1. Record Nr. UNINA9911007373503321

Titolo	Coastal wetlands : an integrated ecosystem approach / / edited by Gerardo M.E. Perillo ... [et al.]
Pubbl/distr/stampa	Amsterdam ; ; Boston, : Elsevier, 2009
ISBN	9786612257933 9781282257931 1282257935 9780080932132 0080932134
Edizione	[1st ed.]
Descrizione fisica	1 online resource (975 p.)
Altri autori (Persone)	PerilloG. M. E (Gerardo M. E.)
Disciplina	577.69
Soggetti	Estuarine restoration Coastal zone management Wetland ecology Coasts
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Front Cover; Coastal Wetlands: An Integrated Ecosystem Approach; Copyright Page; Table of Contents; Preface; List of Contributors; List of Reviewers; Chapter 1 Coastal Wetlands: A Synthesis; 1 Introduction; 2 A Synthesis of Coastal Wetlands Science; 2.1 Geography; 2.2 Geomorphology evolution under climate change; 2.3 The influence of vegetation on the geomorphology evolution with climate change; 2.4 The stabilizing role of vegetation; 2.5 State change and coastal evolution; 2.6 The role of physical disturbances; 2.7 The role of herbivores; 2.8 Observations across ecosystem types 2.9 The human impact2.10 Modeling and predictions; 2.11 Coastal wetland ecosystems as a component of estuaries; 2.12 Coastal wetland socioeconomics; 2.13 Coastal wetlands are essential for our quality of life; 3 Lessons from the Chapters in this Book; 3.1 Coastal wetlands as ecosystems; 3.2 Physical processes; 3.3 Tidal flats; 3.4 Marshes and seagrasses; 3.5 Mangroves; 3.6 Coastal wetland restoration and management; 3.7 Coastal wetland sustainability and landscape

dynamics; References; Part I Coastal Wetlands as Ecosystems; Chapter 2 The Morphology and Development of Tropical Coastal Wetlands
1 Introduction2 Mangrove and Associated Wetlands; 3 Sedimentation and the Development of Wetlands; 4 Sea-Level Controls on Wetland Development; 5 Sea-Level Change and the Diversification of West Indian Mangroves; 6 Sea-Level Change and the Evolution of Mangrove Habitats in the IWP; 7 Impact of Future Climate and Sea-Level Change; 8 Summary and Concluding Remarks; References; Chapter 3 Temperate Coastal Wetlands: Morphology, Sediment Processes, and Plant Communities; 1 Introduction; 2 Factors Controlling Sediment Dynamics; 2.1 The ""ramp" model of salt marsh accretion
2.2 The ""creek"" model of salt marsh accretion2.3 Storms and salt marsh erosion; 3 Factors Controlling Patterns of Vegetation; 3.1 Zonation of vegetation; 3.2 Ecological development; 4 Geographic Variation; 4.1 Northern Europe; 4.2 Eastern North America; 4.3 Western North America; 4.4 Mediterranean; 4.5 Eastern Asia; 4.6 Australasia; 4.7 South America; 5 Human Impact and Climate Change; 5.1 Human impact; 5.2 Climate and sea-level change; 6 Summary; References; Chapter 4 Polar Coastal Wetlands: Development, Structure, and Land use; 1 Introduction; 2 Geology/Geomorphology; 3 Oceanography
4 Climate5 Structure of Coastal Wetlands; 6 Vegetation of Polar Coastal Wetlands; 7 Fauna of Polar Coastal Wetlands; 7.1 Invertebrate fauna; 7.2 Vertebrate fauna using coastal wetlands; 8 Environmental Hazards; 9 Conclusions and Research Priorities; References; Part II Physical Processes; Chapter 5 Intertidal Eco-Geomorphological Dynamics and Hydrodynamic Circulation; 1 Introduction; 2 Intertidal Eco-Geomorphological Evolution; 2.1 Poisson hydrodynamic model; 2.2 Model of channel network early development; 2.3 Model of marsh platform evolution; 3 Results; 4 Discussion; 5 Conclusions Acknowledgments

Sommario/riassunto

Coastal wetlands are under a great deal of pressure from the dual forces of rising sea level and the intervention of human populations both along the estuary and in the river catchment. Direct impacts are direct such as the destruction or degradation of wetlands from land reclamation and infrastructures and indirect such as the impact of pollutants and changes in the river water and sediment discharge from land clearing and dams. As sea level rises, coastal wetlands in most areas of the world migrate landward to occupy former uplands. The competition of these lands from human development is