all approach' may pose a real risk because the nature of the communities to be served, their current story without a sanitation system, their economic level, their demand, and their affordability are all changing factors from one community to the other. Top-down approach in planning and the lack of engagement with the villagers may lead to a weakened sense of ownership of the projects. One key lesson learned from previous rural sanitation projects is that the absence of a sense of buy-in and ownership normally results in serious challenges in implementation.

- **Risk of social tensions as a result of exclusion of certain villages**

For multiple technical and financial reasons, certain villages might be left behind without benefiting from the project. The risk emerges if the excluded villages are located near other villages that will be receiving the service. Leaving villages behind may create a sense of alienation, marginalization, and discrimination against the local residents of these villages. The previous experience demonstrated the risk of leaving communities behind and how this risk might escalate to create social unrest and to affect the targeted villages (for example, by preventing the contractors from work). Weak communication with those unserved communities, including communicating the selection criteria, contributes to a deeper sense of anger. The risk in such cases expanded to affect the time schedule of the contractors working on the ground in other villages and resulted in drastic delay in the project delivery.

- **Risk related to affordability of poor households**

Affordability of poor households to the connection fee, land, and maintenance cost is one key potential challenge. In most of the villages, land for the PSs is acquired through community donation mechanisms as explained above. In villages with supportive community leaders and CDAs, it is largely the case that poor households' contribution to the land is cross subsidized by the remaining better-off households. This is not a structured mechanism for contribution but rather a community initiated arrangement within the framework of social solidarity. In certain villages, poor households are not supported and they are not able to contribute to the project. The same inconsistency applies to the payment arrangement for the households' connection fees. The discussion with the WSCs revealed that some WSCs do not have any mechanism for handling the cases of households that cannot afford the households connection. Other WSCs cooperate with the CDAs and community leaders to get information about the poor cases and support them through a zero-interest instalment mechanism. In the meantime, some WSCs are making the zero-interest instalment schemes available universally and they collect the instalment for the connection fees on the water bill for all the interested households. The discrepancies in the level of attention given by various governorates to the support of poor households is a risk that may lead to inability of poor households in certain areas to access the service.

It is worth noting here that the HCWW previously initiated a pro-poor mechanism to handle the same challenge of weak affordability to the connection fees for the water connection. An internal memorandum was issued by the HCWW and was sent to all WSCs stipulating the reduced cost of installing the connections. The application of the system of reduced fees included involvement from the CDAs who provide information on poor households through social surveys.

Another relevant initiative is the revolving loan program that the United Nations Children's Fund (UNICEF) is carrying out in cooperation with the WSCs in Upper Egypt to connect water to the poor households. As part of the initiative, a unit is being established inside the WSC to handle the revolving fund.

The HCWW and the WSCs strongly believe that the pro-poor mechanism to be established for the program should benefit and build on the existing initiatives.

- **Potential escalation of unresolved community concerns/complaints**

In all the previously identified risks, one key threat that crosscuts various issues is the absence of an appropriate consultation system and a local level grievance system to handle any potential impact or risk that may emerge on the ground (for example, damage to houses and complaints related to land issues) before they escalate. This is specifically true during the design and construction phases. The current existing mechanisms for handling grievances and complaints, as elaborated in sections 3.2.1 and 3.2.10, tend to be more oriented toward the operational aspects of the running systems rather than the aspects related to planning, design, and constructions of new projects.

4.4.3 Social Impacts

Potential Impacts during Construction

The construction phase is expected to generate a number of local job opportunities for the villagers who can engage with contractors in various activities associated with the construction phase. This is specifically applicable for low skills jobs related to construction. In the meantime, a number of negative impacts might result from the construction phase of the project. This most importantly includes:

- Temporary impacts on land including the temporary use of land for construction camps and materials' storage and the potential damage to crops during pipelines expansion and construction. As explained earlier in this section, the exact magnitude of this impact and the number of potentially affected individuals is difficult to determine at this stage.
- Permanent land acquisition and potential implication on the livelihoods of a number of rural individuals and families. As explained earlier in this section, the exact magnitude of this impact and the number of potentially affected individuals is difficult to determine at this stage.
- Inconvenience to the local communities and potential implication on the local activities within the villages, including distracting local business.
- H&S risks to workers and local residents within the project site.
- Potential damage to fragile structures during construction works.

Potential Impacts during Operation

As elaborated in section 4.2.1, numerous benefits and positive impacts are anticipated from the operation of rural sanitation projects. Returns entail benefits on health, economics of the households, enhanced level of awareness, and special benefits to women and children.

In the meantime, a number of social risks were identified in section 4.2.2. A sound and inclusive project design, an accountable system to engage and consult with local communities, and a diligent system for handling land-related issues are key guarantees for successful project implementation. The risks should be handled carefully through actions and indicators as part of the PAP.

5 Program Capacity and Performance Assessment and Gap Identification

5.1 Performance of the WSCs with Regard to the Legal and Regulatory Framework

5.1.1 Performance of the WSCs with Regard to the Legal and Regulatory Framework on Environmental Aspects

The environmental laws and standards are believed to sufficiently address the environmental risks and impacts of the sanitation sector in Egypt. They meet international standards and the Bank Group's EHS Guidelines with a few gaps as indicated earlier in chapter 3. The main gaps could be summarized as follows:

- There are no clear guidelines that control the management of septage. Although there is legal prohibition on discharge to watercourses, the difficulty in enforcing such a prohibition and the absence of other practically available options make this legal requirement ineffective. The program design includes a result indicator for septage management that should provide incentives for septage tankers to evacuate the septage at the sewerage system and also should allow for more effective inspection of illegal discharges to watercourses.
- Similar to the above issue, although there is legal prohibition to establish private sewers that discharge to watercourses, no enforcement mechanisms or alternative solutions are available to those networks. The networks achieve important benefits for the villages where they serve. However, the legal framework and technical guidelines do not allow for a sound solution for those networks. The program design would allow for connecting those networks with due diligence assessment of their conditions through the ISC and taking feasible measures to improve their condition.
- There are no explicit standards against land contamination. Also, there are no explicit requirements for ensuring secondary containment of hazardous substance storage tanks that covers 110 percent of the storage capacity and for taking adequate measures while filling the tanks. This gap would be bridged by including such requirements in the ToRs of site-specific ESIA's which will be prepared and supervised by the WSCs.

With regard to implementation of and compliance with the laws and standards, there are some weaknesses and gaps in the system, including:

- The strict punishment of noncompliant WWTP operators sometimes gives opposite results as they tend to bypass a portion of the received influent for meeting the effluent standards.
- Although the 'negative discharge' by the PSs is done as a last resort in the absence of sufficient finance, there should be an assessment of the advantages and disadvantages of starting the connections without having enough resources to discharge the collected wastewater in a WWTP.

- Most of the WWTPs do not keep a documented environmental register that is frequently updated according to the requirements of Law 4/1994.
- Most of the WWTPs do not handle sludge, solid waste removed by screens, or removed grit according to law requirements. This needs to be improved as indicated later in the PAP.
- The safety procedures need to be improved and integrated within the procedures for design, construction, and operation of networks and the WWTPs.

The above-mentioned gaps have been considered in the design of the PAP to ensure consistency with the core principals of the PforR OP 9.00.

5.1.2 Performance of the WSCs with Regard to the Legal and Regulatory Framework on Land Acquisition

An analysis of current procedures and the regulatory framework related to land revealed that the existing laws and regulation have a number of positive aspects in dealing with land acquisition. This most importantly includes provisions related to compensation, sharing information with the affected persons, rights of affected persons to appeal, and provisions related to temporary damage and associated compensation.

In reviewing the legal and regulatory framework against international best practices, a number of gaps were identified, but most importantly:

- **Consultation with affected individuals.** The legal and regulatory framework applied does not stipulate clear provisions for consultation with persons affected by the project and does not indicate any rights for the affected persons in selecting appropriate and technically and economically feasible resettlement alternatives and compensation alternatives. Also, there is no stipulation on the inclusiveness of the consultation process (gender, disabled, and youth).
- **Identification of entitled categories.** With regard to entitled persons and entitlements, some of the groups who could potentially be affected are not explicitly indicated. Squatters and formal and informal tenants are among the groups that could encounter some serious social and economic implications as a result of the land acquisition process without having a legal entitlement to compensation. In the meantime, the Egyptian legal framework for handling land acquisition does not stipulate any special attention, consideration, or special measure to be taken for the vulnerable groups (for example, individuals below the poverty line, the landless, female-headed households, the elderly, and handicapped).
- **Absence of proactive local-level mechanism for handling grievance.** As stipulated in the relevant laws, persons affected by the project have the right to object and appeal. However, the stated options for handling grievance are through the court. There is no mention for local modality to proactively handle complaints to minimize the cases that are escalated to the court.

- **Land valuation process.** The relevant law on land acquisition stipulates the market price and the committees to be formed for the valuation process. However, the valuation process of land might entail some inconsistency because of the absence of a strong formal land market in Egypt.
- **Replacement cost.** The legal framework does not indicate that the valuation of land and affected assets should consider the replacement cost.

5.1.3 Performance of the WSCs with Regard to the Legal and Regulatory Framework on Community Engagement

The Public Relations and Awareness Department in each of the WSCs operates against an annual work plan that they develop under the supervision and guidance of the General Department of Public Awareness and Customers' Service in the HCWW. The work plan is meant to include all the activities that the department will be doing during the year to specifically tackle the awareness raising part of their responsibilities. The annual plan is discussed among the teams of the same department in all the WSCs and the HCWW. The plan is approved by the HCWW chairman before the WSC takes the responsibility of implementing it. The work plans of various WSCs are almost uniform. Boxes 3 and 4 present an overview on the work plans.

Box 3. Work Plan Objectives

- Raise the awareness of citizens.
- Enhance the concept of water rationalization.
- Enhance community participation to develop the communities.
- Contribute to a high level of efficiency in the collection of fees and revenues.
- Raise internal awareness for the crew inside the WSCs.

Box 4. Examples of Key Activities Within a Work Plan

1. Prepare and finalize the plan and obtain the approval of the HCWW chairman.
2. Form the civil society committee.
3. Carry out a 'Water Campaign'.
4. Implement activities for people with special needs.
5. Implement activities for school children.
6. Cooperate with universities and youth camps.
7. Engage with youth, culture, and media centers to publish awareness messages.
8. Cooperate with the National Council for Women.
9. Mobilize community participation and civil society organizations (CSOs).
10. Cooperate with the youth union/groups.
11. Cooperate with donors.
12. Raise awareness through religious institutes.
13. Carry out awareness campaigns.
14. Carry out fees collection campaigns.
15. Carry out campaigns on illegal connections³⁶ (stolen connection).

³⁶ Illegal connections (stolen connections) entail the informal water and wastewater connections that some community members install in the governmental network. Through these connections, the installed household gets the service without being officially charged.

