

Viewpoint

Note No. 177

April 1999

Management Contracts in Water and Sanitation—Gaza’s Experience

*Jamal Saghir,
Elisabeth
Sherwood, and
Andrew Macoun*

In 1995, as the interim agreements between the Palestine Liberation Organization and the government of Israel were being finalized and signed, water and sanitation services in the Gaza Strip were in crisis. Gaza has an extremely dense population of about 2,500 people per square kilometer (the population is around 900,000). The thin strip of land’s primary source of water, a shallow aquifer, was being mined at more than twice its estimated annual recharge rate, resulting in an increasing deterioration in quality.

Responsibility for water services was fragmented among four municipal water departments, twelve village councils, and the United Nations Relief and Works Agency. There was no accurate accounting of water production or consumption, though estimates put daily per capita consumption at less than 70 liters, well below levels in countries with similar incomes. About half of the water supplied was unaccounted for—the result of system losses, illegal connections, and nonfunctioning meters.

A stepwise approach to reform

All stakeholders recognized that private sector involvement was the only way to rapidly improve the water supply system. But long-term arrangements posed significant risks to both the Palestinian Authority and potential private contractors. First among these was the risk resulting from the political and security situation in Gaza. Second, the Palestinian authorities had only just been empowered to manage water resources; it was unlikely that they would agree to divestment. Third, so little information was available on the existing system that there was almost no basis for establishing the terms or expectations of a concession contract or lease.

Finally, tariffs were too low—between US\$0.30 and US\$0.40 a cubic meter¹—for a contract based on revenues to succeed.

Under these circumstances a management contract offered several advantages: it was highly flexible, of limited duration, and ensured that a range of options would be available at the end of the contract. In addition, the contract would allow both the Palestinian Authority and the general public to judge the advantages of private sector management without committing to a long-term relationship. The contract would also allow the private sector to judge the Palestinian Authority’s commitment, particularly to cost recovery through tariffs. Finally, the terms of the contract included a number of tasks necessary to establishing a sound commercial approach (such as implementing a computerized administrative system, network mapping, and hydraulic modeling). By the time the contract ends the Palestinian Water Authority will be able to make an informed decision on future private participation in infrastructure and regulatory arrangements. At that point an alternative means of private sector involvement—such as a lease or a full performance management contract—is expected to be implemented.

So in mid-1996 Lyonnaise des Eaux/Khatib and Alami (LEKA) was awarded a four-year water services management contract to help local government service providers and the Palestinian Water Authority improve water service. The contract is the first of its kind in a World Bank-funded project in the Middle East.

Since the contract became active, water quality has improved, water losses have fallen, and consumption and revenues have increased. Despite





the improved performance, the management contract has illustrated some of the limitations of this approach. The contract leaves the implementation of management decisions in the hands of the local authorities, limiting the benefits of improved management. For example, although LEKA has identified nearly 11,000 illegal connections, resolution is left to municipalities and the Palestinian Water Authority—and to date, action has been limited. And although LEKA has provided training to well operators on chlorine dosing and routine maintenance procedures, most failures in the dosing units are due to the reluctance or inability of municipal employees to carry out basic procedures.

The contract design

The contract fee is split between a fixed annual payment and an additional performance payment based on the achievement of performance targets.

The fixed-fee portion of the contract, which formed the basis for international competitive bidding for the contract, is about US\$6 million over four years. In return, the operator provides full-time expatriate managers, full-time local technicians, administrative support, and short-term expatriate specialists to undertake specific tasks. The scope of work for the contract focuses on four objectives:

- Increasing the quantity of available water by improving the efficiency of the water supply distribution system and operating equipment.
- Improving the quality of the water supply and of wastewater effluent.
- Improving management of water and wastewater systems through better operations, revenue collections, and customer service.
- Strengthening water and wastewater institutions through long-term system planning and training.

An incentive payment was added to the contract to encourage the achievement of the contract's objectives. The total incentive payment for the four years is US\$3 million, or an additional 50 percent of the fixed contract payment. The an-

nual ceilings for incentive payments were set at one-quarter of the total, or US\$750,000.

