



INTRODUCTION

Water helped make the Fertile Crescent fertile, but the area is now among the most water-poor in the world.

Growing populations and increasingly intensive agriculture regularly outstrip the yields of rivers and rainfalls and deplete ancient aquifers.

The region's wealth and abundance were legendary in antiquity, but today, the Middle East faces similar pressures to those found throughout the developing world.

Growing urban populations strain infrastructure, create unprecedented amounts of waste, and consume growing amounts of electricity required for transportation, heating and cooling, industrial production, and more.

In fact, many Middle Eastern states are even worse off than many of their middle-income peers. Civil wars and insurgencies have interrupted efforts to build infrastructure and have driven high levels of displacement, inside and outside of national borders. Ongoing displacement has driven the construction of large swathes of informal housing, sometimes only belatedly connected to public utilities and often defying long-term planning efforts. Climate change adds another layer to the region's troubles by triggering deepening water shortages, increasing migration from the countryside, and driving high electrical consumption in the summer.

Despite frequent international support, governments often struggle to provide reliable power, water, and solid waste disposal. Adopted solutions are often costly, require extensive ongoing inputs, work intermittently, and are difficult to maintain and to scale upward. Since citizens come into daily contact with these basic services, it is no wonder that their poor quality has often become a common rallying cry in the Middle East.

New technology-based approaches provide opportunities for this vicious cycle to morph into a virtuous circle. Environmentally sustainable approaches to the provision of utilities are often more decentralized, are less technically complex,

and generally have much lower operating costs. While there is no single definition of environmental sustainability, sustainability efforts focus on bringing processes into alignment with the regenerative processes of the ecosystem. For example, renewable energy reduces pollution and helps avert dramatic climate change, while water conservation and recycling reduce pressure on the water table. Twentieth century development often favored maximizing short-term human benefit, while twenty-first century approaches seek to align human benefit with the environment.

A shift toward more environmentally sustainable efforts to provide public utilities can address many of the grievances—and public health threats—that animate today's public debate. For both local and national governments, these initiatives create positive habits: local accountability, distributed technical expertise, and integrated planning and maintenance. Smaller-scale, sustainable, and more locally focused projects discourage monopolists and profiteers from sweeping in, and they encourage greater local participation and the development of local skills. They can enhance trust between central governments, localities, and the populations they serve, reversing some of the skepticism that often greets major projects. The widespread international interest in sustainability also gives local actors exposure to international financial institutions, NGOs, governments, big business interests, entrepreneurs—the same groups that could play a key role in promoting investment and creating jobs for the region's young

people. Orchestrating the resources, expertise, and stakeholders for sustainable environmental projects would create competencies that flow into other areas as well, creating a greater culture of experimentation and entrepreneurship to invigorate local economies.

Success in this realm would require more than technology and blueprints, however. The absence of trust is an enduring obstacle. The Middle East has some of the lowest prevailing levels of institutional trust of any region in the world. Skepticism that projects will bring positive change—often reinforced by experience—makes success harder and breeds more skepticism. Despair over prospects drives short-term thinking, diminishes long-term investment, and encourages short-term profit-taking. People in all areas of society withhold the information necessary to plan effectively, out of fear it will either be misused or corrupted in the pursuit of gain. Time after time, the powerful in the Middle East have added to their strength, while the weak have stiffened their resolve to resist it. The failure to reliably provide utilities has become both the symbol and cause of dysfunction. An enhanced ability to provide those services in an environmentally sustainable manner can contribute to a virtuous circle in which services improve, trust increases, sustainability is enhanced, economies grow, and public welfare rises.

In order to explore the roles that environmentally sustainable service provision can play in Arab societies, CSIS explored three countries in the Eastern



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Mediterranean basin: Jordan, Lebanon and Tunisia. The three countries have a great deal in common: they are all middle-income countries, they have similar demographics, and they enjoy a high degree of international interest and financing. They have young and growing populations, but they lose some of their best young talent to opportunities abroad, and they struggle to attract foreign direct investment. Subsidies strain the public budgets, and agricultural sectors are stressed.

And yet, for all of their commonalities, the respective governments have taken markedly different approaches to governance. Lebanon's centrally managed patronage system aims to satisfy the country's 18 sectarian communities while ensuring that they remain divided. Maintaining the country's precarious political balance has often shaped the country's development plans and the organizations that implement them. Jordan has experienced little of Lebanon's political drama. The government is highly centralized, with authority and extensive technocratic expertise firmly based in the capital. Tunisia is a new experiment in the Arab world, as it seeks to build new systems as an escape from the country's authoritarian past. Often, Tunisia has been hampered by the persistence of old institutions and the relative weakness of new ones.

Throughout the report, the authors assessed three key sectors—power, water and sanitation, and solid waste. The study team explored governmental and private sector efforts to provide utilities, the obstacles they have encountered, and entrepreneurs' efforts to enter the sectors with sustainable solutions. The team also studied country-specific details, which often related to the political economies of states, as well as sector-specific details that might have relevance in different contexts. Interspersed in the study are brief vignettes that give examples of especially memorable successes and failures.

The study that follows draws broader lessons from the successes and failures of

efforts to promote environmentally sustainable projects in the power, water and sanitation, and solid waste sectors in Jordan, Lebanon, and Tunisia. While there is a great amount of specificity in each case and in each country, the report pays specific attention to the twin challenges of sustainability and trust. The authors believe the two are related in compelling ways and believe the relationship is the same in all of the countries in this study.

Governments around the world should seek environmentally sustainable methods of providing services for a host of reasons. Similarly, governments should seek to promote trust for many reasons



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as well. The authors are convinced that the Middle East's environmental stresses put a special premium on environmental sustainability, and the region's enduring trust deficit puts a special premium on the trust. Not only is success in both areas necessary for success in either, but success in both would also have positive effects that reach deeply into Middle Eastern societies.

Middle Eastern states have explored any number of paths in the last century to achieve prosperity and security. Most have struggled, sometimes serially, to secure lasting results. The challenges described here do not merely represent threats to the region's hopes. They also represent a route to realize many of the region's most enduring aspirations.