16. Conduct feedback surveys.
17. Organize meetings and share experiences.
18. Raise awareness for government offices.
19. Participate in the official national occasion (for example, Environment Day).
20. Conduct an annual exhibition for awareness materials (for example, manuals and brochures).
21. Prepare awareness messages and awareness materials for the Hotline and the customer service centers.
22. Raise internal awareness for the WSCs crew.

The reviewed work plans showed that a number of key sub-activities have strong linkages to sanitation projects, but most importantly on:

- Raising awareness (with special learning and experience-sharing activities directed at schools).
- Providing septic tank vacuuming service to the households.
- Contributing to the removal of illegal (stolen) connections.
- Carrying out community surveys for monitoring the water and sanitation service.
- Cooperating with the CDAs/NGOs in serving communities by providing untraditional sanitary services.
- Cooperating with a wide range of governmental offices (for example, irrigation authority, health, education, and agriculture) and CSOs (for example, women representatives).
- Carrying out surveys related to the customer service center and following up on the complaints on the Hotline.
- Preparing awareness material.
- Carrying out cross-training among the WSCs.

The annual work plans are being revisited and discussed with the General Department of Public Awareness and Customers' Service at the HCWW at a semiannual meeting. Some modifications may take place and get clearance from the HCWW based on the actual need.

Monitoring System for Annual Work Plan

According to the discussion with the HCWW General Department of Public Awareness and Customers' Service, the performance of the Public Relations and Awareness Department is assessed based on the successful completion of the annual work plans. This is evaluated based on the following performance criteria that involve:

- The ratio of completed activities to the planned;
- Regularity in sending monthly reports to the HCWW;
- The geographic range and spread of the activities;
- Number of participants from public service members against the number of water subscribers;
- Ratio of completed community survey questionnaires to the number of water subscribers;
- Ratio of completed company staff survey questionnaires to the targeted number; and
- The feedback of the focal point from the targeted entities (for example, youth centers and CDAs).³⁷

³⁷ This criterion has been recently introduced as one of the verification monitoring tools. The WSC is now being asked to collect the contact information of focal points for each of the awareness activities. As part of measuring the performance, the HCWW is using a verification method to ensure that the activities were successfully and

Table 14. Key Indicators from the 2014 Evaluation Report (Performance-related Awareness)

Key indicators	Beheira	Sharkiya	Dakahliya
Number of awareness members in the WSC	17	3	6
Number of completed field surveys	3,012	1,557	436
Percentage performance of the WSCs' awareness teams	70 (graded 7 on 25)	68 (graded 9 on 25)	60 (graded 11 on 25)

Source: The General Department of Public Awareness and Customers' Service, 2014

An analysis of the work plans and the monitoring process along with consultations with the WSCs revealed a number of gaps in both the procedures as well as the institutional arrangements. This will be analyzed in more detail in section 5.2.3.

5.1.4 Performance of the WSCs with Regard to the Legal and Regulatory Framework on Grievance Mechanism

As elaborated in detail in section 3.2.9, the official grievance-handling mechanisms are mainly the Hotline for the various types of complaints related to the O&M of water and wastewater projects and the customer service centers for the issues related to billing and subscriptions.

With regard to the up-and-running mechanisms, more specifically the Hotline, the following are the main identified gaps:

- Because the system is not fully automated and technology is not being utilized to the maximum, there are deficiencies in the mode of operation of the Hotline; around 50 percent of the calls made in 2014 received a busy line signal.
- Despite the huge popularity of the Hotline service across the country, informal channels including direct complaints to technicians are more widely used than the Hotline. This could be attributed to the following reasons: (a) some cultural and perceptual issues that make customers believe that face-to-face communication might be more efficient than a call; (b) lack of efficiency of the Hotline due to operational challenges (for example, busy line and unanswered calls); and (c) face-to-face complaints, particularly those which are communicated to maintenance teams, are responded to quicker.
- Weakness in the system functionality is leading to a problem in the monitoring system. Monitoring is done only for selected cases because the HCWW does not have full access to all the calls due to database shortfalls.

efficiently completed. The HCWW connect with the sessions' beneficiaries and external focal points (for example, CDAs) to assess the quality of the completion of the activities.

- Time interval for resolving the complaints is not clearly communicated to the complainers. By design, the system has a specific time duration to resolve each type of problem or complaint. However, this time duration is usually exceeded and it is never clearly communicated to the complainers.
- A key shortfall related to the existing mechanism is the dominant orientation to the O&M. Grievances related to projects planning, design, and construction are not handled through the existing mechanism (for example, issues related to potential construction impacts like damage to land or houses and issues related to land acquisition).

5.2 Adequacy of Institutional Arrangements and Capacity

5.2.1 Adequacy of Institutional Arrangements and Capacity on Environmental Aspects

Environmental planning for the rural sanitation sector, including preparing the ESIA's, is mainly the responsibility of the NOPWASD as it is mandated for capital investments. Therefore, the capacity within the WSCs for carrying out or administering the preparation of the ESIA's by consultants is limited. In the governorates where the ISSIP 1 and ISSIP 2 were implemented, the preparation of the ESIA's was headed by the HCWW and the environmental personnel in its PIU and the involvement of the WSCs was mainly during the implementation and follow-up of the ESMP measures.

On the operational side, the existing institutional arrangements at the WSC level comprise, within the organizational structure, the Sector of Quality Control, Labs and Environment mainly responsible for effluent quality and labs, and the General Department for Occupational Health and Safety which is responsible for H&S issues. None of the two departments have environmental management of sanitation facilities on their mandate.³⁸ The institutional weaknesses of the existing system in the WSCs could be summarized as follows:

- There are no mandates or capacities at the WSC level for preparing the ESIA's—whether directly for small projects or by recruiting consultants for larger projects—and following up on their environmental requirements. This has been addressed in the program design by having an environmental specialist at each of the PIUs at the WSC level supported by an environmental specialist at the PMU level and the already existing environmental specialists of the HCWW. The ISCs will also support the WSCs in implementing ESMP measures and ensure including them in the construction and operation of the program facilities.
- The Quality Sector focuses on effluent quality and does not have sufficient equipment and trained personnel for collecting and analyzing samples of mature sludge. This is one of the main recommendations of the PAP which includes providing sufficient investments and creating a new Department for Sludge Quality.
- The Occupational Health and Safety Department does not have a mandate to review the PS and WWTP designs to ensure implementation of the H&S design measures. Also, the department

³⁸ It is worth noting that environmental management of ISSIP 1 and ISSIP 2 was done through a special institutional arrangement in the PIU and the RSUs in the WSCs and not through the existing structure of the WSCs.

does not have sufficient manpower to follow up on H&S measures at all sanitary facilities within its domain. The above weaknesses are addressed through the PAP by including H&S review of the designs prepared by the ISC along with providing necessary modifications to existing WWTPs to improve their H&S condition. Providing sufficient staff to frequently inspect H&S conditions at the PSs and WWTPs is also one of the PAP measures.

- The operation of the WWTPs is not carried out according to standard procedures that take environmental aspects of the operation into consideration. The operation is carried out under the supervision of the Operation Sector and currently the main focus, as mentioned earlier, is meeting the effluent standards. However, the handling of hazardous substances, handling of wastes, monitoring of bypass, and documenting safety incidents are not included in the standard procedures. The PAP requires inclusion of such measures in a standard documented O&M manual for each WWTP.

It is worth noting that, currently, the HCWW has started with the WSCs with support from the German International Cooperation and a certification system for the WWTPs according to the TSM. The TSM is a quality management system that aims to ensure that water and wastewater conform to Egyptian regulations, codes, laws, and management requirements in the fields of human resources, occupational H&S, O&M, and quality assurance. Improvement of the WWTPs to comply with the TSM would improve its general performance against certain KPIs and adding the environmental management dimension to this would be required under the PAP as further indicated in chapter 6.

5.2.2 Adequacy of Institutional Arrangements and Capacity on Land Acquisition

An analysis of the existing institutional arrangement and capacity for handling land acquisition issues showed a number of shortfalls and gaps that need to be addressed to allow for an enhanced and transparent system in dealing with land acquisition. The following are the main identified gaps:

- Land issues are being largely managed through a **technical and legal orientation**. The Properties Department which is currently mandated with the land issue is one of the legal offices within the WSC. The department which is interacting with the local communities and has mandates for handling social aspects does not have a role to play in the process of land acquisition (including consultations with affected individuals).
- There is **substantial lack of capacity in dealing with the social impacts** related to land acquisition. This includes, but is not limited to, lack of experience in dealing with complaints related to land; lack of any knowledge of the potential adverse impacts of land acquisition on people's income and livelihood; and lack of any skills to carry out consultation with landowners.
- Absence of the **inter-agencies coordination role** to facilitate the process of obtaining approvals.
- **Shortage in human resources** to handle land acquisition issues in a more diligent and transparent manner.
- **Absence of institutional responsibilities and mandates for local-level grievance** to handle land-related complaints and concerns.

5.2.3 Adequacy of Institutional Arrangements and Capacity on Community Engagement

The conducted institutional assessment for handling community engagement showed that existing resources and mechanisms for managing community engagement has a number of strengths that could be summarized as follows:

- **Availability of teams** to handle the issues related to community awareness and communication at the governorate level.
- The activities of the Public Relations and Awareness Department at the WSC level is conducted based on an **agreed upon annual work plan**.
- There is an **M&E system to track the performance of the WSCs**. The HCWW evaluates performance against the work plan on an annual basis and ranks the WSCs.
- There are a number of **community-based monitoring techniques** for measuring satisfaction with the service, the problems encountered by customers, and the efficiency of the awareness and grievance systems (for example, surveys).
- **Availability of awareness and communication** guidelines and good quality materials that are used by the staff.

In the meantime, a number of institutional gaps were identified. These gaps are concerning the mandates, accountability, the amount and capacities of existing manpower, and the resources available to them. The following section presents the main identified and analyzed gaps.

- **Limitations in the mandates of the WSCs' scope and the WSCs' capacity**

The HCWW and the affiliate WSCs are specifically mandated with the O&M. Currently, the role of the WSCs in the needs assessment, design, planning, and construction of the rural sanitation projects is very limited. Apart from cases where land is donated for the PSs and the WSCs get engaged in the process, no actual interface with local village residents starts until the project is up and running on the ground. Even in the cases of land donation, the Department of Public Relations and Awareness Raising does not get involved in issues related to land.