The performance payment is calculated according to thirty-one performance targets grouped under the four contract objectives. Each of the performance targets—ranging from the number of meters repaired or replaced, to reductions in unaccounted-for water, to the completion of tasks such as the development and implementation of maintenance and materials management systems—was given indicator values that quantify the annual achievement of the target.

In addition, all performance targets were weighted to reflect the priority of the target. Critical targets were given much higher weightings—for example, reducing unaccounted-for water is weighted the highest of any target. The indicator weightings emphasize the importance placed on increasing the quantity of available water. A composite performance score determines the incentive payment. If the composite score does not meet a threshold level the operator is disqualified from any incentive payment.

The rating system provides for exclusion of work performed by contractors hired by other agencies or authorities.² In addition, LEKA and the Palestinian Water Authority are allowed to invoke a force majeure clause of the contract for any event beyond their control that makes it impossible to fulfill their obligations. Such events include strikes, lockouts, and other industrial actions (except where such events can be prevented by the party invoking force majeure) as well as confiscation or any other action by government agencies. Many such events have occurred over the life of the contract because of border closures and other disruptions. As a result a one-time agreement was negotiated to carry over to the second year the balance of the first year's performance payment, less a 10 percent penalty, in return for withdrawing all force majeure claims.

No significant changes have been made to the performance targets. Though some criteria were not sufficiently challenging (metering, system

disinfection), on the whole targets have been challenging but achievable. At the same time, performance targets for institutional and procedural development objectives have generally not been met—either because of different interpretations of actions taken or the operator’s prioritization of other benchmarks. Different weightings in the original contract, or some other mechanism for ensuring equal attention to institutional development, might have addressed this issue from the start. In more recent performance-based management contracts for Amman, Jordan, and for the Bethlehem and Hebron areas of the West Bank fewer and better-defined indicators have been used.

Contracting out regulation

Some tension between a private operator and an oversight body is to be expected. In Gaza no regulatory capacity existed before the management contract went into effect, and the Palestinian Authority, with no experience with a private operator, feared being taken advantage of.

The solution agreed on was to hire a reputable auditing firm (Deloitte and Touche, Norway) to perform an annual audit of the operator’s technical and financial performance.³ At the end of each six-month period of the contract, the operator prepares a performance report detailing its progress against the performance indicators, including evidence necessary for substantiation. As part of this exercise the operator calculates its own performance score. The operator also reports its activities in each of Gaza’s sixteen municipalities and villages. In addition, the Palestinian Water Authority prepares progress reports.

At the end of each contract year the auditor reviews the performance reports, confirms their accuracy by visiting sites and examining records and inventories, and verifies the performance score. The incentive payment is then calculated on the basis of the performance score. The auditor also reports to the Palestinian Water Authority on the operator’s financial statements and any issues arising from them.

This approach has worked well. At the end of the first year of the contract, LEKA’s assessment of its performance yielded an incentive fee payment of US\$498,000 (64 percent of the total possible payment). The auditor downgraded four of the performance indicators—in three cases LEKA claimed full compliance whereas the auditor found that compliance was poor. The auditor’s score was ultimately used to calculate the incentive payment of US\$444,000. Performance in the second year was assessed close to US\$800,000 (due to the carryover from the first year).

Funding

The Gaza management contract is not funded by revenue from water and sanitation services. Rather, it is funded entirely by a US\$25 million credit from the World Bank to the Palestine Liberation Organization for the benefit of the Palestinian Authority. In most cases it should not, however, be necessary to guarantee an external source of funds. Sector reforms should raise revenues enough to cover all or most of the costs of a management contract, thereby increasing private sector interest in such arrangements. In Gaza, however, political and security concerns would likely have dissuaded operators from taking on such a large assignment without the support of the Bank credit.

The Bank also contributed to another crucial aspect of sector improvement, establishing a US\$12 million fund to invest in the operational capacity of water and sanitation infrastructure. The fund gives the operator the means to make improvements in the system in much the same way a lessee would, based on needs identified by management. The operator has considerable flexibility in determining immediate investment needs and can procure (using World Bank guidelines) goods and services as needed.

