Ministry of Housing, Utilities and Urban Communities
Egyptian Water and Wastewater and Consumer Protection Regulatory Agency
(EWRA)

The 10th Annual Report

of the Egyptian Water and Wastewater and Consumer Protection Regulatory Agency

2017-2018

Contents

2 The address of Professor Dr. Minister of Housing, Utilities and Urban Communities and Chairman of EWRA

3 The address of Professor Dr. Deputy Minister of Housing, Utilities and Urban Communities

4 The address of Professor Dr. CEO of EWRA

5 **Chapter I**

6 Introduction:

6 Challenges that face water and wastewater sector

7 Effective parties in water and wastewater sector

9 Brief on the Egyptian Water and wastewater and Consumer Protection Regulatory Agency (EWRA)

13 **Chapter II**: Financial, commercial analysis

23 **Chapter III**: Performance indicators and service levels

24 First : Performance indicators and service levels of the drinking water and wastewater services

31 Second: Performance indicators and service levels with respect to water quality

37 **Chapter IV**: Service quality

55 **Chapter V**: Consumer protection

The address of Professor Dr. Minister of Housing, Utilities and Urban Communities and Chairman of EWRA

Prof. Assem El-Gazar

Egypt has witnessed during the past years an increasing attention for further optimization of water resources and rationalization of water consumption and this is a part of the efforts exerted by the state to preserve the drinking water considering it national security issue.

Water and wastewater sector come On the top of the government's priority list, in line with Egypt's vision for sustainable development 2030. This interest was reflected in the country's eagerness to use the latest technology in water purification and wastewater treatment, in order to reuse it in various purposes. In addition to continuously improving the services provided to citizens and upgrading the sector as well as raising its efficiency, in light of the challenges that face the water scarcity and the state's commitment to provide services to all citizens, while adhering to health and environmental standards and requirements.

The Ministry of Housing, Utilities and Urban are suitable to is working on non-traditional solutions to extend waste water services to deprived areas. Which commensurate with the nature and circumstances of these areas inorde to get benefit from the international experiences in this regard, throughout the implementation of decentralized systems and other low-cost solutions.

The ministry's methodology with regard to the drinking water and sanitation facilities,

The sector has several axes represented in improving drinking water and waste water services, extending and expansion of services in deprived areas, improving operational systems by raising the efficiency of service providers, in addition to enhancing the Institutional and legislative frameworks within the sector and achieving financial independence.

This has been done over the past years on the national plan to rationalize water consumption by raising awareness among citizens of the importance of water and reducing water losses of drinking water and maximizing the utilization of the available water resources by providing alternative sources of drinking water and reusing of treated water, which It has become one of the trends of the country in light of water scarcity, population growth and climate change, as well as the development and maximizing the use of groundwater.

In the same context, the role of the Egyptian water and wastewater regulatory agency (EWRA) is to find its pivotal role in regulating the sector in a way that enable service providers to achieve appropriate performance levels and high quality at the technical and financial levels Moreover ensuring consumer protection by monitoring the quality of service provided.

The address of Professor Dr. Deputy Minister of Housing, Utilities and Urban Communities

Prof. Sayed Ismael

As part of the efforts exerted by the state represented in the Ministry of Housing, Utilities and Urban Communities to provide drinking water to all citizens and maximize the utilization of available water resources, it has been directed to provide alternative sources of drinking water, as desalination of seawater in coastal governorates , the construction of groundwater plants, reuse of treated water, including the expansion of the construction of wastewater treatment plants in upper-Egypt governorates, Also upgrading of treatment plants that discharged in the Nile River and turn them into triple treatment ,Moreover improving the quality of the treated wastewater at the rest of the governorates to be reused in agriculture, as well as reducing the water losses in all areas by expanding installation of meters (prepaid or Code) and reducing the losses of drinking water by placing private parts in taps connections in order to save water. Also raise awareness among citizens to the rationalization of water. Where Currently 20 desalination plants are under implementation with a total capacity of 553 thousand m3/day, at a cost of 11.13 EGP billion, in the governorates of (Matrouh, The Red Sea, North Sinai, South Sinai, Port Said, Daqahliya, Suez), other than 64 stations with a capacity of 741.26thousand m3/day, where the amount of desalinated water has been doubled from 80 thousand m3 in 2014 to 741.26 thousand m3 currently, and a range of desalination plants are planned in accordance with the ministry's future strategic plans to be expanded to meet drinking water needs.

One of the most important challenges that faces the drinking water and waste water sector is optimizing the efficiency of the waste water services in accordance with local and international standards and specifications to get benefit from reusing it the state has adopted a national sewage program for rural areas that considered to be a restructuring of the sector, financed its two phases by the World Bank and the Asian Bank for Investment in Infrastructure.

A total of 54 bilateral and trilateral wastewater treatment plants are under construction in Upper Egypt governorates, with a capacity of 1,188 million m3/day (433 million m3/year), at a cost of EGP 8.87 billion, to serve 8 million inhabitants, and 48, treatment plants have been completed and the rest of the plants are scheduled to be completed in the current fiscal year.

The role of the Egyptian water and wastewater and consumer protection regulatory agency (EWRA) crystalized in regulating, monitoring and follow up all the related activities of drinking water and waste water at the level of the state, whether initiated by government projects or granted ones that have the concession of working in this field in accordance with the laws or units of drinking water and waste water established by private projects, in a way that can encourage these projects to achieve the highest level of performance in order to ensure the continuity of service with the required quality and efficiency.

The state represented by the Ministry of Housing, Utilities and Urban Communities and the Water, waste water and Consumer Protection Regulatory agency (EWRA) exerted a lot of efforts to provide reforms to the sector aimed to raise the efficiency of workers in the sector, increasing investments and increasing the efficiency of services provided to citizens.

The address of Professor Dr. CEO of EWRA

Prof. Mohamed Hassan Mostafa

Within the scope of the State's concern with reforming the system of the Drinking Water and Wastewater Sector, and within the context of the restructuring process that was launched at the beginning of the new millennium, the Presidential Decree No. 136 for the year 2004 was issued, establishing EWRA to be responsible for organizing, monitoring and controlling all matters related to the production and distribution of drinking water and safe disposal of wastewater. Through the sequence of reform phases, Presidential and Ministerial Decrees were issued supporting EWRA in undertaking its responsibilities. The Presidential Decree No. 227 for the year 2007 was issued amending certain provisions of Presidential Decree No. 136 for the year 2004, followed by the Ministerial Decree No. 115 for the year 2007 which granted EWRA a set of authorities to help it play its role, which is regulated by Decree No. 136 for the year 2004. Recently there has been an important discussion concerning a new draft law regulating the Drinking Water and Wastewater Sector, which will provide a wide range of legal tools to EWRA to contribute to the Sector's improvement and to regulate the relationship between its parties under the umbrella of the Ministry of Housing, Utilities and Urban Communities.

Within the framework of its roles and responsibilities, EWRA continues to issue its annual reports, which showcase the developments taking place in the Sector.

The 10th Report in your hands includes a presentation of EWRA's status during FY2017/2018 It also highlights the activities and achievements of the various departments under EWRA during the same period, especially that during this period

The 10th Report in your hands includes a presentation of EWRA's status during FY2017/2018 It also highlights the activities and achievements of the various departments under EWRA during the same period, especially that during this period EWRA played a pivotal role in developing and supporting the financial reform plan of the Sector through a new policy and a new structure for the drinking water and wastewater tariff which was approved by the Cabinet of Ministers no.(1012) of year (2018) and the service providers have already commenced its implementation, and EWRA is following up the implementation process to ensure compliance with the determined tariff structure and tables and to achieve a balance between the producers' and consumers 'rights. During FY July 2017/ June 2018,

EWRA issued (11) reports continued to implement its plan by checking the quality of drinking water by covering different governorates at the state level.

In addition to EWRA issued (15) reports of wastewater efficiency treatment through them EWRA directs the concerned parties to take the necessary measures to carry out the recommendations And then coordinate with the service providers to follow up on the implementation of the corrective measures as recommended by EWRA As well as follow-up the customer service sectors and the mechanisms of dealing with complaints and customer inquiries as well as reviewing the financial and commercial performance of service providers.

We are presenting herewith the 10th Annual report of the Egyptian Water Regulatory and Customer Protection Agency (EWRA) to the concerned parties, hoping for success in achieving our goals for the benefit of the Sector and our beloved country. May God grant us success and support.

Chapter I

The Drinking Water and Wastewater Sector

Introduction:

The State directs a massive attention to the development of the Drinking Water and Wastewater Sector, reflected in the structural reform of the Sector since 2004 through the issuance of Presidential Decree No. 135 for the year 2004 establishing the Holding Company for Water and Wastewater and transforming the public authorities into subsidiary companies governed by Law No. 203 for the year 1991, as well as the issuance of Presidential Decree No. 136 for the year 2004 establishing EWRA as a control entity and regulator of the Sector to achieve a balance between the service providers and recipients, which is one of the important steps in restructuring the Sector in order to develop it and increase its efficiency. The Sector is characterized by a great wealth, holding a large number of existing assets, represented in the drinking water and sewage networks, drinking water purification plants, wastewater treatment plants and drinking water and wastewater lifting stations, where the total volume of assets according to the Holding Company's estimates is about EGP 100 billion EGP.

The availability, preservation, governance and utilization of the drinking water and wastewater system are among the most investment-attracting factors that help achieve sustainable and comprehensive development across generations

In the light of these challenges, it was indispensable to consider the development of reference policies aiming at reforming the Sector's works and improving its performance to enable it efficiently and effectively meet the growing needs. Hence the importance of the presence of a regulator for the Sector becomes obvious, which would seek to ensure that the service reaches all citizens with high quality and fair price while achieving the financial sustainability of the companies and ensuring compliance with environmental conditions and controls

The challenges facing the Sector:

The Drinking Water and Wastewater Sector faces four key challenges, namely;

1. Legislative challenges:

These challenges are represented in the presence of a legislative framework that controls, governs and defines the main aspects of policies that identify and direct subsidies and the aspects that achieve balance between the interests of consumers and service providers as well as project financing alternatives.

A draft law regulating the Drinking Water and Wastewater Sector has been prepared in this respect.

2. Financial challenges:

The financial challenges of the Drinking Water and Wastewater Sector are represented in the presence of pricing policies that control and set pricing controls, whereas in terms of investment activities, the challenges are represented in calculating the volume of financing necessary for the Operation & Maintenance (O&M) processes.

The previous pricing method for drinking water and wastewater services has negatively impacted the financial performance of the Sector leading to higher deficits in project financing and increasing the gap between expenditure and revenue and the deterioration of tariff and make it fixed since 2009. Also this method was not reflecting the sound bases of economical pricing and total cost recovery of service providers, leading to ineligible groups benefitting from the subsidies, which made service providers obtain the subsidies offered by the Ministry of Finance whether to support the current budgets or to finance investment budgets, which limits their ability to develop their technical, administrative and financial performance. In this context, a new pricing policy was adopted starting FY2014/2015, where the tariffs were increased by different percentages by observing the political and socio-economic conditions that the country underwent to be able to contribute to covering the costs incurred by the service providers.

3. Technical challenges:

The technical challenges involve raising the efficiency of rehabilitation and periodic maintenance programs, as well as compensating the shortage in technical expertise that lead to increase in water losses, irregularity and deterioration in the service, in addition to problems related to the water quality and extending drinking water and wastewater services to deprived and poor areas.

4. Institutional challenges:

In the light of the structural reforms of the Sector which began in 2004, the roles of the Sector's key entities (EWRA, the Holding Company, the subsidiary companies, The National Organization for Potable Water and Sanitary Drainage [NOPWASD] and the Construction Authority for Potable Water & Wastewater [CAPW]) and the supporting entities related to the Sector (Ministry of Finance, Ministry of Health, Ministry of Water Resources and Irrigation, Ministry of Environment)

The key players in the Drinking Water and Wastewater Sector:

Ministry of Housing Utilities and Urban Communities

Ministry of Housing Utilities and Urban Communities bears the greater burden in the management of Drinking Water and Wastewater Sector in Egypt. It is responsible for formulating the policies of the Sector, preparing the strategies and plans and reviewing the annual reports on the performance of this facility. The above is implemented through several entities entrusted with carrying out these works, namely;

1- The Holding Company for Water and Wastewater and its subsidiary companies (HCWW):

- The Holding Company for Water and Wastewater was established by virtue of Presidential Decree No. 135 for the year 2004 and has the legal personality in accordance with the provisions of the Business Sector Companies Law No. 203 for the year 1991 and its executive regulations.
- By virtue of the aforementioned Presidential Decree, public and economic authorities also water and wastewater companies in the governorates were transformed into subsidiaries of the Holding Company and are subject to the provisions of the Business Sector Companies Law.
- Also the Presidential Decree No. 249 for the year 2006 was issued, transferring the ownership of the drinking water and wastewater facilities assets which are managed by the municipalities to the Water and Wastewater Companies in the governorates. The purposes of establishing the Holding Company are to form and administer the State portfolio; represented in the assets of the Water and Wastewater Companies in the governorates; including the shares, financing instruments, bonds and any other instruments or financial instruments.
- The purpose of the establishment of subsidiary companies is to undertake the responsibilities of purification, desalination, transportation, distribution and sale of drinking water, as well as collection, treatment and disposal of wastewater.

2- The National Organization for Potable Water and Sanitary Drainage (NOPWASD)

NOPWASD, established by virtue of Presidential Decree No. 197 for the year 1981, is responsible for preparing the drinking water and wastewater activities plans at the national level in all the governorates of Egypt, except Cairo, Alexandria, Sinai, Red Sea and some reconstruction areas. NOPWASD undertakes all the necessary activities to achieve its objectives through the following:

- The design of major projects at the governorate level, which are classified under NOPWASD plan and financed by the State budget; including the preparation of studies, conditions and specifications documents and contracts for such projects, also analysis and study of tenders and their award.
- Construction supervision and handover of projects and the transfer of assets and liabilities to the entity in charge of O&M, including their rights and obligations, to undertake their management and operation.
- Establishment of training centers to increase the production efficiency of the drinking water and wastewater works.
- Providing technical advice and expertise in the fields of drinking water and wastewater, internally and externally (Arab and foreign countries).

3- The Construction Authority for Potable Water & Wastewater (CAPW)

• The Construction Authority for Greater Cairo Wastewater Project was established by virtue of Ministerial Decree No. 497 for the year 1981 for the purpose of implementing the Greater Cairo Wastewater Project at that time.

• The Ministerial Decree No. 372 for the year 2005 was issued to incorporate Greater Cairo and Alexandria drinking water and wastewater projects in the competences of the Construction Authority for Greater Cairo Wastewater Project.

• The Ministerial Decree No. 296 for the year 2007 was issued to amend the scope of work of the Construction Authority for Greater Cairo Wastewater Project to include the drinking water and wastewater projects of Greater Cairo, Alexandria, Giza and Qaliubia governorates. The name of the Authority was changed to the Construction Authority for Potable Water & Wastewater (CAPW),

• (CAPW) is specialized in studying, proposing and developing policies, plans and technical and financing programs for projects related to drinking water and wastewater within the scope of its work, as well as their construction supervision through coordination between those plans and programs and the plans of the various parties connected to EWRA.

4- New Urban Community Authority (NAUC)

Established by virtue of Presidential Decree in September. 14, 2017, to cancel the presidential Decree of No. 117 for the year 2010, stated the transfer of the assets of stations, networks and lines of drinking water and wastewater in the new cities affiliated to the new urban community authority to the holding company for drinking water and sanitation In accordance with the presidential decree stated the transfer of water and sanitation systems from the holding company to the new Urban Communities Authority and currently they are dealing with (NAUC) to lay the foundations for its drinking water and sanitation systems.

5- The Egyptian Water Regulatory and Consumer Protection Agency (EWRA)

EWRA was established by virtue of the Presidential Decree No. 136 for the year 2004, which become effective in 2007. EWRA is specialized in monitoring and controlling all activities related to drinking water and wastewater at the national level.

Vision:

Enhancing the drinking water and wastewater services, through achieving a balance between the interests of all parties concerned, within the framework of the general principles of transparency, efficiency and consumer rights protection.

Mission:

Ensuring the availability of high-quality drinking water and wastewater services at an appropriate price aligned with the State policy concerning the Sector, through commitment to protect the public health and the environment.

Objective:

Organizing, monitoring and controlling all activities related to drinking water and wastewater at the national level whether those carried out through governmental projects or those which the State grants as concession agreement in this field according to the Law, or through water and wastewater units established by private projects in a manner that enables and encourages those projects to achieve the highest level of performance in order to ensure service continuity with the required quality and efficiency and to offer the service to the consumer appropriately with the most competitive prices

The competences of EWRA:

• Ensuring that all activities related to drinking water and wastewater are carried out in compliance with the laws and regulations, especially those related to quality and environmental protection.
• Reviewing the consumption, purification, analysis, transfer and distribution plans of drinking water and wastewater.
• Providing technical assistance to projects based on studies that determine the level of performance.
• Offering the targeted technical, commercial, economic and financial follow-up and verifying the cost of drinking water and wastewater activities to guarantee the interests of the projects and consumers.
• Studying the requests to determine and amend the tariff that would create a balance between service providers and consumers and obtaining the approval of the Cabinet of Ministers thereon.
• Reviewing and approving templates of contracts and agreements between service providers and consumers.
• Following up the availability of administrative, technical, financial and economic capacity for all projects.
• Guaranteeing the quality of the technical and administrative services for all projects.
• Dissemination of information, reports and recommendations guaranteeing the rights and obligations of service providers and consumers.
• Investigating the complaints of the subscribers to achieve a balance in protecting the interests of service providers and consumers.

Governing rules:

• Financial and water sustainability.
• Quality of service delivery.
• Fair prices.
• Consumer protection.
• Environmental protection.

Regulatory tools:

• Licenses to practice the activity.
• Service consumption tariff.
• Performance control.
• Promoting competition and regulatory incentives.

The key axes of the EWRA's activities:

Axis I: Water quality control:

- Collection of samples from water production sites in the governorates and their analysis at the laboratories of neutral scientific entities.
- Issuing reports on the status of drinking water quality and wastewater services in the governorates.
- Field inspection on the central and branch laboratories also the plant laboratories of the service providers.
- Comparison between the results through the reports issued by EWRA to check the improvement in the quality of drinking water and the efficiency of wastewater treatment.

Axis II: Consumer protection:

- Monitoring, enumerating and classifying consumer complaints through various methods.
- Field visits to investigate drinking water and wastewater complaints on-site.
- Checking the customer service centers and departments to examine the level of service delivery and performance development.
- Changing negative behaviors and encouraging positive behaviors regarding the way the local community deals with drinking water and wastewater issues and raising awareness among consumers.
- Measuring the degree of satisfaction with drinking water and wastewater services.

Axis III: Financial analysis and economic regulation:

- Analyzing the financial statements of the drinking water and wastewater services providers.
- Reviewing the investment budgets of the drinking water and wastewater services providers.
- Issuing reports including necessary recommendations for performance improvement.
- Conducting cost studies and adjusting the tariffs of drinking water and wastewater services.

Axis IV: Accreditation of drinking water and wastewater facilities operators:

- A program was developed for capacity identification, building and measurement for the managers and operators of drinking water and wastewater plants also the laboratory analysts at the drinking water and wastewater facilities laboratories and network laboratories and the granting accreditation certificates to them.
- EWRA cooperates with the Housing and Building National Research Center and the Holding Company in undertaking the executive procedures to activate the accreditation program.

Axis V: Monitoring the performance of the companies to reduce the drinking water losses:

- Installation of measuring meters in the water production sites and checking all the meters installed on the consumers' connections.
- The companies divided the service areas into separate areas to control and verify the quantity of water within the distribution networks.
- The companies established measuring meters on the intake of drinking water production plants to measure the amount of raw water entering the drinking water plants.

