

fauna samples, meiofauna, intertidal and subtidal rock, bacteria and fungi, plankton, fish, birds, identification, and safety. It is the product of eighteen contributors, all but two from Britain.

The various authors have clearly made use of their personal experience as they meticulously point out limitations, mistakes and pitfalls that may beset the survey techniques. While this is a refreshing change from more glib and superficial accounts that make everything seem easy, the result unfortunately does not make for very inspiring reading.

The book is painstakingly comprehensive but confines itself largely to the British and European literature. This self-imposed geographical limitation was obviously necessary in order to keep the book to a manageable size, but as a result some useful techniques have been missed. Thus, the use of side-scan sonar for mapping nearshore topography is omitted. Also not mentioned is McLachlan's (1980) exposure-rating system for sandy beaches, which remains the only one of its kind. I was also disappointed not to find any discussion of survey methods for coastal sand dunes.

This, however, does not deny the value of this book, to be welcomed by environmental consultants, teachers and students alike. Perhaps of even greater importance is that it should be acquired and read by those government agencies who have to judge the value of Environmental Impact Assessments they have commissioned.

Reference

McLachlan, A. 1980. The definition of sandy beaches in relation to exposure: a simple rating system. *South African Journal of Science*. 76, 137-138.

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Impact of Sea-level Rise on Society, edited by Herman G. Wind, 1987. A. A. Balkema, Rotterdam, 191p. \$50.00 (£28.50), ISBN 90-6191-8767.

It is increasingly widely accepted that global sea level is rising, and that it will rise 0.5-2.0m

in the next 100 years. This volume, *Impact of Sea Level Rise on Society*, indicates that the principal impacts will be through the loss of land with accelerated coastal erosion, increased flooding and storm damage, and through salt water intrusion (up rivers) and seepage. It examines 3 alternatives: (i) prevent further sea-level rise (not possible in the short term), (ii) set up or upgrade coastal defences, or (iii) move people and property away from endangered areas.

The book is the outcome of an ISOS (impact of sea level rise on society) Workshop held at Delft in the Netherlands in 1986. It has 3 parts, (i) framework, a synthesis of contributions from workshop participants, (ii) outline of participants' contributions, and (iii) an addendum comprising each of the contributions in full. It brings together a wealth of information particularly from the Netherlands, a nation with a long tradition of 'battling the sea.' However, I found this layout unnecessarily repetitive.

The contributions with the widest application are a review of the causes and effects of sea-level rise by J. G. Titus, and a synopsis of the consequences of relative sea-level rise in the Mississippi Delta by J. W. Day. Both are useful accounts, though most of their material is readily available elsewhere in the sea-level literature. The majority of contributions concern the Netherlands. They range from socio-economic to ecological to engineering in perspective and in conjunction with the framework synthesis they give an insight into Dutch response to sea-level rise. I found the accounts of flood protection and water management particularly enlightening.

A major part of the book (more than 50 pages) is devoted to policy analysis. Policy analysis is a 'systematic process with which to identify, analyze and evaluate alternative options for solving a policy problem' (p. 22). A computational model (ISOS model) is proposed which will indicate to decision makers the relative merits of alternative management strategies. A scaled-down version of this model, applied to the Dutch coast, was run at the workshop and selected results are shown in the book. Different scenarios of sea-level change, economic/capital growth, population growth and social discount rate are input into the model, alternative protective measures can be costed in, and

effects in monetary terms are output graphically over 100 years in 5 year steps.

The authors of the policy analysis section, G. Baarse and F. R. Rijsberman, go to great lengths to stress the need for cautious interpretation of model output, which is intended as a tool that decision-makers can use interactively. They are very right to urge caution, the pilot model contains some extremely simplistic elements, especially in the spatial context where the 'average' gradient of the coast is used. The larger ISOS model, which could be developed given time and money, will remain a first-order model. It cannot take account of the complex interactions between physical, chemical and biological factors until these are understood in the area that is being modelled (they appear to be relatively well understood in the Mississippi Delta after 30 years of research as described by Day). Nevertheless, the model is an exciting, multidisciplinary approach to a management problem which, I became convinced after reading, could become a valuable management tool if used in conjunction with other qualitative information.

One shortcoming of the book is its uneven geographical coverage. The workshop apparently chose 3 case-study nations, the Netherlands, Bangladesh and the Maldives in which to study impacts and to model effects. These are very appropriate countries to choose. However, aside from a few pages of rather general description, Bangladesh and the Maldives receive scant treatment.

This book is not a research or a teaching textbook; there are several recent books which cover the subject far more thoroughly. However, I believe that it will be very useful for those involved in management of areas prone to inundation by sea-level rise. The multidisciplinary approach that the book embodies and the model it describes provide a basis for planners who are in a position to make decisions about coastal management, or who pass on recommendations to decision-makers.

There is no doubt that we all have a lot to learn from the Dutch experience of living with (relative) sea-level rise. It is particularly pertinent to conclude with two comments from the book: firstly that the Netherlands has for several years spent 0.1% of its GNP on coastal defence, and to question whether the rest of the world is prepared to make such an investment,

and secondly to reflect that, even in the Netherlands, it has taken a disaster involving loss of life and property, to convince decision-makers to take adequate coastal protective measures.

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Tidal Power, Proceedings of a symposium organised by the Institute of Civil Engineers in London in 1986. Thomas Telford, London. 379p. £37.50, ISBN 0-7277-0390-0.

One day, some day, somebody, somewhere is going to build a large tidal power barrage. Meantime the pre-construction bandwagon rolls on, with yet another book discussing the likely effects of yet another series of speculative proposals. (I often think it would be rewarding—at least in terms of my CV—to invent a totally imaginary project and instigate a series of publications based on it. Anybody interested in tunnelling under the Atlantic or attending a symposium on Black Holes and Coast Erosion?) However such lightheartedness must be set aside in consideration of this serious, almost earnest, volume.

The title itself is slightly misleading as the main focus of this book is the "Severn Barrage" across the Bristol Channel, a macrotidal estuary in SW Britain, and not as one might think "Tidal Power" in a global sense.

Plans to throw a barrage across the Bristol Channel have been put forward for at least 80 years. Geological and economically the project looks very attractive, as an estuary barrage could provide power, improved transportation and better ship berthing facilities. The present proposals have been gathering momentum since the early 1970s, with the prize being 5% of the British electric generating capacity. At a time when the UK energy industry is advancing towards privatisation, then the development of the barrage, through private financing, could be an important element in energy policy for the twenty-first century. However, as becomes apparent while reading this book, many of the experts have doubts, which when brought together, lead to a conclusion that the barrage will not be built in the foreseeable future.

The book consists of 17 chapters most of