



# ICCCM'05

International Conference on Coastal Conservation and Management in the Atlantic and Mediterranean

17 - 20 April | Tavira, Algarve - PORTUGAL

## KEYNOTE PRESENTATIONS

Monday, April 18, 2005 | 10:00 - 12:00 | Plenary I

### Room *Infante Santo*

**Chairperson: Fernando Veloso Gomes and Francisco Taveira Pinto (IHRH/FEUP, Portugal)**

- Page 3** New Trends and Challenges in Coastal and Ocean/Sea Management and Conservation: An International Perspective  
*Biliana Cicin-Sain*
- Page 7** Mediterranean Protocol on Integrated Coastal Management: Prospects and Challenges  
*Ivica Trumbic*
- Page 13** Strategic Environmental Assessment of Coastal Planning and Programme Development in Europe  
*Maria do Rosário Partidário*

Tuesday, April 19, 2005 | 10:45 -12:30 | Plenary II

### Room *Infante Santo*

**Chairperson: Óscar Ferreira (University of Algarve, Portugal)**

- Page 11** Threats, Obstacles and Barriers to Coastal Environmental Conservation: Societal Perceptions and Managerial Positionalities that Defeat Sustainable Development  
*Charles Finkl & Craig Kruempel*
- Page 23** Coastal Conservation, Management and Restoration  
*Pat Doody*
- Page 21** Integrated Management and Sustainability of Coastal Tourism Destinations: A Model of Diagnosis  
*João Albino Silva; Júlio da Costa Mendes & Adão Flores*

Wednesday, April 20, 2005 | 14:00 -15:00 | Plenary III

### Room *Infante Santo*

**Chairperson: Alexandra Sena (CCDR Algarve, Portugal)**

- Page 17** The Sea: Coastal Laws. Their Application and Associated Problems  
*Juan Suárez de Vivero*
- Page 25** Science-Based Management of Seaport Activities and Projects in Protected Areas: Findings from ECOPORTS EU Research Project  
*T.A. Stojanovic; C.F. Wooldridge & H. Ormerod-Smith*



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## ORAL PRESENTATIONS

Monday, April 18, 2005 | 14:00 - 15:30 | Parallel Sessions A

### Room Alcácer Quibir

**Sub-Theme 1: Strategic Environmental Assessment in Coastal Areas**

**Chairperson: Maria do Rosário Partidário (New University of Lisbon, Portugal)**

- [14:00] **Page 33** Coastal GIS for Conservation and Management  
*Françoise Gourmelon & Iwan LeBerre*
- [14:20] **Page 35** Coastal Management in Azores. Indicators Checklist for Monitoring Program  
*Andrea Botelho; Ana Costa; Helena Calado & João Porteiro*
- [14:40] **Page 39** Strategic Environmental Assessment for Coastal Zone Management  
*Helena Calado; Joana Cadete & João Porteiro*
- [15:10] **Page 43** Littoral Management Including Sustainability and Quality of Life  
*Juan M. Santiago & Miguel A. Losada João Figueira de Sousa & Maria João Martins*

### Room Dom Sebastião

**Sub-Theme 2: Integrated Coastal Zone Management**

**Chairperson: Biliana Cicin-Sain (University of Delaware, USA)**

- [14:00] **Page 77** Integrated Coastal Zone Management: Experiences from The Netherlands  
*F.A. van Kouwen; Carel Dieperink; Martin Wassen & Paul Schot*
- [14:20] **Page 81** Towards Integrated Coastal Zone Management of Banda Aceh Beach: Description of the Coastal System  
*Ella Meilianda; Marjolein Dohmen-Janssen; Suzanne Hulscher & Jan Mulder*
- [14:40] **Page 89** Integrated Coastal Zone Management (ICZM) and Marine & Coastal Protected Areas (MCPAS). Examining Coastal Governance & Networks in Wales, UK  
*Evangelia Moutselou*

