



AL MEYYAH NEWS

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PERFORMANCE MANAGEMENT UNIT (PMU)

The Programme / Performance Management Unit (PMU) of the Jordan Ministry of Water and Irrigation (MWI) was established in 1997 as an organizational body assigned to carry out the management and administration of a number of strategic projects. It streamlined the activities and the monitoring of the Management Contract in Amman and the execution of a challenging restructuring and rehabilitation capital investment program (CIP) for the water supply in greater Amman and is continuing to be a counterpart of the activities under GTZ/OMS project that paved the way for corporatizing and commercializing activities in the water sector. The Performance Management Unit (PMU) is currently charged with the execution of the EC funded Al-Meyyah Project. The current activities of this project as specified in the financing Agreement and Al-Meyyah project Agreement extension rider are to advance Private Sector Participation (PSP) and involvement to enhance the provided services in the water Sector through working under commercial principles. The other main activities of the (PMU) are to develop and promote performance monitoring practices of private and public water utilities and work on the regulation aspects of the water sector aiming at protecting interests of all water users and supporting the water sector institution in ensuring further development of the water utilities towards business oriented entities focusing on operational efficiency for the benefit of all customers.

The Performance management Unit (PMU) is working in close cooperation and collaboration with all its stakeholders in the water sector as the Ministry of Water and Irrigation, Water Authority of Jordan, Jordan Valley Authority, the Water companies contractors, Administrations and with other government of Jordan Agencies and through the valued support of the European Union and other international donor agencies.

PMU Structure:

During 2010-2011 PMU will utilize a flat management, task oriented and result focused style for accomplishing the specified targets: such style will ease introducing the new assignment and tasks specially the licensing and phasing out of the commercialization activities.

Roles of Performance Management Unit (PMU):

PMU is always seen by the MWI as its dwelling of expertise through which it ambitiously seeks to enhance and improve the quality of water services provided to consumers across the kingdom. This is clearly manifested from the tasks assigned to PMU among of which,

- Technically monitoring and auditing the performance of the private water companies in the country by applying agreed upon indicators, which enable a fair basis for comparison among the utilities and provide tools to evaluate their performance aspects as well as the effectiveness of service provisions.
- Promotion of Private Sector Participation (PSP) in water services and management.
- Development of Public Private Partnership (PPP).
- Planning and providing strategic advisory to decision makers.
- Application of commercial principles on the retail side.

Performance Management Unit (PMU) & Commercialization

Commercialization is the process of introducing business principles into an organization. PMU introduces and oversees commercialization projects including the implementation and management of the remaining of Al-Meyyah Project, in line with the related on going initiatives of the Ministry of Water and Irrigation. Corporatization is expected to increase transparency of financial flows and to allow decision about water supply and waste water services that is closer to citizens. The water sector pursues a policy of creating regional water and sanitation companies throughout Jordan. Most households in the governorates receive water only one day per week (some localities receive water less frequently especially during summer) and the level of physical and administrative losses is high, operating costs are high (especially with increased energy price), the percentage of non revenue water is high and the billing efficiency isn't satisfactory. As a result of the foregoing, PMU developed two types of corporatization approaches:

(Corporatization & Management Contract Approach)

Northern Governorates Water Administration (NGWA) Corporatization and Management Contract

Project Background & Scope:

Water Authority of Jordan (WAJ) analyzed and evaluated various options for the Northern Governorates Water Administration (NGWA) and finally, decided that NGWA has to undergo a process of commercialization that consists of two stages:

- 1- NGWA corporatization, through out the establishment of a limited liability company (Yarmouk Water Company YWC). So that it will be an independent legal entity with its own separated finances and management.
- 2- YWC to go for a full Performance Based Management Contract, (ie; Management Contractor).

The main objectives of the Management Contract:

- A) To improve the water and wastewater services provided to the customers in the Northern Governorates
- B) To improve the financial position of Al-Yarmouk Water Company through the achievement of cost efficiencies and improved revenue management.
- C) To establish, for Al-Yarmouk Water Company (YWC), the foundation for sustainable operational and business effectiveness and efficiency; and
- D) To reduce the amount of water lost or unaccounted for through, among other things, leakage and unauthorized connections to the water facilities.

Service area:

The service area covers the four Governorates of Ajloun, Irbid, Mafraq and Jerash with a population of around 1.5 million people.

Type of Contract:

The contract is performance-based; the Management Contractor (MC) will receive a (fixed fee) plus an incentive. Year by year, the variable fee will increase.