- Community engagement tends to be defined by the WSCs as raising the awareness of the communities rather than engaging with them in the process of decision-making. In the meantime, water supply and water rationalization are priority scope areas for the WSCs that far overweigh sanitation. No structured uniform mechanism is in place for the WSCs to engage with poor households to facilitate their access to household connections or to get communities' views on the design and planning of certain sanitation projects.
- **Shortage in human resources and lack of staff representation at the *markaz* and village levels.** In addition to the lack of comprehensiveness in the scope of work of the Public Relations and Awareness Department, the conducted assessment revealed a significant shortage in the available human resources at the WSC level. While the number of staff in Dakahliya is six, only two staff are in charge in Sharkiya. In the meantime, the interviewed WSC members expressed concern about the fact that no support teams are available at the *markaz* (where the WSC

branches exist) or the village levels. This shortage in human resources is affecting the capacity and scope of outreach in rural areas.

High staff turnover rate. Because raising awareness and the tasks related to community engagement are perceived to be of lower profile, the department generally witnesses a high turnover rate with staff more interested in joining other departments closer to management.

- **Lack of a monitoring system to measure the impacts and the efficiency of the implemented community-based activities including awareness raising**

The current monitoring system that the HCWW is using is oriented toward monitoring the completion of activities rather than measuring their impacts on the communities. For instance, the current method for monitoring awareness raising is by completing the planned activities and not measuring their impacts on the targeted communities.

- **Lack of resources for logistical support**

The lack of resources for the required logistical and administrative support is one of the key common challenges among all the WSCs, with some slight exception in the case of the Beheira WSC. Members of the WSCs mentioned the challenges they face due to the lack of supportive equipment like laptops and cameras and how this is having an impact on their ability to work.

- **Inconsistency in the capacities of the assigned teams**

There is inconsistency in the level of capacities among the three governorates. While a number of assigned staff have good technical and communication capacity, other staff are not equally qualified. In general terms, the capacities needed to carry out community engagement seemed to be absent. There is significant limitation in knowledge related to community consultation, handling and mitigating social impacts, handling grievance, and handling land acquisition issues.

5.2.4 Adequacy of Institutional Arrangements and Capacity on GRM

This is elaborated in detail in section 5.1.4.

6 Recommended Actions to Address Identified Risks and Gaps

6.1 Actions to Address Identified Environmental Risks and Gaps

The measures and actions recommended in this chapter have been identified according to risks, impacts of the program, and the gaps identified in the existing system.

6.1.1 Implementation Support for Environmental Aspects

The institutional support for managing the environmental aspects of the PAP will be as follows:

- The main implementation responsibility of the PAP will be on the PIU which should recruit an environmental specialist on a full-time basis. The PIU environmental specialist in each WSC will be responsible for the environmental assessment of the interventions at each program cluster; following up on the implementation of the ESMPs; ensuring that the actions taken by other departments are done in a timely manner; preparing environmental registers and progress reports; and implementing monitoring measures. The three environmental specialists at the PIUs will be supported by:
 - o An environmental specialist at the PMU level who is expected to be recruited with sufficient environmental assessment and management experience (more than 10 years of experience) to support and build the capacity of the PIUs. It is expected that during the first stages of the program, the PMU environmental specialist will play a major role in the ESIA process by providing the PIUs with ToRs and templates, helping in contracting ESIA consultants, following up on the approvals of the EEAA, and responding to different comments so as to ensure that the quality of the ESIA would adequately address the site-specific environmental risks. The role of the PMU environmental specialist is expected to be more of a supervisory role with the advancing of the program as the PIUs would have gained the experience to handle the ESIA toward the end of the program.
 - o The environmental specialist of the HCWW who will also provide support in reviewing the ESIA and providing an insight into bottlenecks usually confronted in other projects and how to overcome them. The environmental specialist of the HCWW is already onboard and has worked on a long list of similar projects implemented through the HCWW.
- The ISC would support the environmental specialists of the PIUs on implementation and supervision of site-specific ESMPs. The WSCs will take advantage of the ISC role in construction supervision to overlook the environmental management of construction contractors.
- The Quality Sectors in the three WSCs should either introduce a new department for sludge quality or add the sludge quality to the mandate of the Effluent Quality Department. The WSCs should procure sufficient laboratory equipment in the labs of the WWTPs and the central labs at each WSC to analyze sludge. Sludge analysis should be done once the sludge maturation period

is completed (six months) at each WWTP. A report is sent to the central lab to identify the suitability for sludge sale and the sludge is sold at the WSCs accordingly. It should be noted that the contracts for sludge selling, if analysis proves its suitability, should include restrictions for sludge application as indicated in Decree 44/2000.

- The Occupational Health and Safety Department should add the following responsibilities to its mandate:
 - o Reviewing designs of new WWTPs and PS and ensuring that sufficient H&S measures are taken.
 - o Following up on the adherence of WWTP and PS staff to the H&S site-specific measures. An inspection report should be prepared for each facility on a quarterly basis. To sufficiently implement this, it is expected that more H&S staff would be recruited to inspect each facility on a quarterly basis.
- The Operation Sector should prepare an O&M manual specific for each WWTP, including the environmental measures included as recommended by the environmental specialists, and should ensure that WWTP managers adhere to such manuals.

6.1.2 Exclusion of High-risk Activities (Category-A-Type Investments)

The program interventions are limited to sewerage networks and small-scale WWTPs, a maximum of 30,000 m³ per day as indicated earlier. No Category-A-type interventions are included within the program. However, the NRSP interventions in the three governorates include construction or extension of three relatively large WWTPs, which could be regarded as Category-A-type intervention due to their size, as follows:

- Gharb El Mansoura WWTP, which is currently under construction with a design capacity of 135,000 m³ per day. In its first stage, the WWTP will serve five villages in Dakahliya Cluster 41 with a total current population of about 60,000.
- Kafr Abo Naser WWTP, which is also under construction with a design capacity of 88,000 m³ per day. In its first stage, the WWTP will serve 10 villages in Dakahliya Cluster 32 with a total current population of about 70,000.
- Aslougy WWTP, which is currently operating with a capacity of 80,000 m³ and the NRSP would introduce expansions of an additional 50,000 m³ per day. In its first stage, the expansion will serve two villages in Sharkiya Cluster 36 with a total current population of about 40,000.

These WWTPs are not included in the PforR program and their completion is not required to achieve the PDO or the DLIs. It would be required to maintain the borders between the government program (NRSP) and the PforR program.

- The PMU and PIUs in Dakahliya and Sharkiya WSCs should make sure that the interventions of networks, PSs, and WWTPs in the three clusters mentioned above are not included in the aggregation of results for DLI 1.

- The IVA should ensure that any interventions in the clusters mentioned above are not included in the aggregation of the DLIs.

6.1.3 PAP for Environmental Aspects

The following measures are proposed for minimizing environmental risks and mitigating environmental impacts:

- The PIUs, with support from the PMU and HCWW, should initiate the ESIA process for new clusters by preparing ToRs for the ESIA by putting sufficient weight on covering issues identified in this ESSA and site-specific issues.³⁹ The ESIA should be approved by the EEAA before initiating any civil works at the project level. The site-specific ESMP measures should be included in the construction contracts and WWTP manuals. The ISC should supervise the implementation of such measures and prepare progress reports.
- Sludge analysis should be included in the regular operations of the Quality Sector in the WSCs. The analysis should be carried out for each batch of matured sludge against the standards of Decree 44/2000. In case the sludge complies with the standards, it could be sold to contractors on a condition that the contractor would be responsible for making farmers aware of the application rate of sludge. This responsibility should be reflected as an article in the contract. In case the sludge does not comply with the standards, it should be transferred to an adequate disposal site.
- The Operation Sector for each WWTP should prepare an O&M manual specific to each WWTP. The manual should include standard procedures to be followed under normal conditions as well as during emergency conditions. The PIU environmental specialist should frequently monitor adherence to this manual. The manual should include the following measures:
 - o Bypass discharges should be measured and recorded in the environmental register of the WWTPs. The PIU should make sure to supervise this by observing the bypass line during site visits and comparing records of discharges of the PSs against received discharges measured at the WWTPs.
 - o Solid waste separated from screens and grit chamber should be collected at a certain location of the WWTPs and transferred on a daily basis to disposal sites identified by the Local Authority. The PIU should follow up on the implementation of this measure through site visits.
- The new code of rural sanitation should have measures that take rural shock loads into consideration when designing the WWTPs. The code should address common shock loads from septage and animal slurry in rural areas. The code should also provide technologies for minimizing land requirements for the PS and WWTPs in the Delta area. The code shall be

³⁹ The ToRs of site-specific ESIA should address risks on land quality and requirements for secondary containment of hazardous substance tanks as these were identified as gaps in the legal system.

developed by the NHBRC with close coordination from the PMU. The ISC should consider those factors while designing new PSs and WWTPs.

- The ISCs should provide sufficient site supervision of contractors during excavation works to report on any chance finds of culturally valuable objects.
- The Occupational Health and Safety Department should conduct a needs assessment for existing PSs and WWTPs to improve the H&S standards. The department should review the designs of new facilities and provide comments as needed. The department should conduct quarterly inspection for each WWTP and PS to ensure compliance with H&S standards.
- The ISC should review the compliance of construction contractors with H&S requirements and include any observations in site supervision progress reports. Also, the adherence of contractors to the ESMP measures for minimizing temporary construction impacts should be included.
- The ISC should ensure that dewatering operations do not affect the structures in neighboring areas and that it is not discharged in land. Site supervision progress reports should include any relevant observations.
- Connecting the PSs that are negatively discharging to drains and private networks should be calculated among the results of DLI 1, which will promote the environmental benefits of the program. In the case of connecting private networks, the ISC should assess their conditions and identify necessary measures to improve their quality to prevent or minimize clogging and leakage.
- The PMU and HCWW should establish a dialogue with the MWRI and MoH regarding possible modifications to Law 48/1982. This would help in making the PMU technically and financially prepared for any future modifications of the law.

6.2 Actions to Address Identified Social Risks and Gaps

To address the previously identified social risks, the design of the program will need to take into consideration the number of measures indicated below. Enhancement of institutional capacities should involve assigning the required human resources, training them, and equipping them with the tools required for them to implement and monitor these measures. According to the design of the DLIs and the PAP, capacity enhancement will adopt an incremental approach that allows the teams in charge to move with the identified measures and actions into actual implementation. The action to address the identified risks will entail procedural, executive and institutional dimensions. They will largely revolve around two main dimensions: (a) land acquisition and (b) community engagement.

One key crosscutting dimension to the proposed actions is women inclusion. As indicated in the analysis of the ESSA above, women are critical players who especially encounter harsh implications from the absence of an appropriate rural sanitation system. Women inclusion and engagement are key prerequisites for the success and sustainability of the program. Measures should be designed in a manner to ensure that women (as well as other marginalized groups) are getting equitable access to the project benefits and are not specifically encountering negative impacts. This will be highlighted in the section 6.2.1.

The key proposed measures are summarized below.

6.2.1 Develop a Standardized Approach for Land Acquisition

1) *Establish an inclusive SOP*

- Prepare an SOP for the different approaches and procedures for acquiring land. The SOP should be prepared within the framework of the key principles of international policies and best practices.