### Room Infante Santo

**Sub-Theme 4: Living With Erosion**

**Chairperson: Fernando Veloso Gomes (IHRH/FEUP, Portugal)**

- [14:00] **Page 157** Oceanfront Shoreline Changes Associated with a Locationally Stable Inlet System: Rich Inlet, North Carolina, USA  
*William Cleary; Chester Jackson & Adam Knierim*
- [14:20] **Page 159** The Ebro Delta: New Chances for Erosion Management  
*Jordi Serra; Carlota Montori; Oriol Gelizo & Elisabet Roca*
- [14:40] **Page 161** Beach Sand Loss from Headland-Embayment Systems: Multifarious Causes and Human Response Options  
*Andrew Cooper*
- [15:10] **Page 165** Microscale to Mesoscale Controls on Aeolian Sediment Transport from Beach to Foredunes  
*Derek W.T. Jackson; Kevin Lynch & Andrew Cooper*

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Monday, April 18, 2005 | 16:00 - 17:30 | Parallel Sessions B

### Room Alcácer Quibir

#### Sub-Theme 1: Strategic Environmental Assessment in Coastal Areas

Chairperson: Francisco Andrade (Marine Laboratory of Guia, Portugal)

- [16:00] Page [47](#) Environmental Risk Assessment - A Current Synopsis of the Cardiff Bay Barrage, Wales, UK  
*Allan T. Williams & Michael R. Phillips*
- [16:20] Page [51](#) Environmental Assessment in the Todos os Santos Bay, Bahia, Brazil  
*A.L.R. Wagener; U. Lima; C. Hamacher; J.A.A. Lacerda; A.L. Scofield; S. Camargo; D. Reitermajer; N. Miekeley; R. Campos & J.M. Godoy*
- [16:40] Page [53](#) Environmental Indicators for Beach Management: Case Study in the Canary Islands  
*Cristina Ana Pérez Alemán; Yaiza Fernández-Palacios Vallejo; S. Pérez-Santana; N. Cárdenes; M. González; J.J. Hernández Brito & R.J. Haroun*
- [17:00] Page [55](#) Strategic Environmental Assessment in Tróia (Portugal)  
*Francisco Andrade; M. Adelaide Ferreira; Nuno Gomes; João Joanaz de Melo; Pedro Leitão & Manuel João Pinto*

### Room Dom Sebastião

#### Sub-Theme 2: Integrated Coastal Zone Management

Chairperson: Ivica Trumbic (UN Environmental Programme, Croatia)

- [16:00] Page [91](#) Integrated Coastal Zone Management: Towards an Atlantic Vision to an Integrated and Sustainable Management of the Natural and Environmental Coastal Resources  
*João Figueira de Sousa & Maria João Martins*
- [16:20] Page [93](#) Coastal Management and Protection Between Local Culture and Community Politic  
*Céline Chadenas & Claire Choblet*
- [16:40] Page [99](#) Long-Term Management Strategies for Integrating Natural Resource Conservation and Shoreline Protection  
*Jeffrey Zappieri*
- [17:00] Page [101](#) The Coastal Zone of Egypt, Environmental Issues, Management and Capacity Building  
*Randa M. Hassan*

### Room Infante Santo

#### Sub-Theme 4: Living With Erosion

Chairperson: Andrew Cooper (University of Ulster, Northern Ireland)

- [16:00] Page [169](#) Beach and Dune Erosion: The Concept in Three Dimensions and its Measurement. Case Study of Reducing Sand Cover Over Buried Large-Diameter Oil and Gas Pipelines in North-East Scotland  
*William Ritchie*
- [16:20] Page [173](#) Analysis of the Portuguese West Coast Morphology and Morphodynamics Correlation. A GIS Tool for Coastal Erosion Management  
*Joaquim Pais Barbosa; Fernando Veloso Gomes & Francisco Taveira Pinto*
- [16:40] Page [175](#) Geotextile Containers – Successful Solutions Against Beach Erosion and Scour Problems under Hydrodynamic Loads  
*Burkard Lenze & Jörg Klompemaker*
- [17:00] Page [177](#) Australian & German Experiences on the Use of Geotextile Containers  
*Simon Restall; Warren Hornsey; Hocine Oumeraci; Marc Hlnz; Fokke Saathoff & Katja Werth*

