Coastal and Marine Geospatial Technologies
Coastal Systems and Continental Margins

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Coastal and Marine Geospatial Technologies

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Preface

In 2005 the CoastGIS symposium and exhibition was once again held in Aberdeen, Scotland, in the UK, the second time that we have had the privilege host this international event in the city of Aberdeen. This was the 6th International Symposium Computer Mapping and GIS for Coastal Zone Management, a collaboration between the International Cartographic Association’s (ICA) Commission on Marine Cartography, and the International Geographical Union’s (IGU) Commission on Coastal Systems.

The theme for 2005 was: *Defining and Building a Marine and Coastal Spatial Data Infrastructure*. As a major coastal event, the CoastGIS series of conferences always attracts an international audience of coastal researchers, managers, and practitioners who use one or more of the geospatial technologies (e.g. GIS, GPS, digital mapping, remote sensing, databases, and the Internet) in their work.

The CoastGIS series is fundamentally an international event which over the years has gained a strong following attracting delegates from around the globe. Hosted by the University of Aberdeen – at the Aberdeen Exhibition and Conference Centre (AECC) – once again CoastGIS 2005 provided an opportunity to communicate the results of a wide range of innovative scientific research into coastal and marine applications of the geospatial technologies, including remote sensing, Geographical Information Systems (GIS), Global Positioning Systems (GPS), databases, data models, the Internet and online mapping systems. The 2005 even offered many excellent paper and poster presentations from around the World, with delegates from the UK, Norway, Spain, Italy, France, Germany, Mexico, Indonesia, Nigeria, the USA, Canada, and Australia – indeed a truly international cross-section of people!

This current book, which is the outcome of this event, is a compilation of a selection of edited chapters given in Aberdeen. Divided into six parts this edited volume categorises the chapters into parts on: (I) *Information Networks, Spatial Data Infrastructures and Information Systems*; (II) *GIS Tools*; (III) *Spatial Planning*; (IV) *Coastal Geomorphology*; (V) *The Coastal Environment*; and (VI) *Coastal Hazards and Vulnerability*. Part I touches upon metadata services, spatial information systems for policy support, spatial data infrastructures in Nigeria, Indonesia, and the UK, information sharing, information networks, and national databases. Part II considers a range of GIS tools dealing with marine pollution and aquaculture, ICZM, macro-algal weedmat monitoring, hydrodynamic models, and the
spatial analysis of and risks associated with coastal traffic. In addition, topics such as photogrammetry and visualisation are also covered. Part III deals with aspects of coastal planning issues and the links with spatial information systems. Part IV focuses on the use of GIS for studies of coastal geomorphology, morphodynamics, and shoreline evolution. Part V examines the currently highly topical issues of climate change of the coastal landscape and the use of GIS to manage coastal defence planning. The final Part, VI, deals with environmental indicators, coastal vulnerability in relation to climate change, and geohazards.

As a book it offers a collection of chapters with considerable insight into the application of these rapidly evolving technologies to many different aspects of the marine and coastal environment around the world, and at many different scales.

I would like to take this opportunity to express my thanks to a number of people and organisations who were involved in the Aberdeen event and who have been instrumental in helping progress this book into print as a permanent record of the CoastGIS 2005 Symposium:

Aberdeen City Council (ACC) for making funds available to the CoastGIS 2005 event and for hosting the Civic reception in Aberdeen; NOAA (in particular Cindy Fowler and Jeff Payne) in the USA for agreeing to sponsor CoastGIS 2005 and for input to both presentations and a special workshop; to the University of Aberdeen for the Symposium Proceedings; and finally Stronachs in Aberdeen. Also to thank all the AECC staff for making the conference work on the ground, and for their input into the organization, registration, presentations and catering, and especially to Brian Horsburgh taking the risk by underwriting this event; to Petra van Steenbergen and her team (especially Hermine Vloemans) at Springer for believing in this book and for progressing this volume to publication; the ICA and IGU; and last but not least all of the people who have supported the CoastGIS event over the years – they know who they are – and in this case for encouraging the second event in Aberdeen – particularly Darius Bartlett (UCC in Ireland) – who started the whole CoastGIS series off in 1995 – and Ron Furness in Australia who was enthusiastic, supportive and encouraging throughout the event.

Scotland, UK

David R. Green
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