Axis VI: Emphasizing the control of the technical and financial performance of the service providers through performance indicators and service standards:

- Preparing tabulations for the annual data required from the companies in order to submit them to EWRA for the purpose of calculating performance indicators of the companies and standards of the services offered to the consumer.
- Reviewing and analyzing the received data.
- Calculating the companies' performance indicators and the standards of the services offered to the consumer.
- Issuing reports including recommendations to improve and develop the performance of service providers.

Axis VII: The legislative framework of the Drinking Water and Wastewater Sector:

- The law regulating the Sector.
- The licenses.
- Standardization of legislations.
- Protecting the investments and assets of the Sector.
- Attracting private investments.

Axis VIII: International Cooperation:

- The United States Agency for International Development (USAID).
- The EU-Egypt Association Agreement (The Support to the Association Agreement Program - SAAP).
- Egyptian-German Technical Development Cooperation (German Agency for International Cooperation - GIZ).
- The World Bank (WB).

Within this context, EWRA seeks to achieve the following objectives:

- Ensuring the provision of adequate and high-quality drinking water to the citizens across Egypt, in a manner ensuring that all citizens have access to high-quality clean drinking water.
- Achieving the financial sustainability of the companies operating in the Sector, allowing them develop their working methods and efficiently manage their activities.
- Safe collection and treatment of wastewater in line with the environmental and health standards.

- Achieving a high-level institutional independence for the service providers to enable them achieve their objectives without being committed to restrictions that affect the courses and efficiency of their actions.
- Achieving a fair return on investment in the Sector's activities to realize the concept of (cost effectiveness).

By service regulator within the Drinking Water and Wastewater Sector, it is meant the presence of a set of regulatory and binding rules issued by an entity having the necessary legal capacity and authority (the regulatory entity) to control, follow-up and supervise the adherence of the other entities (services providers) that are governed by EWRA, to their responsibilities towards their customers and undertaking the procedures and imposing the necessary penalties upon violating such responsibilities. EWRA undertakes this role being at the top of the triangle, whose base consists of both the service providers and the service recipients.

Chapter II

Financial, commercial analysis

In order to achieve a balance between the service recipients and providers that would ensure the Sector's growing efficiency and development, and in line with the performance development of the Sector represented in the following:

1. Cost recovery of the service provider companies in order to achieve the financial independence of the Sector and reduce the burden on the State budget.
2. Optimizing the efficiency of collection in the Sector to provide the necessary liquidity to pay the dues.
3. Building credibility with the customers by improving the efficiency of meter-reading system and their maintenance.
4. Efficient and effective human resources management within the Sector.
5. Curbing the increasing water losses which represent a massive energy and operational and maintenance input losses as well as an impediment for the companies to improve their financial performance.

EWRA verified the development of the financial, administrative and commercial performance levels of the service providers for FY2017/2018, in accordance with the powers vested in it by Presidential Decree No. 136 for the year 2004, and according to a set of eight (8) regionally and internationally relevant performance indicators, in addition to categorizing the performance levels of the service provider companies according to performance measurement indicators into three levels in terms of efficiency

Good Performance
Acceptable Performance
Unacceptable Performance

Accordingly, the service provider companies working in the Sector, amounting to 23 subsidiaries (after excluding Qaliubia Co. and the Canal Governorates Co. from the scope of this report) were divided into four main groups to facilitate the presentation and comparison between similar companies in different factors and circumstances, in terms of:

- Economies of scale.
- Geographical scope.
- Special nature and circumstances.

Group (A) companies: Major companies

Five companies: Cairo Water Co., Cairo Wastewater Co., Alexandria Water Co., Alexandria Wastewater Co., Giza Co.

Group (B) companies: Delta companies

Seven companies: Dakahlia, Beheira, Sharkia, Gharbia, Kafr el Sheikh, Munofia, Damietta Companies.

Group (C) companies: Upper Egypt companies

Eight companies: Fayoum, Beni Suef, Minya, Qena, Assiut, Sohag, Luxor, Aswan Companies.

Group (D) companies: Companies of special nature and circumstances

Three companies: Marsa Matruh, Red Sea, North & South Sinai Companies.

Financial, administrative and commercial performance measurement indicators

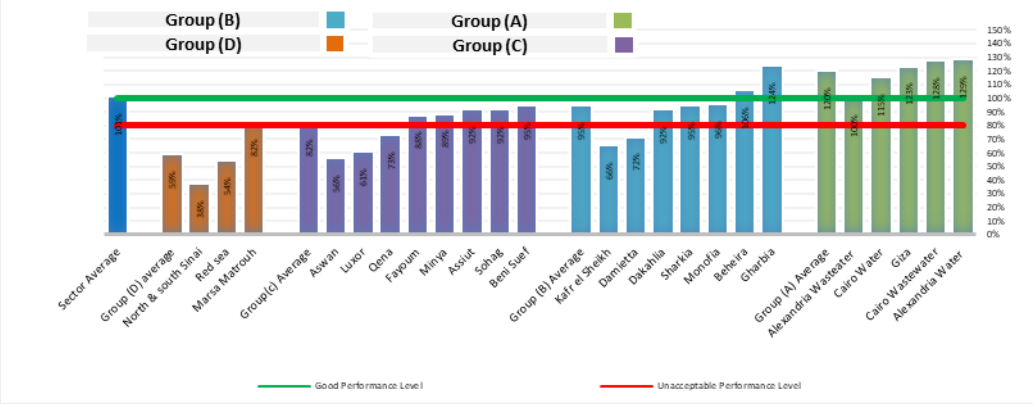
1- O&M costs coverage through the activity revenues.	%
The measurement: The extent of the Companies' ability to cover the O&M costs (excluding the depreciation and interests) through the revenues of the activity.	
2- Coverage of the overall costs through the overall revenues.	%
The measurement: The extent of the Companies' ability to cover all the costs and expenses through the overall revenues.	
3- The percentage of collections against the issued invoices of the period.	%
The measurement: The extent of the Companies' ability to collect the due amounts from the customers against the invoices and claims issued for the activity of the year.	
4- The percentage of the total collections.	%
The measurement: The extent of the Companies' ability to collect the due amounts against the invoices of the period and the deferred amounts of previous years, from the customers.	
5- The percentage of the number of subscribers invoiced according to the actual consumptions.	%
The measurement: The relative weight of the number of customers invoiced according to the actual consumption (operating and valid measuring meters) without average estimates.	
6- The percentage of sold water quantities according to actual readings.	%
The measurement: The relative weight of the consumed water quantities according to the actual readings (operating and valid meters) without average estimates.	
7- Number of labor force per 1000 connections.	One worker per 1000 connections
The measurement: Generally assessing the efficiency of the workers employed by the companies.	
8- The water loss percentage.	%
The measurement: The extent of the companies' operational capability and efficiency in reducing their water losses (technical and commercial).	

S/N	Performance assessment indicators	Performance levels classification (average)		
		Good	Acceptable	Unacceptable
1	The percentage of O & M costs coverage through the activity revenues %	Greater than or equal to ≥ 100%	80-100%	Less than or equal to ≤ 80%
2	The percentage of coverage of the overall costs through the overall revenues %	Greater than or equal to ≥ 100%	80-100%	Less than or equal to ≤ 80%
3	The percentage of collections against the issued invoices of the period %	Greater than or equal to ≥ 80%	60-80%	Less than or equal to ≤ 60%
4	The percentage of the total collections %	Greater than or equal to ≥ 70%	60-70%	Less than or equal to ≤ 60%
5	The percentage of the number of subscribers invoiced according to the actual consumptions %	Greater than or equal to ≥ 85%	75-85%	Less than or equal to ≤ 75%
6	The percentage of sold water quantities according to actual readings %	Greater than or equal to ≥ 85%	75-85%	Less than or equal to ≤ 75%
7	Number of labor force per 1000 connections	Less than or equal to ≤ 6	6-9	Greater than or equal to ≥ 9
8	The water loss percentage %	Less than or equal to ≤ 25%	25-30%	Greater than or equal to ≥ 30%

The results of the financial, administrative and commercial performance levels assessment of the Drinking Water and Wastewater subsidiaries affiliated to the Holding company for FY2017/2018 resulted in the following

First: at the sector level

The percentage of O&M costs coverage (excluding the depreciation and interests) during FY2017/2018 amounted to approximately 101.2% compared to 99.1% during FY2016/2017. The percentage of O&M costs coverage during FY2017/2018 is classified under the "good" performance level according to the performance levels classification, which should be developed and maintained in order to achieve the financial sustainability of the Sector and to ease the burden on the State budget.

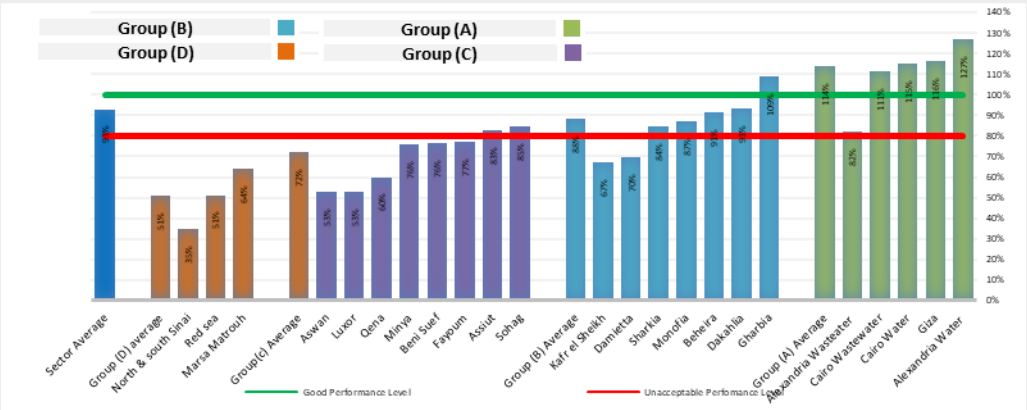


The percentage of O&M costs coverage through the activity revenues

The percentage of coverage of the overall costs through the overall revenues of the Sector during FY2017/2018 amounted to approximately 93.0% compared to 89.0% during FY2016/2017. These percentages are classified under the "acceptable performance level" which should be improved to achieve a financially stable Sector and to ease the burden on the State budget.

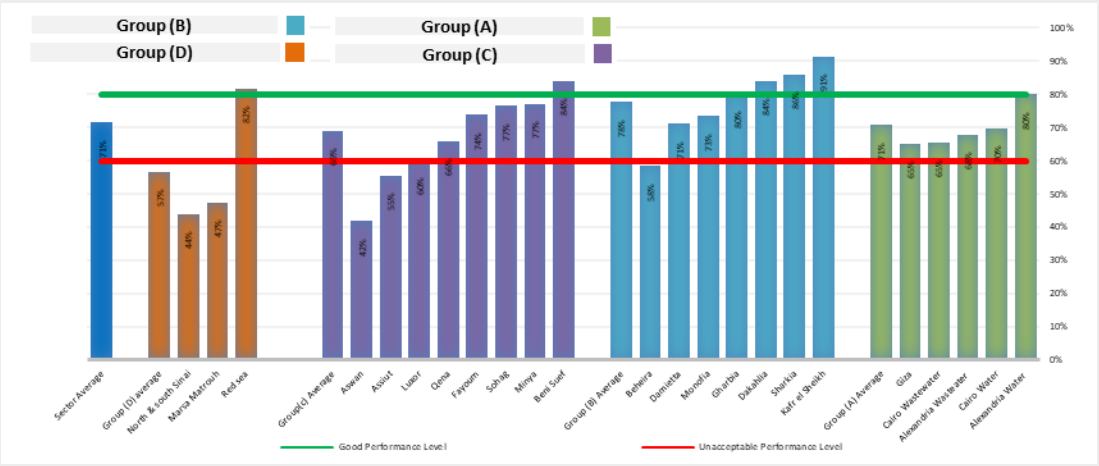
•The results of the cost recovery rates during Fiscal Years indicate the positive impact of the restructuring of the drinking water and wastewater services pricing systems on the performance rates, ensuring the financial sustainability of the Drinking Water and Wastewater Sector.

Grants, subsidies total income of previous years', and allocations (negated its purpose) as well as previous years' expenses and non-depreciation provisions, were excluded from the total costs of companies for financial analysis purposes.



The percentage of coverage of the overall costs through the overall revenues

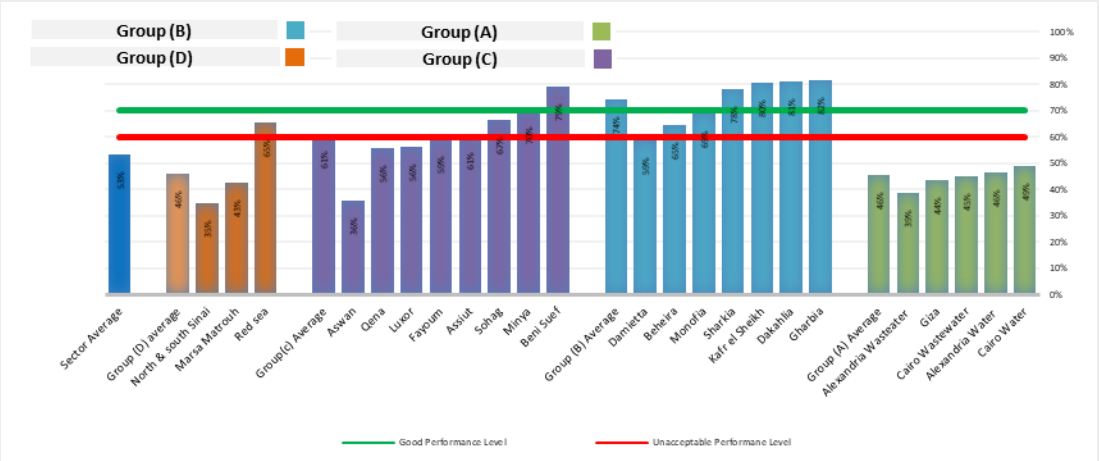
The percentage of coverage of the overall costs through the overall revenues of the Sector during FY2017/2018 amounted to approximately 71.5% compared to 65.8% during FY2016/2017. These percentages are classified under the "acceptable performance level" which should be improved to achieve a financially stable Sector and to ease the burden on the State budget



The percentage of collections against the issued invoices of the period

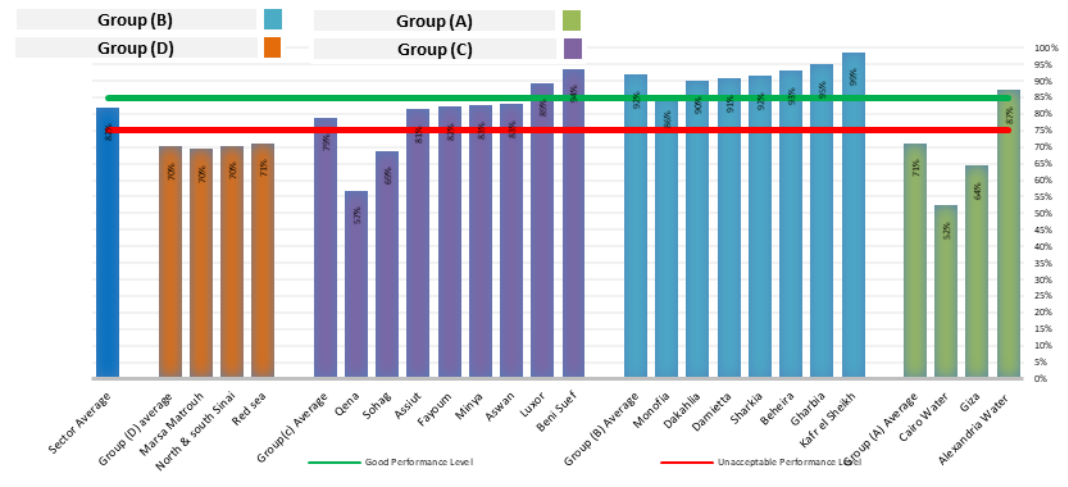
The percentage of the total collections of the Sector during FY2017/2018 amounted to approximately 53.3% of the total customer dues compared to the collection rate amounting to approximately 49.4% during FY2016/2017. These percentages, according to the performance levels classification, fall under "unacceptable performance level". The collection system is required to be improved and developed in order to contribute to increasing the fund flows to achieve a financially stable Sector and to reduce the burden on the State budget

THE PERCENTAGE OF THE TOTAL COLLECTIONS OF THE SECTOR DURING FY2017/2018



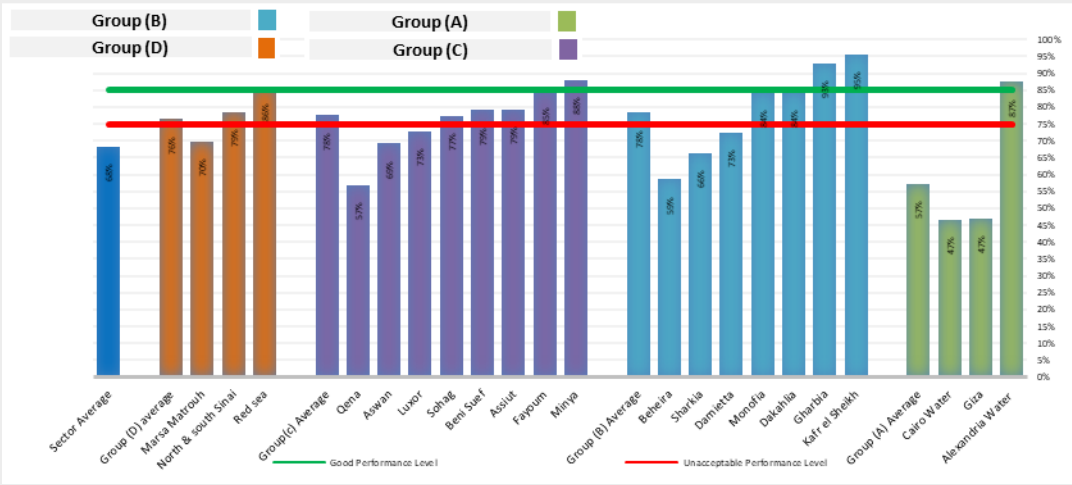
The percentage of coverage of the overall costs through the overall revenues

The percentage of the number of subscribers invoiced according to the actual consumption during FY2017/2018 amounted to approximately 82.0% of the total number of subscribers, compared to approximately 80.5% during FY2016/2017. Those percentages, according to the performance levels classification, fall under "acceptable performance level" which is required to be maintained and gradually improved



The percentage of the number of subscribers invoiced according to the actual consumptions

The percentage of sold water quantities according to actual readings during FY2017/2018 amounted to approximately 68.2% of the total quantity of sold water, compared to approximately 66.5% during FY2016/2017. These percentages are classified under "unacceptable performance level", according to the performance levels classification; accordingly, the Holding Company must direct its subsidiaries towards the installation and replacement of the broken-down and damaged measuring meters for the subscribers while ensuring that the companies are invoicing the customers against the actual consumption rather than according to estimated averages.