Wednesday, April 20, 2005 | 09:00 -10:30 | Parallel Sessions C

**Room Alcácer Quibir**

**Sub-Theme 3: The Sea**

**Chairperson: Michelle Portman (University of Massachusetts, USA)**

**[09:00] Page [131](#) Towards Environmentally Sound Marine Transportation**

*David Johnson*

**[09:20] Page [133](#) Environmental Effects of Marine Fish Pond Culture in the Ria Formosa (Southern Portugal)**

*raçois Noël Hubert; Marc Pellaud & Sofia Gamito*

**[09:40] Page [137](#) Static Laws in Dynamic Environments**

*Adelaide Ferreira; João Joanaz de Melo & Francisco Andrade*

**[10:00] Page [141](#) Fisheries Management and Marine Biodiversity: The Case of New England Groundfish**

*Michelle E. Portman*

**Room Infante Santo**

**Sub-Theme 4: Living With Erosion**

**Chairperson: Duncan FitzGerald (Boston University, USA)**

**[09:00] Page [179](#) Sediment Transport Trends and Management Implications at Wells Inlet, Maine, USA**

*Duncan FitzGerald; Zoe Hughes & Mark Rits*

**[09:20] Page [183](#) Cliff Vulnerability to Erosion in SW Spain: Contributing Factors and Management Considerations**

*Laura del Río & F. Javier Gracia*

**[09:40] Page [187](#) Neural Network Analysis of Bayed Beaches for Coastal Erosion Control**

*Gregório Iglesias; G. Diz-Lois & F. Taveira Pinto*

**[10:00] Page [191](#) River Mouth Development in the Northern Adriatic: The Bevano Case Study and the Dilemma of No-Intervention**

*Paolo Ciavola; Yann Balouin & Clara Armaroli*

**Room Dom Sebastião**

**Sub-Theme 5: Tourism and Coastal Conservation**

**Chairperson: Júlio Mendes (University of Algarve, Portugal)**

**[09:00] Page [215](#) Surfing Reef Design Criteria Propostion with Application to a Real Case**

*Luiz António Franco de Oliveira filho, Luiz Guilherme Morales de Aguiar & Enise Valentini*

**[09:20] Page [219](#) The Management of Beaches: Implementing the Carrying Capacity Concept**

*Carlos Pereira da Silva; Saudade Pontes & José Carlos Ferreira*

**[09:40] Page [223](#) Coastal Tourism and Public Access: A Case Study of North Carolina Beaches in the United States**

*Bob Buerger; Jeffery Hill & James Herstine*

**[10:00] Page [227](#) Tools for Tourist Coastal Zones Environmental Enhancement and Sustainable Development**

*Claudio Comoglio; Jacinto Barroso; Serena Botta & Sérgio A. Morais*

Wednesday, April 20, 2005 | 15:10 -16:30 | Parallel Sessions D

**Room Alcácer Quibir**

**Sub-Theme 1: Strategic Environmental Assessment in Coastal Areas**

**Chairperson: Allan T. Williams (University of Glamorgan, UK)**

- [15:10] **Page 59** Using Grazing to Mitigate Effects of Atmospheric Nitrogen Pollution on Sand Dunes  
*Laurence Jones; H.L. Wallace; D.G. Hewett; S. Haria; T. Ash; P.M. Rhind & B.A. Emmet*
- [15:30] **Page 63** Coastal Scenic Assessment: Portugal -The Lisbon Metropolitan Area  
*Aysen Ergin; Allan Williams; A. Micallef & Carlos Pereira da Silva*
- [15:50] **Page 67** Coastal Zones Monitoring Using Remote Sensing Satellite Data  
*Ana C. Teodoro; André Marçal & Fernando Veloso Gomes*
- [16:10] **Page 71** ICM Assessment of Access Channels Located in Backbarrier Systems. A Conceptual Model  
*A. Pacheco; A. Carrasco; A. Villa-Concejo; T. Garcia; Ó. Ferreira & J.M.A. Dias*

