This research report, published by the California Policy Seminar, a joint program between the state government and the University of California, provides background information behind the conflict between oceanfront development and coastal hazards, and reviews the state and local policies and responses to this problem. The report is organized into five major sections. Part One examines the natural processes affecting the shoreline, hazards associated with human occupancy, protective strategies and their limitations. Part Two reviews the history of state-level coastal planning and policy, emphasizing the important Coastal Act of 1976. Part Three assesses implementation of the California Coastal Act with respect to coastal hazards on the local level, and Part Four examines similar responses on the state level. Part Five offers recommendations designed to strengthen state policies dealing with coastal hazards.

Prior to the California Coastal Act of 1976, the California Department of Navigation and Ocean Development had classified the shoreline according to physical attributes, including extent of erosion and exposure to the open sea. Although California had policies concerning geological hazards, these dealt primarily with earthquake hazards, landslides, and flooding, but not specifically with coastal erosion storm-wave damage. The Coastal Act of 1976 was designed, in part, to encourage new development mainly near existing urban and built-up areas, and also away from hazardous environments. Interpretative Guidelines were also issued to assist local governments in carrying out provisions of the Act. Griggs et al. critically review the Coastal Act and accompanying Guidelines and point out numerous shortcomings. The Coastal Act is vague on development in beach and back-beach environments, and on coastal flooding from high storm-tides and waves. A 1982 amendment to the Coastal Act called for establishment of a Coastal Resource Information Center to collect and integrate coastal data for policy-making. It also required preparation of a California Coastal Resources Guide. While the latter was published in 1987, the Center was never established, due to budgetary constraints.

A major existing problem is that data on coastal hazards remain dispersed and uncoordinated. Furthermore, a coherent statewide coastal hazards policy is lacking because of overlapping jurisdictions, diverse sources and types of data, and non-uniform standards in designating hazardous zones and in implementing the provisions of the Coastal Act.

Griggs et al. conclude with a set of 10 recommendations implying a basic change of direction—avoiding siting new developments in hazardous zones, phasing out hard protective structures, designating Coastal Hazards Zones, and requiring detailed geologic or geotechnical reports, conforming to state standards, for any projects in such zones. Their last recommendation—to develop a statewide Coastal Hazards Information System, to be used by government planning agencies as well as property owners—should have been given higher priority, inasmuch as it would serve as the primary basis for decision-making and project evaluation. This report, while primarily intended to recommend changes and improvements to existing coastal legislation and policies in California, will also provide useful guidelines for analogous efforts in other coastal states confronting similar problems.

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This is a timely contribution to coastal engineering science that examines the entire issue of beach profile response to oceanic forcing from a somewhat unconventional perspective. I am not certain whether the work would classify as a "monograph," since diverse subjects in coastal engineering are covered towards the ultimate goal of explaining beach response. Furthermore, this work is a textbook meant to explain the basis of the numerical code, SLOPES. Chapters are accordingly arranged; the first four are introductory, followed by four each on hydrodynamics, sediment dynamics, morphodynamics and numerical modeling.

A fairly significant portion of the book is a recapitulation of coastal engineering principles and data available in other textbooks and some important papers that the author has cited. The difference is that in this case the review is limited

to concepts and computations that are directly or indirectly relevant to SLOPES. Therefore for those who wish to use this or similar numerical routines the book provides a physical insight into the forcing and response mechanisms. Each review chapter stands by itself, and some reviews are quite extensive, *e.g.* orthogonal (for me a new word this! I am more used to "cross-shore") sediment transport, presumably reflecting primary areas of the author's research interest.

I especially enjoyed reading all four chapters in Section D, which the book is (or should be) all about. Section E is also well written, but because (1) I am not a potential user of SLOPES and (2) I have no way of evaluating this model against other recent approaches, I was less enthusiastic. I found the falling and oscillating ball experiments in Chapter 12 most interesting, but suspect they represent an "overkill' for the present purpose.

The book is easy to read. However, I could not find the verb "to marinise" in my dictionary (see p. 165, section 12.1, line 4). In the event a second edition is considered, I suggest not repeating the table of contents at the beginning of each chapter. Also, Chapters 1 and 2 may be combined, especially because Chapter 2 seems a bit over-extended. Presumably by that time a more advanced software will enable better fonts for the equations. In addition to spelling checks, typographical corrections will be particularly required in two areas: proper nouns (*e.g.* Iribaren *vs.* Iribarren on p. 61, Table 5.2) and references to equations (*i.e.* matching the number in the text with that of the equation: *e.g.* on p. 83 Eq. 6.24 should be Eq. 6.29). Ditto for figures (*e.g.* on p. 68 reference to Fig. 5.22 which does not exist).

Some additional explanations should have been given (*e.g.* on p. 50, Figure 5.3, why does the Druck time-series differ from that generated by the staff? I have had problems with Druck myself; however, if such is the case in Figure 5.3 why not eliminate the pressure-based record?). A formal convention for parentheses should be adhered to, *e.g* [0] as opposed to (0), *etc.* The academic value of the effort can be enhanced by toning down reference to SLOPES, thus making it less of a manual for that specific software.

All in all this is a very worthwhile effort for which the author deserves commendation. It is justified by the need encapsulated in a sentence on p. 189, "There are few introductory texts to the science of morphodynamics which compare with basic books on physics or chemistry or fluid dynamics."

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Computer Modelling of Seas and Coastal Regions, edited by P. W. Partridge, 1992. Computational Mechanics, Inc., Billerica, MA, 534p. ISBN 1-56252-092-X.

Coastal research proceeds along so many different disciplinary paths that it is difficult to stay informed about developments outside of one's own specialty. Yet most coastal researchers are scientifically eclectic and want to know at least something about related research fields. Modelling of coastal physical processes is one of the specialty disciplines that impacts almost all coastal professionals. Process models are now routinely used in research and as a means of applying research to the solution of a variety of practical problems. This book presents proceedings of an international conference on modelling of seas and coastal regions that offers both detailed information for the modelling specialists and a broad range of topics for the generalists.

Breadth of coverage of coastal process modelling is the strongest feature of the book. The book contains 37 papers divided into six sections: waves, tides, shallow water circulation and channel flow, situation and sedimentation, pollution problems, and computational techniques. The papers within each section treat the topic from several viewpoints. In the waves section of the book there are papers describing monochromatic wave prediction in shallow water, wave drift predictions, spectral wave prediction in shallow water, wave diffraction, wave decay over a porous bottom, wave forces on cylinders, wave breaking, long waves in harbors, wave statistics and combined wave refraction and diffraction. The wave modelling approaches include analytic formulas, explicit finite difference, finite element, boundary element method, and combined finite element and boundary element. Many of the articles also contain either laboratory or field data which are used to verify the theoretical predictions.