Box 5. Basic Content for the SOP⁴⁰

- i. Regulating laws
- ii. Approaches for land acquisition
- iii. Proposed improved procedures
- iv. Principles:
 - ✓ Entitlements
 - ✓ Valuation of compensation
 - ✓ Consultation with affected individuals
 - ✓ Information disclosure
 - ✓ Grievance mechanism
 - ✓ Inclusion of vulnerable groups (including women, the elderly, and the landless)
- v. Planning the resettlement process
- vi. Documentation process
- vii. Monitoring the impacts related to land acquisition:
 - ✓ Tools
 - ✓ Reporting
- viii. ToRs and performance indicators for the 'land acquisition officer'
- ix. Key executive steps for finalizing land acquisition process (including the checklists and forms to be used and the steps to be followed)

As indicated under the consultation discussion and the various sections of the ESSA, there is a strong recognition among the teams of the WSCs of land as a bottleneck and clear openness for adopting a streamlined and strengthened approach in acquiring land. Commitment to the WSCs' application for the SOP should be ensured. This could be attained through the following:

- Ongoing consultation during the preparation of the SOP will strengthen the sense of ownership and ensure that the proposed procedures are technically doable.
- Wide dissemination of the SOP and building capacity on the tools for its application should be assured.
- The SOP should be clearly reflected in the responsibilities (ToRs) of the assigned teams to ensure that the stipulated procedures are actually followed.

⁴⁰ The content is not inclusive and will be developed further as part of more comprehensive ToRs to be developed for preparing guidelines with guidance from the Bank.

- Linkages between the application of the SOP and the performance of the WSC teams.

2) Streamline the process of land acquisition approvals among various ministries

- Develop an MoU between the ministry and different entities in charge of provision of the land approvals. These entities include the line ministries as well as the concerned governorate and LGUs. This MoU should work as an umbrella agreement to set forth the cooperation among the various entities to ensure securing approvals on a fast track basis and work to prevent any potential delay in the process of land acquisition. The MoU should stipulate any required measures to be taken (for example, establishing a higher committee or governorate-level committee) to ensure close coordination for timely delivery.

3) Handling potential risk related to the land that was acquired before the start of the program

- Conduct of a post verification or review by the WSCs for the land acquisition cases that were completed before the start of the program to ensure that the process of land transaction was completed satisfactorily (for example, documentation, compensation value, entitled groups, and full payment paid).

4) Strengthen the capacity of the WSCs to manage land acquisition

- Assign staff to work in each of the governorates to fill in the function of the land acquisition officer.⁴¹ The role of these assigned members should not be of a pure legal nature but rather a combination of social and legal backgrounds to ensure sufficient consideration of social impacts related to land acquisition. A senior land acquisition officer should also be assigned within the PMU at the central level to ensure close coordination with the assigned governorate staff. If the assigned social officer has good knowledge and experience about land acquisition, he or she might be assigned the land responsibilities in cooperation with the Legal and Properties Departments. The land acquisition team should coordinate closely with the Legal and Properties Departments with the objective of addressing the social implication related to land and ensuring that the various principles according to the SOP are addressed. Training and capacity building should be provided to this team as indicated below.

Box 6. Preliminary Responsibilities for the Land Acquisition Officers⁴²

At the PMU level

⁴¹ Assigning a team in the PMU and the WSCs to be fully in charge of 'land acquisition' (to work with the legal team) is an optimal scenario. If human resources for this purpose are not available, these mandates should be handled by the community engagement teams.

⁴² Those are not inclusive ToRs for the land acquisition officer. Comprehensive ToRs will need to be prepared with guidance from the Bank. It is also possible to revise the existing ToRs of the Properties Department to ensure that the proposed responsibilities are included.

The senior land acquisition officer at the PMU level should be in charge of the land file at the program level. He or she should work on designing a progressive work plan that carefully harmonizes between the project implementation schedule and the land acquisition requirements in a timely manner. Based on the MoU, he or she should play a key role in flagging issues to the central committee to avoid any potential delay in the project implementation as a result of land acquisition. The senior land acquisition officer should work closely with the land acquisition officers at the WSC level to ensure diligent implementation of the land acquisition process according to the SOP. The senior land acquisition officer should report to the head of the PMU.

At the WSC level

The land acquisition officer in the WSC should be charged with the daily responsibility of consultation and communication with the affected groups as a result of land acquisition. The land acquisition officer should work to fulfill all the resettlement principles that will be stipulated in the guidelines. He should coordinate and harmonize activities closely with the community engagement teams. He or she should report to the senior land acquisition officer at the PMU level.

6.2.2 Strengthening the System of Community Engagement

6.2.2.1 *Strengthening the Institutional Setup and the Procedures to Address Community Engagement and Social Risks*

As examined in chapter 5, the process of community engagement currently entails a large number of shortfalls that could be majorly attributed to the limitation in scope, mandates, and human capacity. As is the case with land acquisition, a number of measures will need to be taken to strengthen the system of community engagement.

1) *Developing comprehensive ‘Procedural Guidelines for Community Engagement’*

The ‘Procedural Guidelines for Community Engagement’ should set the foundation for the teams who will be assigned to carry out community engagement in an inclusive and comprehensive manner. The guidelines should cover the various stages of the project starting from the assessment and preparation, passing through design and construction until project implementation, operation, and evaluation. The guidelines should include a full set of guiding tools, sheets, and checklists that the community engagement teams will use. They should provide clear guidance to the teams working on community engagement on how to address vulnerability issues, including how to engage women and how to strengthen communities’ ownership of the projects as a prerequisite for project success and sustainability. The guidelines will also work as a protocol manual that give guidance on how to design and implement field work in a culturally sensitive manner.

Box 7. Basic Content for the Procedural Guidelines for Community Engagement⁴³

- i. The process of social risk identification and mitigation**
- ii. Project preparation:**

⁴³ The content is not inclusive and will be developed further as part of more comprehensive ToRs to be developed for preparing guidelines under guidance from the Bank.

- ✓ Participatory needs assessment
 - ✓ Willingness to pay and affordability surveys
 - ✓ Willingness to contribute (for example, land and cash)
 - ✓ Designing and implementing a pro-poor strategy
 - ✓ Consultation with landowners and land users
 - ✓ Preparation of the relevant ToRs for the ESIA
 - ✓ Support the preparation of baseline surveys
 - iii. Project design:**
 - ✓ Mobilize the community for participatory design
 - ✓ Review and provide inputs to the ESIA
 - iv. Project construction:**
 - ✓ Implementation of the social management plan including:
 - Consulting with various stakeholders including affected individuals
 - Monitoring mitigation measures
 - Establishing and operating local-level grievance mechanism
 - Maintaining records of the construction process, impacts, and complaints handling
 - Raising awareness
 - v. Project operation:**
 - ✓ Implementation of the social management plan:
 - Communities satisfaction survey
 - Raising awareness
 - ✓ Regular reporting
 - vi. Project M&E:**
 - ✓ Identification of key monitoring indicators
 - ✓ Key principles and tools for participatory monitoring
 - ✓ Preparing monitoring reports
 - ✓ Evaluation of sanitation projects
 - vii. Protocols for designing and carrying out field work**
 - viii. ToRs and competencies for the community engagement teams:**
 - ✓ ToRs for the senior community engagement officer at the PMU level
 - ✓ ToRs for the community engagement officer at the WSC level
 - ✓ ToRs for the community engagement focal point at the branch level
 - ix. Performance-based evaluation for the community engagement teams**
- Annexes** should include all the templates, checklists, and guiding documents.

2) Assign the appropriate human resources for community engagement

Currently, the departments with the closest relevance to the responsibilities related to community engagement are the Public Relations and Awareness Raising Department and the Hotline Department within the WSCs. However, the scope of responsibilities of these departments is currently narrower than their anticipated role in the program. As shown in Table 15, there are certain mandates that are not within the current scope of the WSCs and other mandates that will need to be strengthened as part of the new program.

Table 15. The WSCs' New Mandates and the Existing Mandates that Need Strengthening

Areas that are outside the current mandates (need to be added)	Areas that are within the current mandates but will need strengthening
<ul style="list-style-type: none"> • Communities need assessment • Willingness to pay and contribute • Participatory planning and design • Identifying and handling social risks • Construction phase (consulting, assessing, and mitigating the impacts related to construction) • A GRM to cover construction- and land-related issues • Monitoring project benefits for local communities • Monitoring the impacts of awareness-raising activities (for example, change in knowledge, behaviors, and attitudes) 	<ul style="list-style-type: none"> • Assessing community satisfaction • Raising awareness • Designing and implementing action plans • GRM • Monitoring performance

It is recommended that the human resources within both the PMU and the WSCs are strengthened to ensure diligent consideration of the various community engagement aspects and to work proactively to address the social risks along the various stages of the project. As is the case for teams managing land acquisition, it is recommended to assign a senior community engagement officer at the level of the PMU at the central level to ensure close coordination with the assigned governorate staff. At the WSC level, teams of community engagement officers should be assigned. Due to the relevance of the scope of this position and the existing teams under the Department of Public Relations and Awareness Raising, it is recommended that existing human resources within the WSCs are considered for community engagement officers. However, a review of their previous performance along with the relevance of the existing staff qualifications and experience to carry out the new mandates should be carried out before deciding on the members to be selected.

One of the key gaps that the new institutional setup should seek to bridge is the absence of staff to manage community-related issues at the level of the *markazes*/WSC branches. It is recommended that branch-level community engagement focal points are assigned to take care of day-to-day consultation and communication with local communities as well as persons affected by the land acquisition. The scope of work and the TORs of the teams to be assigned for community engagement should be developed as part of the preparation of the Procedural Guidelines for Community Engagement. The assigned teams should be capable and competent to carry out all the tasks related to community engagement and mitigate social risks at different levels and along different stages of the project. Most importantly, the teams should work proactively to address the risks identified through this social assessment by adopting measures that are stated in this chapter of the ESSA. The teams should also work to identify any other potential social risks that might emerge along the project life cycle. It is worth mentioning that for all the measures stated from section 6.2.2.2 to section 6.2.2.7, the community engagement teams should play a key leading role in implementation.

Box 6.4 presents a preliminary idea about the key responsibilities of the community engagement teams at the levels of the PMU, WSC, and branches.

Box 8. Preliminary Responsibilities for the Community Engagement Teams⁴⁴

At the PMU level

The senior community engagement officer at the PMU level should be responsible for the overall performance of the program with regard to community-related activities and managing social risks associated with the program. With the WSC team, he or she should design the overall community engagement and the risks mitigation strategy and follow up closely on their implementation. He or she should monitor and evaluate the performance of the community engagement teams at the WSC level. The senior community engagement officer should work closely with the senior land acquisition officer to develop joint plans that incorporate land-related impacts along with diligent and proactive measures.