**Room Dom Sebastião**

**Sub-Theme 2: Integrated Coastal Zone Management**

**Chairperson: José Carlos Ferreira (New University of Lisbon, Portugal)**

- [15:10] **Page 95** South Area of the Coastal Zone of Rio de Janeiro State Conflicts Analysis: Case Study of the Municipality of Paraty - Brazil  
*Mariana de Faria Benchimol & Marcus Polette*
- [15:30] **Page 103** Changes in Coastal Landscape of the Costa Brava (Catalonia, Spain) in the Last 50 Years  
*Carolina Martí & Josep Pintó*
- [15:50] **Page 107** The Internet as Facilitator Tool for Integrated Coastal Management for South America  
*Liliana P. Silva & Marcus Polette*
- [16:10] **Page 111** Spatial Behaviours and Land Use Evolution Patterns on Developed Coastal Areas: Fuzzy Data Integration Through Multi-Criteria Analysis for Cellular Automata Modelling  
*José Carlos Ferreira; Jorge Rocha & José A. Tenedório*

**Room Infante Santo**

**Sub-Theme 4: Living With Erosion**

**Chairperson: Giovanni Randazzo (University of Messina, Italy)**

- [15:10] **Page 195** Morphodynamic Variation Between the Adjacent Beaches of Caños and Zahora (Cádiz, SW, Spain)  
*Javier Benavente; G.C. Malvarez; Laura del Rio; F. Navas & F. Javier Gracia*
- [15:30] **Page 199** Negative Response to Remedial Measures of Shore Protection in Sicily: The Case of the Tindari Headland Spit (Northern Sicily)  
*Giovanni Randazzo; Francesco Geremia & Stefania Lanza*
- [15:50] **Page 201** Responding to Climate Change Based on Recent Coastal Evolution: A Case Study of the Western Solent, UK  
*David Johnson & Andrew Colenut*

Wednesday, April 20, 2005 | 16:40 -18:00 | Parallel Sessions E

**Room Dom Sebastião**

**Sub-Theme 2: Integrated Coastal Zone Management**

**Chairperson: Albert Salman (EUCC – The Coastal Union, The Netherlands)**

**[16:40] Page 115** The Action Plan of “Barrinha de Esmoriz” – A Governmental Commitment in a Portuguese Coastal Lagoon

*Fátima Lopes Alves; Luísa Pinho; Celeste Coelho & Álvaro Santos*

**[17:00] Page 119** "Canarias, por una Costa Viva" An Integrated Environmental Awareness Raising and Marine Research Project in the Canary Islands, Spain

*Yaiza Fernández-Palacios; F. Tuya; C. Fernández-Gil; Y. Cárdenes; J.J. Hernández Brito & R.J. Haroun*

**[17:20]** Constraints to the Implementation of ICZM

*Alan Pickaver*

**[17:40] Page 125** Tideland Management: Implementation of the Massachusetts' Public Waterfront Act

*Michelle E. Portman*

**Room Alcácer Quibir**

**Sub-Theme 3: The Sea**

**Chairperson: Juan Luis Vivero (University of Seville, Spain)**

**[16:40] Page 145** Numerical Simulations of the Bacterial Pollution Along the Coast of the Venice Province (Northern Adriatic)

*Isabella Scroccaro; Andrea Cucco; Paolo Osti & Georg Umgieser*

**[17:00] Page 147** The Effects of the Land and Sea Breezes on the Photochemical Pollution in the Coastal Area of Normandy (North-Western France)

*Aurélié Dudouit*

**[17:20] Page 151** Strategies to Evaluate Contamination in Todos os Santos Bay (Bahia, Brazil) using Marine Invertebrates

*A.L.R. Wagener; E. Francione; M. Peso-Aguiar; U. Lima; A.L. Scofield; S. Camargo; C. Hamacher; D. Reitermajer; N. Mickleley & R. Campos*

**[17:40] Page 153** Development of a Prototype of a Decision Support Computer System for the Combat of Oil Pollution at Sea

