

Book review

GUIDELINES FOR RESPONDING TO THE EFFECTS OF CLIMATE CHANGE IN COASTAL AND OCEAN ENGINEERING

National Committee on Coastal and Ocean Engineering (NCCOE).
EA Books, Crows Nest, Australia, 2004, Aus \$27·00, ISBN
0 8582 57505, 76 pp.

These guidelines present an update and extension of a methodology for assessing the impacts of climate change. The guidelines were first developed in 1991 and are outlined in Appendix 1 for reference. The guidelines are well written and the chapters are logically ordered, beginning with the global perspective of climate change through to specific climate change projections and methodology of impact assessments for Australia.

Following the introductory chapter, Chapter 2 provides a comprehensive and objective review of the scientific basis of climate change on a global scale with clear and concise text supported by appropriate figures. Details of the latest global projections for land surface temperature and sea level rise are conveyed along with interesting comparisons between past research and results and the more recent developments. Changes to major weather systems are also covered. Finally the impacts, adaptation and vulnerability of the oceans and coastal zones and possible response strategies are discussed.

Chapter 3 proceeds on to the specifics of climate change for Australia, but avoids burdening the reader with unnecessary information for each region of Australia. Instead it briefly provides details of the representative bodies involved with the climate-change assessments and provides national projections of air temperature and rainfall having already covered sea level rise under the global projections section in Chapter 2. Furthermore, it then refers the interested reader to Chapter 8, which contains an extended list of documents each relating to

climate change in the different regions of Australia. The author is also kind enough to list a few of the more useful and relevant works at the end of Chapter 3.

The first three chapters contained excellent coverage of the theory and science of climate change but the chapter that really caught this reviewer's attention was the chapter on engineering impact assessment. This chapter, Chapter 4, is a description of the methodology and guidelines for assessing the appropriate response to climate-change impacts in Australia. A flow chart dictating the process is presented and is followed by a step-by-step guide through its application culminating with an interaction matrix that highlights the major concerns of climate change on any given coastal project in Australia. The reviewer particularly enjoyed the authors' (who are not individually named) application of the methodology to two different projects in the coastal zone and felt that this chapter adds something different—which would appeal to the more 'hands-on' engineers in this field—to an already well-written book.

These guidelines cover the ideal amount of information for a book of this size on the topic of climate change with good use of figures and examples. It provides just enough detail on the relevant topics without getting bogged down in the specifics, but equally well refers the reader to the more detailed documents required when undertaking a project in Australia. The last chapter is a useful discussion on future research and developments in the science of climate change in Australia. UK engineers will find these excellent guidelines a useful first point of reference when working on projects on the Australian coast and the extensive reference list will no doubt reduce the amount of time one would spend on a literature review.

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