The senior community engagement officer should report to the head of the PMU.

At the WSC level

The community engagement officers should be assigned at the WSC level. They should work together as a team and with their respective officers at the branch level to execute the strategy related to community engagement and mitigation of social risks. Their work is field-based with a majority of the time expected to be spent in the targeted villages to carry out the various activities. They should provide direct day-to-day support to the focal points in the branches. The community engagement officer reports to the senior community engagement officer at the PMU level.

At the branch level

Community engagement focal point is based at the WSC branch (*markaz*) level. He or she works under the direct supervision of the community engagement officer in the WSC. The focal point should follow up on the actual issues with villagers on a daily basis. He or she should work with a monthly work plan that is developed along with the WSC. In the meantime, the focal points should alert against any potential social risks and contribute to setting strategies to address them. The focal point reports to the community engagement officer at the WSC level.

6.2.2.2 Addressing the Risk of Damages Associated with Construction Activities

This potential risk could be addressed through the following proactive measures:

- Consulting early with various community groups including the potentially vulnerable households.
- Ensuring that the ToRs of the ESIA stipulate this type of potential social risk and that the ESIA gives due attention to it in the analysis.
- Designing an ESMP that sets forth measures that oblige the contractor to take precautionary measures to avoid this risk.
- Maintaining consultation during project construction.
- Monitoring the work of contractors closely.
- Designing and operating a local-level grievance mechanism to handle potential complaints.

⁴⁴ Those are not inclusive ToRs for the land acquisition officer. Comprehensive ToRs will need to be prepared with guidance from the Bank

6.2.2.3 Addressing the Risk of Weak Sense of Demand for and Ownership of Projects in Certain Communities

This potential risk could be addressed through the following proactive measures:

- Consulting early with the targeted community to assess the need for the project.
- Working to demonstrate to the local communities the anticipated returns from the project including health benefits.
- Engaging strongly with rural women to raise their awareness and build their sense of ownership.
- Highlighting other issues related to pollution and the unsustainability and unreliability of the current illegal services.
- Initiating coordination with other relevant stakeholders including the Ministry of Water and Irrigation and NGOs to mobilize against illegal sewage dumping.

6.2.2.4 Addressing the Risk of Low Acceptance and Readiness for the Proposed Technology

This potential risk could be addressed through the following proactive measures:

- Collaborating closely with the design consultant to enable the community engagement officers to deliver a clear and comprehensive idea to the community members on the project technical details, household connection cost, and the role of the communities and the CDAs in O&M.
- Consulting early with the targeted community to assess the need for the project, willingness to pay, affordability, and their capacity to manage a decentralized system.
- Enhancing the level of ownership of the project through community mobilization and implementation of a participatory assessment.
- Facilitating the delivery of the required capacity building to enable the local communities and/or CDAs to operate and maintain the project in sustainable terms.

6.2.2.5 Addressing the Risk of Social Tensions as a Result of Exclusion of Certain Villages

This potential risk could be addressed through the following proactive measures:

- Avoiding this potential risk during the clustering of the villages in the design of the project.
- Facilitating access of the communities to any alternative sanitation model (on-site models) in case the exclusion of certain villages is inevitable.
- Consultation activities should target and include these communities.
- Ensuring sharing of information in a transparent manner.
- Designing and operating a local-level grievance mechanism to handle potential complaints.

6.2.2.6 Addressing the Risk Related to Affordability of Poor Households

This potential risk could be addressed through the following proactive measures:

- Preparing a pro-poor strategy for supporting poor households. This will include a comprehensive analysis of the potential locally appropriate forms of assistance to poor households that should be developed based on actual assessment at the level of each governorate.
- Engaging with key stakeholders at the governorate and village levels including, but not limited to, CDAs, Directorate of Social Solidarity, natural leaders, and the targeted beneficiaries from poor households for the analysis.
- Examining the different options along with the pros and cons of each in the context of a specific village.
- Reaching a set of alternatives in consultation with stakeholders and announcing those in a transparent manner.
- Announcing the criteria for the selection of households for receiving special assistance should be announced in a clear and transparent manner at the village level.
- Designing and operating a local-level grievance mechanism to handle potential complaints.

Table 16 presents a basic analysis of the scenarios that could be considered along with their pros and cons.

Table 16. Analysis of the Possible Scenarios for Supporting Poor Households in Connecting to the Project

Assistance scenario	Pros	Cons
1. Universal exemption from the household fees; the government to offer the household connection cost to all subscribers.	<ul style="list-style-type: none"> • Minimizes the amount of work needed and the associated cost. • Easy to apply. • Minimizes any chances of social tensions among communities. 	<ul style="list-style-type: none"> • Big waste for the government resources because of high leakage to well-off cases. • Threatens the sense of ownership of the project. • Creates unfavorable sense of dependence on the government. • Potential fear of claims of unfair and unequitable treatment since other households outside the project are paying for the connection.
2. Universal installment system with low or no interest to be made available for all.	<ul style="list-style-type: none"> • Limited amount of work needed to apply the system (no targeting work is involved). • It entails self-targeting because whoever cannot afford will likely benefit from this type of assistance and well-off people may likely prefer to pay in cash. 	<ul style="list-style-type: none"> • Potential leakage to cases that can afford to pay in cash. • Potential waste of governorate resources.

<p>3. Full exemption from the connection fee to poor households (based on targeting through various mechanisms— for example, submitting papers and social surveys to be conducted).</p>	<ul style="list-style-type: none"> • Significant support to the poor households. • If done efficiently, it will mean limited room for leakages. 	<ul style="list-style-type: none"> • Huge amount of work associated. • Potential escalating claims of unfair treatment or claims of being excluded. • Possibility of social tension.
<p>4. Targeted installment system with low or no interest to be made available only for poor households (based on targeting through various mechanisms— for example, submitting papers and social surveys to be conducted).</p>	<ul style="list-style-type: none"> • If done efficiently, it will mean limited space for leakages. • Limited or no waste of government resources. • The sense of ownership will be maintained because all households will still pay for the service. 	<ul style="list-style-type: none"> • There is a possibility that some eligible households will not benefit while the benefit might leak to ineligible cases. This heavily depends on the targeting mechanism to be applied.

The scenarios mentioned above should be elaborated and examined against local conditions to make sure that the selected scenario suits the conditions in each governorate. In the meantime, the method for targeting the poor households (in the scenarios where this is needed) should be carefully designed to combine both simplicity and efficiency. It is unfavorable to put additional pressure on poor households to complete and submit a large number of documents to prove that they are entitled for assistance. The associated administrative costs related to applying the targeting mechanism as well as the required human resources should be taken into consideration while designing the targeting mechanism. It is strongly recommended that community-based mechanisms (for example, village-level committees, community leaders, and CDAs) are considered to participate in the targeting process and to help in verifying the information and confirm eligibility. It is critical to ensure that the community-based mechanism is representative of the various subgroups within the village to avoid any exclusion. The designed strategy should be built on existing mechanisms (for example, the UNICEF mechanism) and the lessons learnt from them.

Transparent sharing of information should be ensured through:

- Announcement of the whole process, including (a) the support scenario that will be applied, (b) the criteria for selecting the poor households, (c) the required documents (if any), and (d) the community-based mechanism that will be used.
- A grievance mechanism that operates efficiently to receive various complaints. People should be given the right to claim and prove eligibility and a timely, transparent response should be provided to them.

6.2.2.7 Strengthened Grievance Mechanism to Accommodate Various Issues

As elaborated in detail in chapter 5, the current Hotline system has its own limitations including, but not limited to, the lack of automation and limitation in applying technology, lack of a standardized process and procedures, absence of clarity on the time interval need for handling different types of complaints, and preference of informal intake channels versus formal ones. In the meantime, the ESSA identified the limitation in the scope of the Hotline and the focus on the O&M as a key gap. Currently, the types of social risks identified above are not being handled through the Hotline and they do not have another grievance channel to resort to. As shown in section 6.2.2 and all the subsections above, designing and operating a local-level grievance mechanism to handle potential complaints was introduced as one key crosscutting measure to address multiple social risks.

The Hotline system should be improved through better use for technology, strengthening the registry and tracking system, and enabling complainants to appeal if their complaints are not satisfactorily resolved. In the meantime, for handling the social risks related to land, poor households' connection fees, and the impacts of construction work as elaborated above in this chapter, a local-level mechanism will need to be designed at the village level to handle these issues. The merit of having a local mechanism versus having these complaints channeled through the Hotline is the fact that these issues are largely generated at the grassroots level and it is better to ensure that they are handled promptly at the local level instead of leaving them to get through a universal, inefficient system which is already overloaded with several complaints related to O&M. It is recommended that a diversion protocol be established between the Hotline and the local grievance mechanism to ensure that (a) complaints received through the local mechanisms are also reported in the Hotline system and (b) in case complaints related to the program are received through the Hotline, they are promptly diverted to the local-level grievance mechanism. It is also strongly recommended to ensure that women have smooth and equitable access to the designed grievance system and that their complaints are handled in a fair manner.

In the design of the local-level grievance mechanism, the following are key principles that should be taken into consideration:

- Multiple uptake locations with clear organizational structure for grievances handling.
- Clear system for sorting, processing, prioritization, and referral.
- Acknowledgement through provision of receipts and tracking numbers.
- Timely provision of progress updates to complainants and feedback.
- Timely and efficient verification, investigation, and action.
- M&E through operating a good tracking system, analysis of the complaints including status, and development of regular reports.

The following section wraps up the actions related to social aspects that should be included in the PAP.

Developing a standardized approach for land acquisition

- Develop the ToRs for the SOP.
- Develop the SOP.

- Develop an MoU along with any other associated requirements (for example, higher committee and decrees).

Enhancing the system for engaging with communities and addressing social risks

- Develop the ToRs for the Procedural Guidelines for Community Engagement.
- Develop the Procedural Guidelines for Community Engagement.

Addressing poverty and affordability issues

- Set and apply a strategy for assistance scenarios (including targeting techniques) to be provided to the poor households.

Crosscutting measures

- Strengthen grievance mechanism to accommodate various issues.
- Establish a strategy for ongoing consultation with stakeholders across various stages.
- Establish a transparent system for sharing and disclosing information.

Institutional issues

- Assign the appropriate human resources for handling land acquisition.
 - ✓ Develop the ToRs for the senior land acquisition officer at the central level and the land acquisition officer at the level of the WSC and obtain Bank approval.
 - ✓ Assign land acquisition teams.
- Assign the appropriate human resources for community engagement and handling social risk.
 - ✓ Develop the ToRs for the senior community engagement officer at the central level, the community engagement officer at the level of the WSC, and the focal points at the *markaz* or branch level.
 - ✓ Assign community engagement teams.

