

# Local Water Supply, Sanitation and Sewage

In Mediterranean Partner  
Countries

## Executive Summary

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Draft version

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## EXECUTIVE SUMMARY

It is by now widely recognized that improved water supply and sanitation services are important means for reducing poverty. The explicit goals regarding water and sanitation of the Millennium Declaration, adopted in 2000, also show how important these services are considered by the international community.

Managing water services in a sound and sustainable manner and providing access to everyone, is a complex task. Many factors have to be taken into consideration; environmental sustainability, institutional settings and legal framework, water scarcity and financial means for operating, maintaining and developing water infrastructure. Many governments have come to realize that with conventional water sector strategies they will not be able to extend local water services to all residents, especially in poor urban areas, and that innovative approaches have to be introduced, not only with respect to technical solutions and infrastructure works but also regarding governance strategy.

The situation of local water supply and sanitation services in the Mediterranean Partner Countries varies. All countries in the region have limited water resources with population growth and rising living standards, increasing the pressure on the already stressed aquifers. Water scarcity and access to local water services is a well recognized problem for local governments and international financing bodies, and there is a long list of projects aiming to improve the performance of the sector.

The study has been commissioned by EMWIS/SEMIDE, Phase II, following a decision taken during the EMWIS Steering Committee meeting on Malta 2004, to work on four themes with the overall objective of providing a synthesis analysis on subjects of interest to the Euro-Med water community. The aim of this study is to overview the current policies for Local water supply, sanitation and sewage in 8 of the 10 Mediterranean EMWIS Partner Countries<sup>1</sup>, namely Algeria, Israel, Jordan, Lebanon, Morocco, Palestine, Tunisia and Turkey, including Malta and Cyprus.<sup>2</sup>

This paper is based on public documents and sources of information consulted mainly through internet. For each country was created a separate overview report of policies and practices, successively validated through the National Focal Points. A special acknowledgement is addressed to all National Focal points of the MPC, for the invaluable support received during the validation and integration of the collected information that made it possible to complete the study.

The findings, interpretations and conclusions expressed in this paper are entirely those of the authors and do not represent the general view of the EMWIS project and the member countries. The study cannot in any case be considered comprehensive and definitive, but only another step in the process of integrating the information between the MPC countries in the water sector with the overall aim of improving the partnership ties and giving a contribution to the process for a shared improvement of water supply and sanitation governance.

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<sup>1</sup> Regarding Syria and Egypt, the study did try to collect information relevant to the local water supply and sanitation services in this two countries, but due to the scarce availability of data and the impossibility of confirming their reliability, it has been decided to not publicise this information.

<sup>2</sup> In the text all countries will be referred to as Member Partner Countries (MPC).

The topics and main findings of the study can be synthesized as follows:

(a) *Shifting strategy focus for local water supply and sanitation*

An important strategy shift has taken place in the world to secure supply of local water supply and sanitation. At the core of major problems encountered are the management and performance of the water utilities and large efforts have been undertaken to improve the situation. The general trend has been to focus strategies on supply side measures like large infrastructure works and increased water exploitation. Service coverage generally increased, but has in many countries caused severe over-abstraction and depletion of already scarce freshwater resources. The strategy has also proved to be hard to support economically as the exploitation of new sources of supply is expensive and the investment need is large, especially for poor countries.

By now it is widely accepted that a broader strategic approach to improve the sector performance is needed, supported by an institutional framework and incentive system for economical efficiency and environmental protection. The new water strategies focus on demand management, socially sustainable tariffs and economical efficiency of services. Potential actions are many and range from optimisation of renewable water resources, re-utilisation of treated wastewater, reduction of unaccounted for water (UFW), improving the water conveyance systems and distribution networks, rehabilitation of sewage systems. All the above actions must be accompanied by the improvement of the operational and management capacity in order to meet the new requirements of efficiency and transparency of operation and economical performance.

