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## Estuaries: a physical introduction

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**Authors** Top

Dyer, K.R.
Dyer, K.R.

**Abstract**

Estuaries is a comprehensive introductory text emphasizing the physical processes involved in the mixing of sea and river water and the transport of fine sediments within the complex estuarine topographic context. The theoretical and mathematical formulation of these processes are treated at a fairly elementary level, and are used to develop a foundation for more extensive study. The second edition retains the classical approaches to the tidally averaged circulation and mixing conditions but broadens them to consider recent advances in the understanding of processes occurring within the tide. The scope has also been widened to include more detail on the morphology of estuaries and their development, the fluxes of suspended fine sediments, and the generation and maintenance of turbidity maximum. The book provides an excellent introduction for research students in oceanography, environmental science, geography, geology, and water and coastal engineering. It will also be useful as a reference book for those working in water quality, morphological modelling and estuarine environmental management.

**Vlaams Instituut voor de Zee** | InnovOcean site | Wandelaarkaai 7, 8400 OOSTENDE, België
Tel.: +32-(0)59-34 21 30 | Fax: +32-(0)59-34 21 31 | e-mail: info@vliz.be | BTW BE 0466.279.196 | privacy en cookiebeleid

(Jan. 4) Introduction: What estuaries are like and why. Class organization, estuary and fjord definitions, water quality and habitat issues. Geomorphology: how do estuaries evolve over interglacial time scales (erosion, deposition, sea level rise, biological effects)? Classification: the range of observations and the quest for simple explanations. Simple mass and salt conservation: Knudsen's Relation. Dyer (1997) Estuaries: A Physical Introduction, pages 1-22. (Jan. 11) Tides. Download Estuaries A Physical Introduction book in pdf, epub, mobi. Also, you can read online Estuaries A Physical Introduction full free.  This book provides an introduction to the complex system functions, variability and human interference in ecosystem between the continent and the ocean. It focuses on circulation, transport and mixing of estuarine and coastal water masses, which is ultimately related to an understanding of the hydrographic and hydrodynamic characteristics (salinity, temperature, density and circulation), mixing processes (advection and diffusion), transport timescales such as the residence time and the exposure time.