

# ARAB

## MILLENNIUM ECOSYSTEM ASSESSMENT

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SYNTHESIS REPORT



United Nations  
Environment Programme  
(UNEP)



Centre for Environment and  
Development for the Arab Region and  
Europe (CEDARE)

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In Collaboration with:



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## FOREWORD

The Arab Region Sub-Global Assessment began as an associate assessment of the Millennium Ecosystem Assessment (MA). Its remit was to go beyond the global MA and pave the way for the adoption of integrated assessments in the Arab region. Three sites, representing the dominant ecosystems of the region, were selected as the focus of the study – the Sinai Peninsula in Egypt; the Tafilalet Oasis in Morocco; and the Assir National Park in Saudi Arabia.

This Arab Millennium Ecosystem Assessment Synthesis Report integrates the findings of these three assessments. It highlights the commonalities and differences between them and how they relate to the national, regional and global ecosystem. The report also looks at some of the more detailed findings for selected ecosystem services.

The report shows that, despite geographical differences, the three sites bear significant commonalities in a number of key areas, notably: hot, dry and continental climate patterns, water scarcity, resource depletion, land use change, desertification, soil erosion, sand encroachment, overpopulation and urbanization, poverty and unemployment.

The total population of Arab countries will be about 395 million by 2015. This rapid increase, together with changing consumption patterns, puts excessive pressure on fragile land. The report recognizes this



and shows that environmental degradation and diminishing ecosystem services severely impact human well-being and are direct causes of poverty and inferior quality of life. It identifies the most common ecosystem services as water, agriculture, grazing and raising cattle, aromatic and medicinal plants and biodiversity. It also identifies the most significant drivers of ecosystem change as water scarcity, land use change, the impact of extractive industries, and governance.

Water scarcity is a serious concern and the most influential driver on ecosystem services. While the population in the Arab

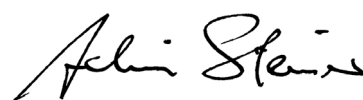
region accounts for five per cent of the world population, the region is the source of less than one per cent of the world's renewable fresh water. Water deficits and poor water quality jeopardize human security at many levels, and additional water shortage and pollution remain one of the biggest challenges.

The three assessments had a strong input from local inhabitants, who are inextricably linked to the conditions of the surrounding environment. The report provides abundant examples of how local knowledge has built a valuable body of information which reflects people's ability to combat environmental hardship. Local plants, for example, are used to augment food supplies, as is the case in both El Maghara and Tafilalet.

The report also acknowledges the many positive developments that have occurred in the Arab World since the Stockholm Conference. However, it reveals that these still fail to realize the aims of the Brundtland report, and only the GCC countries are considered likely to reach the MDGs by 2015. Critical to achieving these goals, the report emphasizes the need for a new paradigm: one that recognizes that environmental sustainability is the foundation upon which economic health depends. A number of interventions are proposed, occurring in three spheres of action: i) regenerating the ecosystem; ii) human resources development, which includes both social and economic interventions; and iii) institutional reforms.

Progress towards sustainable development is vitally dependent upon sound decision making. It is my hope that this report will not only meet the needs of decision-makers, but will help promote sound ecosystem management practices and sustainable development strategies to improve ecosystems and human well-being in the Arab region.

I would like to extend my thanks to the Government of the Kingdom of Saudi Arabia for providing initial financial support for this report, as well as the Center for Environment and Development for the Arab Region and Europe (CEDARE) for their continuous support and professionalism. I would also like to thank all of the authors and contributors for their painstaking work in realizing this important publication.



**Achim Steiner**

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## PREFACE

Ecosystems matter! The Arab region, this vast and cherished homeland, has been blessed with great wealth, its own unique natural resources, and has enriched us with the glory of its ancient civilizations.

While our region faces many interrelated environmental challenges, at the same time, they represent attractive opportunities for development. Partnerships, progressive thinking, scientific, technological and evidence-based knowledge, as well as strong determination and confidence, are key to meeting these challenges and reaffirming our commitment to a unified Arab vision for the environment, in line with global environmental thinking and action.

The Arab region's ecosystems, - our very life support systems - are subject to rapid depletion, posing a significant challenge to sustain future generations. Today's technology and knowledge can considerably reduce the damaging human impact on ecosystems. That said, they are unlikely to be fully deployed until ecosystem services cease to be perceived as free and limitless, and their full value is taken into account.

It has been an honour to collaborate with the United Nations Environment Programme (UNEP), Presidency of Meteorology and Environment (Kingdom of Saudi Arabia), Ministry of Energy, Mines, Water and



Environment (Morocco), and the Suez Canal University (Egypt), in the production of the Arab Millennium Ecosystem Assessment Report.

The assessment examines the environment through the framework of ecosystem services, to identify how changes in ecosystems influence human well-being and to provide information in a form that decision-makers can weigh, alongside other social and economic information.

Many messages emerge from the report. These are rooted in three main pillars: Sustainability, Leadership and Innovation:

1. Sustainability: teaming up with countries and institutions to address, - in parallel - environmental, economic, social and governance concerns as an integral part of policies and strategies for balanced and inclusive growth.
2. Leadership: empowerment of human capital, particularly since this region is blessed with human resources of inestimable value. People's involvement in the decision-making process, ownership of the problem and sharing the benefits and knowledge, yield positive synergies - the backbone for environment-friendly resilient communities of the future.
3. Innovation: advancement of people and societies through knowledge-sharing, reshaping traditional approaches, progressive environmental governance, creative solutions and circulation of best practices.

The backbone of our credibility is action. This lies in achieving tangible results to enrich our accomplishments - and these are many - and in dealing scientifically, practically and collectively with what lies ahead.



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