

1. Record Nr.	UNINA9910965714903321
Titolo	Clean coastal waters : understanding and reducing the effects of nutrient pollution / / Committee on the Causes and Management of Coastal Eutrophication, Ocean Studies Board and Water Science and Technology Board, Commission on Geosciences, Environment, and Resources, National Research Council
Pubbl/distr/stampa	Washington, D.C., : National Academy Press, c2000
ISBN	9780309172097 0309172098 9780309516150 0309516153
Edizione	[1st ed.]
Descrizione fisica	1 online resource (421 p.)
Disciplina	363.739/4
Soggetti	Nutrient pollution of water - United States Marine eutrophication - United States Coastal zone management - Government policy - United States Water quality management - Government policy - United States Watershed management - Government policy - United States
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 (p. 311-345) and index.
Nota di contenuto	""Front Matter""; ""Preface""; ""Contents""; ""Executive Summary""; ""1 Understanding Nutrient Over-enrichment: An Introduction""; ""2 Combating Nutrient Over-enrichment: Findings and Recommendations""; ""3 Which Nutrients Matter?""; ""4 What Are the Effects of Nutrient Over-Enrichment?""; ""5 Sources of Nutrient Inputs to Estuaries and Coastal Waters""; ""6 What Determines Susceptibility to Nutrient Over-Enrichment?""; ""7 The Role of Monitoring and Modeling""; ""8 Water Quality Goals""; ""9 Source Reduction and Control""; ""References"" ""APPENDIX A Statement of Task and Committee and Staff Biographies""""APPENDIX B Acronyms and Abbreviations""; ""APPENDIX C Programmatic Approaches and Results of a Local Managers Questionnaire""; ""APPENDIX D Model Reviews""; ""APPENDIX E Related

---

Sommario/riassunto

Environmental problems in coastal ecosystems can sometimes be attributed to excess nutrients flowing from upstream watersheds into estuarine settings. This nutrient over-enrichment can result in toxic algal blooms, shellfish poisoning, coral reef destruction, and other harmful outcomes. All U.S. coasts show signs of nutrient over-enrichment, and scientists predict worsening problems in the years ahead. Clean Coastal Waters explains technical aspects of nutrient over-enrichment and proposes both immediate local action by coastal managers and a longer-term national strategy incorporating policy design, classification of affected sites, law and regulation, coordination, and communication. Highlighting the Gulf of Mexico's "Dead Zone," the Pfiesteria outbreak in a tributary of Chesapeake Bay, and other cases, the book explains how nutrients work in the environment, why nitrogen is important, how enrichment turns into over-enrichment, and why some environments are especially susceptible. Economic as well as ecological impacts are examined. In addressing abatement strategies, the committee discusses the importance of monitoring sites, developing useful models of over-enrichment, and setting water quality goals. The book also reviews voluntary programs, mandatory controls, tax incentives, and other policy options for reducing the flow of nutrients from agricultural operations and other sources.

---