like Bruun's Rule and introduces a number of interesting case studies.

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External Costs of Coastal Beach Pollution: An Hedonic Approach, by Elizabeth A. Wilman, 1984, Resources for the Future, Washington, D.C., 194p. $US15.00, ISBN 0-915707-08-X.

Economics may fall short in its quantification attempts but it continues to be applied everywhere, including the coast. This monograph is premised on economic analytics being useful in improving the information base for coastal management decisions. The vehicle for showing the usefulness is a case study of a potential oil spill on the recreational beaches of Cape Cod and Martha's Vineyard. It is an attempt at measuring potential damages via a "hedonic pricing model" coupled with an oil spill risk model. The former measures the loss in value of beach recreational services that would occur if an unpolluted beach becomes polluted with oil; the latter measures the probability of these beaches being affected by an oil spill.

The hedonic model is based on the idea that purchasing specific recreational services includes more than simply the items themselves, but rather the larger set of coastal attributes of which the purchased services are a part. This model is subject to a large number of difficulties and assumptions, particularly when attempting to apply it. The author notes that the "large system of simultaneous equations and the identification of any marginal bid or offer function is very difficult." While she heroically works to reduce this complexity, the resulting model becomes increasingly tenuous due to the limiting assumptions necessary to apply it. Also hindering its applicability are the "normal" economic assumptions of consumer and seller information, equilibrium conditions, homogeneity, etc. Thus, after wading through pages of equations and complicated explanations, we learn that "the actual pollution damages that need to be measured will not always conform to the model specifications." However, as all economists are quick to note, such does not mean the model is useless, only that its results can be an over or underestimate without knowing which! Finally, the author notes that the value of offshore oil is so high that the sandy beach oil spill damage estimates cannot begin to compare. Nevertheless, she concludes the estimates can be used as a basis for determining spill cleanup investment and a possible compensation fund. Given the magnitude of the data search, the tenuousness of the results, and the cost of economists, I doubt if such a case can be made for its use.

This research monograph is basically an exploratory exercise in applying an economic model (probably a dissertation). It has little relevance to coastal management decision-making. Indeed, the model cannot come close to living up to the claims made for it. Thus, it reveals again the source of discontent with economic analysis: economists claim too much and produce too little. Coastal managers would do well to look to others for relevant management information.

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Coastal Research: UK Perspectives, edited by Malcolm W. Clark, 1984, Geo Books, Norwich, 131p. £7.00 ($US12.50), ISBN 0-86094-1663 (soft cover).

This relatively small paperback contains nine papers presented at a one-day Nearshore Dynamics workshop held following the British Geomorphological Researchers Groups Conference in April 1981. Six of the papers are full contributions whilst three, published elsewhere, present short summaries.

The operative word in the book's title is 'research.' If one expects an updated coverage of the UK coast, forget it. Of the six full papers two are sited well outside the UK, one a mathematical model, one a flume experiment, leaving two to examine micro shoreface environments. Only two of the summaries present more comprehensive models of modern UK coastal evolution. Whilst the editor finds the geographical and methodological diversity encouraging, I find it unsuited to a small single volume text. There may be something for everyone but not a lot for someone.

All the papers do, however, deal with some aspect of sediments and sedimentary processes. The six full papers can be grouped under mathematical, micro scale and exotic. A purely mathematical approach to equilibrium beach profiles is presented by Hardistry. The model, based on Stokes wave theory, is applied to both spatial (cross shore and alongshore) and temporal changes in profile. Fine-

grained bedforms come under the scrutiny of Mantz who used a small flume to observe bedform development and sediment transport associated with silt and fine sand. The structures produced by equally small bedforms are observed in the field by Wright who box-cored ridge and runnel topography in a macro-tidal environment, finding substantial spatial and temporal variability across the tidal flats. Also at a micro scale, Hartnell monitored the effect of salt marsh vegetation and location relative to tidal creeks on marsh sedimentation finding distinct spatial, seasonal and annual patterns.

The remaining two full papers are from exotic locations. Clark *et al.*, working in the Canadian Archipelago, attempts to estimate arctic coastal sediment budgets using sequential aerial photographs and bed drifters. Pye presents the best and most comprehensive paper in the volume. Field data from N.E. Australia is used to evaluate four models of transgressive dune evolution, with the rising sea level model getting the nod, something workers outside Australia may find surprising.

The three summaries cover nesses, shingle armouring of barrier crests and ords, an interesting rhythmic beach feature.

As a perspective into U.K. coastal research the theme is diverse with no theme or direction apparent. The lack of an index perhaps reflects this feeling. It is unfortunate for this volume that it appeared at the same time as edited volumes on Australian coastal work (Thom) and U.S. barrier research (Leatherman and Oertel). It all but fades into insignificance by comparison. The U.K. has a varied and fascinating coast which needs to be re-evaluated in light of modern research capabilities. The present volume does little in this direction.

I would find it difficult to recommend this book even in the U.K. except for a mandatory place on the library shelf.

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Global Fisheries: Perspective for the 1980s, edited by Brian J. Rothschild, 1983, Springer-Verlag, New York, 289p. $US23.90, ISBN 0-387-97772-6.

Fishery managers are like lion tamers: the best of them can expect to get chewed up from time to time. The history and practice of fishery management have been mixed to terrible and the current "do nothing" policy exacerbates the problem. Things are likely to get much, much worse unless dimensions wider than the traditional applied ecology are incorporated in management. These are a few of the ideas from a pithily written chapter by G.D. Brewer in this useful new book about fisheries management.

The book contains 12 chapters following an extended introduction by the editor in which he argues the case for a multidisciplinary review of fisheries policy. Important changes to the law of the seas and our understanding of the failures of classical management tools both took place, somewhat traumatically, in the 1970s. Rothschild sets out his views on the multidisciplinary remedy in full chapter later in the book. Most of the other chapters in the book convey a similar message: in a brief review I have space only to highlight some of them.

Larkin, on the basis of his extensive experience in fisheries, tackles the question of how much research and management effort are appropriate in relation to resources and knowledge of the stocks: his chapter is entitled "How much is enough?" He neatly categorizes four levels of management: for example, at the primary level, a three-person team covers all resource assessment and management, at the secondary level, a 30-person team is required; while at the other extreme, quaternary level research and management may cost 20% of the landed value of the catch. Catalytic "fifth level" support provided by small international organizations like FAO is praised, and the author takes a hard but approving look at the policy of "contracting out" fishery appraisal work to organizations independent of government. Larkin clearly puts understanding of the biology of the stock first and I found his pragmatic article stimulating and refreshing.

Kesteven stresses the need for developing countries to become self-sufficient in fisheries research so that management details are known before exploitation begins. Although this is not the pattern of exploitation of fisheries with which the developed world is familiar, there is hope that this happy situation will become more common. In an appendix to his chapter, Kesteven gives some helpful advice for fishery workers starting out in developing countries.

Cushing, the doyen of this field, reviews the outlook for the study of the population dynamics of fish over the next decade. After a well-composed review of cohort analysis as a management tool, a brief history of quota enforcement and a sense of regret that the recruitment problem is still unsolved, I found Cushing's forecast of little overall change for the next ten years rather uninspiring. Four main needs are envisaged: stock estimation independent from