

limited budgets, and possibly has restricted convenient access to copy machines.

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Dissolved Oxygen in the Chesapeake Bay: Processes and Effects, Gail MacKiernan, Maryland Sea Grant Publication, College Park, Maryland, Publication Number UM-SG-TS-87-03, Free, No ISBN.

This volume is the produce of a seminar held in 1987 to consider the problems of oxygen depletion (hypoxia) in Chesapeake Bay. Many enclosed water bodies suffer from low oxygen levels, particularly during summer periods, when biological activity (*i.e.* oxygen demand) is highest, and water turnover rates are low. Although such conditions can occur naturally, they are often exacerbated by anthropogenic influences, particularly where and when BOD and COD are stimulated. The Chesapeake system, particularly in the lower reaches, shows a worsening trend over the last 25 years.

The volume is divided into three parts, the first dealing with recent trends, the second with the processes associated with dissolved oxygen and the third on the biological effects of hypoxia. Most authors stress the incompleteness of knowledge about the problem (a phenomenon that tends to increase in almost exponential proportion to the amount of data available), and there is an understandable caution about management strategies. The publication might have been strengthened by an integrated summary, especially if it signposted the way forward. As it is the volume rather fades away in the report of an inconclusive discussion (like so many conference resolutions). Notwithstanding this, it is an interesting contribution on a worldwide problem, and the editor should be congratulated on producing a concise, timely, and almost error-free text.

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Coasts, Hansom, J.D., 1989, Cambridge University Press, 100p., £5.25 (\$9.95), ISBN 0 521 31377 5.

This book handles the theme "Coasts" in a very general way, involving almost all the sub-

jects normally associated with coastal geomorphology from "recent" phenomena to the Quaternary. In the first four chapters the author exposes the reader to general ideas as to how the coast 'operates,' including both erosional or depositional processes. The main theme focuses on natural processes and resultant morphology. The following two chapters (5 and 6) are dedicated to particular aspects of the shoreline, namely coastal sand dunes and estuaries, with a slight, but efficient, characterization of this environment as to the important role in preservation of natural ecology.

The author adopts a different approach in the chapter on the problems of sea level rise. Although much of this material could possibly have been included in chapter two as it affects all the world's coasts, the author's choice is justified because of the increasing importance accorded to this particular subject over the last few years. Also by putting the sea-level information in a separate chapter it allows a little more exploration of the subject.

The last chapter (8) presents a different view of coastal problems, showing, in a clear way, the growing human occupation of the shoreline almost always without concern for the natural environment. In this chapter some negative attitudes of Man are discussed in relation to coastal environments for example, pollution. The book also presents some of the possible solutions for these problems. At the end of this chapter the reader should understand that there is no such thing as an ideal solution to, for example, the coastal erosion problem, largely because such problems are related to social-economic values that are not easy to deal with. I would have liked to suggest that this chapter be entitled "Coasts and Costs" . . .

The final evaluation of this book is obviously connected with the target readership, which the author has defined (in the preface) as "A-level students and introductory undergraduate courses." Bearing in mind this target readership, together with the idea to which the author also refers, ". . . to bridge the gap between the superficial level of general texts and the more detailed presentation in advanced texts and research papers" this is a well-written educational book, presenting in a concise way the theme, without, sometimes boring, scientific detail, but still using in a very accessible manner the author's scientific knowledge.

"Coasts" is recommended to those seeking something about the theme, who wish to have a more global view of the processes, morphology,

problems and solutions associated with this important and fragile zone.

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Advances in Berthing and Mooring of Ships and Offshore Structures, E. Bratteland, 1988, University of Trondheim, Trondheim (Norway), 500p., \$93.50.

Increased ship sizes, resulting in berths being built and operated at more exposed locations, together with advances in cargo handling and loading—unloading systems have increasingly focused on safety, operational requirements and reduction of frequencies and consequences of accidents. The problems addressed in this volume (NATO ASI SERIES E 146) are twofold related to ships: When berthing the ship with resulting impact, and conditions while the ship is moored at berth. The scope of this ASI and the resulting volume was to present recent advances in berthing and mooring of ships and mooring of offshore platforms, as well as vessels at buoys or storage vessels. Theoretical aspects and models as well as practical applications were dealt with.

Ongoing developments in this field include: Low recoiling fenders, fenders with varying (step) stiffness, use of tension mooring systems, increased emphasis on instrumentation, monitoring and adjustment of fenders and mooring during operation, a more integrated approach to the design of mooring, fenders and berth structures etc.

Although considerable advances have been made in the system approach to berthing and mooring, there are many problems that remain to be solved for proper modelling such as, for example, more reliable hydrodynamic and mechanical inputs and criteria, as well as knowledge on structural characteristics and environmental forces. Further advances are possible by coupling developments in mathematical modelling with realtime measurements and micro-computer technology. Existing information and models should be made available to every-day users and designers in a format that can be easily understood and readily applied to practical situations.

Further developments in integrated design, probabilistic approach and criteria to be

applied are suggested. Cooperative research by existing international organizations is encouraged on mathematical and physical models, full scale measurements and development of new concepts.

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Fjords: Processes and Products, J.P.M. Syvitski, D.C. Burrell and J.N. Skei, 1987, Springer Verlag, Berlin, DM195, 379p., ISBN 3-540-96342-1.

Fjords are coastal environments with a unique combination of physical, biological and chemical characteristics which creates estuarine systems with notable extremes of rugged topography and fragile ecology. World attention has been drawn recently to the tragic oil spill in a fjord (Valdez Arm) in southeast Alaska underlining the necessity of strict environmental management of these areas which have a low capacity for recovery from such disasters. Cold temperatures, slow flushing time and fragile biota in fjords combine to produce an environment that can not easily return to normal after a catastrophic event.

Fjords: Processes and Products is a comprehensive text aimed at earth science research professionals and upper-level students. The authors draw on a wealth of data and personal experience gathered during their careers, as well as information from over 1000 references in published literature. They have divided the book into 3 sections: (1) introduction, (2) processes and products and (3) implications and applications. The treatment is even and the authors clearly have made an attempt to present a balanced picture of fjords in terms of subject matter and geography. All fjord coastlines of the world are included, except for Antarctica, as little is known or published on the 1000 km fjord coastline of the Antarctic Peninsula. The book is written from a geological point of view with emphasis on the importance of physical characteristics such as fjord geometry, sediment input, fjord circulation and mass movement on biota, biochemical processes and general ecology.

The book is well illustrated with maps and figures drawn in a uniform style. Original and published data are provided throughout in support of the text. Some minor factors detract