The study shows that all MPC have followed this general strategy for local water supply and sanitation. Although the level of implementation and measures differs, all have initiated reforms of institutional settings and legislative framework, applied to alternative forms of management.

The importance of sewage and wastewater treatment seems also to have come more into focus in the MPC strategies, not only in order to protect the environment from pollution but also because it is considered a strategic alternative resource to substitute freshwater used for irrigation.

(b) *Alternative forms of management*

Regarding alternative forms of management, private sector involvement is considered by most countries a strategic choice to improve and secure water supply and sanitation services. It is expected to bring new investment capital to the sector and operational and financial efficiency to the water utilities.

The level of private sector involvement in the MPC varies. Most of them have already taken the necessary steps to change the legal framework and the institutional settings in order to open up the water sector for private interests, but the examples of private companies actually managing the integrated water service utilities are still few. The study shows how four countries have examples of management contracts for providing local water supply and sanitation, while one country is in the process of awarding the management of two large municipalities.

Based on the study result, it is not possible to claim that private sector involvement in managing water utilities has, or has not, actually improved service. In the cases where the utility performance was available for analysing, the service coverage has increased and economical performance improved, but it is at the same time debated that the tariffs have increased uncontrollably, compromising the poor population's possibility to pay for and access to water services.

The process of establishing management contracts is a complex procedure, that often spans over several years. An alternative to large management contracts can be to outsource operational activities partially. In the other countries, the private sector involvement is still limited to infrastructure works under arrangements like BOT or BOOT, especially regarding the construction and management of desalination plants and wastewater treatment plants.

(c) *Institutional settings and legal framework*

Fragmented institutional settings with consequent complex coordination mechanisms and inefficiency, are a major hindrance for sustainable water management in the MPC. The problem can only be solved through a more effective institutional structure and an appropriate legislative framework supporting it.

In all countries it is possible to distinguish between a policy setting unit - normally a ministry or an executive or regulatory body under the ministry governance - and a local level utility company responsible for the retail supply, often under the responsibility of the municipality, although the complexity and number of bodies involved vary largely. The trend for the institutional reforms, in order to overcome the complex and inefficient institutional set up, is to strengthen the water management structure by consolidating responsibilities for different activities into one single unit, improving the overall governance of the sector. Most of the countries have already created, or are expressing the intention of starting the procedure of establishing a separate regulating unit, with the overall responsibility for water resources and local water services. In three countries the consolidation of water utilities companies into larger units is under way.

In two countries only it has been possible to find a clear statement distinguishing between the responsibility for operations and the monitoring of efficiency and performance, protecting the end users' interests, although the analysis shows that several of the other countries are aiming for the same policy.

Four countries have strongly regulated water market with a natural monopolist body at governmental level, responsible for the water supply. While two are in the process of decentralizing.

Except for the BOT and BOOT, there is no example of local water supply and sanitation infrastructure that has been sold to private operator. The overall water infrastructure remain public property and under the responsibility of a central public body. The responsibility for local water supply infrastructure varies. In most cases it is the municipality responsibility to operate and maintain the infrastructure, while investments and construction works are the responsibility of a central public body. Also in the case of private sector involvement, like in Jordan, the operator is responsible for operation and maintenance but the infrastructure remain public property.

Regarding the responsibility for sanitation and sewage services and the level of integration with water supply services, the organisational set up varies. Generally in countries where municipalities are in charge of sanitation and sewage services, the same are managed by separate boards. One country has separate central public institutions, one responsible for water and one for sanitation services. Two countries have already applied the strategy of concentrating all responsibilities within one public utility company.

The information regarding legal framework for the water supply services is very limited. The result of the study shows that all countries have started to reform their water sectors and legal framework. The legislative regulations regarding wastewater treatment are often connected to the laws regarding water quality and protection of water resources with an environmental perspective. This might explain the growing focus on sewage services and wastewater treatment in management strategies and investments initiatives.