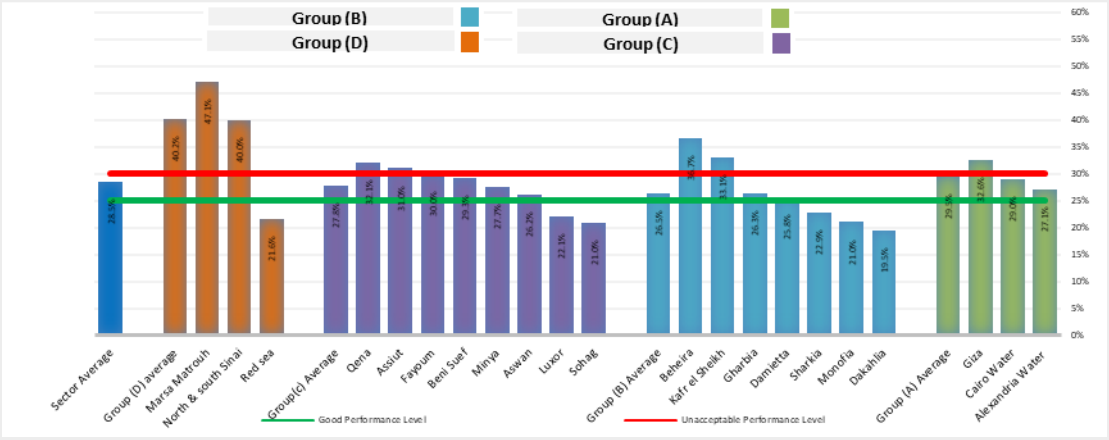


The percentage of sold water quantities according to actual readings

The average number of labour force per 1000 house connections (water and wastewater) during FY2017/2018 amounted to almost 5.7 workers compared to an average of 5.6 workers during FY2016/2017 and an average of 5.7 workers during FY2015/2016.
The average number of labour force per 1000 connections during the fiscal years under study according to the performance levels classification falls under "good performance level", which must be maintained.

Number of labor force per 1000 connections

The water loss percentage in the Sector during FY2017/2018 amounted to approximately 28.5% of the water quantities available for sale compared to approximately 29.5% during FY2016/2017 .Although this percentage, according to the performance levels classification falls under "acceptable performance level", nevertheless it must be improved as it represents massive energy and operational input losses; moreover, saving the lost water is a better alternative to expanding existing plants or constructing new ones



Water loss percentage

The development of the financial, administrative and commercial performance levels of the Drinking Water and Wastewater Sector during the fiscal years under study.

S/N	Indicators	Development of the performance levels of the Sector						Benchmark
		FY 2017/18	Performance Development		FY 2017/16	Performance Development		FY 2015/16	
1	The percentage of O & M costs coverage through the activity revenues %	101.2%	2.1%	↑	99.1%	-3.5%	↓	102.6%	100%
2	The percentage of coverage of the overall costs through the overall revenues %	93.0%	4.0%	↑	89.0%	0.2%	↑	88.8%	100%
3	The percentage of collections against the issued invoices of the period %	71.5%	5.7%	↑	65.8%	2.9%	↑	62.8%	80%
4	The percentage of the total collections %	53.3%	3.9%	↑	49.4%	0.7%	↑	48.7%	70%
5	The percentage of the number of subscribers invoiced according to the actual consumption %	82.0%	1.5%	↑	80.5%	0.6%	↑	79.8%	85%
6	The percentage of sold water quantities according to actual readings %	68.2%	1.7%	↑	66.5%	-0.7%	↓	67.2%	85%
7	Number of labor force per 1000 connections	5.7	0.1	↓	5.6	-0.1	↑	5.7	6.0
8	The water loss percentage %	28.5%	1.0%	↑	29.5%	-0.0%	↑	29.6%	25%

Second: At the companies level

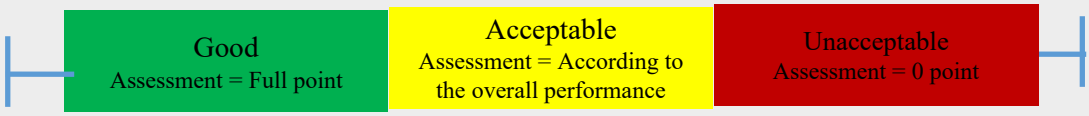
EWRA ranked the service provider companies according to the Overall Performance, based on the total points awarded to companies according to the results of the indicators used to assess performance levels, in order to motivate and encourage service providers to improve financial, administrative and commercial performance levels.

S/N	Performance assessment indicators	Assessment methodology (amended)			
		Good	Unacceptable	Points	Relative weight
1	The percentage of O & M costs coverage through the activity revenues %	Greater than or equal to ≥ 100%	Less than or equal to ≤ 80%	15	15%
2	The percentage of coverage of the overall costs through the overall revenues %	Greater than or equal to ≥ 100%	Less than or equal to ≤ 80%	15	15%
3	The percentage of collections against the issued invoices of the period %	Greater than or equal to ≥ 80%	Less than or equal to ≤ 60%	15	15%
4	The percentage of the total collections %	Greater than or equal to ≥ 70%	Less than or equal to ≤ 60%	15	15%
5	The percentage of the number of subscribers invoiced according to the actual consumptions %	Greater than or equal to ≥ 85%	Less than or equal to ≤ 75%	10	10%
6	The percentage of sold water quantities according to actual readings %	Greater than or equal to ≥ 85%	Less than or equal to ≤ 75%	10	10%
7	Number of labor force per 1000 connections	Less than or equal to ≤ 6	Greater than or equal to ≥ 9	10	10%
8	The water loss percentage %	Less than or equal to ≤ 25%	Greater than or equal to ≥ 30%	5	5%
9	Communication with EWRA			5	5%
				100	100%

The service provider companies are ranked according to the Overall Performance efficiency level measurement through the following steps:

1- Measuring the performance efficiency level of each indicator as following:

- The company achieving unacceptable performance level assessment grade = 0 points.
- The company achieving acceptable performance level assessment grade according to the performance results in a percentage of full point.
- The company achieving good performance level assessment grade (full points)



2- Specifying the overall performance efficiency level of the company which is the total points of the performance efficiency level assessment of all the indicators.

3- Ranking service provider companies according to the overall performance efficiency

The results of ranking the service provider companies according to the financial, administrative and commercial performance assessment levels for FY2017/2018 resulted in the following:

- Gharbia Company ranked first, Dakahlia Company ranked second and Alexandria drinking water Company ranked third.
- Monofya Water Company ranked fourth and Sharkia Company ranked fifth.
- The Water and Wastewater Companies (Luxor, Qena, Aswan. Marsa Matruh, North & South Sinai Wastewater Companies) attained the last rankings in the Sector necessitating the Holding Company to support them in all aspects with the inevitability of developing plans and programs with specific timeframes aiming at improving the performance levels gradually

EWRA issued a set of recommendations that contribute to improve the financial, administrative and commercial performance of the Drinking Water and Wastewater Companies, which aim to adopt a number of procedures, programs and plans that achieve the following:

- Automate and develop the costing systems of the service providers, which would contribute to reflect the real cost per cubic meter of drinking water and wastewater.
- Reducing the O&M costs of the plants and networks.
- Improving the collection efficiency rates and linking them to the incentive system for the workers at the companies.
- Improving the efficiency of the meter reading and meter maintenance systems while ensuring compliance of customer invoicing with the actual consumption.
- Activating the Assets Management System with all its asset programs and follow-up mechanisms of periodic and preventive maintenance programs and identifying the required investments for the rehabilitation programs accurately and according to the priorities and the degree of risk, which would in turn lead to the continuity of the service with the required quality and efficiency.

Chapter III

Performance Indicators and Service Levels

First: Performance indicators and service levels of the drinking water and wastewater services

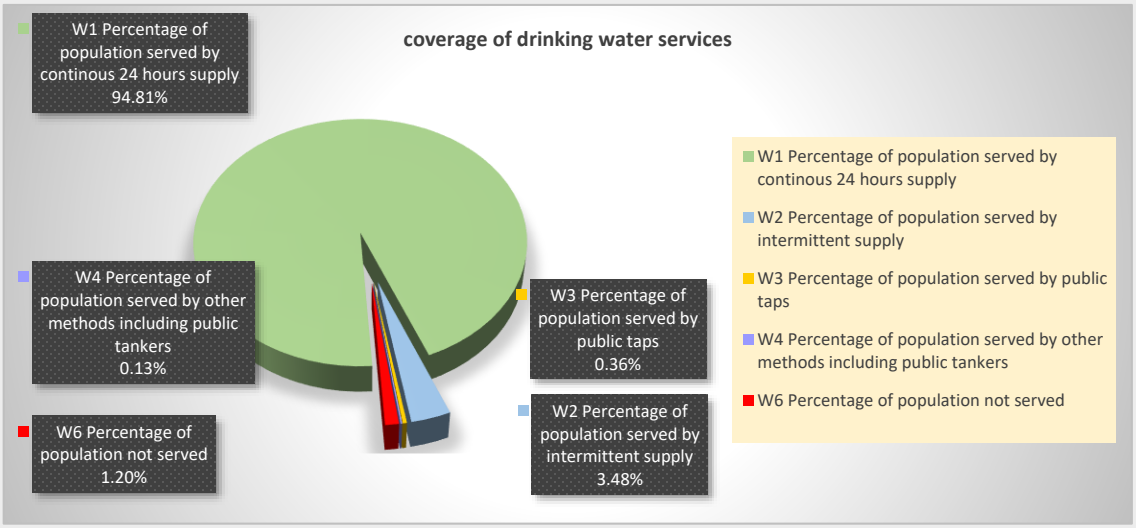
Second: Performance indicators and service levels with respect to water quality

First: Performance indicators and service levels of the drinking water and wastewater services

Drinking water services:

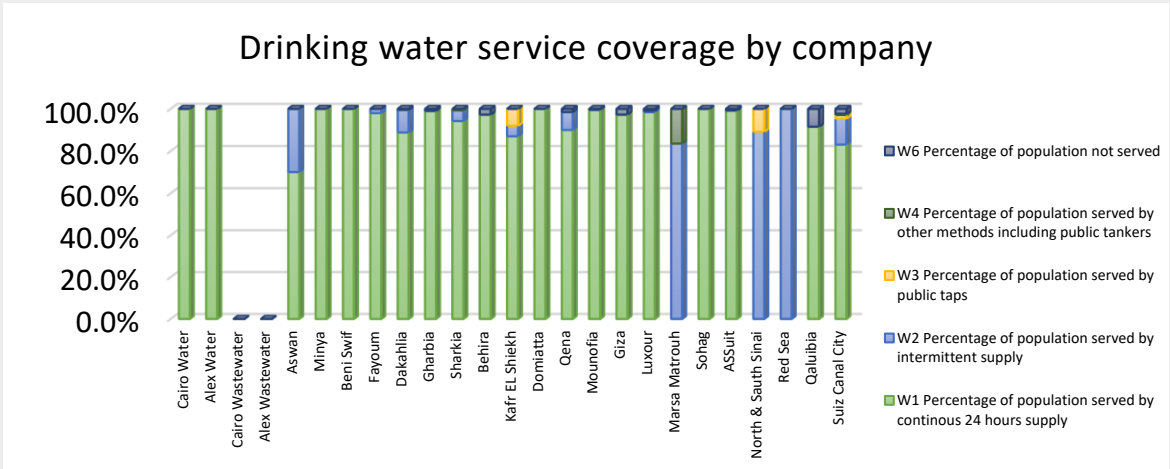
Coverage of drinking water services at company level

- The coverage of drinking water services at the level of 24 companies for 24 hours continuously amounted to 94.8%, while the services coverage system through rotations amounted to 3.5%. The percentage of beneficiaries from public taps amounted to 0.4%, while those served through other means; including water tankers, amounted to 0.1%, whereas the percentage of those who are not served amounted to 1.2%



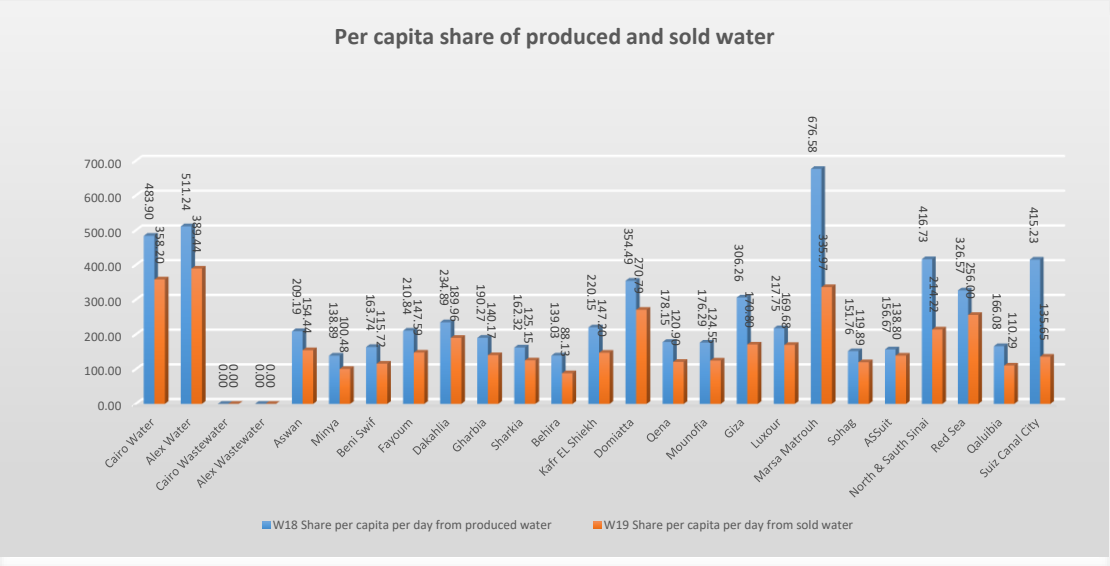
Drinking water services coverage per company:

- The coverage of drinking water services through the 24-hour continuous coverage system amounted to 100%, at each of Cairo Water Co., Alexandria Water Co., Sohag, Minya, Beni Suef, and Damietta Water and Wastewater Companies.
- Followed by Monofia Water and Wastewater Company, where the 24-hour coverage system amounted to 99.5%, whereas the remaining 0.5% do not receive the service.
- The least coverage through the 24-hour continuous coverage system was reflected at Aswan Water and Wastewater Company, amounting to 70%, while the remaining 30% is covered through rotations system.



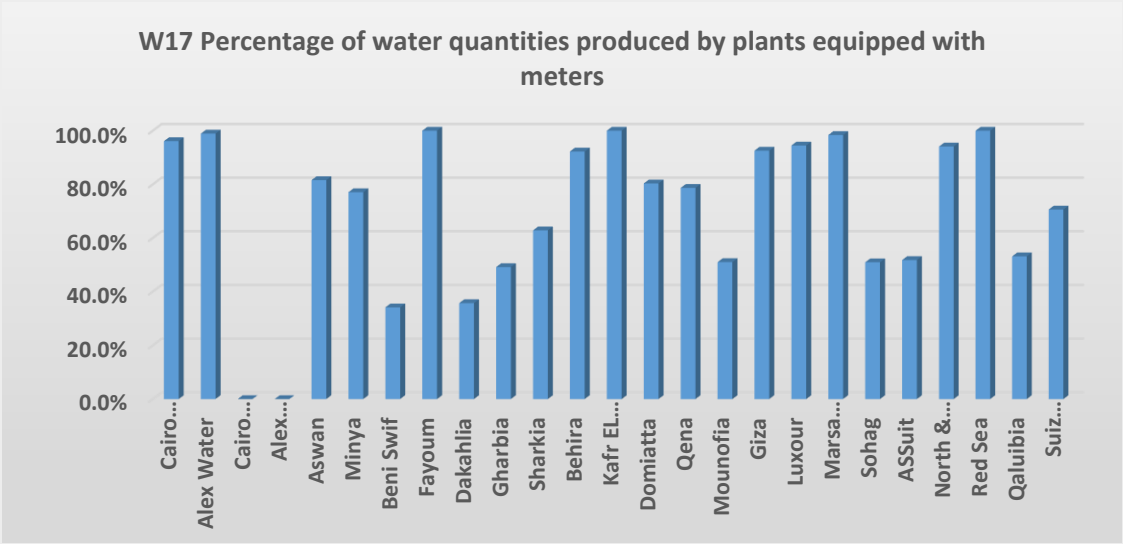
Per capita share of produced and sold water

- Marsa Matrouh Water Co. ranked first with respect to per capita share of produced water quantities, amounting to 676.58 lit/day; whereas the per capita share of sold water quantities amounted to 335.97 lit/day.
- The highest per capita share of sold water was recorded at Alex Water Co., with per capita share of produced water amounting to 389.44 lit/day.



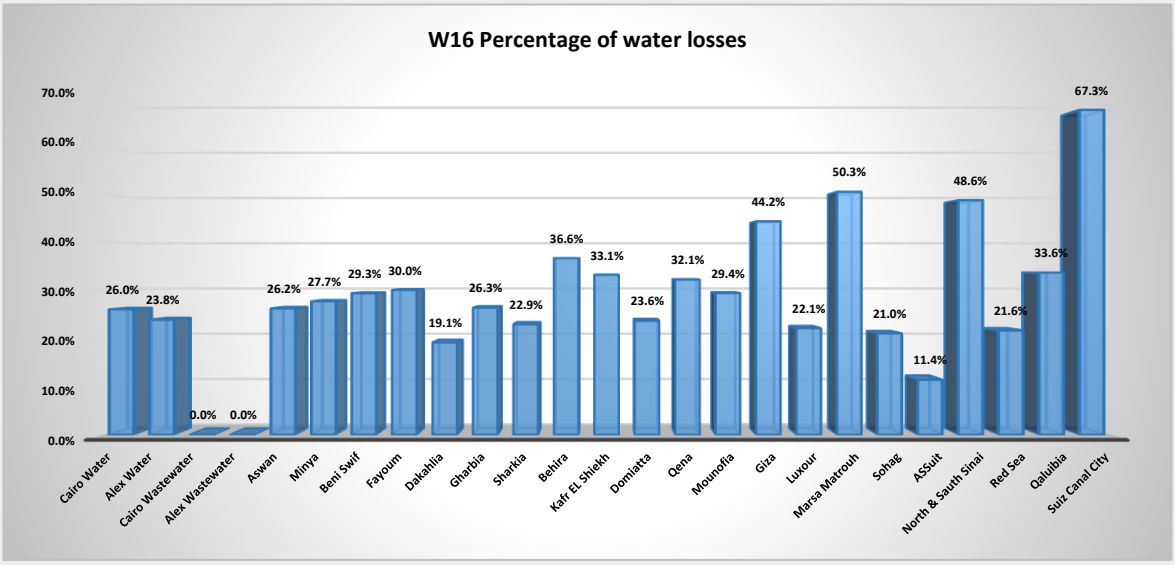
Water quantities produced by plants equipped with meters

- Kafr El Sheikh Water Co. Fayoum Water and Wastewater Co. and Red Sea co. ranked first in terms of water quantities produced by the plants equipped with meters, amounting to 100%, followed by Alex Water Co. (98.9%) and Matrouh Water and Wastewater Co. (98.4%), whereas the water quantities produced by plants equipped with meters amounted to 34.1% at Beni suef Water and Wastewater Co.



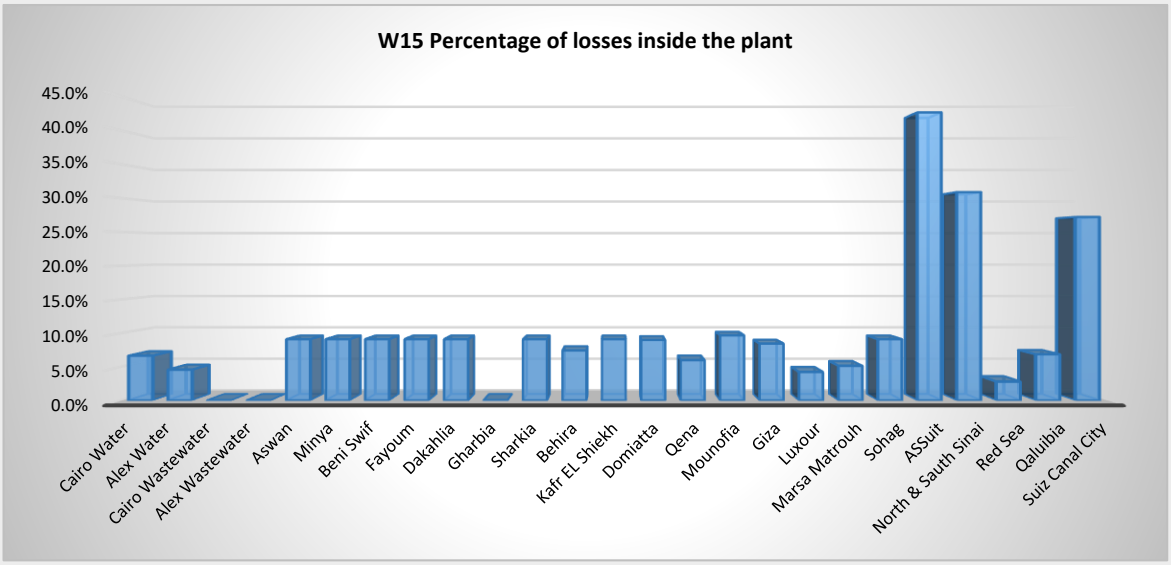
Water loss

- Canal Cities Water and Wastewater Co. ranked first in terms of water loss which amounted to 67.3%, followed by Marsa Matruh Water and Wastewater Co. amounting to 50.3%
- The lost water quantities at Assuit water and wastewater co. amounting to 11.4% which came at the lowest rank between companies.



