

ENVIRONMENTAL PROBLEMS IN COASTAL REGIONS

VI

INCLUDING OIL AND CHEMICAL SPILL STUDIES

Editor: C. A. Brebbia



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Environmental Problems in Coastal Regions VI including Oil Spill Studies

Editor

C.A. Brebbia

Wessex Institute of Technology, UK

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Preface

This volume of the Transactions of the Wessex Institute contains papers presented at the 6th International Conference on Environmental Problems in Coastal Regions and includes Oil Spill studies.

The Conference Series started in Rio in 1996 and continued in Cancún (1998), Las Palmas de Gran Canaria (2000), Rhodes (2002), Alicante (2004) and again in Rhodes in 2006. All papers were published in book form on time for the meetings and are archived on-line in the Transactions of the Wessex Institute's collection (<http://library.witpress.com>).

The high population density in coastal areas has led to many ecological and environmental problems, which require effective strategies for their management. It is important to discuss the way in which these issues interact with social and economic pressures to reach integrated solutions. Most coastal areas are subjected to an increased number of problems resulting from the growth of industrial, commercial or tourism activities. This book tries to address some of these concerns.

Of particular importance are the papers dealing with the environmental effect of oil spills, which are of primary concern in coastal areas.

The papers have been divided into the following sections: Ecology and the coastal environment; Water quality issues; Sediment problems; Erosion problems; Coastal restoration; Computational modelling; Wetlands; Remote sensing and prediction; Atmospheric aspects and flooding and Management of risk.

The Editor is grateful to the members of the International Scientific Advisory Committee and other colleagues who participated in the review of the papers, thus ensuring the high quality of the book.

The Editor
Rhodes, 2006



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Coastal Dynamics and Shoreline Protection

G. BENASSAI, University Parthenope, Italy

Using specific case-studies this book provides an integrated approach to coastal dynamics and shoreline protection. The text introduces students and graduate engineering students to the different meteorological factors which influence coastal dynamics. Of practical and theoretical application the book explores factors such as winds, sea level variations, offshore waves (predicted and measured, regular and random), wave transformation and breaking as well as topics of sediment transport computation, beach profile and shoreline modeling and coastal protection systems.

ISBN: 1-84564-054-3 2006 apx 350pp
apx £120.00/US\$210.00/€180.00

Marine Technology V

Editor: WESSEX INSTITUTE OF TECHNOLOGY, UK

This book contains most of the papers presented at the Fifth International Conference on Marine Technology.

Developments in the following areas are highlighted: Design and Fabrication in Shipbuilding; Shipbuilding and Design; Hydrodynamics; Navigation, Ship Operation and Multimode Transport; Inland Water Transportation; and Reliability and Safety in Marine Technology.

WIT Transactions on The Built Environment Volume 68

ISBN: 1-85312-973-9 2003 340pp
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Coastal Engineering VII

Modelling, Measurements, Engineering and Management of Seas and Coastal Regions

*Edited by: C. A. BREBBIA, Wessex Institute of Technology, UK,
M. DA CONCEICAO CUNHA, ISEC, Portugal*

Recent disasters have confirmed the importance of adequate protection of coastal areas. The cumulative effect of development in these regions needs to be better understood in order to ensure that they are managed in a sustainable fashion. Given the dynamics of the processes taking place on shorelines and the multitude of aspects that need to be considered the problems involved are extremely challenging.

Bringing together contributions from researchers and professionals engaged in the development of modern computational and experimental tools, this book addresses many subjects relevant to the successful management of such areas and offers new insights. The papers featured were originally presented at the Seventh International Conference on Modelling, Measurements, Engineering and Management of Seas and Coastal Regions.

Topics and techniques covered include: Shallow Water Studies; Estuarine Problems; Pollutant Transport and Dispersion; Water Quality Issues; Oil Spills; Coastal Ecosystems and their Sustainability; Coastal Erosion and Sedimentation; Coastal Geomorphology; Sea Defence and Protection Systems; and Case Studies.

WIT Transactions on The Built Environment Volume 78

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£140.00/US\$224.00/€210.00



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Coastal Environment V

Incorporating Oil Spill Studies

Editors: C.A. BREBBIA, Wessex Institute of Technology, UK, and J.M. SAVAL PEREZ, L. GARCIA ANDION and Y. VILLACAMPA, University of Alicante, Spain

Highlighting monitoring, analysis, modelling and control, this volume contains papers presented at the Fifth International Conference on Environmental Problems in Coastal Regions and the associated Fourth International Seminar on Hydrocarbon Spills.

Over 40 contributions are included and these focus on areas such as: COASTAL ENVIRONMENT: Ecology and the Environment; Water Quality Issues; Wetlands; Sediment Problems; Coastal Restoration; Atmospheric Aspects; Sea States Forecasting. OIL SPILL STUDIES: Modelling of Trajectory and Fate of Spills. *WIT Transactions on Ecology and the Environment*

ISBN: 1-85312-710-8 2004 484pp
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Maritime Engineering and Ports III

Editors: C.A. BREBBIA, Wessex Institute of Technology, UK and G. SCIUTTO, SCIRO S.r.l., Italy

Examining the rapidly changing management, operation, design and building of maritime works and ports, this book includes papers originally presented at the third international conference on this subject. *WIT Transactions on The Built Environment Volume 62*

ISBN: 1-85312-923-2 2002 320pp
£108.00/US\$167.00/€162.00

Coastal Engineering VI

Computer Modelling and Experimental Measurements of Seas and Coastal Regions

Editors: C.A. BREBBIA, Wessex Institute of Technology, UK, and D. ALMORZA and F. LÓPEZ-AGUAYO, University of Cadiz, Spain

The proceedings of the Sixth International Conference on Computer Modelling and Experimental Measurements of Seas and Coastal Regions. Contributions are grouped into sections including: Shallow Water Studies; Pollutant Transport and Dispersion; and Coastal Erosion and Sedimentation.

WIT Transactions on The Built Environment Volume 70

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Coastal Environment

Environmental Problems in Coastal Regions IV

Editor: C.A. BREBBIA, Wessex Institute of Technology, UK

Containing the proceedings of the fourth international conference on this subject, this volume highlights areas including: Oil Slicks and Spills; Erosion and Drift; Sediment Transport; Hydrodynamics and Transport Modelling; Water Quality Issues; and Atmospheric Pollution and Control.

WIT Transactions on Ecology and the Environment Volume 58

ISBN: 1-85312-921-6 2002 472pp
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