Enhancing the performance evaluation system

- Establish a performance-based monitoring system to evaluate the teams that will be assigned.
- Establish a strong reporting mechanism that allows for bottom-up flow of information and allows decisions to be taken accordingly.

6.2.3 Implementation Support for Social Aspects

Training and capacity building will be key prerequisites to enable the assigned teams to carry out their responsibilities as stipulated in their ToRs. The main areas of support for program implementation are given below.

For land acquisition

The SOP should be applications related to land acquisition. Implementation support in this regard will entail:

- Providing guidance and support to the PMU and the WSCs in the preparation of the ToRs for the responsibilities of the team, the SOP, and the Procedural Guidelines for Community Engagement.
- Providing training to the WSC teams working in land acquisition.⁴⁵

Initially proposed topics of training for the teams working in land acquisition

- International policies and best practices related to resettlement
- Legal and social aspects associated with resettlement
- Preparing resettlement assessments and action plans
- Monitoring land acquisition and resettlement impacts

For community engagement

The Procedural Guidelines for Community Engagement will set the foundation for the work of the community engagement team. The implementation support in this regard will entail:

- Providing assistance in the development of the Procedural Guidelines for Community Engagement.
- Supporting the WSCs in strengthening the GRM system.
- Providing assistance to the WSCs to strengthen their M&E system with regard to service feedbacks.
- Providing training to the teams of the WSCs and relevant stakeholders on community-engagement-related aspects.

Initially proposed topics of training for the teams working in community engagement

- Social assessments
- Social risk assessment
- Participatory planning approaches
- Monitoring consultants and contractors

Crosscutting modules for all the teams

⁴⁵ Training should be initiated once the teams are assigned to enable them to carry out their tasks in a sound, diligent, and socially sensitive manner.

- Consultation and engagement with affected persons
- Information sharing and disclosure
- GRMs
- M&E
- Report writing

In the meantime, it is essential as part of the capacity-building process of the assigned staff and the implementation support to provide the required logistical support to enable them to carry out their mandate and perform the tasks that will be requested from them. Logistical support will involve office-based facilities as well as the required facilities for frequent field visits to carry out consultation and interact directly with the various affected groups and individuals.

Table 17. PAP Measures According to the Core Principals of OP 9.00

Core principal	Assessment	Proposed measure	Responsibility	Monitoring indicators	Time of implementation and frequency of monitoring	Corrective action in case of deficiency
<p>Environmental and social management procedures and processes are designed to promote environmental and social sustainability in the program design; avoid, minimize, or mitigate adverse impacts; and promote informed decision-making relating to the program’s environmental and social impacts.</p>	<p>The existing system allows for early screening of environmental impacts and mitigating those impacts through the ESIA process. There are risks relating to the lack of experience of the implementing agency (Substantial)</p>	<p>The PIUs to recruit environmental specialists who will lead the ESIA process. The PMU and HCWW will include an experienced environmental specialist to support the PIUs and the ISC will support the implementation of site-specific mitigation measures.</p>	<p>PIUs, PMU, HCWW, and ISC</p>	<p>Environmental specialists recruited at each PIU and PMU</p> <p>The ESIA’s prepared and approved by the EEAA in a timely manner</p> <p>ESMP measures included in construction contracts and WWTPs manuals</p> <p>The ISC submits frequent progress reports on contractors and environmental and social performance</p> <p>Environmental register prepared for each WWTP</p>	<p>Recruitment of the PIUs and PMU specialists to start during the first quarter of program start-up. Clearance of the ESIA’s is a pre-condition for signing construction contracts. Indicators will be monitored quarterly during the first year and then annually.</p>	<p>In case of un-captured risk/impact, the ESIA process should be reviewed by the PMU to fill the gap accordingly and learn from the experience. In case of noncompliance with the ESMPs, the responsible contractor/operator should be accountable for corrective measures.</p>

Core principal	Assessment	Proposed measure	Responsibility	Monitoring indicators	Time of implementation and frequency of monitoring	Corrective action in case of deficiency
	Risk of sludge handling (Substantial)	Introduce sludge quality control measures as an integrated part of the process.	PIUs and Quality Sectors in the WSCs (under PMU supervision)	Sludge analysis attached to each batch of sold or disposed sludge Application rates included in selling contracts	Human and financial resources for analyzing sludge should be available during the first quarter from program start-up. Indicators will be monitored quarterly during the first year and then annually.	Identify the deficiency, analyze the reason for the deficiency, and take corrective measures accordingly.

Core principal	Assessment	Proposed measure	Responsibility	Monitoring indicators	Time of implementation and frequency of monitoring	Corrective action in case of deficiency
	Risk of noncompliant effluents (Medium)	<p>O&M manuals to be produced for each WWTP.</p> <p>Bypasses to be reported.</p> <p>New code to allow for common shock loads in rural areas.</p>	<p>Manuals to be developed by the Operation Sector and reviewed by the PIU/PMU.</p> <p>Bypasses to be included in the manual and environmental register and to be followed up by the PIU</p> <p>new code to be prepared by the NHBRC with PMU contribution.</p>	<p>Manuals prepared for each WWTP</p> <p>Bypasses included in environmental registers and confirmed by the PIU</p> <p>New code produced including measures for considering shock loads in design</p>	<p>Manuals to be prepared by the fourth quarter from program start-up.</p> <p>Environmental registers to be maintained during the second quarter of the program.</p> <p>Indicators to be monitored annually.</p>	<p>Manuals to be reviewed if not sufficiently prepared.</p> <p>The WWTPs should be accountable for bypass documentation.</p> <p>The ISCs to consider adequate shock loads in designing each WWTP.</p>
	Risk of improper handling of solid waste (Medium)	O&M manuals to include adequate disposal methods.	Operation Sectors to include in manuals and the PIU to supervise	<p>Solid waste practices included in each WWTP manual.</p> <p>PIU prepares progress reports about its supervision visits to ensure adherence to the manuals.</p>	Manuals to be prepared by the fourth quarter from program start-up. Indicators will be monitored annually.	Documentation of solid waste management practices to be reviewed. In case of inadequate disposal, the WWTP managers should be accountable for corrective actions.

Core principal	Assessment	Proposed measure	Responsibility	Monitoring indicators	Time of implementation and frequency of monitoring	Corrective action in case of deficiency
	Risk of networks clogging, especially when connecting private networks	Upgrade private networks as necessary.	ISC	Reports showing needs for upgrading private networks and necessary measures to be taken	Upgrade of private networks to be done before connection to the system. Monitoring would be annual.	Review condition of network and provide required repairs/maintenance.
	Temporary impacts during construction	Supervise construction contractors on the field. Include this in the GRM system.	ISCs	Monthly progress reports of the ISCs include section on dewatering even if it reads 'no violations'	The ISCs to be briefed about their supervision role of environmental and social aspects once required (roles to be included in their ToRs). Monitoring would be annual.	Take timely correction action according to the type of noncompliance.
	Maximize program benefits on water quality	Include negative discharges and private networks in the calculation of program results.	PIU and IVA	Number of households connected through the PSs or private networks that were discharging to drains	Already included in program design. Monitoring would be according to verification frequency.	Included in DLI 1.

Core principal	Assessment	Proposed measure	Responsibility	Monitoring indicators	Time of implementation and frequency of monitoring	Corrective action in case of deficiency
Environmental and social management procedures and processes are designed to avoid, minimize, and mitigate against adverse impacts on natural habitats and physical cultural resources resulting from the program.	Risk of improper handling of chance find cultural objects (Low)	Inform Antiquity Authority about construction plan. Provide site supervision of contractors during excavations.	PIU for informing Antiquity Authority in a timely manner ISC with close follow-up from the PIUs, especially in Sharkiya	Correspondence with Antiquity Authority once plans are approved Progress reports of the ISCs include section on chance finds even if it reads 'inapplicable'	Informing the Antiquity Authority once plans are ready. Supervision will take place once works start. Monitoring would be annual.	Any chance finds should be reported to the Supreme Council of Antiquities.
Environmental and social management procedures and processes are designed to protect public and worker safety against the potential risks associated with: (a) construction and/or operations of facilities or other operational practices under the program; (b) exposure to toxic chemicals,	Risk of handling chlorine and diesel (Medium)	Review designs of new PSs and WWTPs against H&S requirements and identify the needs of existing ones and inspect their compliance.	Occupational Health and Safety Department	H&S report for each existing and designed WWTP and PS H&S quarter reports for each WWTP and PS	Review of new designs to be done once designs are ready. Resources for H&S to be provided during the first year. Monitoring would be annual.	Take timely corrective action according to the type of noncompliance with H&S measures.

Core principal	Assessment	Proposed measure	Responsibility	Monitoring indicators	Time of implementation and frequency of monitoring	Corrective action in case of deficiency
hazardous wastes, and other dangerous materials under the program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.	Safety and hygiene risks of labor during construction and operation (Medium)	Supervise construction contractors on the field. Inspect the WWTPs and PSs on a quarterly basis.	ISCs and Occupational Health and Safety Department	Monthly progress reports of the ISCs include section on H&S even if it reads 'no violations' Monthly progress reports on H&S of WWTPs include section on H&S even if it reads 'no violations'	Site supervision to be provided once construction starts. Quarterly inspection of the PSs and WWTPs to be regular from the second year. Monitoring would be annual.	Take timely corrective action according to the type of noncompliance with H&S measures. Contractors to be accountable for noncompliance during construction.
	Risks of affecting structures and land inundation by dewatering (Medium)	Supervise construction contractors on the field. Include this in the GRM system.	ISCs	Monthly progress reports of the ISCs include section on dewatering even if it reads 'no violations'	Site supervision to be provided once construction starts. Monitoring would be annual.	Take timely corrective action according to the type of noncompliance.

Core principal	Assessment	Proposed measure	Responsibility	Monitoring indicators	Time of implementation and frequency of monitoring	Corrective action in case of deficiency
Land acquisition and loss of access to natural resources are managed in a way that avoids or minimizes displacement and affected people are assisted in improving, or at least restoring, their livelihoods and living standards.	Risks related to acquiring land for the WWTP and the PSs (Substantial)	Develop a standardized approach for land acquisition. This will be achieved by developing an SOP, issuing an MoU among relevant line ministers to mainstream the land acquisition process, assigning the relevant teams, and building their capacity.	PMU and WSCs	Compliance to the developed SOP A functioning, efficient, and timely land acquisition process is in place	Annual	Take timely corrective action according to the type of noncompliance.
	Impacts on land use (Low)	New engineering code to include technologies for minimizing land use. Designs of new WWTPs and PSs consider minimizing land use as one of their priorities.	NHBRC and ISC	New code takes land as one of the design criteria. Designs of new WWTPs and PSs include options for different footprints.	Annual	–

Core principal	Assessment	Proposed measure	Responsibility	Monitoring indicators	Time of implementation and frequency of monitoring	Corrective action in case of deficiency
Give due consideration to the cultural appropriateness of and equitable access to program benefits, giving special attention to the rights and interests of the indigenous peoples and to the needs or concerns of vulnerable groups.	Certain social risks (non-land) might affect the program if not taken into consideration (Moderate)	A comprehensive citizen engagement system will be designed and applied.	PMU and WSCs	<p>Guidelines for community engagement developed and applied</p> <p>Transparent information sharing strategy is developed and used</p> <p>Pro-poor strategy is developed and applied</p> <p>Consultation strategy is developed and applied</p> <p>Strengthened grievance mechanism is developed and used</p>	Annual	Take timely corrective action according to the type of noncompliance.