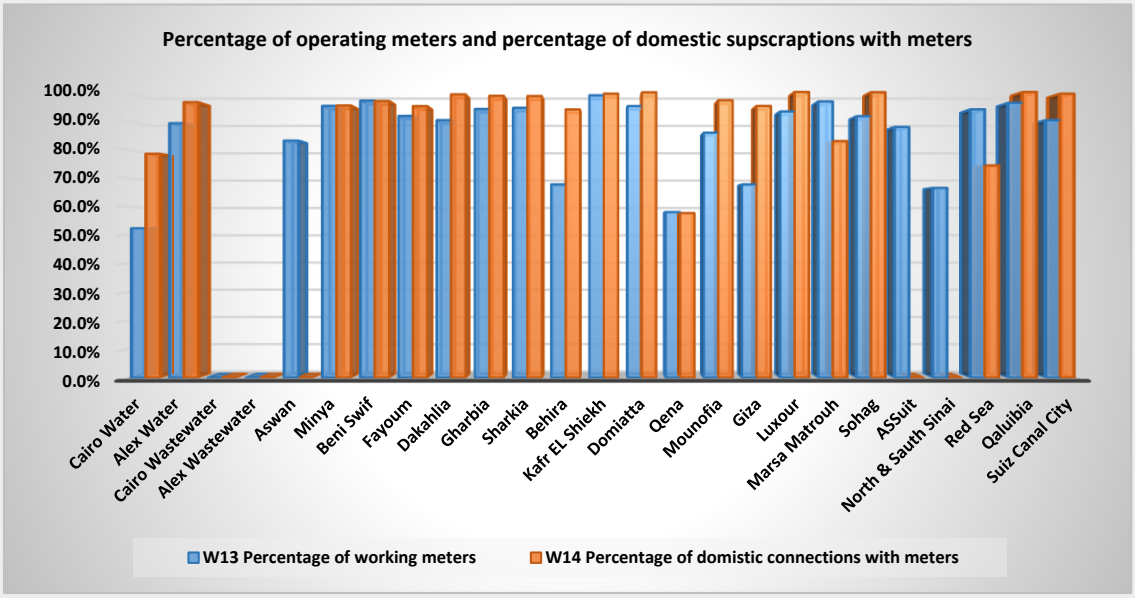
The water loss inside the plants

- The highest percentage of water losses inside the plants was recorded at Assuit Water and Wastewater Co., which amounted to 42.60%, while the lowest percentage of such losses was recorded at Red Sea Water and Wastewater Co., amounting to 2.8%.



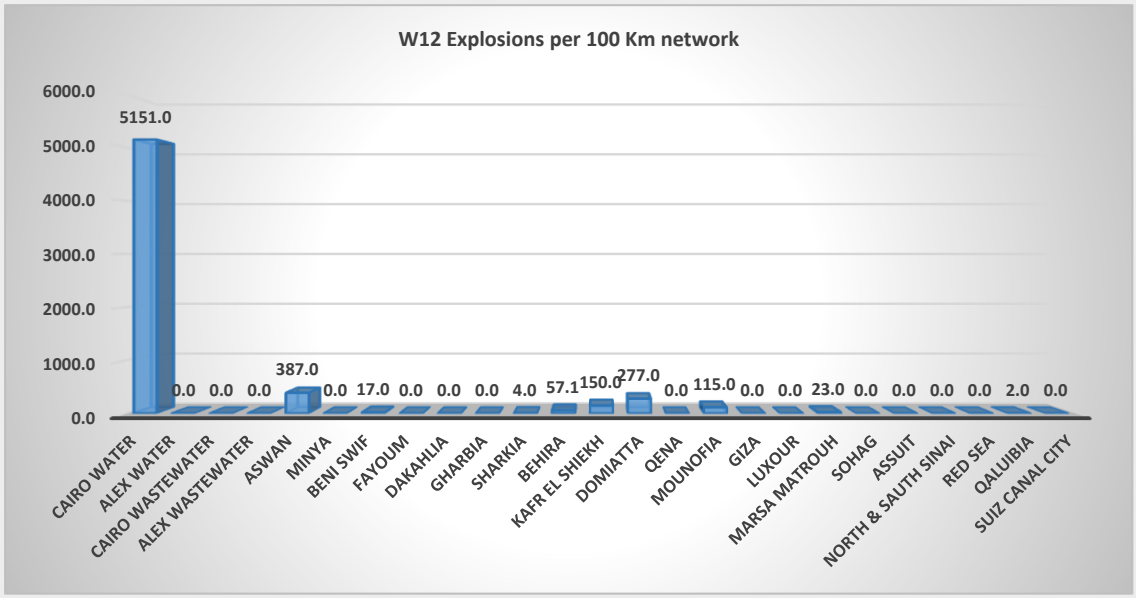
The operating and domestic meters

- The highest percentage of the operating meters was recorded at Kafr El Shiekh Water and Wastewater Co. amounting to 98.8% while the lowest percentage thereof was recorded at Cairo Water Co. at 52.5%
- The highest percentages of operating meters of domestic subscriptions amounted to 100% in Luxor Co., while the lowest percentage was recorded at Qena Water and Wastewater Company amounted to 57.8%



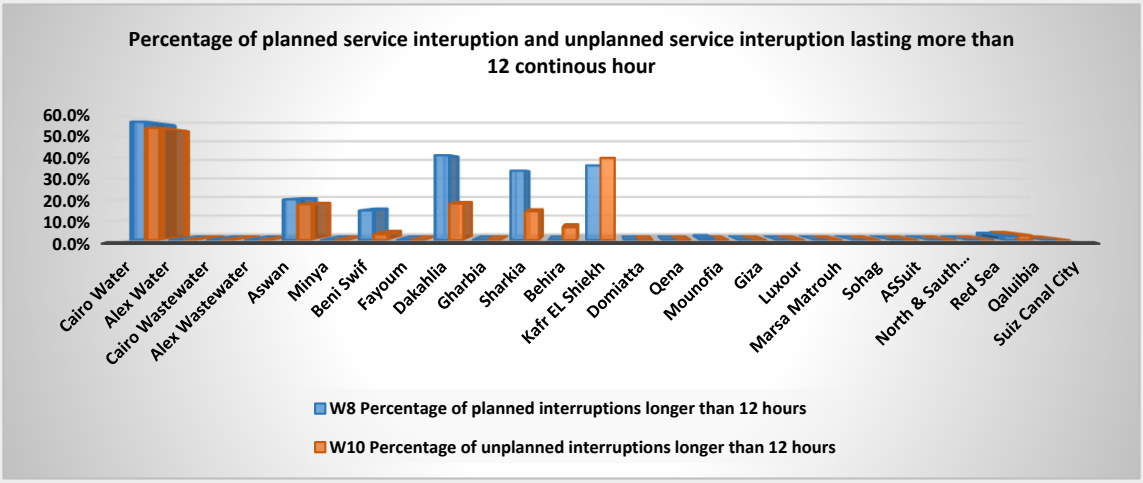
Broken pipes per 100 Km

- The most frequent breaks per 100 Km network were recorded at Cairo Water Co. amounting to 5151 followed by Aswan Water and Wastewater Co. amounting to 387 explosions.



Interruptions

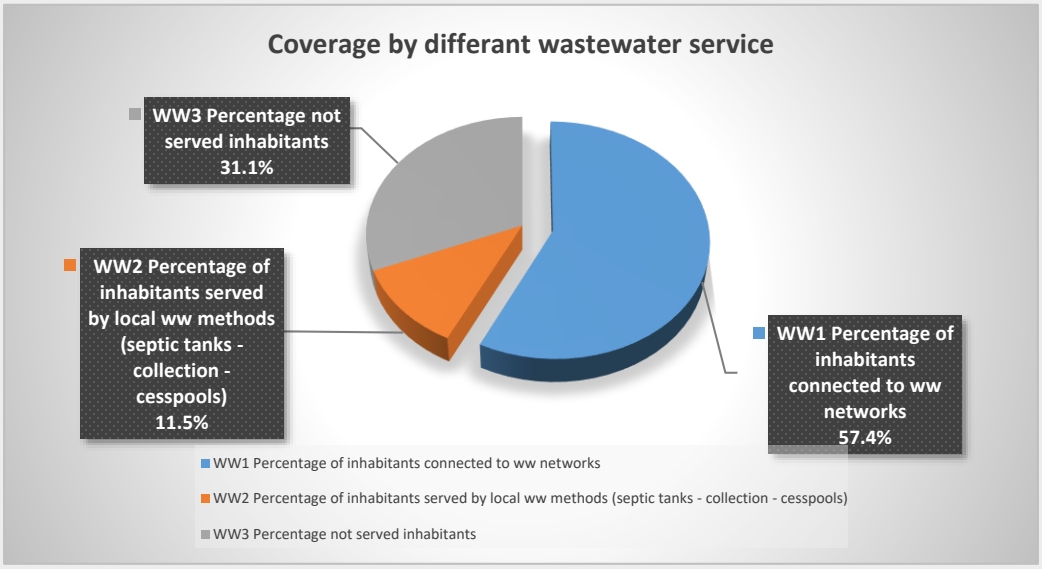
- Cairo Water Co. recorded the highest unplanned service interruptions lasting more than 12 hours, amounting to 54.5% amounted by 11 interruptions, whereas the planned interruptions amounted 33 interruptions with percentage of 57.6% out of the total



Wastewater services:

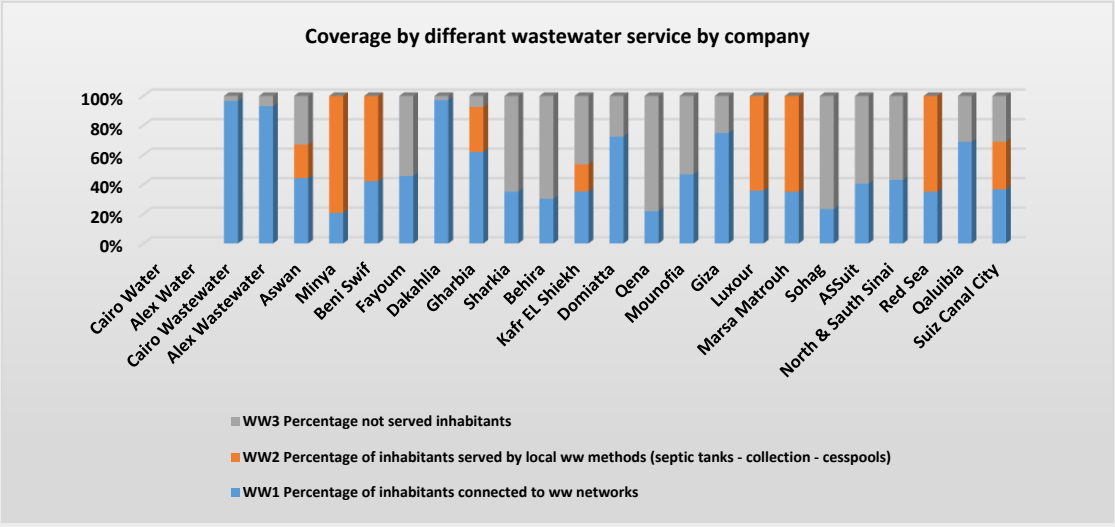
Coverage by wastewater services

- The percentage of inhabitants connected to waste water networks at the level of the 24 companies, amounts to 57.40%. The percentage of inhabitants served by local wastewater methods (septic tanks – collection - cesspools) amounts to 11.5 %, while 31.5 of the inhabitants do not receive wastewater services.



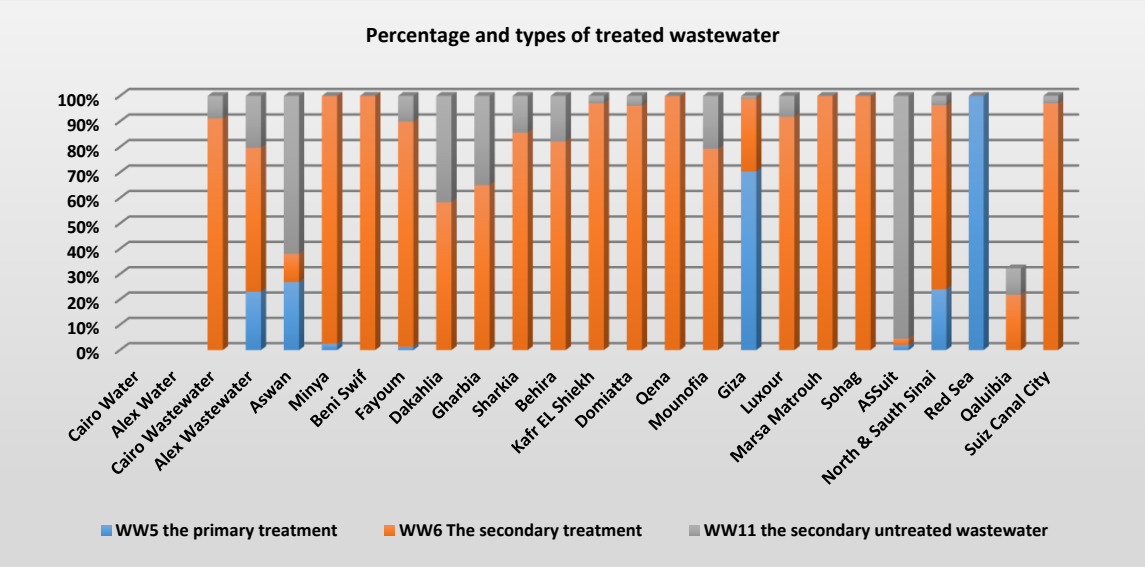
Coverage by wastewater services at company level

- The highest coverage percentage at the level of wastewater services companies (connected to waste water networks) was recorded at Dakahlia Wastewater Co. at 97.2%, followed by Cairo Co. at 96.6%, followed by Alex wastewater with percentage 93.0 whereas the lowest percentage of coverage was recorded at Minya Water and Wastewater Co. at 20.7% and Qena water and wastewater co. at 21.8%



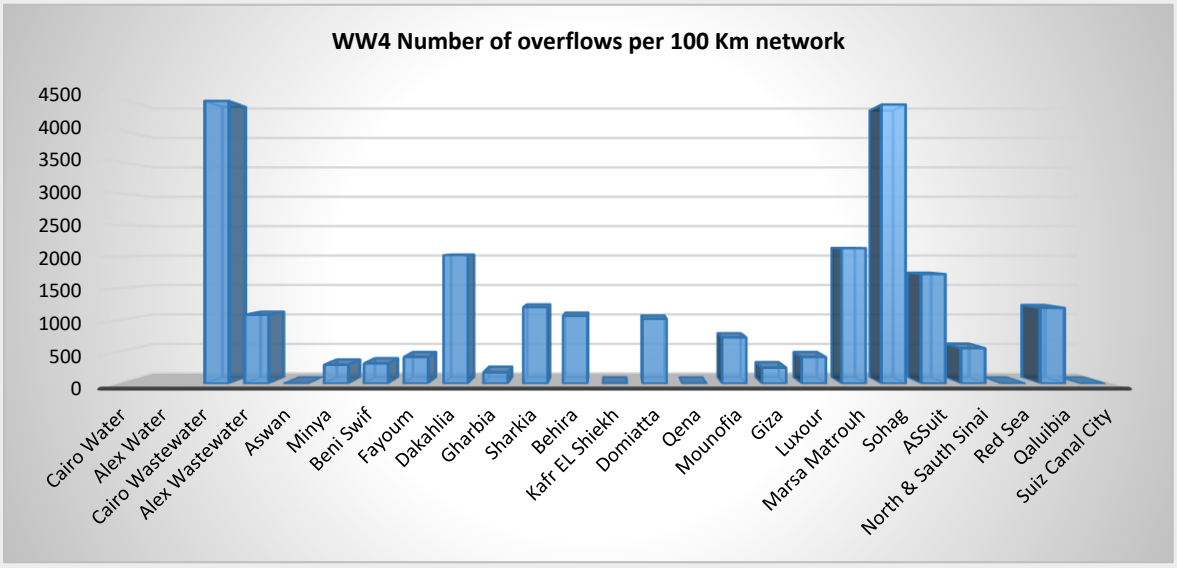
The kinds and percentage of different kinds of treated wastewater

- The secondary treatment amounted to 100% at each of Qena Water and Wastewater Co., sohag Water and Wastewater Co..Matruh and Beni Suef Water and Wastewater Co.,
- the primary treatment amounted to 100% at Red Sea Co.
- the secondary untreated wastewater amounted to 95.5% at Assuit co.



Overflows per 100 Km network

- The overflow percentage per 100 Km network at Cairo Wastewater Co. amounted to 4,457 overflows per 100 km of Cairo networks, which was due to the long and aging networks, whereas the overflow per 100 Km network was less than 1000 cases at Monofya, Gharbia, Sinai, Luxor, Aswan, BeniSuef, Fayoum, Kafr El Sheikh, Minya and Giza Water and Wastewater Companies.

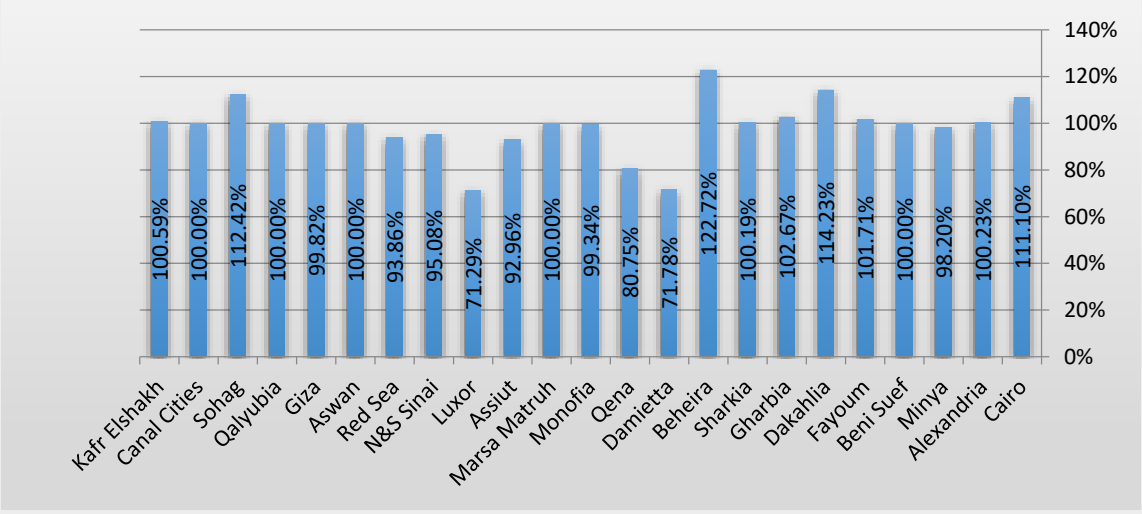


Second: Water quality performance indicators and service levels

Water quality performance

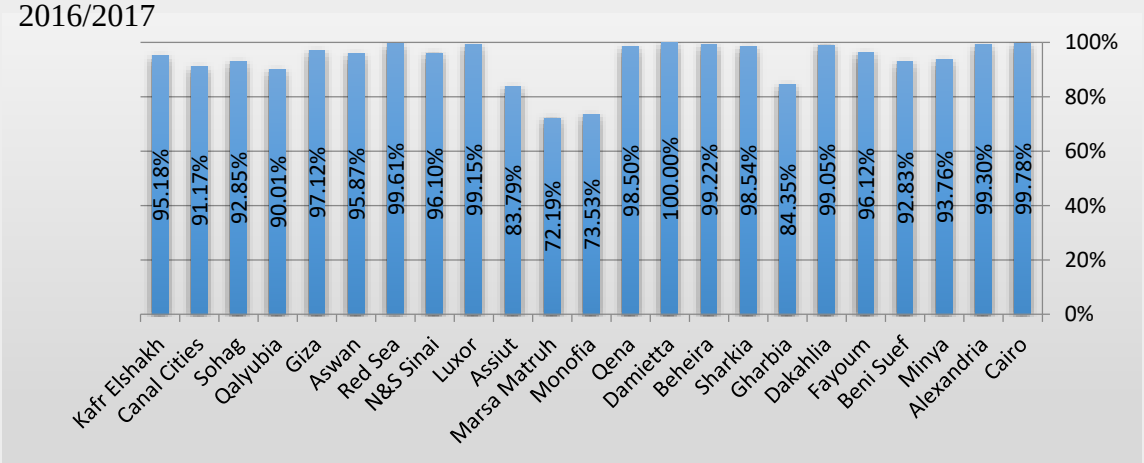
1. Indicator for the implementation of the drinking water sampling plan for chemical and physical analysis

- The chart shows the percentage of samples that have already been physically and chemically analyzed to the planned number during the year.
- An increase was observed in the proportion of samples that were already analyzed during the year against the projected number at some companies (Beheira).



