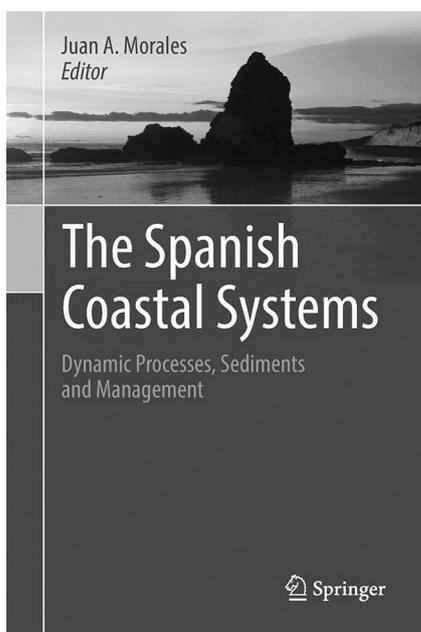


## Book reviews

**The Spanish coastal systems - Dynamic processes, sediments and management**, by Juan A. Morales (Ed.), 2019. Springer Nature Switzerland. xiv + 823 pages. Hardback: price \$179.99, ISBN 978-3-319-93168-5. E-book: price \$139.00, ISBN 978-3-319-93169-2.



Coasts are, possibly together with mountains, the environments where the widest variety of geological processes are active simultaneously, changing the face of the earth. Hardly anywhere are coasts stable: deltas are prograding into seas, whereas rocky coasts are retreating. In combination with tectonics this results in regressions and transgressions, processes without which geology would not exist as the whole Earth would be covered by an ocean.

Considering the importance of coastal processes for the development of the Earth, it is not surprising that coasts have always attracted much interest from geologists. It becomes ever more clear, however, that modern society needs thorough management of coasts. Not only because coastal areas are the most populated parts of the Earth, but also because coasts should protect people, house them, offer place for industrial activities, provide recreational opportunities, etc.

Spain is a country with over 9000 km of coasts of all types. It is, consequently, a country that is most suitable for the numerous aspects of coastal research. The present book reflects this: it is a spin-

off of a series of Spanish Littoral Geomorphology Conferences. The various chapters are authored by participants of these conferences, but the book is not a proceedings volume but rather presents the state of art of the geologic knowledge about the Spanish coast obtained through scientific research in the last thirty years.

The book is, after an introductory chapter, subdivided into six parts: (1) Rocky coasts and cliffs (with 8 chapters), (2) Lineal sandy coasts and beaches (8 chapters), (3) Fluvio marine(!) systems (8 chapters), (4) Coastal dunes (6 chapters), (5) Case studies of coast-human interaction problems and coastal management (4 chapters), and (6) Final remarks (1 chapter by the editor: Future perspectives of the Spanish coast). As can already be deduced from the subjects of these parts, the emphasis of the book is clearly on geomorphology, which is not surprising considering the connection with geomorphology conferences. The geomorphology is dealt with in detail, indeed, with numerous interesting chapters. Less fortunate, however, that the book promises more in the subtitle (dynamic processes, sediments and management) than it delivers: there are no chapter at all about dynamic processes, and only one page about sediment availability!

The book is well printed, but on paper that significantly reduces the quality of the colour figures. Moreover, numerous figures have been reproduced at such a small size that they are hardly readable (e.g. Fig. 13.12). There are some more shortcomings: many chapters are written in fairly poor English (the publisher did apparently not do much more than printing the material that was handed over), there are incorrect symbols (such as Km instead of km: fig. 1.5), there are 'explanations' that are overdue (e.g. the tides are semidiurnal: p. 419), and there are some incomprehensible inconsistencies (the sea level is expected to rise 4.0 mm per year in the SE of Spain but 2.5 mm per year in the north: p. 5). There are two more shortcomings that reduce the practical use of the book: there is no joint reference list (which makes it difficult to trace relevant studies, also because an index of cited authors is lacking),

and there is no subject index (which makes it impossible to trace specific subjects or localities within a reasonable time),

Those who are mainly interested in the geomorphology of coasts will probably take such shortcomings for granted, as they will certainly be pleased with the huge amount of data provided in this book which is a valuable text for advanced graduate stu-

dents and coastal researchers, as it emphasizes the specific dynamic functioning of the main Spanish coastal environments and their relationships with human activities.

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