Contents

V  PREFACE
IX  EXECUTIVE SUMMARY
XV  INTRODUCTION

1  CHAPTER 1
Agriculture
Abdul-Karim Sadik, Musa Nimah, Si Bennasser Alaoui

53  CHAPTER 2
Water
Arab Forum for Environment and Development (AFED)

75  CHAPTER 3
Energy
Ibrahim Abdel Gelil, Farid Chaaban, Leila Dagher

113  CHAPTER 4
Industry
Tarek El Sayed, Walid Fayad

133  CHAPTER 5
Transportation
Isam Kaysi, Farid Chaaban

161  CHAPTER 6
Cities and Buildings
Mohammad Al-Asad, Tareq Emtairab

205  CHAPTER 7
Waste Management
Ahmed Gaber, Mahmoud Riad, Rami El-Sherbiny

235  CHAPTER 8
Tourism
Heba Aziz, Edith Szivas
255 ANNEX
263 CONTRIBUTORS
269 ACRONYMS AND ABBREVIATIONS
Preface

Green Economy: Sustainable Transition in a Changing Arab World is the fourth of a series of annual reports on the state of Arab environment, produced by the Arab Forum for Environment and Development (AFED). The first AFED report, published in 2008 under the title Arab Environment: Future Challenges, covered the most pressing environmental issues in the region. The second report, Impact of Climate Change on Arab Countries, was published in 2009 and addressed the vulnerabilities to climate change facing Arab countries. The third report, Water: Sustainable Management of a Scarce Resource, was published in 2010 and covered water issues in the driest region of the world.

The AFED Board of Trustees selected Green Economy as the topic for the 2011 report in November 2010. Soon after, the Arab Spring started in early December and has since been at the center of global news coverage. It was then that we decided to focus on how green economy can help to navigate a sustainable transition in a changing Arab world, ushering in a new direction for economic and environmental sustainability. At the moment the prospects are not good for either one. However, political reforms should be expected to clamp down on administrative corruption as well as the mismanagement of natural resources. More representative governments should bring stronger political will to the sustainable management of environmental resources through effective public policy, whereby the civil society and people whose lives are most impacted by these concerns will have more say in shaping political decisions. Hence we should expect better governance in general to have spillover effects on environmental governance. Only time can tell. Inequality, oppression and poverty are at the core of environmental destruction. As part of the transformation, we should also expect civil society to be freer and more effective.

Despite the high oil revenues reaped from hydrocarbon resources and their spillover effects on non-oil producing countries, Arab economies suffer from structural problems, with fragile political systems, precluding them from adopting effective green transformations. Arab economies remain undiversified. They largely rely on oil and low-value added commodity products such as cement, alumina, fertilizers and phosphates.

Demographic transitions present a major challenge: population increased from 100 million in 1960 to about 400 million in 2011. Sixty percent are under 25 years old. Urbanization has increased from 38 percent in 1970 to 65 percent in 2010. If rural development does not become a priority, the increasing rural migration into the cities in search of jobs will put even more strain on the already inadequate infrastructure.

Current economic development patterns will increasingly strain the ability of Arab
governments to provide decent-paying jobs. For instance, youth unemployment in the region is currently double the world average.

The demand for food, water, housing, education, transportation, electricity, and other municipal services will rise. Power demand in Saudi Arabia, for example, is rising at a fast rate of over 7 percent per year. Agricultural land around Amman, Cairo and other Arab cities is being lost to the expansion of suburbs. Whereas higher learning institutions are proliferating, the quality of education offered is below average. Gated communities and high-rise office buildings are sprawling, while decent low-income housing is ignored. Even when capital is available, investments are typically misdirected.

The 2010 AFED report found that the Arab region is facing impending catastrophic water shortages, to start taking effect as early as 2015. The 2009 AFED report found that the impact of climate change in the region will multiply the risk of water and food scarcity. Irrigation efficiency in the region also stands at a very low level of 30 percent, often to produce low-value crops demanding vast amounts of water. Cropping patterns and varieties should be changed to produce more with less water, even if this eventually means radical changes in eating habits. Arab countries should also do their part in reducing emissions, through greater energy efficiency, cleaner utilization of oil and gas, and wide use of renewable energy.

Given these challenges, transitioning to the Green Economy is not only an option for the Arab region; rather it is an obligation to secure a proper path to sustainable development.

Taking advantage of its position as a unique regional organization grouping the private sector in the Arab world, together with civil society, academic institutions, and media, with government institutions as observers, AFED took the lead to advance the concept of a green economy as a basis to transform Arab economies in a direction which allows them to achieve sustainable development. To AFED, this means a transformation from the ‘virtual economy’, primarily based on speculation in real estate and financial markets, to ‘real economy’ focusing on sustainable production, which alone can protect the natural capital and generate long term job opportunities.

This comprehensive report on options of green economy in Arab countries represents the first phase of the AFED green economy initiative. Over one hundred experts have contributed to the report, and discussed its drafts in a series of consultation meetings, leading to the production of the report and the regional annual AFED conference in October 2011 to present and debate the findings. The report is intended to motivate and assist governments and businesses in making a transition to the green economy. It articulates enabling public policies, business models, green investment opportunities, innovative approaches, and case studies, and addresses eight sectors: agriculture, water, energy, industry, cities and buildings, transportation, tourism, and waste management.

Phase II of AFED Green Economy Initiative involves putting policy recommendations into practice by implementing demonstration green projects with national institutions as partners. AFED has produced a Water Efficiency Manual, and launched a series of Water Efficiency Workshops including water audits, in cooperation with the Ministry of Water and Electricity in Saudi Arabia.
and other partners. Other activities include an Energy Efficiency Handbook for buildings and workshops promoting Green Finance, Water Efficiency in Industry, and Sustainability Reporting. The process will continue with inclusive consultations, also involving governments, to help develop a broad understanding and strong regional position leading to the United Nations Conference on Sustainable Development (Rio +20) in June 2012, which will discuss green economy as main topic. Rio +20 presents an opportunity to employ green economy as a tool to achieve sustainable development.

As the recent developments in Arab countries proved, sustainability cannot depend on a choice between freedom and stability. Equally true, we cannot win a “war on terror” if we fail to wage a determined war on poverty, oppression and injustice.

AFED hopes that this report will contribute to introduce the concepts of green economy to the Arab region and put them into action, including catalyzing institutional reforms. If this report can inform and help shape public policy and private sector involvement for a transition to green economy to boost sustainable development in the Arab world, then it would have served its purpose.

AFED Secretariat wishes to thank all those who supported this work, specifically the authors and experts who helped in laying down the methodology and appraising the outcome. AFED’s special thanks go to the OPEC Fund for International Development (OFID) for its continuous genuine support to the Forum’s program, the Islamic Development Bank (IDB), the Kuwait Fund for Arab Economic Development (KFAED) and all corporate and media partners who made this endeavor possible. Thanks are also due to the editorial and production team of Al-Bia Wal-Tanmia (Environment & Development) magazine for their dedication to produce this report and book up to the highest standards and in record time.

Najib Saab
Secretary General
Arab Forum for Environment and Development (AFED)