

# Preface

The continuously growing human population along the coasts of our world will exacerbate the impact of human activities on all coastal environments. Therefore, restoration activities will become increasingly important. In particular, sandy shores and coastal dunes will require significant restoration efforts because they are preferred sites for human settlements and tourism. A major problem is that research into coastal dunes is scarce, despite the relative economic, social, and ecological importance of these ecosystems. The literature that deals with coastal dune restoration has increased significantly over the last decade, but the few books published on the subject mostly emphasize mid-latitude dune systems. As of January 2011, the ISI Web of Science database contained more than 60,000 articles on restoration, but less than 100 of them ( $<0.1\%$ ) focus on coastal dunes, beaches, and slacks (or deflation basins and plains). In general, the information available on the ecology of coastal sand dunes is very uneven, and broad geographical syntheses are rare. Examples of local coverage generally come from Europe and North America. There is a general lack of attention given to low-latitude coastal environments where much of the current exploitation and coastal development of tourism is occurring. To our knowledge, there are no books that deal with coastal dune restoration from a global perspective. The need for a worldwide compilation of experiences of restoration efforts is therefore evident.

The International Conference on Management and Restoration of Coastal Dunes (Santander, Spain, 3–5 October 2007) provided an impetus to compare and contrast different restoration projects around the world and initiate interdisciplinary and comparative studies. This book is the first step toward the development of international cooperation among those concerned about coastal sand dunes and their restoration.

This book is directed mainly at graduate students and colleagues who are interested in biological, ecological, geographical, and environmental sciences. This book will also be useful to those with an interest in conservation biology and coastal management who seek information on the different strategies that have been used to restore coastal dunes in different regions of the world. This goal can only be achieved after a comprehensive review and comparison of ongoing studies

and restoration activities, where “successful” and “failed” studies or approaches (however they are determined) are compared and contrasted. Finally, this book will be a resource for coastal planners, as well as for local and state officials, residents of coastal communities, environmental advocates, developers, and others concerned with coastal issues.

A major product of this book is a compendium of empirical experiences showing that coastal dune restoration has many meanings, and thus, leads to many different actions. Coastal dune restoration may have the goal of increasing vegetation cover and reducing substrate mobility, but it may also aim to remobilize sandy terrains in order to counteract the negative impact of overstabilization: reduced diversity. Here, the relevance of the different goals in restoration is shown very clearly.

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This book is dedicated to the memory of M. Anwar Maun (1935–2007), cherished friend and colleague who was a leader in coastal dune ecological studies. He is dearly missed by us and by all the coastal dune scientific community.

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