Contract Funding:

YWC through partial subsidy from WAJ and a grant from the German Development Bank KfW will secure respectively the finance of the MC's total annual fee. WAJ is committed to subsidize the cash deficit of YWC throughout the duration of the management contract.



Project Current Status:

1) Corporatizing NGWA:

- NGWA has been corporatized through the establishment of a Limited Liability Company Al-Yarmouk Water Company (LLC). "YWC" was registered on 26 July 2010 in accordance with its Article of Association and Memorandum of Association (AOA and MOA).
- YWC is now the legal successor of NGWA. YWC is an independent legal entity with its own separate finances and management. Its Management Committee consists of seven members chaired by WAJ S.G, the committee members are from both public and private sectors.
- The duties and responsibilities of YWC are specified and defined in an "Assignment Agreement" with the Water Authority of Jordan. This Assignment Agreement governs the working relationship to be followed by the management contractor.

2) Yarmouk Management contract:

- PMU has tendered and signed an agreement with a Transaction Advisor on 20 June 2010 in order to do the due diligence, prepare the tender documents for the services of the Management Contractor for YWC, and assist PMU in the tendering process.
- PMU is now tendering the services of the Management Contractor on behalf of YWC; in addition PMU will eventually carry out all regulatory responsibilities relating to the management contract.
- PMU has announced on 27 July an international competitive bidding to procure an international experienced company or a consortium of companies to provide services of a Management Contractor for YWC. Offers were received by 18 October 2010, the management contractor is expected to commence on 1st April 2011.

Ma'an Management Contract for Water and Sanitation

Ma'an Water Administration, working under the public water sector umbrella has suffered from poor administrative performance due to poor staff performance, experiences and difficulties in attracting qualified personnel, poor services provided to the customers, low cash amounts and low cost recovery in addition to declination in many Key Performance Indicators KPI's especially non revenue water during recent years.

Several solutions have been investigated by Water Authority of Jordan to improve efficiency and performance and to enhance provided services to the public.

The feasibility study has shown that the best alternative financially and technically to WAJ is a resort of management contract with Aqaba Water Company AWC as an operator (off taker).

The operator is required to carry on all activities originally rested with WAJ that include O & M activities, customer services,

asset management development of services, business planning, definition of capital investment, relation with customers and stakeholders.

And so, WAJ jointly with PMU has prepared a management contract with AWC for duration of five years extendable for two years. This contract has been formulated in a way to improve performance through involving Performance Based elements to achieve the desired aims and enhancements. This contract had been enforced starting 1st of July 2010.



Zarqa Water Administration Commercialization (Corporatization and Management Contract)

Project Scope:

The water sector pursues a policy of creating regional water and wastewater companies throughout Jordan.

WAJ decided that Zarqa Water Administration has to undergo a process of commercialization, this includes two stages:

- 1) Establishment of a limited liability company (Zarqa Water Company ZWC). So that it will be an independent legal entity with its own separate finances and management.
- 2) ZWC to go for a full performance based Management Contract, with a professional utility operator to be assigned as the Management Contractor.

The main objectives of the Management Contract are to:

- (a) Improve the water and wastewater services to customers in Zarqa Governorate;
- (b) Improve the financial position of ZWC
- (c) Establish, the foundation for sustainable operational and business effectiveness and efficiency
- (d) Reduce the NRW.
- (e) Manage the capital investments projects (by Japan, China, EU) and coordinate with MCC investment projects in Zarqa Governorate.

Service Area:

The service area covers Zarqa Governorate with a population of around 800,000 people.

Management Contract Period:

Five years, the contract may be extended by a period of two years for two times.

Type of Contract:

Performance-based service contract

Contract Funding:

WAJ.

Project Current Status:

1) Corporatizing ZWA:

- Corporatization documents, Memorandum of Association (MOA) and Article of Association (AOA) are under preparation. Zarqa Water Company ZWC will be the legal successor of ZWA, and will be a legal entity with its own separate finances. Its management committee members will be from both the public sector and the private sector. The duties and responsibilities of ZWC will be defined in MOA and AOA.
- The same duties and responsibilities of ZWC will be defined in the "Assignment Agreement" between the Water Authority of Jordan (the assignor) and ZWC (the assignee). The Assignment Agreement which is under preparation will be governing the working relationship between ZWC and WAJ and is the basic framework to be followed by the Management Contractor.
- Registering the company requires the cabinet approval, it is expected that the draft Assignment Agreement will be ready to be submitted with other required documents for cabinet approval in Jan. 2011.