Annex 1: Performance of the Existing WWTPs in the Program Areas

Table 1.1. WWTPs in Dakahliya Governorate (Bahr Hadous Drain Watershed)

Current Status						Plan for NRSP			Notes
WWTP	Design capacity (m ³ /d)	Received discharge (m ³ /d)	Biological treatment	Final effluent quality	Receiving drain	No. of villages to be connected	Population (1,000 capita)	Additional discharge of extension (m ³ /d)	
Manzala	20,000	7,780	Conventional activated sludge (CAS)	Compliant	Safra	26	104.7	25,000	–
Aga	10,000	6,976	Extended aeration (EA)	Low efficiency	El Mansoura	4	16.3	11,000	–
Aoleila	10,000	1,266	EA	Compliant	El Hawaber	9	60.1	20,000	–
Barq El Ezz	2,000	0	EA	Not working	Barq El Ezz	2	6.6	4,000	–
Brembal El Gedida (ends at Serw)	To Serw	To Serw	EA	Compliant	Brembal	3	24.6	18,000	Part of villages located in Hadous Drain watershed
Bani Ebied	10,000	2,232	EA	Compliant	Bani Ebeid	4	23.4	6,000	–
Telbana	8,000	No data	Rotating biological contractor	No data	El Mansoura	4	26.9	9,000	–
Tami El Amdid	2,000	888	EA	Compliant	Shahin	3	14.7	7,000	–

Current Status						Plan for NRSP			Notes
WWTP	Design capacity (m ³ /d)	Received discharge (m ³ /d)	Biological treatment	Final effluent quality	Receiving drain	No. of villages to be connected	Population (1,000 capita)	Additional discharge of extension (m ³ /d)	
Dekernis	20,000	15,840	CAS	Compliant	Tal Bala	3	9	14,000	–
Damas	14,000	2,283	EA	Compliant	Om Salem	7	42.1	19,000	–
Salamon	2,000	2,100	CAS	Compliant	Badin	3	23.7	4,000	–
Samaha	1,000	697	Wetlands	Compliant	El Dalal	3	11.9	7,000	–
Mahalet El Damna	2,000	2,248	EA	Compliant	Omoumy El Behira	1	1.8	8,000	–
Mit Damsis	2,000	1,450	Oxidation pond	Low efficiency	El Gharaka	6	35.2	14,000	–
El Senbelwaen	20,000	5,992	CAS	Compliant	El Senbelwaen	8	62.2	15,000	–
El Moqataa	2,000	1,515	EA	Low efficiency	Om Ghanem	4	16.2	8,000	–
El Maasara	20,000	No data	No data	No data	No data	1	1.5	Current capacity is sufficient	–
El Kordi (ends at Serw)	To Serw	To Serw	EA	Low efficiency	Kafr El Kordi	1	2.8	3,000	Part of villages located in Hadous Drain watershed

Current Status						Plan for NRSP			Notes
WWTP	Design capacity (m ³ /d)	Received discharge (m ³ /d)	Biological treatment	Final effluent quality	Receiving drain	No. of villages to be connected	Population (1,000 capita)	Additional discharge of extension (m ³ /d)	
Sahragt El Soghra	5,000	No data	EA	No data	No Data	1	1.3	5,000	–
Shaha	2,000	1,682	CAS	Compliant	El Nezam	1	6.8	6,000	–
Total	152,000	52,949	–	–	–	94	491.8	203,000	–

Table 1.2. WWTPs in Dakahliya Governorate (Serw Drain Watershed)

Current Status						Plan for NRSP			Notes
WWTP	Design capacity (m ³ /d)	Received discharge (m ³ /d)	Biological treatment	Final effluent quality	Receiving drain	No. of villages to be connected	Population (1,000 capita) in 2012	Additional discharge of extension (m ³ /d)	
El Kordi	7,000	3,960	EA	Low efficiency	Kafr El Kordi	1	2.8	3,000	–
Zarka (Damietta)	20,000	No data	No data	No data	El Serw	1	11.1	Current capacity is sufficient	WWTP located in Damietta Governorate
Shaha (Ends at Hadous)	To Hadous	To Hadous	CAS	Compliant	El Nezam	4	27.1	6,000	Part of villages located in Serw Drain watershed
Badawy	4,500	2,333	CAS	Compliant	El Serw El Omoumi	1	2.3	6,500	–
El Baramon	2,000	1,897	EA	Compliant	El Serw El Omoumi	2	13.8	7,000	–
Berembal El Gedida	2,000	1,755	EA	Compliant	Brembal	4	43.7	18,000	–
El Gamalia	20,000	12,258	CAS	Compliant	El Serw Omoumi	2	9.9	10,000	–
Total	55,500	22,203	–	–	–	15	111	50,500	–

Table 1.3. WWTPs in Sharkiya Governorate (Bahr Hadous Drain Watershed)

Current Status					Plan for NRSP			Notes
WWTP	Design Capacity (m ³ /d)	Biological treatment	Final effluent quality	Receiving drain	No. of villages to be connected	Population (1,000 capita)	Additional discharge of extension (m ³ /d)	
Awlad Saqr	10,000	EA	Compliant	Hadous	5	47.2	17,000	-
Kafr Saqr	10,000	Surface aeration	Low efficiency	Om El Rish	8	35.6	28,000	-
Diarb Negm	10,000	EA	Compliant	Ekwa	6	36.7	5,000	-
Shalshamon	20,000	Surface aeration	Compliant	El Qalyoubi	1	4.1	10,000	-
Abo Metna	10,000	EA	Compliant	Behnia	9	81.1	14,000	NOPWASD operation
Faqous	20,000	Surface aeration	Compliant	Bahr El Bakar	3	63.7	30,000	-
Abo Kbeir	20,000	EA	Compliant	Awqaf El helmia	4	58.6	20,000	-
El Hosainia	10,000	EA	Compliant	Bahr El Bakar	1	15.3	15,000	-
El Kenayat	20,000	Tricking filters	Compliant	Ekwa	4	49.4	30,000	-

Current Status					Plan for NRSP			Notes
WWTP	Design Capacity (m ³ /d)	Biological treatment	Final effluent quality	Receiving drain	No. of villages to be connected	Population (1,000 capita)	Additional discharge of extension (m ³ /d)	
El Teiba	7,000	Anaerobic	Compliant	Bardin	5	34	Current capacity is sufficient	NOPWASD operation
San El Hagar El Keblia	10,000	Surface aeration	Compliant	El Fanan	1	15.9	25,000	NOPWASD operation
Total	147,000	-	-	-	47	441.6	206,000	-

Annex 2: New Treatment Plants that Will Be Constructed under the Program

Table 2.1. Dakahliya Governorate (Hadous)

WWTP	Design capacity (m³/d)	No. of villages to be connected	Population (1,000 capita)
El Nasimia	10,000	7	44.1
Berqeen	17,000	13	60.2
Shobrahour	12,000	8	41.2
Shobrawish	9,000	6	31.3
Tanbol El Kobra	8,000	4	20.7
Monshaat AbdelRahman	7,000	3	23.3
Meniet Sandoub	15,000	8	62.6
Mit Zoqr	15,000	1	7.4
Mit Ali	9,000	4	30.2
Mit Ghrita	17,000	7	58.1
Mit Fares	16,000	8	56.3
Nosa El Gheit	13,000	4	45.2
El Balamon	10,000	7	35.1
El Robae	6,000	4	19.3
El Rabeya	7,000	1	21.3
El Beida	10,000	6	47.9
El Khaleig	10,000	6	40.7
Abo El Akhdar	2,000	1	4
El Mahmoudia	7,000	2	22.3
Total	200,000	100	671.2

Table 2.2. Dakahliya (Serw)

WWTP	Design capacity (m³/d)	No. of villages to be connected	Population (1,000 capita)
Eskandria El Gedida	4,000	1	13.3
Total	4,000	1	13.3

Table 2.3. Sharkiya Governorate

WWTP	Design capacity (m³/d)	No. of villages to be connected	Population (1,000 capita)
Karmot Sahbara	17,000	7	50.3
Shinbara El Maimona	12,000	6	40.8
Beisha Kayed	7,000	4	18.9
Seneit El Refayeen	25,000	5	74.4
Kafr Ibrahim Bishara	17,000	10	51.4
San El Hagar El Bahria	14,000	2	51.6
Monshaat Abo Omar	15,000	1	38.1
Samakin El Gharb	10,000	3	41.1
Mit Rabia El Dalala	5,000	1	2
El Mohamadia	7,000	6	19.3
Kafr El Faraiha	3,000	5	35.5
Bani Hassan	12,000	4	42.9
El Manshia El Gedida	17,000	7	57
El Hagarsa	6,000	3	18.6
Nazlet El Aarin	18,000	7	65.8
Totals	185,000	71	607.7

Table 2.4. Beheira Governorate

WWTP	Design capacity (m³/d)	No. of villages to be connected	Population (1,000 capita)
No. 9	30,000	9	65.2
Total	30,000	9	65.2

Annex 3: Registration Forms for the Consultations

Annex 4: Photo Log

Photos Log for the consultation, field visits and verification sessions



Consultation with WSCs and HCWW for preparing the ESSA, Cairo



Consultation with WSCs and HCWW for preparing the ESSA, Cairo



Verification Session with PMU, HCWW and WSC to review ESSA results, Cairo



Verification Session with PMU, HCWW and WSC to review ESSA results, Cairo



Community Consultation, Kafr El Noaman village, Dakahlya



Consultation with Dakahlya WSC as part of preparing the ESSA, Mansoura City



Customer Service Center in Dakahlya



Customer Service Center in Dakahlya



Community Consultation, Santimay, Dakahlya



Leakage in grave yards in Kafr El Noaman, Dakahlya



Community consultation, El Ghonemy Kom Hellen, Sharkia



Problem of sewage leakage and septic tanks overflow, El Ghonemy Kom Hellen, Sharkia



Problem of sewage leakage on houses wall, Kafr El Noama village, Dakahlya



Community consultation, Kom El Nasr, Behira



The unoperations pumping station in El Ghonemy Kom Hellen, Sharkia



Problem of sewage leakage on houses wall, Kafr El Noama village, Dakahlya



Problem of sewage leakage on houses walls, El Ghonemy Kom Hellen, Sharkia



Meeting at one of the pumping stations, El Zankalon village, Sharkia



Public consultation on the ESSA draft findings in Zakazik, Sharkia



Public consultation on the ESSA draft findings in Zakazik, Sharkia



Public consultation on the ESSA draft findings in Damanhour, Behaira



Public consultation on the ESSA draft findings in Manoura, Dakahlia

Annex 5: Comments of the Public Consultations

Summary of key comments from the Public Consultations on the ESSA Draft Findings

April 21–23, 2015

Summary of key comments from the Sharkiya consultation on the draft ESSA - Tuesday, April 21, 2015

Magdy El Hossary - EEAA Regional Branch Office

- Bahr El Bakar Drain is also a priority area as it discharges to Lake Manzala. I recommend expanding the program coverage.
- There are pilot projects in Borg El Arab that used innovative technologies in wastewater treatment. I recommend benefiting from this experience.