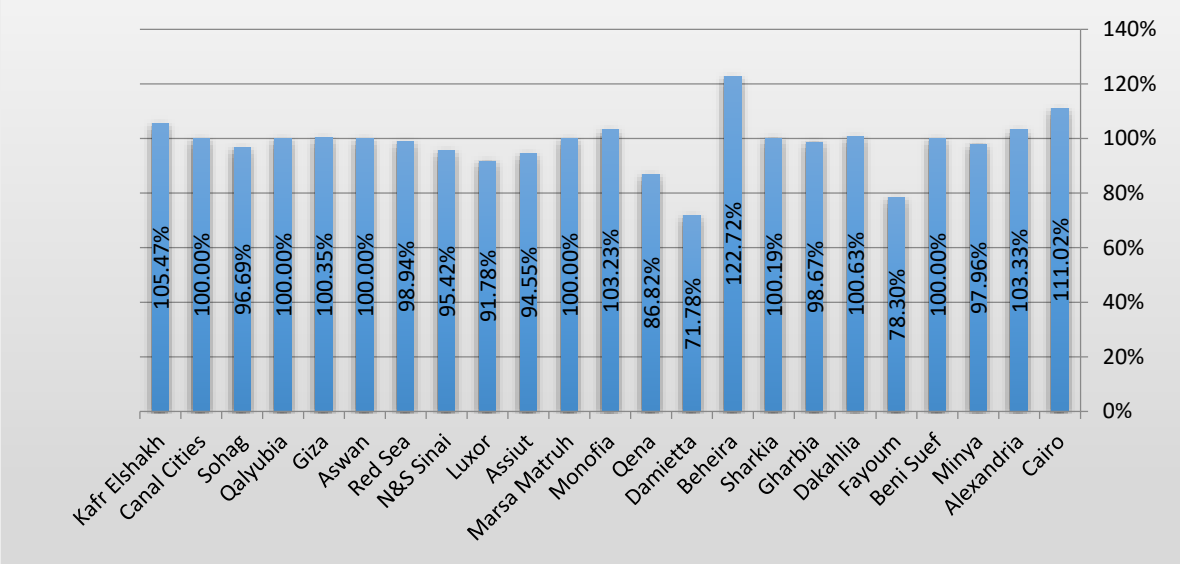
2. Indicator for the chemical and physical conformity of the drinking water samples

- The chart shows the percentage of conforming samples analyzed physically and chemically to the actually analyzed number during the year.
- Indicator for the chemical and physical the percentage of conformity in the different governorates didn't differ significantly in 2017/2018 than 2016/2017 except in (Marsa Matrouh – Canal cities)
- The percentage of conforming samples analyzed physically and chemically during fiscal year 2017/2018 in canal cities amounted 91.17% comparable with 51.68% for fiscal year 2016/2017.
- The percentage of conforming samples analyzed physically& chemically during the year 2017/2018 in Marsa Matrouh 72.19% comparable with 95.96% for the fiscal year 2016/2017



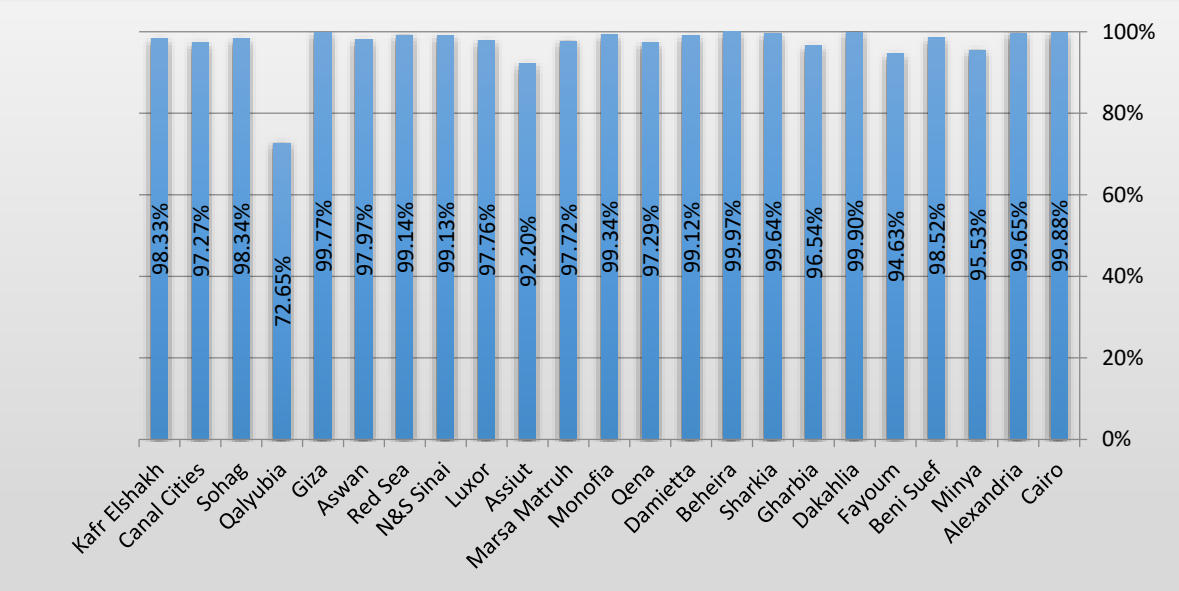
3. Indicator for the implementation of the drinking water sampling plan for bacteriological analysis

- The chart shows the percentage of samples that have already undergone bacteriologic analysis to the projected number during the year.
- An increase was observed in the percentage of samples that were already analyzed during the year against the projected number at some companies (Cairo,Beheira) .



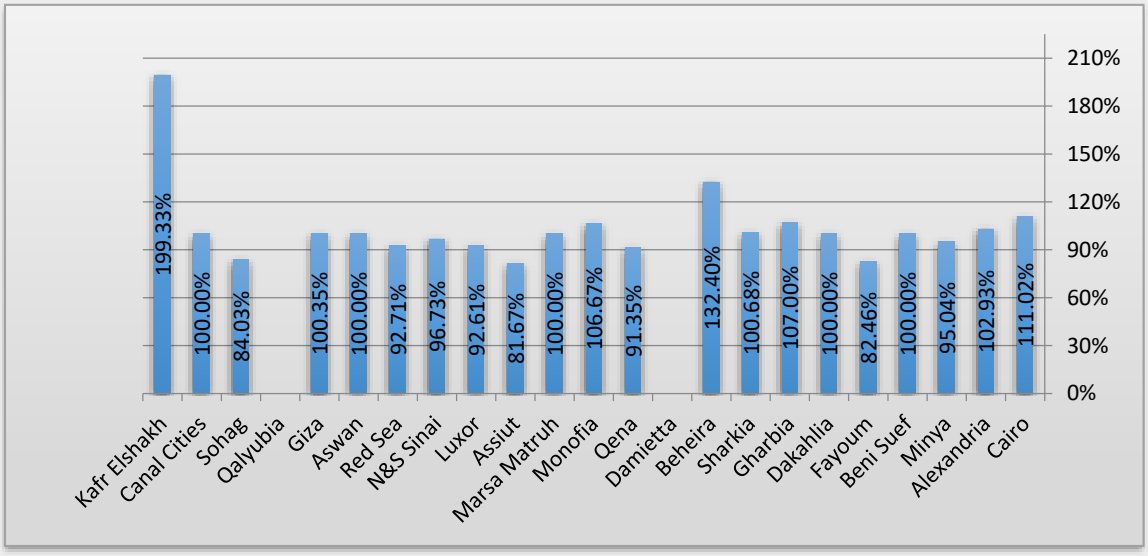
4. Indicator for the bacteriological conformity of drinking water samples

- The chart shows the percentage of conforming samples that have undergone bacteriological analysis to the actually analyzed number during the year.
- Indicator for the chemical and physical the percentage of conformity in the different governorates didn't differ significantly in 2017/2018 than 2016/2017
- An increase was observed in the percentage of samples that were already analyzed during the fiscal year against the projected number at some governorates canal cities 97.27% comparable with percentage of 68.2% than fiscal year 2016/2017.



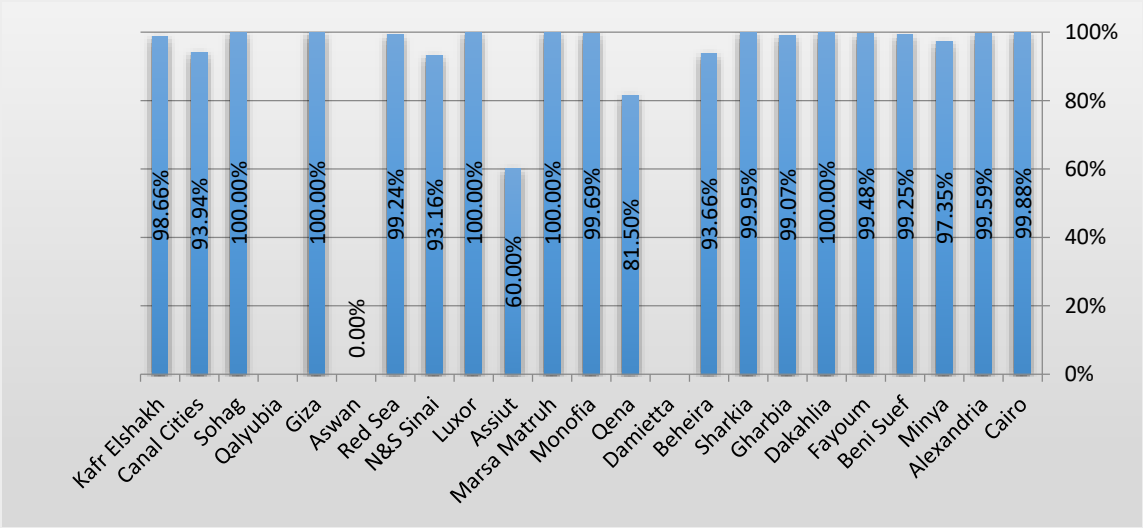
5. Indicator for the implementation of drinking water sampling plan for analyzing the water for parasites

- The chart shows the percentage of samples that have already been analyzed for parasites to the projected number during the year.
- There is no sampling plan to analyze the water for parasites at Damietta companies.
- No data on the water sampling and analyzing for parasites plan have been entered at Qalyubia Co.
- An increase was observed in the percentage of samples that were already analyzed during the year against the projected number at some companies (Kafr El Sheikh - Beheira).



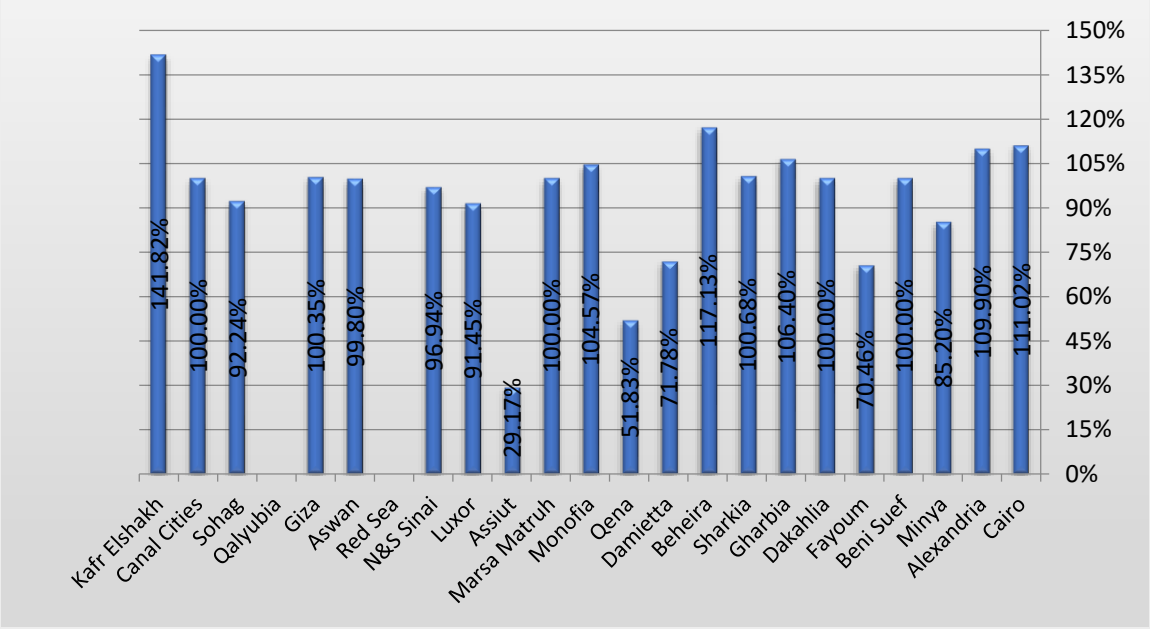
6. Indicator for the parasitic conformity of drinking water samples

- The chart shows the percentage of the conforming samples analyzed for parasites to the total actually analyzed number during the year.
- Regarding Damietta companies there are no samples to be analyzed for parasites.
- No data on the water analysis for parasites have been entered at Qalyubia Co.
- Non conformity in the analysis for parasites has been observed at Aswan company.
- Regarding Beni Suef, and Monofia companies conforming samples analyzed amounted to 99.25%, 99.69% in the fiscal year 2017/2018 comparable with not performing this analyses in the fiscal year 2016/2017.



7. Indicator for the implementation of drinking water sampling plan for algal analysis

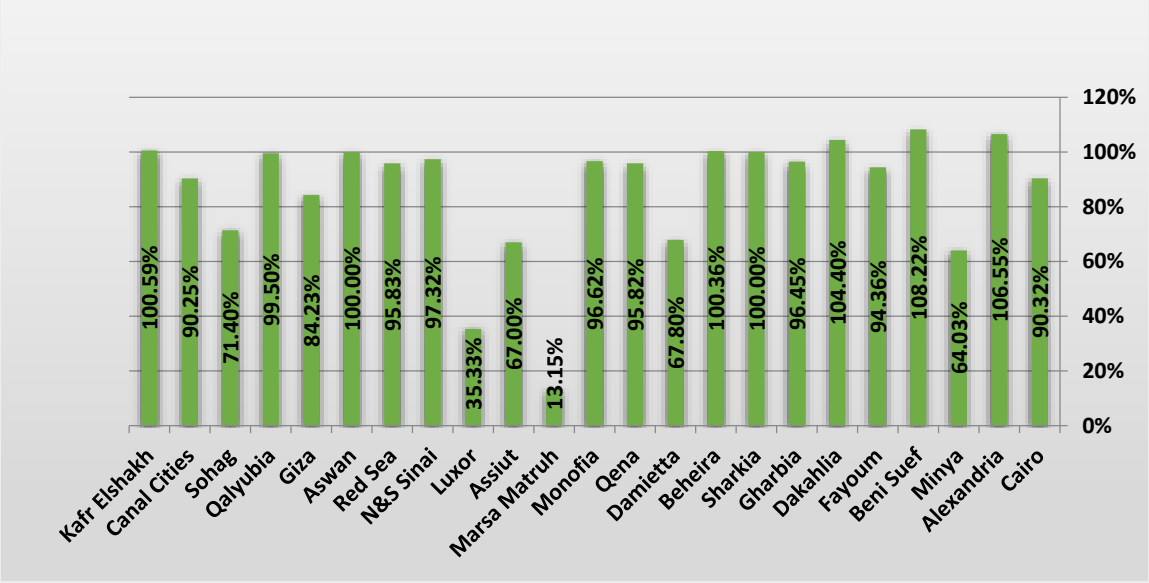
- The chart shows the percentage of samples that have already undergone algal analysis to the projected number during the year.
- No data on the algal analysis of the samples have been entered at Qalyubia company.
- regarding the Red Sea company, the number of samples planned to be algal examined calculated to be within the number of parasite examined, and the two kinds will be separated next year.
- An increase was observed in the percentage of samples that were already analyzed during the year against the projected number at some companies (Kafr el Sheikh).
- A decrease was observed in the percentage of samples that were already analyzed during the year against the projected number at some companies (Assuit).