2) ZWA Management Contract :

- CH2 M Hill Consulting Co. has been assigned by the Millennium Challenge Corporation (MCC) on 1st Sep. 2010 to do the transaction advisory (the technical) part, their duties include assisting PMU in the preparation of tender documents for the services of the Management Contractor for ZWC, as well as assisting PMU in the tendering process.
- The transaction advisor together with PMU had prolonged discussions between 10 and 14 Oct. 2010 and had agreed on the management contracting strategies, organization roles and responsibilities, risk allocations, and procurement process.
- It is expected to announce the Expression of Interest (EOI) to potential bidders internationally by July 1st 2011.

PMU and the Micro PSP approach:

Micro PSP (Private Sector Participation) through local Jordanian companies has proven to be a very successful approach to improve service delivery and financial performance of WAJ organizational units in the respective governorates.

The input based service contract that has been applied for Madaba Governorate starting 2006 is one of these successful stories.

Since, then, PMU has worked intensively on evaluation, regulation and monitoring on this model. Continuously, PMU has developed the so called performance based service contract (output based) on the micro level out sourcing. The PMU worked on attracting of facilitating firms, local and international firms that are in association with local Jordanian ones, in participation and involvement in conducting and executing such kind of contracts.

And so a Micro PSP service contracts for karak and Balqa governorates had been prepared, contracted, awarded and started on 1st September 2010 for Balqa and on 1st of October 2010 for Karak.

The objectives of the performance based service contract are to improve:

- 1) Water and waste water customer services
- 2) GIS –ICT units
- 3) Implementation of GIS based tools, redesigned customer information system and sewerage Data Base

The cost of Karak contract is two million JOD and Balqa contract is around three million JOD. These contracts include supporting services beyond the customer management activities (ie. GIS-ICT and financial management). However such services are seen very essential for the overall improvement of the Karak and Balqa Water Administrations.

Accompanying Measures Contract for Karak Governorate

As a pre-condition for the successful implementation of the management of the contract and for the preparation of a necessary data, the PMU, in coordination with the OMS and Accompanying measures consultant for middle and southern regions had conducted a Comprehensive Subscribers Survey (CSS) (2007-2008 for Karak governorate) and (2006-2007 for Balqa governorate). Moreover a Customer Satisfaction Survey had been conducted for both governorates too.

Project Proposal PPP WWTP Madaba Energy Saving and Sludge Treatment

The success of Baquria pumping station project under PPP, where a 40% energy savings per month had led to an accumulation of more than 20000 JOD savings for WAJ for the period (March 2010-June 2010), had led through coordination between Engicon Consultant and the GTZ with the support and facilitation from PMU, to formulate a proposal to work under the concept of the PPP at the WWTP in Madaba, which should bring sustainable efficiency increase and improvements.

The idea had been approved and moved forward in signing a PPP contract with the off taker, on which he contributes in covering 50% of the overall costs. The aim of the PPP measure is to establish know how in the optimization of the operation of WWTPs with regard to energy saving and sludge dewatering.

Samara Waste Water Treatment Plant in Jordan

Samra wastewater treatment plant project is a public private partnership (PPP) for financing the construction and operation of a public infrastructure in Jordan based on (Build, Operate and Transfer) approach over a period of 23 years. This project was the first (BOT) project in Jordan, financed by USAID, MWI and Samra Plant Syndicate of Jordan and Bank consortium which led by the Arab Bank.

The project characteristics are:

- Provides a proper wastewater treatment,
- Replaces an overloaded waste stabilization pond treatment system,
- Produces an effluent with a quality meeting the Jordanian Standards,
- Allows safe reuse of treated water for agriculture,
- Eliminates offensive odors in the surrounding area,
- Develops production of compost and fodder from the digested sludge,
- Use the biogas which was produced in the sludge digesters to generate thermal and electrical power in addition to using the hydraulic potential energy at the inlet and outlet of the plant to produce electricity.



PMU and Re -allocation Plan

Our country suffers from different water problems, as, water shortage, in-continuous water supply and low per capita share of water. So, based on these reasons the re-allocation plan had been necessarily studied. Previously, there was water exportation from the governorates that had excess water to the neighboring governorates. However as the local needs for water increased with time, the ability of the exporting governorates to provide water decreased.

Additionally, some governorates have a continuous water supply as Aqaba and Madaba, (the per capita share is high), while other governorates as Jerash does not have the same opportunity, (it has low per capita share). So the project aims to have fair capita share, continuous supply of water and each governorate depends on its own source of water. The Reallocation plan was designed by PMU.