Lessons

More than two years after the award of the contract the water supply system is much improved. In the first half of 1998 unaccounted-



for water was around 35 percent lower than in 1995. Water consumption for the same period was almost 16 million cubic meters, nearly 50 percent more than in 1995. Total revenue collected in 1997 was almost twice that in 1996. In addition, water delivered in the Gaza Strip is now reliably chlorinated, more than 11,000 illegal connections have been identified, more than 2,000 leaks have been repaired, a complete database of service connections has been prepared (with almost 10,000 connections replaced), 80 percent of the system has been mapped, and more than 7,000 meters have been repaired and 8,000 replaced.

Experience with the management contract in Gaza suggests that conferring higher degrees of management responsibility to an operator could expedite improvements. As successful as the operator has been in meeting the requirements under its direct authority, local authorities have not been consistent in supporting those improvements. This remains the weakest link of the contract.

One essential feature of the contract was its use of independent technical and financial auditors to audit the achievement of the annual performance targets, calculate the incentive fee, and provide a comfort letter for payment of the incentive fee. But although the contract established clear benchmarks and a performance rating system, it allowed the operator to focus on benchmarks that would generate a higher performance payment. As a result less attention was given to benchmarks that were perceived as being harder to achieve or worth too little in terms of their weighted worth (for example, training and public relations). Structuring the contract so that some objectives are simple contractual requirements, within either the base fee or the incentive fee, would overcome this problem.

For several reasons multilateral financing was essential in such a high-risk environment as Gaza. This financing covered the fixed fees of the operator, easing concerns that low revenue and other risks would prevent payment by the Palestinian Water Authority or the municipali-

ties. It financed the operating investment fund, without which the operator could not commit to meeting service targets. And it provided assurances on the policy reforms supported by the donors.

Overall, the Gaza experience suggests that management contracts are most likely to work under four conditions:

- The primary objective is to rapidly enhance the technical capacity and efficiency of services.
- Government faces obstacles to committing to a long-term arrangement for private participation in infrastructure or to inducing the private sector to undertake capital investment or take on commercial or political risk.
- Tariffs are too low to support a long-term arrangement for private participation in infrastructure.
- Government faces difficulties in securing agreements to allow the long-term involvement of the private sector or the regulatory framework is incompatible with a long-term arrangement for private participation in infrastructure.

Where the above conditions apply (as in Gaza), a management contract provides a window of opportunity in which trust can be developed between the public and private sectors. Such contracts also allow the authorities to devote attention to creating an appropriate regulatory framework, adjusting tariffs and subsidies, and creating an environment more conducive to private risk taking.

¹ While within the range of many other tariffs in the region, this rate could not begin to cover realistic provisioning for the major capital investments that are needed. In contrast, water supplied by Jerusalem Water Undertaking costs between US\$1 and US\$1.50 a cubic meter.

² Many donors are helping the Palestinian Authority rehabilitate and extend infrastructure and services. The rating system discounts these contributions to the operator's achievement of performance targets.

³ The auditor's work is funded by a bilateral donor.

*Jamal Saghir (jsaghir@worldbank.org),
Elisabeth Sherwood (esherwood@worldbank.org),
and Andrew Macoun, Middle East and
North Africa Region*

Viewpoint is an open forum intended to encourage dissemination of and debate on ideas, innovations, and best practices for expanding the private sector. The views published are those of the authors and should not be attributed to the World Bank or any of its affiliated organizations. Nor do any of the conclusions represent official policy of the World Bank or of its Executive Directors or the countries they represent.

To order additional copies please call 202 458 1111 or contact Suzanne Smith, editor, Room F11K-208, The World Bank, 1818 H Street, NW, Washington, D.C. 20433, or Internet address ssmith7@worldbank.org. The series is also available on-line (www.worldbank.org/html/fpd/notes/).

♻️ Printed on recycled paper.