Wastewater treatment efficiency

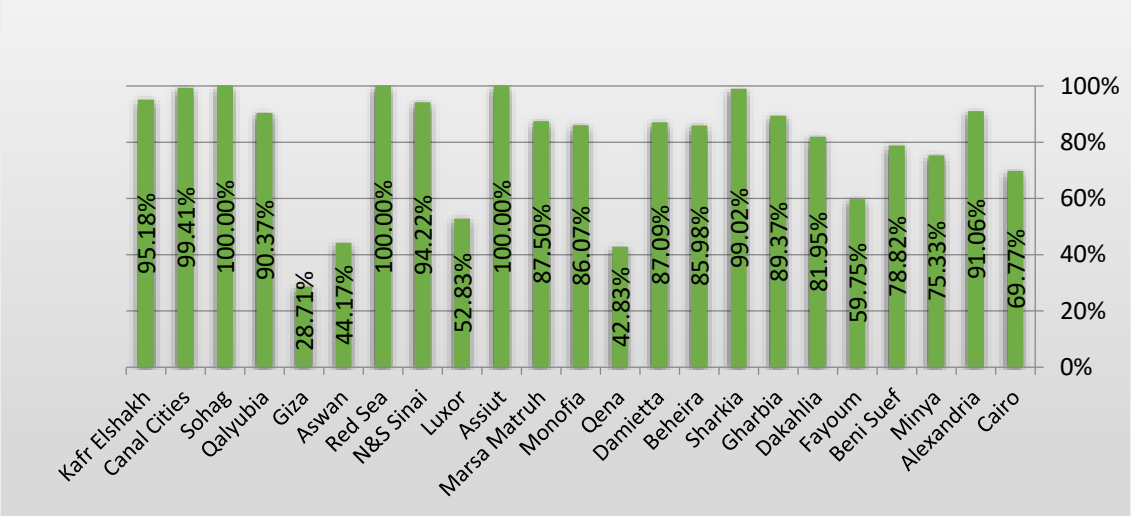
1. Indicator for the implementation of the wastewater sampling plan for chemical and physical analysis

- The chart shows the proportion of samples that have already been physically and chemically analyzed to the projected number during the year.
- A decrease was observed in the proportion of samples that were already analyzed during the year against the projected number in some companies (Marsa Matrouh – Luxor)



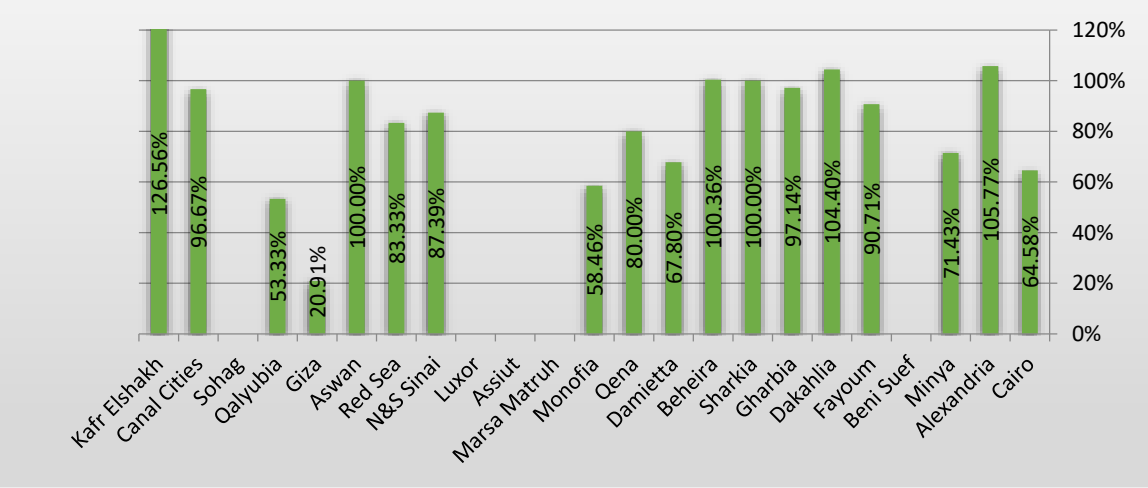
2. Indicator for the chemical and physical conformity of the wastewater samples

- The chart shows the proportion of conforming samples analyzed physically and chemically to the actually analyzed number during the year.
- A decrease in the number of conforming samples was observed at some companies (Qena –Aswan - Giza).
- A decrease in the number of chemical and physical conforming samples in fiscal year 2017/2018 was observed in governorates (Cairo –Fayoum) amounted to 69.77% – 59.75% comparable with 83.4%-72.7% respectively.



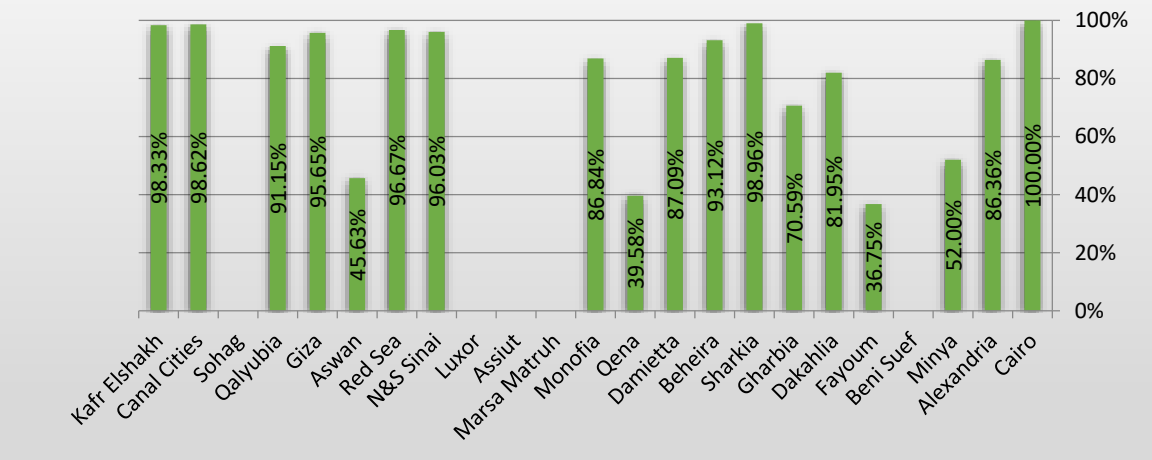
3. Indicator for the implementation of the wastewater sampling plan for bacteriological analysis

- The chart shows the proportion of samples that have already undergone bacteriological analysis to the projected number during the year.
- There is no sampling plan for bacteriological analysis at Beni Suef, Company.
- In Marsa Matrouh The is no equipped laboratory to undergo these analyses.
- No program for bacteriological analysis in Luxor, Assuit ,Sohag as the discharge are on the tree forests as stipulated in the Egyptian code no. 501/2015 degree (d) to use treated water in agriculture.
- A decrease was observed in the proportion of samples that were actually analyzed during the year against the projected number at some companies (Giza).



4. Indicator for the bacteriological conformity of wastewater samples

- The chart shows the proportion of conforming samples that have undergone bacteriological analysis to the actually analyzed number during the year.
- No samples were collected at Beni Suef Companies for bacteriological analysis.
- No program for bacteriological analysis in Luxor, Assuit ,Sohag as the discharge are on the tree forests as stipulated in the Egyptian code no. 501/2015 degree (d) to use treated water in agriculture.
- A decrease was observed in the number of conforming samples at some companies (Fayoum- Qena –Aswan).



Chapter IV
Service Quality

Axis I: Review of drinking water quality and wastewater treatment efficiency

1- The methodology of EWRA for drinking water quality review

- In cooperation with the Ministry of Health, the results of the analyses carried out on the samples taken from the intakes, outlets and drinking water plant networks in the governorates of Egypt throughout the year are delivered to EWRA (every three months).
- Referring to previous reports including the results of the analyses carried out on the samples taken from the intakes, outlets and drinking water plant networks, also from areas where drinking water quality complaints are observed
- By studying previous analyses, the governorates facing risks are selected in descending order according to the weights given to the percentages of bacteriologically nonconforming samples which exceed 5%, as well as the percentages of the chemically nonconforming samples during the year (every three months), taking into consideration the water quality (source) and extent of coverage of this source in the governorate.
- In cooperation with neutral Egyptian entities with whom EWRA has contracted through an annual protocol, samples are collected from intakes, outlets and drinking water plant networks
- Comparing the results with the Egyptian Drinking Water Standards issued in accordance with Ministerial Decree No. 458 for the year 2007.
- Carrying out the statistical analysis of the analyses results.
- Thereafter, a summary of the results deduced from the analyses of the aforementioned entities is formulated indicating the aspects of conformity or difference in those results.
- The final technical report, including the recommendations, is prepared based on the contents of the final summary, including the scientific point of view on remedying all types of deficiencies (if any) in the purification stages to improve the quality of the produced drinking water.
- The reports are sent to the entities concerned for guidance towards undertaking the actions necessary for implementing the recommendations set forth in the report.
- The service providers shall provide EWRA with the procedures undertaken in this regard within fifteen days from the date of sending the report.
- EWRA shall follow-up the implementation of the recommendations.

Within this context, during the period from July 2017 to June 2018, EWRA issued nine (9) reports on drinking water quality in the governorates of (Sharkia, Gharbia, luxor, Sohag, Qena, follow up Qena, Assuit, Wadi, Kafr el sheikh, Beni suef) and also issued three (3) reports on drinking water quality in cities affiliated to the new urban communities authority in (governorates of Capital Cairo, Giza,Beni Suef)) according to the set plan approved by the board of directors as shown in the following table:

Drinking Water Quality Review Reports

S/N	Governorates	NO. of samples	Date of collecting samples	Date of issue
1	Sharkia	132	October 2017	November 2017
2	Gharbia	81	November 2017	January 2018
3	Luxor	47	November 2017	January 2018
4	Sohag	67	January 2018	February 2018
5	Qena	54	January 2018	February 2018
6	Assuit and Wadi	80	December 2017	February 2018
7	New Cities affiliated to the new Urban Communities Authority (New Cairo - 10th of Ramadan – Obour)	21	February 2018	March 2018
8	Follow-up Qena	29	March 2018	March 2018
9	Kafr El sheikh	59	march 2018	May 2018
10	New Cities affiliated to the new Urban Communities Authority in Giza (Sheikh Zayed - October 6)	15	April 2018	May 2018
11	Beni suef	45	April 2018	May 2018
12	New Cities affiliated to the new Urban Communities Authority in Beni Suef	5	April 2018	May 2018

- It has been confirmed that the administrative corrective measures have been completed.
- It was coordinated with the service providers to follow up the implementation of the corrective measures in accordance with EWRA recommendation

Recommendations setforth in EWRA'S reports.

For drinking water and wastewater companies

- The Environmental survey of the plant intakes should be reviewed to ensure their compliance with Article 6 of Law No. 27 for the year 1978 regarding the regulation of public water resources necessary for drinking and human use due to the high concentrations of absorbed Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), organic nitrogen, Oils and greases also lack of Dissolved Oxygen in the intake (DO).
- Upgrading filtration and precipitation stage taking into consideration the Egyptian Code of Operation and Maintenance ministerial decree no. (331) for the year (2007) due to the high concentrations of aluminum residuals in the plant outlets, intakes and networks in (SHARKIA) governorate also the high turbidity in the plant outlets, intakes and networks in (Kafr el sheikh and Luxor).
- Reviewing the washing and disinfection of networks due to the presence of bacterial total count, parasites and bacterial indicalors.
- Reviewing the final chlorine dose and the contact time in the plant networks feeder owing to the rise in the total bacterial count in some samples and the presence of coliform bacteria and streptococcus coliform.
- Ensuring the implementation of washing and disinfection plans in a timely manner according to the system stipulated in the network operation manual.

- Ensuring the continuity of the environmental survey of Rasheed branch to assess environmental impact of all activities and the wastes existing on the banks of the canals through out the Ministry of Health, Ministry of Water Resources and Irrigation, Egyptian Environmental Affairs Agency (EEAA)Holding Company for Drinking Water and wastewater and Drinking Water Company in Kafr El-Sheikh Governorate.
- studying the operation of adding iron and manganese removal units in the artesian plants due to the increase of iron and manganese concentrations
- Ensuring the completation of the drinking water safety plan.
- EWRA recommends that the Company should to follow up the implementation of the recommendations and periodically submit reports on the status and progress of works to EWRA within fifteen days.

➢ For the new urban communities authority (NUCA)

- The importance of cooperation between new urban communities authority and both ministry of environment and Ministry of Water Resources and Irrigation to know the reason behind the high concentrations of Chemical Oxygen Demand (COD), organic nitrogen, also lack of Dissolved Oxygen (DO) in the intake.
- The Environmental survey of the plant intakes should be reviewed to ensure their compliance with Article 6 of Law No. 27 for the year 1978 regarding the regulation of public water resources necessary for drinking and human use to know the reason behind the high concentrations of Chemical Oxygen Demand (COD), organic nitrogen, also lack of Dissolved Oxygen in the intake (DO).
- Ensuring washing and disinfection of networks implementation in a timely manner according to the system stipulated in the network operation manual
- EWRA recommends that the new urban communities authority should follow up the implementation of the recommendations and periodically submit reports on the status and progress of works to EWRA within fifteen days.

The actions that have been undertaken:

EWRA’s reports concerning drinking water quality were sent to the Minister's office, attached with the memorandum submitted to his Excellency in the same regard.
Copy of EWRA’s reports was sent to:

- The office of Minister’s advisor of Housing and Utilities and Urban Communities
- The Water and Wastewater Companies in different governorates to provide EWRA with the corrective actions.
- The Holding Company for Water and Wastewater.
- Ministry of Health and Population.
- Ministry of Water Resources and Irrigation.
- New Urban communities authority
- The Ministry of Environment

The methodology of EWRA in issuing reports of wastewater treatment efficiency

- In cooperation with the Holding Company for Drinking Water and Wastewater, EWRA has received the aspects of conformity or differences in results of wastewater plants throughout the governorates of Egypt
- List all wastewater plants according to the data of the Holding Company for their coverage
- In cooperation with (the National Research Center, the Housing and Building National Research Center and Ain Shams University,National water research centre) which are neutral Egyptian entities with whom EWRA has contracted through an annual protocol, samples of the final sewage of the wastewater treatment plants and raw water are collected to determine the conformity with treatment plants.
- In cooperation with the Ministry of Health, the results of the analyses carried out on the final sewage samples taken from the wastewater treatment plants in the governorates of Egypt throughout the year are delivered to EWRA (every three months).
- The conformity of these results with each other is taken into account after they are compared with the Egyptian Standards issued in accordance with the legislations organizing the criteria of the final sewage of the wastewater treatment plants according to the final disposal system.
- Postponement the coverage of non-conforming treatment plants until the completion of replacement, installation and maintenance processes.
- Thereafter, a summary of the results deduced from the analyses of the aforementioned entities shall be formulated indicating the aspects of conformity or difference in those results.
- Recommendations are made and reports are sent to the stakeholders to follow up the implementation of the recommendations stated in the report
- Service providers shall provide the EWRA with the corrective measures taken in this regard
- EWRA should followup the implementation of recommendations stated in the report
- Within this context, during the period from July 2017 to June 2018, EWRA has issued fourteen (14) reports on wastewater treatment efficiency in the governorates of (Sharkia, Beni Suef, Giza, Gharbia ,Fayom ,Suez ,Kafr el sheikh Sohag,Aswan,Monofya,Cairo,Qalubia ,Ismailia and Port Said) and also issued one report (1) about the efficiency of wastewater in new cities affiliated to new urban communities authority in Grand Cairo according to the set plan approved by the board of directors as shown in the following table:

Reports on the Efficiency of Wastewater

s/n	governorates	Number of samples of final sewage	Date of collecting samples	Date of issue
1	Beni suef	12	August 2017	September 2017
2	sharkia	22	October 2017	December 2017
3	giza	8	October 2017	November 2017
4	suez	3	November 2017	December 2017
5	gharbia	27	November 2017	January 2018
6	fayom	7	December 2017	January 2018
7	Kafr sheikh	19	January 2018	March 2018
8	sohag	5	January 2018	March 2018
9	aswan	3	January 2018	March 2018
10	monofia	19	January 2018	March 2018
11	cairo	5	February 2018	April 2018
12	New cities in greater cairo	6	February 2018	April 2018
13	qalubia	8	February 2018	April 2018
14	portsaid	4	March 2018	May 2018
15	ismailia	4	March 2018	May 2018

- It has been confirmed that the administrative corrective measures have been completed recommendations set forth in EWRA's reports:

For drinking water and wastewater companies

- The Water and Wastewater Companies stressed the importance of checking the discharges of the commercial and industrial establishments into the public sewage network and their compliance with the standards that should be available according to the stipulations of Article 14 of the Ministerial Decree No 44 for the year 2000, which regulates the standards and specifications that should be available in the liquid wastes permitted to be discharged in the public sewage networks.
- Optimizing the operational efficiency of the wastewater treatment plants according to the operation manual of the plant, taking into consideration the Egyptian Code of Operation and Maintenance (O&M) due to the high concentrations of Chemical Oxygen Demand (COD), the absorbed Biochemical Oxygen Demand (BOD), the Total Dissolved Solids (TDS), the Total Suspended Substances (TSS), ammonia and Coliform Count (CC) also lack of Dissolved Oxygen (DO) and the probability of increasing of total count of bacteria in some governorates.
- The importance to adjust the percentage of chlorine that has pumped into the final sewage of the wastewater treatment plants due to the high probability of increasing the coliform count over the permissible limits.
- The importance for the drinking water and wastewater companies to abide by the replacement and installaton of plants that have been stopped or non-conformed.
- The importance to provide EWRA with the corrective measures and the periodical reports made upon it's recommendation within 15 days from receiving the reports.

➢ For The National Organization for Potable Water and Sanitary Drainage (NOPWASD)

- Optimizing the operational efficiency of the wastewater plants according to the operation manual of the plant, taking into consideration the Egyptian Code of Operation and Maintenance (O&M) due to the high concentrations of Chemical Oxygen Demand (COD), the absorbed Biochemical Oxygen Demand (BOD), the Total Dissolved Solids (TDS), the Total Suspended Substances (TSS), sulphide and cadmium, oil, grease and Coliform Count (CC) also lack of Dissolved Oxygen (DO).
- The importance to adjust the percentage of chlorine that has pumped into the final sewage of the wastewater treatment plants due to the high probability of increasing the coliform count over the permissible limits.
- The importance to provide EWRA with the replacement and installation final plans of wastewater plants affiliated to NOPWASD in different governorates.

➢ For the New Urban Communities Authority (NUCA)

- Optimizing the operational efficiency of the wastewater plants according to the operation manual of the plant, taking into consideration the Egyptian Code of Operation and Maintenance (O&M) due to the high concentrations of Chemical Oxygen Demand (COD), the absorbed Biochemical Oxygen Demand (BOD), the Total Dissolved Solids (TDS), the Total Suspended Substances (TSS), sulphide and cadmium, oil, grease and Coliform Count (CC) also lack of Dissolved Oxygen (DO).
- The importance to adjust the percentage of chlorine that has pumped into the final sewage of the wastewater treatment plants due to the high probability of increasing the coliform count over the permissible limits.
- The importance of reviewing the operations inside the plants based on the standard operating steps found in the manual of operation of the plants stated in the Egyptian code for operation and maintenance (O&M).
- periodic maintenance plans should be reviewed to ensure completion of all stages of treatment at these plants to reach the optimal condition.
- The importance to provide EWRA with the corrective measures and the periodical reports made upon her recommendation within 15 days from receiving EWRA' s reports.

The actions that have been undertaken:

EWRA's reports of the efficiency of wastewater were sent to the Minister's office, attached with the memorandum submitted to his Excellency in the same regard.

A copy of EWRA's reports was sent to:

- The office of Minister's advisor of Housing and Utilities and Urban Communities
- The Water and Wastewater Companies in the governorates to provide EWRA with the corrective actions
- New urban cities affiliated to the new urban communities authority to provide EWRA with the corrective actions
- Holding company for water and wastewater
- New urban communities authority
- The Holding Company for Water and Wastewater.
- Ministry of Health and Population.
- Ministry of Water Resources and Irrigation.
- The Ministry of Environment.

➢ Reports on the efficiency of wastewater at New Cairo Wastewater Treatment Plant (Orasqualia WWTP)

- In view of the role of EWRA in monitoring the wastewater at the state level, including the private companies and those operating according to Public-Private Partnership (PPP) system, wastewater samples were collected from Orasqualia Plant (PPP system) and quarterly reports were issued and sent to the New Urban Communities Authority (NUCA) To activate its role in reviewing the capital expenditures in that respect.
- Within this context, during the period from July 2017 to June 2018, EWRA issued three quarterly reports about the efficiency of wastewater at New Cairo Wastewater Treatment Plant (Orasqualia WWTP) as shown in the following table:

S/N	Number of samples	Date of collecting samples	Date of issuing	Corrective measures
1	6	July, August, September 2017	October 2017	Sending monthly report with the results and the operation inside the plant
2	6	October, November, December 2017	January 2018	Sending monthly reports with the results and the operation inside the plant
3	6	January ,February, March 2018	April 2018	Sending monthly reports with the results and the operation inside the plant

The recommendations set forth in the reports:

- The Water and Wastewater Companies stressed the importance of checking the discharges of the commercial and industrial establishments into the public sewage network of the plant (orasqualia) and their compliance with the standards that should be available according to the stipulations of Article 14 of the Ministerial Decree No 44 for the year 2000, which regulates the standards and specifications that should be available in the liquid wastes permitted to be discharged in the public sewage networks
- he importance that the entity in charge of operating the New Cairo Wastewater Treatment Plant, is monitoring and measuring phosphorus in the water plant to assess its impact on the biological treatment process.
- To ensure that the company in charge of operating the Treatment Plant, is monitoring and measuring phosphorus in the water to ensure that they don't exceed the limits set forth in the contract clauses.
- Ensuring that the operator Company checks the operation stages and circumstances and conducts the necessary tests to assess the plant efficiency and to ensure adherence to the standard operation procedures.