PMU and Tariff Restructuring

Water Tariff Restructuring is aimed to be based on monthly billing to make it suitable for the Jordanian citizens who are monthly paid in general. There will be two kinds of Tariffs:

- 1- Tariffs for the governorates which are run by the companies
- 2- Tariffs for other governorates

Restructuring of Tariff of six cubic meters 6 m^3 consumption to be considered as one slice.

There will be no changes for the first two slices ($0-6 \text{ m}^3 / 7-12 \text{ m}^3$) compared with the old tariff. The calculated monthly bill is an accumulation process increasing according to the consumption rate

For example:

The monthly bill for someone is 17 m^3 consumption, so the consumed water will be billed based on the following slices:

$$(1\text{st } 6\text{m}^3 + 2\text{nd } 6\text{m}^3 + \text{remaining } 5 \text{ m}^3)$$

A cabinet decision was taken to apply the new tariff structure and move to monthly billing instead of quarterly billing starting from the beginning of next year.

Zarqa Governorate Water System Restructuring & Rehabilitation

This project is one of four projects that had been funded by Millennium Challenge Cooperation (MCC) by USA Government in Zarqa Governorate. This project had been awarded in 13/10/2009 with a duration of 14 month to the consultant Nicholas Odwyer and Amman Consulting Engineering and Planning Office (ACEPO).

Zarqa governorate is located in the central region of Jordan, its ground level vary from 480 to 710 meters above sea level. Zarqa facing some difficult water conditions and challenges in its water sector due to the scarcity of water resources in the country, and there is considerable variation in elevation within the existing water supply zones in addition to a lack of water storage facilitates within the network. This has led sanitation where large areas of the water supply network are served by direct pumping. This resulted in a very inefficient supply system where water pressures are insufficient in higher areas and excessive pressures are experienced in the lower areas. It is not unexpected therefore that non revenue water exceeds 50% of supply and supply to consumers is unstable and inadequate.

The overriding objectives of MCC funded project are to reduce non revenue water and to affect a substantial improvement in the existing level of water supply services to the population of Zarqa governorate. Through the implementation of a major network restructuring and rehabilitation program.

This project will involve the conversion of the existing Zarqa and Russaifah water supply areas pumped supply arrangement to a gravity fed through the implementation of these measures:

- Separation of distribution pipes from transmission pipes,
- Replacing aging distribution and tertiary systems up to water meters,
- Addition of pressure reducing valve (PR) to provide more control of pressure inside distribution reservoirs.
- Increase storage capacity of reservoirs to meet the criteria of 12 hour storage until 2025.
- Reduce pumping costs by optimizing pumping stations, boosters and reservoirs to cope with the demands and pressure needs until 2025.

Energy Saving Performance Based Service Contract for Investment, Management, Operation, Repair & Maintenance of (Khaw) Pumping Station-Water Authority of Jordan-Zarqa Governorate in WAJ Zarqa Administration

The commercialization and participation of Jordanian private sector companies in operation and management of water supply has been an important element of the MWI water sector strategy. WAJ under MWI developed a Micro PSP concept which envisages the engagement of Jordanian and/or international private sector companies to take over investment, installation of equipment, training, operation and maintenance for water pumping stations in order to reduce energy consumption. With this so called Energy Contracting approach, local expertise is used and built, dependency on foreign assistance reduced and long preparatory periods for macro PSP contracts considerably reduced. WAJ invites interested Jordanian and international companies to send their expression of interest and participate at the orientation workshop which envisages the presentation of the Micro-PSP concept to:

Improve the performance of a defined pumping station by developing and implementing measures (including investments) to reduce energy consumption and costs, optimize the use of available water resources, manage operation & maintenance of the pumping station and improve professional expertise of involved WAJ staff.

(Supervisory Control & Data Acquisition) (SCADA) Project

The critical economic situation that our country faced, this forced the MWI /WAJ to adopt all possible techniques for saving our limited resources and achieve the hard comprise and difficult balance between customer's satisfaction and water scarcity. So methodologies for minimizing the NRW (physical and administrative) huge investment in major water rehabilitation and restructuring of the old water networks, GIS implementation, modern and accurate billing systems and other plans were all used to secure the optimum goal of reasonable water quantity with the best quality to Jordanian consumer.

Recently the implementation of the latest technologies in the field of monitoring and control has become a major role for WAJ in the way towards better water management. Such technology is playing now a major role to insure that the performance of water facilities is approaching the optimum levels in term of operation continuity, water quantity, power saving, maintenance as well as flexibility of applying emergency water scenarios in case of abnormal conditions.