*David Pulquério, Rita Sá, P. Sebastião & Carlos Guedes Soares*

**Room Infante Santo**

**Sub-Theme 4: Living With Erosion**

**Chairperson: Paolo Ciavola (University of Ferrara, Italy)**

**[16:40] Page 203** Differential Behavior of Diverse Sectors of an Urban Beach: La Victoria (Cádiz). Implications in Nourishment Design

*Javier Benavente; Giorgio Anfuso; A. Ghetti & M.A. Santa Rosa*

**[17:00] Page 205** Nearshore Bars as a Natural Protection of Beaches, Field Evidences from Lido di Dante Beach, Adriatic Sea

*Yann Balouin; Paolo Ciavola; Clara Armaroli & Dario Capatti*

**[17:20] Page 209** Tendency of Coastline Changes of Hel Peninsula

*Kaziemierz Furmanczyk; S. Musielak; J. Dudzinska & A. Lecka*

**[17:40] Page 211** The Planning in the Minimisation of the Risks Associated to the Increasing Vulnerability of the Coastal Edge of the Centre Region of Portugal

*António Mota Lopes; Margarida Nunes & Teresa Carvalho*



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## POSTER PRESENTATIONS

Monday, April 18, 2005 | 12:00 - 12:30 | Poster Exhibition

### Sub-Theme 1: Strategic Environmental Assessment in Coastal Areas

Page [233](#) Algarve's Sustainable Development Indicators System -Environmental Component

*A. Franco; P. Coelho; P. Vaz; I. Beja; A. Dores & T.B. Ramos*

Page [235](#) Impact of the Realization of a Sea-Water Feed Canal for the Zarziz Saltworks Located in South-Eastern Tunisia

*Mohamed Choura; Wassim Hamza; Ridha Amdouni & Jamel Rouis*

Page [237](#) A Case Study: The Kwinte Bank (Belgian Shelf)

*Valérie Bellec & Vera van Lancker*

Page [239](#) Proposal to Sanitation in Marujá Community - State Park Cardoso Island, São Paulo, Brazil

*Maria Angelica Barbosa Beccato & E. Salati*

Page [243](#) Marine Ecological Quality Assessment: Trophic Indices in an Area Affected by Finfish Cage Aquaculture

*Vesna Flander Putrle; Valentina Turk & Alenka Malej Paula Castro; Helena Freitas; Cristina Mâguas & Ivan Valiela*

Page [247](#) Internet Training and Information Modules on Coastal Issues

*Gerald Schernewski; Stefen Bock; Silke Rödiger & Anke Vorlauf*

Page [249](#) The Cousteau Label - Awarding The Best Practices of Coastal Management

*Tarik Chekchak*

Page [253](#) Baseline Habitat Mapping Using GIS as a Coastal Management Tool at the Ria de Alvor, Algarve, Portugal

*Helena Baker & Will Simonson*

### Sub-Theme 2: Integrated Coastal Zone Management

Page [257](#) A Finite Element Ecological Model for the Lagoon of Venice (VELFEEM): Analysis of the Sedimentation Processes

*Donata Melaku Canu; Georg Umgieser & C. Solidoro*

Page [259](#) Towards an Integrated Coastal Zone Management Program of the Littoral Between FNIDEQ and MDIQ (NE of Morocco)

*E. Bello; A. Macías; D. Benitez; G. Anfuso & D. Nachite*

Page [261](#) Subsidies for the Co-Management of Crab-uçá in Cananéia -SP - An Ecological and Etnobiological Approach

*Mayra Jankowsky; José Salatiel Rodrigues Pires & Nivaldo Nordi*

Page [265](#) Management Plans in Coastal Wetlands - Achievements of the Preliminary Management Plan of 'Reserva Natural das Lagoas de Santo André e da Sancha' (Portugal)

*Carlos Loureiro Ferreira*

Page [269](#) Territorial Integration of Populations of Threatened Species and Ecological Connectivity in the Southwest Coast of Spain

*José Carlos Muñoz Reinoso; Braulio Asensio & Francisco Rodríguez Infante*

Page [271](#) The Limestone Cliffs of the S. Pedro de Moel Coast (Portugal. A Contribution of Geological Heritage to Land Use Planning

