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Edizione	[1st ed. 1988.]
Descrizione fisica	1 online resource (XV, 367 p.)
Collana	Lecture notes on coastal and estuarine studies ; ; 22
Disciplina	333.917
Soggetti	Coastal ecology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Inshore/offshore water exchange in shallow coastal systems -- Coastal/offshore water exchange in narrow, deep shelf areas -- Satellite remote sensing for estimating coastal/offshore transports -- The use of stable isotope ratios for tracing the nearshore-offshore exchange of organic matter -- Tidal flat areas -- Patterns of organic carbon exchange between coastal ecosystems. — The mass balance approach in salt marsh ecosystems -- Coupling of mangroves to the productivity of estuarine and coastal waters -- Production and transport of organic matter in mangrove-dominated estuaries -- Energy flow through fjord systems -- Mass balance in coral reef-dominated areas -- Riverine C, N, Si and P transport to the coastal ocean: an overview -- Fish migrations between coastal and offshore areas -- Larval transport in coastal crustacea: three case histories -- Transport of crab larvae between estuaries and the continental shelf -- Coupling of hydrodynamic and ecosystems modeling applied to tidal estuaries -- An evaluation of presented evidence.
Sommario/riassunto	stable isotope ratios act as naturally-occurring tracers for organic matter, making possible, under certain conditions, the quantification of coastal-offshore exchanges. In general, organic matter has isotope ratios characteristic of its origin (e. g. plants with different modes of

photosynthesis and different growth conditions, anthropogenic compounds). These ratios are maintained as the organic matter moves through the biosphere and geosphere. A mixture of organic matter from two sources has isotope ratios intermediate between those of the two sources, in proportion to the fraction of material from each source. Isotope ratios are one of the few methods which can trace organic matter as it moves through natural ecosystems. Ratios can be measured on both the total organic matter and on particular chemical fractions or compounds. When used on organisms, isotope ratios provide information of organic matter actually assimilated into body tissues, not just material ingested. As with all tools, this method has certain limitations which must be borne in mind when interpreting its results. Firstly, specific environmental conditions must be met. This generally means an ecosystem with a limited and known number of sources of organic matter having different isotope ratios. Two sources with different isotope ratios are ideal; additional sources with other isotope ratios complicate interpretation. Secondly, the difference in isotope ratios of the two sources should be large compared with analytical variability. Thirdly, the ratios within each source should vary as little as possible.