Hamdy Masoud - Central Labs, Sharkiya WSC

- Installing units to separate oil and grease is an important factor for meeting the effluent standards.
- Designing the networks is an important factor in receiving better quality influent.

Eng. Shaker - Deputy Chairman of the WSC

- The private networks cause many operational problems. Rehabilitation of such networks could be an option to connect these communities.
- Receiving septage should be accounted for in the design of the projects.

Abas Farouk - Antiquities Department

- Antiquities issues and the sites of cultural heritage value are critical here in Sharkiya. We strongly advise that The Directorate of Antiquities is informed early on about the project locations and the areas of work. We will ensure that an Antiquities Inspector is available on-site in all sensitive areas. We have the resources for that.

Eman Hassan - Head of the Environmental Health Department

- Law enforcement is critical to minimize the risk for major violations of the illegal dumping on agricultural drains. Although we have laws, the actual enforcement and the tools to enforce are not in place.

Eng. Zakaria - Head of ISSIP 2 RSU

- Will the ESIA be prepared for the projects under the new program?
- To avoid getting into the challenge of resource limitations to finance land through the willing-buyer willing-seller approach, it would be highly beneficial if the program allowed resources for

the purpose of purchasing land. We are anticipating the capital cost needed for land for the WWTP to range between 5 percent and 7 percent of the capital investment (Eng. Zakaria was also quoting Eng. Ezzat, Dakahliya Chairman, during the previous event).

Zyad - Social Officer of ISSIP 2 RSU

- We need the design of the program to carefully note that the RSU has been going through a lengthy and demanding process to build trust with local communities under ISSIP 2. As a result of a constructive process for community mobilization, we managed to secure land for treatment plants and PSs for 9 villages under ISSIP 2 Phase 2, mostly through community contributions. As part of restructuring ISSIP 2 Phase 2, these villages will not be served. Four of them have moved to the sanitation program (PforR) while five are now left behind. We have concerns regarding the impacts of this on our credibility before the communities. We are also concerned that this may create a sense of mistrust that may have an impact on the whole program. The PforR program should consider ways to serve these villages, specifically since they are located geographically close to the targeted villages.

Dr. Ekhlas El Desouki - Head of the Healthcare Waste Department in the Directorate of Health

- The program is excellent and highly needed but we believe we can do better regarding raising the awareness of local communities to mobilize local resources to contribute to or finance rural sanitation projects.

Dr. Samia Asal - National Council for Women

- The problem of drains' pollution (through the disposal of the septic tanks vacuuming) should be immediately tackled even through intermediate solutions like collective large septic tanks or disposal to existing WWTPs.

Moamen - Improved Water and Wastewater Services Programme PIU

- Land is a critical challenge that we are also facing in the Improved Water and Wastewater Services Programme. The idea of signing an MoU among ministries is very good but it will need follow-up actions like a 'one-stop shop' or a 'higher committee' to be in charge of coordinating all the approvals in fast-track mode.

Nevine Abdel Rahman - The Head of the Awareness Raising Department, HCWW

- Community participation is a critical part of the program. If not done properly, the impacts will not be on DLI 4 but rather on all the other DLIs, including those related to service delivery and the review of the tariff structure.

- We do not currently have a role in handling the impacts related to construction and land but the awareness raising teams are the most suited to carry out these jobs under the program.
- We have a serious challenge related to the limitations in human resources working in community mobilization and awareness raising. We acknowledge the gaps identified by the ESSA.
- It would be highly beneficial to set KPIs related to community engagement, quality of community services, and the complaints systems (for example, International Organization for Standardization [ISO] for the customer service centers and the hotline). We can incorporate them within our annual work plan and set targets related to capacity building in this regard. We have sufficient annual budget for training and it will be highly beneficial if we included more topics related to handling land issues and addressing other social risks in the awareness raising training.
- The institutional setup within the WSC to handle the program is also a key prerequisite for the program success and delivery.

Summary of key comments from the Dakahliya consultation on the draft ESSA - Wednesday, April 22, 2015

Eng. Ezzat El Sayyad - Chairman of the Dakahliya WSC

- There should be dialogue between the WSC and the Directorates of Health and Irrigation to give WWTPs that are overloaded grace periods for compliance.
- The exclusion of the Gharb El Mansoura WWTP (originally was 135,000 and now 185,000 m³ per day after reviewing the plans) should be only for the WWTP, and the networks ending at this WWTP should not be excluded as the networks are separate from the relatively large WWTP. Including these villages, which are located near the Nile, will maximize the benefits of the program.
- The WSC has conducted a gap analysis for the H&S requirements. The study concluded that the H&S tools needed to comply with main H&S requirements is LE 8 million. The WSC is ready to take measures for complying with H&S requirements but there are no financial resources available to take these measures, and it would be a good opportunity if the program could support financing of these requirements.
- Some PSs in Dakahliya are already receiving septage and this could be expanded. This could not be offered free to private contractors as some of them are getting a fee of LE 70 per truckload.
- The land prices are not included in the existing cost estimate of projects. These land prices would be 5–7 percent from the total project cost and including it within the program cost would mitigate potential future risk (if it is left to our resources).
- A large part of the land challenge is about coordination with the concerned authorities. Governors should be included in the MoU.

- We had a good experience in Sohag Governorate for making connection fees affordable to poor households, through making a revolving fund available with long-term repayment conditions in cooperation with UNICEF. I worked closely with UNICEF on this successful program. We can adopt a similar model and the program may consider dedicating a portion from the loan to start a revolving loan for this purpose.

Ms. Rasha - Social Specialist, HCWW

- Raising labor awareness is a key requirement for improving the H&S performance. The equipment is also not available.
- The media should play a more critical role at the national level, particularly since the program is a priority for the government.

Eng. Mohammad Ragab - Dakahliya WSC

- We need to rationalize the use of the program finance and improve the financial efficiency of the construction and operation of projects. There should be emphasis on the improvement of WSCs' operational efficiency and the WSCs should target minimum unit cost per household connection.
- There are a number of technologies that could be employed in WWTPs that have lower operation costs, and the existing technologies that are usually employed are associated with high operational costs.

Dr. Hisham - EEAA Regional Branch Office

- WWTPs which are located in or near residential settlements should be given priority to improve their performance.

Mr. Atef El Kanany - Head of Environmental Management Unit (EMU) in Dakahliya Governorate

- Noncompliant sludge should be disposed in a hazardous waste landfill, but there is no such landfill in the governorate. It might be beneficial to have such sites in the governorate.
- The handling of hazardous materials and hazardous waste (including used containers of chlorine) should be included in the register of the WWTPs.
- There should be capacity building for the environmental staff in the EMU (along with WSCs staff) among the program activities.

Dr. Hisham - Mansoura University

- I recommend raising the risk on structural stability during dewatering operations (especially for PSs) from low to medium as we, in the university, receive many cases of differential settlement incidents.
- Control on industrial discharges to the network (through monitoring for Law 93) is very important in controlling the quality of the sludge and the quality of final effluent.

- While using the existing capacities of WWTPs, consider the increase of population from existing served communities.

Representatives of Antiquities Authorities

- A number of hills are identified to include antiquity sites in the governorate. Site licensing is not granted except after approval of the Antiquity Authority.
- In wastewater projects that are located in sites likely to include antiquities, the Antiquity Authority provides supervision on construction sites by their staff and they have done so near a hill in Tema El Amdid.

Dr. Magdy Aasar - Environmental and Social Specialist, HCWW

- Industrial wastewater could be an important source of revenue to the WSCs.
- Including networks of large WWTPs (such as Gharb El Mansoura) will maximize the environmental benefits of the program.
- There is a difference between the scope of the awareness raising as carried out now by the WSCs and the level of community engagement and community participation that the program is aiming for. From our experience in the ISSIP project, we observed that the more we invested in community engagement, the smoother the projects moved ahead with strengthened level of ownership that was reflected in various aspects, including in acquiring land.
- To launch a revolving loan for targeting poor households, we may need to seek grants from different donors.

Mr. Amr - Awareness Department, HCWW

- We should consider establishing a fertilizer plant from the WWTPs' sludge.

Mr Sameh and Wael - Awkaf Directorate

- The role of worship establishments is very important in awareness raising due to their credibility and proximity to local communities.

Mr. Adel - Sandoub CDA

- The role of NGOs and youth centers are very important in awareness raising.

Ms. Nevine - Public Relation and Awareness Raising, Dakahliya WSC

- In preparing the guidelines related to community participation, we need to take into consideration the manuals that we prepared for engaging with the NGOs.

Summary of key comments from the Beheira consultation on the draft ESSA - Thursday, April 23, 2015

Eng. Khaled - Beheira WSC Chairman

- We should have more and more of these collective and consultative events as the program evolves.
- We have models (under the ISSIP) where resistance and objections to the project are converted to large and strong acceptance and support to the project.

Ms. Samia Soliman - The Secretary of the Women National Council

- The supervision of the actual construction work should be improved more than is the case now. The WSC should play a better role in supervising the contractors.
- If the community networks or sewers are to be incorporated in the program, the quality of these sewer networks should be carefully examined because in many cases, they are not technically compatible.
- As a community member, I have observed that the 125 hotline is always busy.

Samir Mohammad - Kafr El Dawar LGU

- Implementation should be done on a fast-track basis and the changes of managers at the senior level and leaders should be dealt with as a potential threat.

Omaima El Garhy - Public Relations Department

- Engagement and close coordination with the LGUs greatly help in addressing problems in a proactive manner.
- In private networks, sometimes the level of water supply pipes are lower than sewerage gravity networks, which elevates the risk of drinking water contamination.

Khaled Mohammad - Resident in Kafr El Dawar and Employee in the LGU

- The existing WWTPs are overloaded and not maintained properly and in many cases, need urgent renovation.

Dr. Amal Fouda - Directorate of Health

- The technical criteria for land selection is always a critical factor that narrows down the land options. In many cases, communities think they have land available but the land is not technically compatible.