(d) *Water sector performance*

Recent estimates of population and renewable water resources per capita (2005), show how half of the countries in the study fall within the definition of being affected by water scarcity (less than 1000 m<sup>3</sup> renewable water resources per capita per year)<sup>3</sup> and some of them have already less than 500 m<sup>3</sup> per capita. Based on the population growth rates and declining availability of

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<sup>3</sup> PAI 2005 Population Action International - 2005

renewable fresh water, all MPC, except Turkey and Cyprus, are forecasted to face similar conditions of water scarcity by 2025.

The rate of total available water resources actually allocated to domestic uses is, in most countries, around 30% or less and not in the direct governance of the local water bodies. The core of many problems regarding local water supply and sanitation services is the poor performance of the water utilities caused by high rates of physical and commercial losses, low level of service and in many areas insufficient service coverage (access to drinking water and sanitation).

The supply of water varies largely between not only the MPC but also between the different regions within the countries. In average the drinking water supply range between 125 litres and 200 litres per capita per day. Consumed volumes are even less considering the level of unaccounted for water (UFW), still around 40 to 50 percent for more than half of the MPC.

Comparing the rate of population with access to improved drinking water supply, with reference to the Millennium Development Goals, regarding water supply and sanitation, the situation seems satisfactory, at least regarding the supply to urban population, estimated to approximately 90 percent, and for several countries even 100 percent.<sup>4</sup> The access rate of the rural population is somewhat lower but the trend seems to be positive.

The rate of population with access to improved sanitation is between 70 to 90 percent but with a rural population in some countries with under 50 percent coverage.

These performance indicators show the average access to improved service, but do not take into consideration service continuity. There are not enough data for all MPC to draw any overall conclusion regarding service continuity, but the study shows that the access rate could change significantly if this factor should be considered too. In some countries water supply service is being suspended during night time or only provided during a couple of days per week. The problem seems to affect mostly large cities, and in some countries only during dry summer months.

Although the overall strategies seem, also if limited, to gradually give more attention to sewage services and wastewater treatment, there is not much evidence in the result of the research. The official statistics of the countries are also scarce regarding the performance of sewage services. The study showed that Israel have come far in the collection and treatment of wastewater, about 96 percent of total volume is collected and 64 percent of wastewater adequately treated. In the other countries, where data is available, the rate of treatment varies and falls within the range of 30 to 40 percent, with some of them treating less than 10 percent.

(e) *Tariffs and cost coverage*

The information and data regarding total investments in the water sector and for water supply and sanitation services is scarce for all countries. Several of the water sector strategies clearly state that water services must be provided in an economically sustainable manner and subsidies gradually abolished. The economical performance of the water utilities is therefore becoming more and more in focus.

The tariffs and metering are critical aspects for sustainable service supply and a prerequisite for reaching the objectives of access to improved water supply and sanitation. It is also a major challenge as tariff structures and subsidies should be set at levels that do not compromise the poorest possibilities to satisfy basic need for water and sanitation services.

Most of the MPC have laws that define water as an economic good, establishing that costs connected to the service production, operation and maintenance as well as capital costs, should be covered through tariffs. The analysis indicates that there is still a long way to go before it will be possible to implement total cost coverage, mainly due to the fact that the investment needs are so large in some countries that a tariff comprising recover of capital costs, would become

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<sup>4</sup> UNICEF Statistics, 2002

unacceptably high, but also because there is not sufficient financial control of the activity of the water utility companies, to actually be able to measure all costs involved.

Almost all MPC are applying a progressive tariff policy. Sanitation and sewerage services are generally charged in proportion to domestic water consumption.

Regarding subsidies the set-up varies between the countries. Some of them subsidize the bulk water delivered to the municipalities or other entities in charge of local water supply. Tariffs are then set on local level with the consequence that can vary between different localities in the country. In other countries water tariffs are established at governmental level and it is the same all over the

Metering practice varies a lot and, in the countries that have come furthest in the implementation of more economical and efficient service, the meters are read every 2 months. Most countries apply a fixed part on the tariff that must be paid even if there is no water consumption.