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Arab Forum for Environment and Development (AFED) is a not-for-profit organization, which brings the business community together with experts, civil society and media, to promote prudent environmental policies and programmes across the Arab region.

One of the main goals of AFED is propagating environmental awareness by means of supporting the role of environmental education and information and of non-governmental organizations active in the field of environment.

The main product of AFED is a periodic expert report on Arab environment, tracking developments and proposing policy measures. Other initiatives include a regional Corporate Environmental Responsibility (CER) program, capacity building for Arab civil society organizations, public awareness and environmental education.

This Handbook is intended for use as a water use efficiency guide for industrial, residential, and agricultural water users across the Arab region.

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Foreword

Water in the Arab world is a precious and limited resource. The well-being of the region's populations and their prosperity are linked tightly to water availability and quality. In a region known for its arid climate and sparse rainfall, prudent water use is everyone's business. There are a number of strategies to achieve water security in a sustainable manner, but none is more significant than improving water efficiency.

Despite increased stress on water resources, many water users and managers are still unaware of practical, cost-effective water efficiency improvements they can make. Strategies or plans for water efficiency are largely lacking, both in the public and private sectors.

This handbook was developed to assist water users identify and prioritize cost-effective water efficiency opportunities. It targets water use in residential and commercial buildings, industrial plants, and agricultural farms. The handbook offers practical and proven methods to cut water consumption, and water costs, without sacrificing production, reliability, or comfort. By making this handbook available, water consumers at homes and water managers at institutional buildings, industrial sites and farms will be better informed about water efficiency retrofit opportunities, and will, therefore, be better prepared to develop a plan to take advantage of water savings.

Too often, projects to improve water efficiency do not get approval because of the initial capital expenditures required for retrofits, despite the fact that up-front capital costs for financing water efficiency measures are usually recouped quickly through water savings. In fact, the return on investment in many cases is economically profitable, as demonstrated by the case studies in this handbook. In the long-run, the cost of inaction to the economy will be manifested by poor public health outcomes, lower resource productivity and pollution, to name just a few, which will far exceed the investments needed to increase water efficiency.

Making a transition to a water-efficient economy should no longer be viewed as a hard-to-reach, lofty goal. The barriers to a water-efficient economy are not technological or financial. To be sure, innovations and financing structures are indispensable to a water efficiency plan. The main impediment seems to relate to perceived attitudes. What is needed, therefore, is a firm belief in the *capacity* of every household and every organization to change how they consume water and take small steps to become water-efficient. This handbook expounds on the behavioral changes and practices that can be adopted.

The Arab Forum for Environment and Development (AFED) launched a preview edition of this handbook, together with its flagship report *Water: Sustainable Management of a Scarce Resource*, at AFED's Annual Conference in November 2010 in Beirut. Since then, the handbook was put into application for 6 months, and comments were collected from users. This culminated in a Water Efficiency Workshop organized by AFED in Riyadh in May 2011, using the handbook as guide. This revised edition has been based on the feedback collected. Many sections were added, especially demonstrative case studies and guidelines for water audits, to make the handbook more complete as a tool for action.

We hope that this handbook will make a contribution to water efficiency in the Arab world, while improving the performance of its economies and institutions. Our ultimate goal is nothing short of fostering a new ethic of care and responsibility for water. Our health depends on it. Our economy depends on it. Our future depends on it. And it is the right thing to do.

Najib W. Saab
Secretary General
Arab Forum for Environment and Development