*C.B. Duarte; L.V. Duarte & A.O. Tavares*

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**Page 273** GIS and ICZM - A Case Study for Impacts Visualization

*Susana Lacerda; Helena Calado; João Porteiro & L. Paramio*

**Page 277** Integrated Beach Management in the Riviera del Beigua (NW Italy)

*Francesca Palmisani, Rosanna Dursi, Roberta Ivaldi, Valentina Marin & Mauro Fabiano*

### Sub-Theme 3: The Sea

**Page 283** Natural Seeding Production of the Edible Green Alga *Monostroma* SP. In Southern Brazil: Cultivation as an Alternative of Income to the Local Fishermen Community

*Franciane Pellizzari; Eurico C. Oliveira; Nair Sumie Yokoya & Theresinha Absher*

**Page 287** Curonian Spit Shore: Before and After Hurricane "Anatoly"

*Ramunė O. Urbonienė & Algimantas M. Olšauskas*

**Page 291** Downscaling to the Coastal Zone in MAMA: Application to the Nador Lagoon, Morocco

*Georg Umgiesser & Isabella Scroccaro*

**Page 295** Diversity and Community Structure of Epibenthic Invertebrates and Fish on Soft Bottom Sediment

*C. Almeida; D. Machado; P. Veiga; C. Afonso; P. Monteiro; L. Bentes; R. Coelho & J.M.S. Gonçalves*

**Page 297** Radioactive Contamination of the North-Atlantic Monitored Along the Portuguese Coast with Bio Indicators

*João M. Oliveira; Anabela Lucas; Albertina Libânio & Fernando P. Carvalho*

**Page 299** Optimum Management Strategies for the Environment Improvement of Butrint Lagoon, SW Albania

*C. Oikonomou; V. Kapsimalis; Ç. Durmish; T. Llahanaj; G. Papas; A.P. Karageorgis; C. Anagnostou & K. Pavlopoulos*

**Page 303** Comparison of Different Methods for Microbiological Beach Quality Assessment: Coliforms Bacteria in Sea Water, Interstitial Water and Beach Sediments

*Mauro Fabiano & Valentina Marin*

**Page 307** Evolution of Aguda's Small Scale Fishery over the Past 20 Years

*Mike Weber & Jaime Prata*

### Sub-Theme 4: Living With Erosion

**Page 281** Coastal Management Based on an Agenda 21: the Oder/Odra Estuary Case Study

*Nardine Löser, Gerald Schernewski, Peter Dehne & Thorsten Permien*

**Page 309** Application of Formulations and Models to Estimate the Longshore Sediment Transport Between Praia Vieira and Praia Velha, West Coast of Portugal

*Sérgio H.C.D. Larangeiro; Filipa S.B.F. Oliveira & Rui Taborda*

**Page 311** Medium-Term Evolution of a Stretch of the Portuguese Central Coast Based on the Analysis of Aerial Photographs and Hydrographic Surveys: First Results

*Filipa S.B.F. Oliveira; Lourival O. Trovisco & Sérgio H.C.D. Larangeiro*

**Page 313** Mathematical Modeling for the Shoreline Effects of Karasu Marina, Turkey

*M. UfukTuran & V. Firat Sever*

**Page 315** Conservation and Recuperation of Dune Systems and Tourism - Soft Intervention Techniques to Dampen Erosional Processes

*Luísa Ramos*

**Page 317** Morphodynamic Characteristics and Seasonal Variations of Moroccan Beaches Between Ceuta and Cabo Negro

*G. Anfuso; E. Bello; J. Benavente; D. Nachite; R. Guati; A. Ghetti; Y. Meklach & A. Macías*

**Page 321** Combined Wave and Tidal Effects on Sandy Beaches at a Short-Term Time Scale

*Filipa S.B.F. Oliveira*

**Page 325** A Numerical Study of Sand Mining in a Conceptual Scenario Test

*Mariana Ramos; Paulo A. Silva; André Fortunato; Anabela Oliveira & Francisco Sancho António H. da Klein; Fernando L. Diehl & Lindino Benedet*