Axis II: Checking the operation of the central and branch laboratories, plants and networks

The methodology of EWRA:

- EWRA developed a new mechanism enables the specialized technical work groups to conduct field visits to the subsidiaries during FY2017/2018 in order to technically check the central and branch laboratories as well as the plants networks and laboratories
- EWRA issued (6) reports during FY 2017/2018 tackling the operation of the central and branch laboratories plant and network affiliated to service providers (Damietta Gharbia, Sharkia, Beheira, Asssuit, Sohag) shown in the following table
- EWRA issued (9) reports tackling the operation of the laboratories , plants and networks affiliated to the new urban communities authority in the new cities (New Assuit, New Cairo, Obour, 10th of Ramadan .Badr ,6th of October, New Sohag,Sheikh Zayed,New Beni Suef) shown in the following table
- EWRA issued (4) reports tackling the operation of the networks affiliated to the new urban communities authority in the new cities (Obour, 10th of Ramadan ,6th of October,Sheikh Zayed) shown in the following table
- Concerning reviewing the operation of laboratories and plants affiliated to The National Organization for Potable Water and Sanitary Drainage (NOPWASD) EWRA issued (1) report tackling the operation of (Manfalot) laboratory and plant in Assuit shown in the following table

S/N	Governorate	Report type	Date of field audit	Date of issuing
1	Dumietta	Field review to operate some laboratories, plants and networks	July, August 2017	August 2017
2	Gharbia	Field review to operate some laboratories, plants and networks	September 2017	October2017
3	Sharkia	Field review to operate some laboratories, plants and networks	October. November 2017	November2017
4	Beheira	Field review to operate some laboratories, plants and networks	December 2017	January2018
5	Assuit	Field review of laboratories ,plants and networks affiliated to the company	February 2018	March2018
		Field review on laboratory and manfalot plant affiliated to The National Organization for Potable Water and Sanitary Drainage (NOPWASD)	February2018	March2018
		Field review to operate some laboratories, plants and networks(NUCA)	February2018	March2018
6	cairo	Field review on the laboratories and lifting stations in new Cairo city affiliated to new urban communities authority	February2018	March2018
		Field review on the laboratories and networks of Badr city affiliated to new urban communities authority	February2018	April2018
7	Sharkia	Field review on the operation of some laboratories, plants and networks of 10th of Ramadan city affiliated to new urban communities authority	February2018	April2018
8	Qalubia	Field review on the operation of some laboratories, plants and networks of Obour city affiliated to new urban communities authority	march2018	April2018

Reports on the Efficiency of Wastewater

S/N	Governorates	Report type	Date of field audit	Date of issuing
9	Giza	Field review on some laboratories, plants and networks of drinking water in sheikh zayed affiliated to new urban communities authority	March 2018	April 2018
		Field review on laboratory and plant of 6th October affiliated to to new urban communities authority	March 2018	April 2018
10	Sohag	Field review on laboratory plants and network affiliated to companies	April2018	May 2018
		Field review on laboratory plants of new sohag affiliated new urban communities authority	April 2018	May 2018
11	Beni suef	Field review on laboratory plants of new beni suef affiliated new urban communities authority	April 2018	May 2018
12	Giza	Field review on the operation of sheikh zayed plant affiliated to new urban communities authority	May 2018	May 2018
13	Cairo	Field review on the operation of obour plant affiliated to new urban communities authority	May 2018	June 2018
14	Sharkia	Field review on the operation of obour plant affiliated to new urban communities authority	May 2018	June 2018
15	Giza	Field review on the operation of 6th october plant affiliated to new urban communities authority	June 2018	June 2018

- It was coordinated with the service providers to follow up the implementation of the corrective measures in accordance with the EWRA's recommendations
- it has been confirmed that the administrative corrective measures have been completed

The key recommendations set forth in EWRA's reports:

With respect to the central laboratory:

- It is required to prepare charts or GIS maps showing the main landmarks at the plants.
- It is required to document all the necessary data for the sequence of sample acquisition and to review the principles and criteria on which the sampling plans are based.
- It is required to renew the ISO 17025 certification, provided that it shall include all the indicators stipulated in the Egyptian Standard Specifications.
- It is required to review the quality control procedures (sampling – reviewing the analyses quality control procedures regarding the laboratory indicators).
- It is required to identify the tasks of the personnel in charge of analyzing the indicators in the Central Laboratory departments and prepare job description cards for all employees.
- It is required to provide suitable valid chemicals for the analyses to enable the laboratory to analyze all indicators stipulated in the Egyptian Standard Specifications.
- It is required to intensify the communication process with the plant operators by providing them with the analyses results as soon as possible.
- It is required to set a plan for training and optimizing the efficiency of the employees at the Central Laboratory.

- Participating in the external quality control activities, and the results of recorded the result to be commented on and corrective actions should be undertaken when necessary.
- It is required to provide the suitable equipment in the laboratory according to the methods used in analyzing the samples
- It is required to have a Logbook for each equipment; showing all the details.
- The supervisors should follow up the performance of the personnel in charge of the analyses according to a time schedule and fixed periodicity.
- It is required to have a preventive maintenance and calibration plan for the laboratory equipments.
- It is required to have the appropriate number of qualified personnel experienced in organic chemical and bacteriological analyses.
- Its required to finish the preparations of the central laboratory in both governorates (Sohag and Assuit) due to the importance of its role in covering all indicators stipulated in the Egyptian standard specifications of drinking water in addition optimizing efficiency of the company's laboratory according to a time schedule.

With respect to plant laboratories:

With respect to plant laboratories of the subsidiaries it was instructed to:

- Putting into consideration the locations where there are problems while collecting samples.
- It is required to have charts or GIS maps showing the location of the main pipes, service reservoirs, lifting stations and the main valves of the network and indicating whether those valves are open or closed.
- Correctly registering the details of the samples on the labels and in the register of the personnel in charge of sampling.
- Providing the appropriate number of personnel specialized in all required field (chemistry – microbiology - biology) in each plant laboratory commensurate with the volume and diversity of the work.
- Applying the quality control procedures and set plans and stick to it regarding documentation and execution of all the data
- Providing suitable equipment and chemicals to allow the laboratory analyze all the indicators stipulated in the Egyptian Standard Specifications.
- Providing the suitable equipment in the laboratory according to the methods used in analyzing the samples.
- Setting a plan for training and achieve it according to the laboratory needs.
- Activating program in place for maintenance and calibration of laboratories with committing to record all data of the internal maintenance and reviewing the international standards in equipment calibration including all types of equipment.

With respect to the plant laboratories of new urban communities authority (NUCA) It was instructed to:

- It is required to have charts or GIS maps showing the location of the main pipes, service reservoirs, lifting stations and the main valves of the network
- Training plans for all the laboratory employees including collecting and analyzing of samples.
- Providing suitable valid chemicals for the analyses.
- The necessity to have written plans to take samples that show suitable indicators to collect samples from networks.
- Correctly registering the details of the samples on the labels immediately after receiving the sample.

- Maintenance and calibration plan for the laboratory equipment.
- The supervisor should validate the results in a correct scientific manner using different statistical methods to achieve this verification before publishing them in reports.
- Providing Financial Appropriations to perform the external maintenance and record the internal and external data of maintenance.
- Records of all analyses including all the fundamental data that have been collected and analyzed should be available in addition to suitable analyses equipment for collecting samples.

Operation of the purification plants:

with respect to the operation of the purification of the subsidiaries.

- It is required to have information about all the activities existing in the intakes
- Undertaking a risk assessment as part of the drinking water safety plan
- It is required to have a written monitoring plan concerning the water source (the intake) associated with the plant operation and risk.
- It is required to have a plant operating manual including the maintenance and clear instructions on how to operate the plant, provided that this manual is available to the operators, who must read and apply the instructions referred to therein.
- It is required to have written procedure of the operator in case the level of turbidity and aluminum residuals exceeded the permissible limits.
- implementing training plans for the employees in plants

Operation of the purification plants:

with respect to the operation of the purification of the new urban communities authority (NUCA) It's Instructed to:

- it is required to have written information on all the activities existing in the intakes
- The necessity of undertaking a risk assessment as part of the drinking water safety plan
- It is required to have a written monitoring plan concerning the water source associated with the risks of the plant operation .
- It is required to have a plant operating manual including clear instructions about the operation of the plant
- It is required to have written procedures of the operator in case the turbidity exceeded the permissible limits.
- It is required to have written plans for the maintenance of the filters and clarifiers .
- It is required to have a written plan for maintenance and calibration methods of injection.
- It is required to train the operators internally and register this training data.

Operation of the purification plants:

(Manfalot) of National Organization for Potable Water and Sanitary Drainage (NOPWASD):

- Preparing and implementing periodical plans for maintaining the chlorine cabins and alum pumps.
- Controlling and calibrating chlorine cabins to save the consumption of chlorine quantities and to ensure the safety and quality of the water produced.
- Repairing the broken chlorine injection line.
- Pointing out the operating company to operate the alum pumps after being repaired to be able to adjust the dose of alum so as to ensure the removal of turbidity in high percentages with clarifiers and meet the standards of water produced, especially turbidity and remaining aluminum and saving the consumption of alum quantities.

- Following-up the remaining aluminum concentration in the plant intakes to ensure that it is within the permissible limits.
- Changing the ventilations of the eroded ground tanks to ensure that insects and animals will never enter inside.
- Making sure of the sludge discharged from the sedimentation basins every shift to improve the properties of water as to get the highest quality of water.
- Taking into account the shortcomings when designing and establishing new plants with sludge removal system.

Operation of network:

- The need to have some of the GIS maps showing the main and branch networks of some maintenance centers and operation of networks in addition to lack in updating maps in some branches of networks to include all components of the network.
- Preparing Records of main valves and all key network components including all the fundamental data should be available.
- Preparing standard operating procedures for the networks
- Preparing a written standard procedures including the preparation of detailed study when supplying deprived areas with drinking water
- Preparing a written standard procedures illustrating the implementation of pipelines and its components in the executive Department at the company.
- Preparing replacement plans without giving proof of the implementation of these plans in the branches.
- Preparing a regular monitoring plan for the pressure inside the networks.
- Preparing a time plan for the maintenance of networks and the key components inside it in addition to Updating and clarifying the percentage of what has been implemented in attached reports.
- Preparing a written instructions to fix the broken pipes in each branch.
- It is required to prepare a written preventive plans in each branch in case of (explosions – long term changes – sudden stop of the network).
- Coordinating between training branch in the company and branch departments of networks and The lack of training plans for the employees and also the lack of training records in some departments within the network.
- Identifying the tasks of the personnel in charge through job description cards for all employees in the branch networks departments.

The actions that have been undertaken:

EWRA Reports concerning reviewing of central and branch laboratories as well as the plant and network laboratories were sent to the Minister's office, attached with the memorandum submitted to his Excellency in the same regard.

A copy of EWRA’s reports were also sent to:

- The ministry’s advisor office
- The Water and Wastewater Company in the governorates to provide EWRA with the corrective actions.
- New cities authorities affiliated to New urban communities authority
- New urban communities authority
- The Holding Company for Water and Wastewater.
- Ministry of Health and Population.
- Ministry of Water Resources and Irrigation.
- Ministry of Environment

Axis III: Field inspections of complaints

The methodology of EWRA in field inspections of complaints:

- Based on the complaints received from the office of Mr. Dr. / Minister of Housing, Utilities and Urban Communities as well as from the media reading, audio and video.
- Representatives of" EWRA" conduct a site visit to find out the causes of the complaint and take samples of the plants and network intakes to carry out analysis, chemical, bacterial and biological analysis.
- Samples are analyzed, results examined and compared to the specifications and standards stipulated in the laws regulating drinking water and sanitation.
- The report is prepared.
- EWRA has issued 13 reports on drinking water quality and sanitation complaints from July 2017 to June 2018, and the following table shows this.

S/N	Governorate	Report type	No of samples	Date of collecting samples	Date of issuing
1	Aswan	water quality Complaintat the ramadi area of the Edfu Center	8	August 2017	September 2017
2	Giza	Water quality complaint at Osim Center	5	August 2017	September 2017
3	Cairo	Complaint of the administrative capital power station	1	December 2017	December 2017
4	Monofya	complaint of wastewater in (Kafr El-Sanabsa)	2	January 2018	January 2018
5	Qalubia	A complaint about the quality of (Kafr El-Gazzar water)	8	February 2018	February 2018
6	Sharkia	A complaint about the quality of the (Sabrah water facility)	7	february 2018	February 2018
7	Dakahlia	A complaint about the quality of water in (fisha bena)	9	January 2018	February 2018
9	behira	Complaint of water quality in (kafr el dawar)	5	January 2018	March 2018
10	Giza	Complaint of water quality in (bolaq el dakror)	5	March 2018	March 2018
11	Kafr el sheikh	Complaint of winter dam in (foah and motobas)	11	March 2018	March 2018
12	aswan	Complaint of ministry of defense (kema 1 and 2 and el Arbaen plant)	7	March 2018	March 2018
13	dakahlia	Technical report of Sinbelawen wastewater plant	2	May 2018	May 2018

- It was coordinated with the service providers to follow up the implementation of the corrective measures in accordance with the EWRA's recommendations
- it has been confirmed that the administrative corrective measures have been completed

The most important recommendations set forth in the reports

▪ For the complaint of the quality of drinking water in The Ramadi area of Aswan

- The necessity of the environmental survey of drinking water plant intakes to ensure that they comply with Article 6 of Law No. (27) of 1978 regarding the regulation of public resources for water needed for drinking and human use.

- the necessity of implementation of washing for the surfaces of the networks and follow-up their implementation on time as stipulated in the network operating manual.

- **For the complaint of the quality of drinking water at the Osem Center in Giza:**

- Preparing a study of water supplies to the centres of Imbaba Station (Osem Centre) and develop solutions so that the drinking water is available for human use to citizens all the time.
- The necessity to accelerate the construction of (Qerateen) drinking water plant to provide drinking water to the residents of (Osem center).
- The necessity of providing EWRA with solutions to problems concerning the reuse of ground water in prime time to fill the void of water deficit.
- The rotation system should be activated in order to make water available periodically to all sectors of Osem station, as the current service in (Imbaba) plant are powered throughout the day
- The necessity of washing and disinfection plans of networks on a regular basis.

- **For power station in the new administrative capital in Cairo:**

- Making sure of the continuity of pumping water in accordance with the specifications agreed between (CAPW) Construction Authority for Portable Water and Waste Water the stakeholders in the project.

- **For The Kafr Al-Sanabssa plant in Monof center in Manofia:**

- The executing company should be aware of quickly ending the replacement and renovation work for the urgently need for it at the present timeTo improve the treatment process.
- Implementing an emergency plan to deal with sudden or excessive actions.
- The necessity of the exictence of GIS maps of the plant.
- The neseccity for an organizational structure and a training record for all employees.
- The necessity to rehabilitate the plant and provide the necessary labor, equipment and chemicals to cover the indicators stipulated in the Egyptian code for operation and maintenance contained in Article 52 of decree 92 of year 2013 and train workers periodically.
- Optimizing the operating efficiency due to the increase of total suspended materials than the permissible limits.

- **For the complaints about the quality of drinking water in Kafr Al-Jazar (Qalyubia) and Sahbara (sharkia) it was instructed to :**

- Adding iron and manganese removal units due to the concentration of iron and manganese elements in the intakes of underground outlets.
- Reviewing the washing and disinfection plans to ensure that they are implemented on time as stipulated in the network operating manual.

- **Regarding the quality of drinking water in the village of (Fisha Bena, Daqahliya) it was instructed to:**

- The National Authority for Drinking Water, Drainage and Sanitation in coordination with the Drinking water and sanitation company (NOPWASD) in Daqahliya should hand over a 16-inch line to connect (Aja) plant with the villages (Sahrget-fisha), as the line is suspended due to some technical observations.

Regarding the quality of drinking water in Bolaq el Dakror (Giza) & kafr el dawar (Beheira)

- Reviewing the washing and disinfection plans and ensure that they are implemented on time as stipulated in the network operating manual

For the complaint of the winter dam in (Foah and Mutabes in Kafr al-Sheikh).

- Taking decisive action and develop radical solutions to solve the problem of (Al-Rahawi) discharges into the Nile and freshwater streams in addition to the factories that discharge directly to the Nile .
- Conducting a study and survey for Rashid branch to assess the environmental impact of all activities, banks and irregularities located on and inside the branch.
- Developing a water safety plan, to make sure of the commitment and credibility of all stakeholders in participating, providing information to develop an effective and accurate plan.
- Governorate cooperation with local units and representatives of civil society organizations and representatives of the water company to optimizing awareness and spread the culture of the optimal use of water in addition to educate citizens concerning the danger of using household tanks that are not cleaned continuously and correctly.
- The environmental survey should be reviewed and followed-up by(Mtobes) plant to ensure that it confors to article (6) of Law No. (27) of 1978 regarding the regulation of public resources for drinking water and the human use due to the high concentration of elements of ammonia, nitrates and absorbed bio-oxygen in addition to chemical oxygen consumed and the decrease in dissolved oxygen.
- The existence of alternative sources for the intakes of the stations existed on the branch of Rashid and always affected by the winter dam, as in the local station (Abu Ali) using the Canal (al-Qadabiya) as an alternative source during the period of the winter dam.
- Preparing a written emergency plan in case of of any accident may affect the public health or customer satisfaction with the service, including supplying consumers with safe drinking water sources .
- The interaction between the customer service management and the affected consumers in a time of crisis by measuring their satisfaction with the company's performance in managing the crisis and conveying their satisfaction of water quality in terms of color, taste and smell to manage the company's laboratories.

For the Ministry of Defense's letter regarding Kema 1,2 and (El Arbaen station)

- Reviewing the dicharges of commercial and industrial establishments by Aswan company on the wastewater netwaorks of (El Arbaen) plant and ensuring that they meet the standards stipulated in article (14) of ministerial decree No. (44) of year 2000.
- The Egyptian Environment Affairs Agency reviews the environmental record of Aswan company for Chemical Industries because of the high percentage of phenol in the wastewater in lefter no (10) which lift the water up the (El Arbaen) plant.
- Ensure the continuity of the operation of the chlorine system efficiently and follow the instructions of security, safety and occupational health and stick to this system regarding Kema plants 1.2.

With Respect to Sinblawen (Dakahlia) plant the following are notified.

- Carrying out a periodic maintenance procedures by conduct painting actions to metal structures to protect it from rust and corrosion>
- Restoration of dilapidated parts.
- It is necessary for the lab to maintain the results of the analysis of the rest of the indicators that the plant doesn't cover as stipulated in article (52) ministerial decree no. (92)of (2013).
- Providing labor to prepare a program to monitor the performance of the employees inside the plant
- Providing all equipment's and and chemicals to cover the main indicators like the incubators and suitable environments inside the lab.
- The importance of existing plans and records for the staff of the plants and laboratories.
- The lab reviews and monitors the networks and the lifters of treatment plants.
- Establishing standard operating procedures for the sequence of the possession of samples in the laboratory.

Follow Kima Stations (1-2) and the ((El Arbaen)) station.

- The EWRA staff reviewed the efficiency of the operation of the sewage treatment plants and plants of (El Arbaen) station and the two stations of Kema (1,2).
- The recommendations were limited to the final summary, including a scientific or technical point of view to treat all the shortcomings of both the stages of treatment and laboratories in order to preserve the environment and the public health of the citizens.
- Reports have been sent to the relevant authorities to guide the necessary measures to implement the recommendations stated in the report.

The most significant recommendations in respect of plants.