So investing in SCADA (Supervisory Control and Data Acquisition) would be a feasible approach since having such technology present in the Jordanian water sector will assist in attracting private sector participation (PSP) and will be an encouraging factor for the accelerated privatization movement.

SCADA is an industrial control system; it consists of Remote Terminal Unit (RTU) and Programmable Logic Controller (PLCs).

SCADA system is a branch of instrumentation engineering that includes input-output signal hard ware, controllers, and Human Machine Interfacing (HMI) networks, communications, data base and software.

The main objective of SCADA system will be the overall optimization of the management, maintenance and operation of the water. This system will lead to an important role in water management through automatic collection of a wide range of data, such as water demand, available resources, water quality, energy consumption, failure,...etc, that can be centralized, stored and shared for its further analysis.

(Supervisory Control and Data Acquisition) (SCADA) project

The field information collected by SCADA shall contribute to the achievements of the following objectives:

- Reduction of unaccounted water,
- Establishment of sustainable yields for each well,
- Development of an appropriate water management storage through periodic cross-checking between water demand and water resources in addition to achievement of long term water sustainability and protection of water resources,
- Detection of malfunctions, failure and alarm messages,
- Reduction of energy consumption through the development of appropriate control strategy.

- Reduction of operation personnel cost and human errors and detection of leakage. So, the whole objectives are directed to improve the services provided to consumers.

For all these positives of SCADA, the movements towards the Jordan wide SCADA had already started and two major schemes in this regard are currently under implementation:

- 1) Greater Amman SCADA project, started since 12/12/2003
- 2) Nothern Governorates SCADA contract, (it is in preliminary stages).



Performance Indicators System

Indicators are characteristics parameters that describe a status (operational, financial, technical, etc) of an entity or process based on measuring the variables.

World wide, the water and wastewater industry experiences to a more or less extent similar challenges such as efficient utilization of the more and more precious water resources, insufficient sanitation, cost efficient operations that allow for reasonable low service tariffs in addition to quality of services. A side of the technical and circumstantial description that shall enable a fair basis for comparison of utilities, emphasis has to be given to the performance aspects and the effectiveness of service provision.

In recognizing the worldwide problems and in order to provide also the means for international comparison and sharing of improvement efforts and related effects, the International Water Association (IWA) has come up with an extensive set of 138 Performance Indicators grouped into the following main categories:

Water resources, personnel of the utility, physical components, operational aspects, quality of services, financial aspects and wastewater.

PMU Monitoring, Auditing Activities and Achievements

PMU reviewed its old Performance Indicators for Water and Wastewater Services Manual (v6.1) and depending on its accumulated previous experiences in monitoring water utilities within Jordan and with consultation and co-operation with the monitored water companies and administrations produced a new manual (v7) that included more indicators for the wastewater monitoring and a more precise definition of the collected variables and calculated indicators.

The new manual was used in producing the 2009 quarterly and annual monitoring reports for Jordan Water Company (Miyahuna) and Aqaba Water Company (AWC) as well as for producing the monitoring reports of both companies for the first quarter of 2010.

His Excellency the Minister of Water and Irrigation directed PMU to also monitor Jordan Valley Authority (JVA) and monitoring activities already started.

PMU Future Activities

The main activities remaining for implementation in 2010 and 2011 in relation to the two specific objectives of the Al-Meyyah project includes the continuation of working on:

- 1) Transformation of water services to be operated under commercial principles and promote the involvement of the private sector in the management of the water services.
- 2) The foundation for an independent regulator for the water sector is in place, awaiting Government decision. Within this objective, PMU needs to work on:
 - A- Completion of the rolling out of the monitoring and auditing function country wide to cover all water utilities.
 - B- Enhancement of the monitoring and auditing function including the performance indicators and service benchmarking systems.
 - C- Further capacity building of the performance management Units and supporting its transformation into a fully fledged, independent, financially self-sufficient Regulatory Commission planned to be established at the beginning of 2010.
 - D- Finalization of the draft law providing mandate for the future regulatory commission and assisting the water utilities in transformation to work under the licensing system to be implemented by the future Regulatory Commission.

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The Hashemite
Kingdom of Jordan

Contact Information

Performance Management Unit.

Ministry of Water and Irrigation Water Authority

P.O Box 2412 Amman 11183,

Hashemite Kingdom of Jordan

Tel.: +962 6 5652261 Fax.: +962 6 5627823,

E-mail: pmu@pmu.gov.jo.

<http://www.pmu.gov.jo>