**Page 331** Beach Rotation and Coastal Erosion in Armação de Pêra Bay. The Example of Salgados - Galé Sector (Algarve, Portugal) -

*Celso Aleixo Pinto & Sebastião Braz Teixeira*

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- Page 335** **Forecasting Coastal Utility System (FOCUS)**  
*Derek W.T. Jackson; Gonzalo Malvarez; Emilia Guisado Pintado, Joni Backstrom & Andrew Cooper*
- Page 337** **Managing Rural Activity Beaches in Ireland: An Integrated Approach**  
*John McKenna & Andrew Cooper*
- Page 341** **Leirosa Sand Dunes: A Case Study on Coastal Protection**  
*Catarina Schreck Reis; José Antunes do Carmo & Helena Freitas*
- Page 343** **Development of Deterministic Models in a Blowout of Coastal Dunes (Barreira do Inferno) on the North-East of Brazil**  
*P. Fracasso; L. Menezes; Y.A. Reyes-Peres; R. Cavalcante Freire; A. de Medeiros Souza; D. Siqueira de Gauw; V. Dantas de Araújo; C.J. Appi; J.L. Porsani & F. Pinheiro Lima Filho*
- Page 347** **Underwater Walk at Praia da Marinha, Algarve**  
*Paula Gaspar; Sebastião Braz Teixeira; Jacinta Fernandes; Luis Bentes; Joaquim Ribeiro; Pedro Gil Lino & Jorge M.S. Gonçalves*
- Page 349** **Methodology for the Control of Beach Nourishment Works in the Gulf of Cadiz (SW Spain)**  
*J.J. Muñoz Perez; A. Herrera; G. Gomez Pina & L. Fages*
- Page 351** **Geomorphology and Vegetation: A Contribution for a Synthesis on Erosion vs. Stability Bioindicators of the Coastal Zone**  
*Ângela Lomba, João Honrado, Helena Granja, Jean Favennec & Juan Vidal Romani*
- Page 353** **Influence of Urban Infrastructures Location in the Event of Littoral Storms. The Maritime Sea Walkway in the Rincón de la Victoria, Málaga on the March 26 - 29, 2004 Storm Event**  
*Pedro Fernández & Carolina Pérez*
- Page 355** **Portuguese Experiences on the Use of Geosynthetics in Coastal Erosion Control**  
*Luciana das Neves; Fernando Veloso Gomes; Maria de Lurdes Lopes & Francisco Taveira Pinto*
- Page 359** **Managing the Coastal Zone of the Centre Region of Portugal**  
*Margarida Nunes; Teresa Carvalho; Helena Duarte; Pedro Raposo*
- Sub-Theme 5: Tourism and Coastal Conservation**
- Page 363** **Opportunities and Threats Posed by Tourism Development in Natural Areas. Case Study: Park of Nature "Biokovo", Dalmatian County, Croatia**  
*Lidija Petrić*
- Page 367** **The Role of EcoTourism and the Coasts in the Nigerian Environment**  
*Christabel I. Okeke*
- Page 371** **Impacts and Potentialities of Tourism on Artisanal Fishermens' Communities at Corumbau Marine Extractive Reserve, Bahia State - Brazil**  
*Fernanda Terra Stori; Regina di Commo; Marcus Polette & Nivaldo Nordi*
- Page 375** **Foredune Fragmentation and Tourist Pressure in Two Natural Places in the Coast of Huelva, SW Spain**  
*Sara Muñoz Vallés; Juan Gallego-Fernández & Claudia Dellafiore*
- Page 379** **Integrated Quality Management Coastal Recreation and Tourism Business Destinations Strategy**  
*Elena Vitkienė*
- Page 383** **Effect of Human Trampling on Mediterranean Sandy Beaches: Sandhoppers as Bioindicators?**  
*A. Ugolini; G. Galanti; S. Somigli; G. Ungherese; A. Perfetti; F. Borghini & S. Focardi*
- Page 387** **Residues of Persistent Organic Pollutants in Coastal Environments - A Review**  
*Fernando P. Carvalho*