- To study the establishment of central plan at Kema stations (1-2).
- Confirm the continue of operations at Kema Stations (1-2) and ensure the continue of chlorine system operation.
- Study the implementation of expanding the basins of drying the sludge in Kema(1-2).
- Aswan company should review the discharges of the commercial and industrial establishments in Kema (1-2) networks to ensure that they meet the standards stipulated in article (14) of ministerial decree no. (44) of (2000)


EWRA
جهاز تنظيم مياه الشرب
والصرف الصحى وحماية المستهلك

Chapter V
Consumer protection

First: Review the departments and management of customer service Evaluation methodology:

- The EWRA in its evaluation of the customer service component depends on the quantitative value and descriptive analysis of the availability of institutional equipment and the capabilities of the human resources working in different departments, departments and units, as well as the quality of the actual services provided by these departments, departments and units, through Field observations of the task force and the prepared audit lists, as well as analysis of the content of the relevant documents obtained during the field visit.
- In the review process (8) audit lists and checklist questionnaire, each containing a set of items closely related to the customer service component with its different departments and branches, in order to obtain the necessary data for evaluation and suggest appropriate corrective actions, where these data were met. Lists through field visits and interviews with officials and staff of departments, departments and units associated with the customer service component and obtaining the required documents, the eight lists were the following:

- List number "1": List of customer service management review and its employees.
- List number "2": List of review centers for customer service and the efficiency of their employees.
- List number "3": AIR Annual Spreadsheet Review List
- List number "4": Hotline checklist.
- List number "5": List of component reviews of customer satisfaction measurement studies and opinion polls
- List number "6": List of awareness component review
- List #7" List: Social Engagement Component Review Menu
- List number "8": PR component check list

The General Administration of Consumer Protection reviewed the number of (6) companies during the year (2017/2018), and referred to the transfer of the dependency of drinking water and sanitation facilities in new cities to city agencies from February 2018.

Review the departments and centers of customer service in drinking water and sanitation companies:

- From July 2017 to June 2018, the General Administration of Consumer Protection reviewed customer service departments and centers for 6 companies nationwide as part of EWRA's plan for the next year (2017/2018) and its statement as follows:

M	The company	The date the report was issued
1	Drinking water company in Damietta health and wastewater	August 2017
2	Gharbia Water and Wastewater Company	September 2017
3	Sharkia water and wastewater company	November 2017
4	Behira drinking water and wastewater company	December 201 7
5	The water and wastewater company in Assiut	February 2018
6	Sohag Water and Wastewater Company	April 2018

Corrective measure set forth in the report:

- Develop and activate an integrated organizational structure that includes the company's customer service component independently.
- Establish a sustainable mechanism for communicating with civil society and relevant community components.
- Setting the measurements and criteria that enable the company to measure and assess the extent of customer satisfaction.
- Speedy completion of the establishment of a sufficient number of branch customer service centers commensurate with the population, geographical distribution and administrative division of company's service scope.
- Developing the internal coordination and standardized identity of the service centers and provision of the necessary funds.
- Developing the hotline system and linking it effectively to other relevant departments and systems.
- Develop a system to activate and account customer claims and complaints from all sources.
- Develop work guides and operating procedures and attention to measuring the actual time periods it takes to perform different services to beneficiaries or resolve their complaint

The procedures undertaken by EWRA:

- The reports were sent to the office of Mr. Dr. Dr. / Minister of Housing, Facilities and Urban Communities as well as the Holding Company for Drinking Water and Sanitation, drinking water and sanitation companies affiliated and guidance towards the implementation of corrective measures and providing the EWRA with what is done in this regard.

Review customer service departments and centers with new city EWRAs:

- Referring to the new structure of drinking water and sanitation facilities in the new cities, which have been subordinated to city agencies, the Authority has made field visits to some city agencies affiliated to to the Urban Communities Authority in order to carry out field reviews on the customer service system in the presence of The gentlemen in charge of these devices are as follows.

M	City	The date the report was issued
1	New Cairo City	February 2018
2	10th of Ramadan City	February 2018
3	Obour City	March 2018
4	Badr city	March 2018
5	Sheikh Zayed City	March 2018
6	October 6 City	March 2018

EWRA notes:

- Lack of specialized customer service departments in new city agency.
- The lack of customer service centers except the New Cairo City Device, which has a customer service center in the fifth assembly.

EWRA recommendations:

- Developing a plan for the establishment of customer service centers dedicated to providing drinking water and sanitation services and receiving complaints and inquiries (one or more customer service centers according to the number of participants in drinking water and sanitation services in the new cities, taking into account geographical distribution).
- Developing a hotline system to be the communication tool between the citizen and the company by telephone to receive their complaints and inquiries 24/7 in order to improve the mental image of citizens and provide them with a distinguished service.
- Establishing a competent department to raise awareness and information as an important stage in reaching the consumer in order to raise awareness of the matters that concern him and that will enhance his knowledge for sector and the services provided to him to reach optimal way to use those services in order to reach the most advantaged of them and in order to maintain them and enhance the use of these services in addition to communicating with the media regarding the follow-up, monitoring and clarifying issues related to drinking water and wastewater services.
- Establish a competent department for opinion surveys and surveys in order to find out the opinions of citizens and the level of service provided to them and measure their satisfaction with these services.
- Providing sufficient and qualified personnel to deal with customers through a hotline or customer service centers.
- Taking into account the development the organizational structure that should includes the customer service departments independently, including the previous departments referred to as (complaints management, management of main and sub-service centers, hotline management, opinion survey and survey management, awareness and information departments) it's Dependency on the head of the EWRA.

Actions taken by the EWRA:

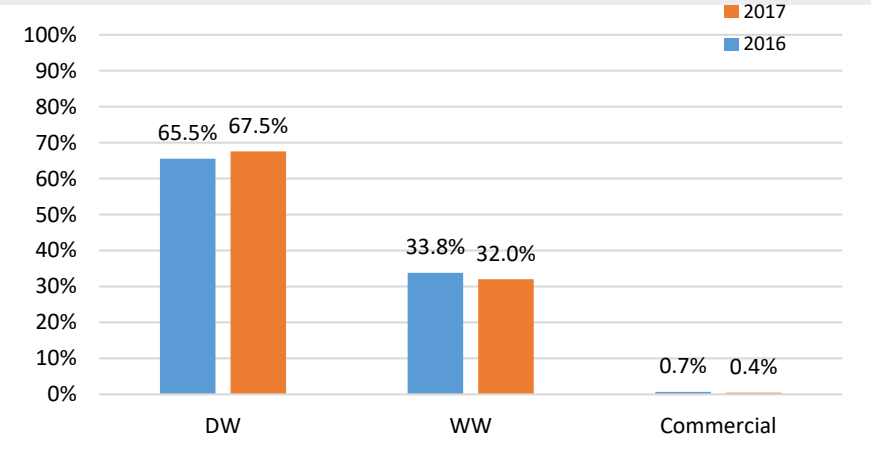
- The reports were sent to Prof. Dr. Dr. Minister of Housing, Utilities and Urban Communities, as well as Mr. Eng. Deputy of head of new Urban Communities Authority for the development of the sector and cities which includes costumer service centers in new Cairo to send its corrective measures to EWRA.
- The new city agencies will respond to EWRA as to send its plan to implement the recommendations and the agency will review the implementation of these procedures during the review of the year (2019/2018).

Second: Summer 2017 Complaints Report

EWRA conducts an inventory and analysis complaints of drinking water and wastewater sector during the summer months of each year (May, June, July, August, September), in order to identify its impact on citizens and the service provided to them and also to be determine the actual performance of companies during that period.

1- Total summer 2017 complaints

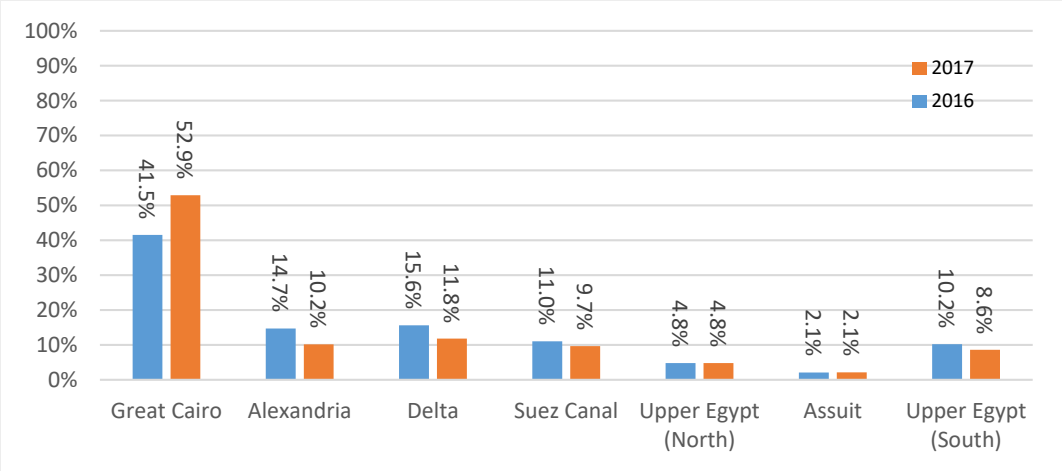
- During the summer months of 2017, the drinking water and wastewater sector received 454,190 complaints for the number of (25) drinking water and wastewater companies, the complaints were divided based on technical data received from the holding company for drinking water and wastewater owing to their direct impact citizen's, which categorized as (drinking water complaints , wastewater complaints and commercial complaints) while non technical complaints and inquires have been excluded during the summer months of 2017 the number of complaints was 306,788 complaints, with percentage of 67.5% of the total complaints of 454,190 complaints, and the number of wastewater complaints reached 145,390 complaints, with percentage of 32.01% complaints, whereas 2,012 commercial complaints, with percentage of 0.44% of total complaints for the summer of 2017.



2- Comparison of complaints from the summer months of 2017 and summer 2016 distributed across the regions

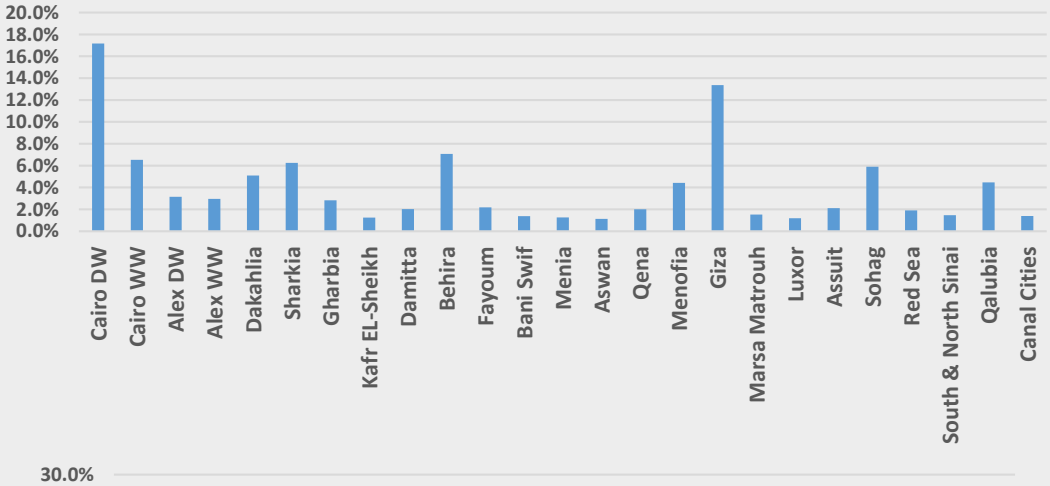
- The percentage of complaints during the summer months of 2017 varied from those during 2016 in terms of complaint number and percentage in each region. The complaints contrasted in greater Cairo to be 41.5% during 2017 after it was 52.9% in 2016, also the percentage of complaints in Alexandria region increased to 14.7% during 2017 from 10.2% in 2016, whereas the number of complaints increased in Delta region to 15.6% in 2017 from 11.8% during 2016.

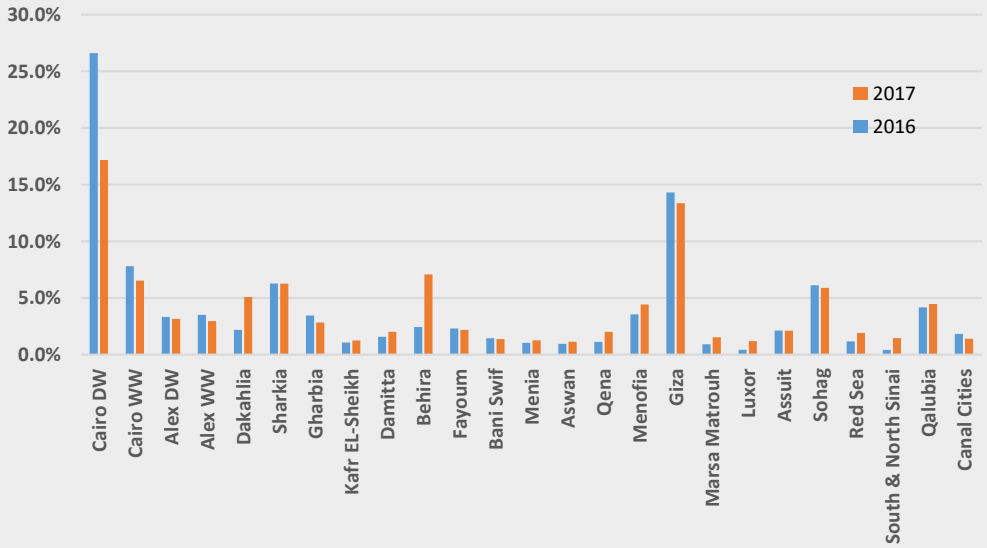
Territories	Asyut	North of Upper Egypt	Southern Upper Egypt	Suez Canal	Alexandria	The delta	Greater Cairo
The percentage of complaints The year 2017	2.1%	4.8%	10.2%	11%	14.7%	15.6 %	41.5%
The percentage of complaints 2016	2.1%	4.8%	8.6%	9.7%	10.2%	11.8 %	52.9%



3- Complaints of the summer months of 2017 distributed to companies

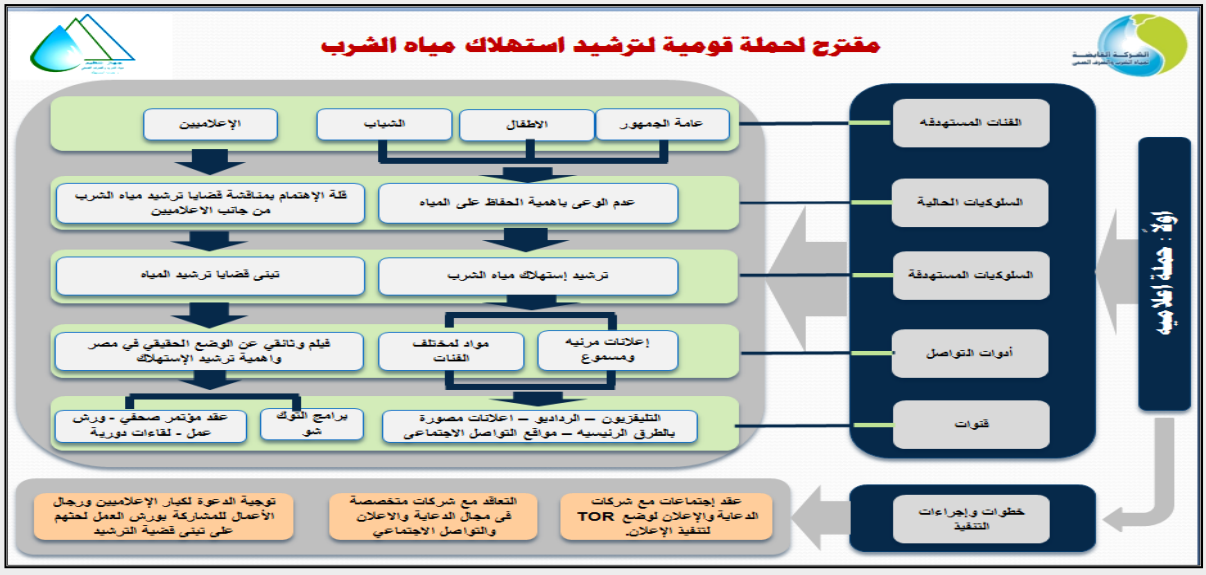
- The Drinking Water Company in Cairo recived in the highest number of complaints, with 77,995 complaints amounted to 17.2% of the total complaints of the state, followed by Giza with 60,686 complaints, with percentage 13.4% of the total complaints, while the lowest companies in terms of the number of complaints is Aswan Co. with 5.117 complaints, with percentage of 1.1%, and then Luxor has 5,419 complaints, with percentage of 1.2% of the total number of complaints during the summer of 2017.
- Comparing the complaints of companies in the sector during the summer months of 2017 with the complaints of the summer months of 2016, it was found that there is a disparity between companies in the proportion of complaints increased or decreased.

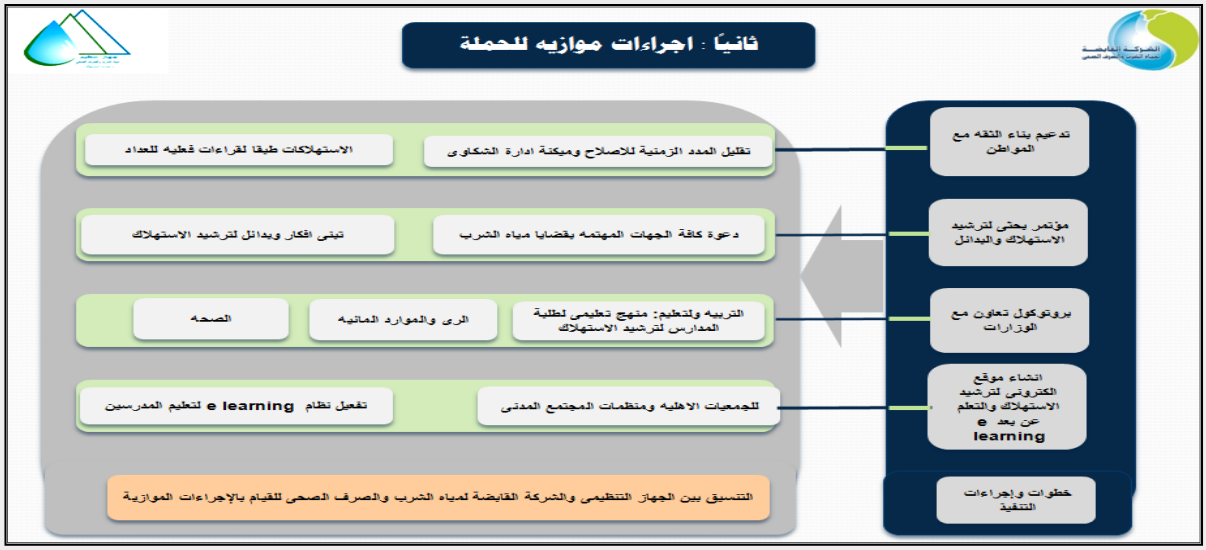




Third: The proposal of the media campaign to rationalize water consumption

- The General Administration of Consumer Protection prepared a proposal of the national campaign to raise awareness for rationalization of drinking water in cooperation with the holding company for drinking water and sanitation and under the supervision of the Ministry of Housing, Utilities and Urban Communities.
- A media campaign aimed to reach the community through an audio and visual advertisement broadcast on television and radio, the proposal includes of an animated films for children that are exposed in the media and also presented in schools in cooperation with the Ministry of Education, and the proposal contains the necessity Communicating with young people through social media.
- The proposal pointed to the importance of communicating with the category of media professionals as a reliable party in the awareness campaign in order to adopt the issue of water conservation in the visual and read media.






EWRA
جهاز تنظيم مياه الشرب
والصرف الصحى وحماية المستهلك

The Tenth Annual Report

of the Egyptian Water Regulatory and Consumer Protection Agency

2017-2018