

1. Record Nr.	UNINA9910828346603321
Titolo	Assessment of the U.S. Outer Continental Shelf environment studies program . I Physical oceanography // Physical Oceanography Panel, Committee to Review the Outer Continental Shelf Environmental Studies Program, Board on Environmental Studies and Toxicology, Commission on Geosciences, Environment, and Resources
Pubbl/distr/stampa	Washington, D.C., : National Academy Press, 1990
ISBN	1-280-21279-9 9786610212798 0-309-58238-5 0-585-08462-9
Edizione	[1st ed.]
Descrizione fisica	1 online resource (143 pages) : illustrations, maps
Altri autori (Persone)	RatrayMaurice
Disciplina	333.8/2314/0973
Soggetti	Continental shelf - Environmental aspects - United States Oceanography Offshore oil industry - Environmental aspects - United States Offshore gas industry - Environmental aspects - United States
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Panel chairman: Maurice Ratray, Jr. "Support for this project was provided by the U.S. Department of the Interior, contract no. 14-12-001-30342."
Nota di bibliografia	Includes bibliographical references (p. 107-126).
Nota di contenuto	Assessment of the U.S. Outer Continental Shelf Environmental Studies Program -- Copyright -- Preface -- Contents -- Executive Summary -- THE PRESENT STUDY -- ACQUISITION AND USE OF PHYSICAL OCEANOGRAPHIC INFORMATION BY THE ESP -- CONCLUSIONS -- Physical Oceanographic Processes And Models Of Importance To The Esp -- Regional Oceanography -- Evaluation Of Regional Programs And Washington Office Programs -- RECOMMENDATIONS -- 1 Introduction -- OUTER CONTINENTAL SHELF ACTIVITIES -- Management Of OCS Activities -- Extent of the Leasing Program -- Environmental Concerns Resulting from OCS Activities -- MMS'S ENVIRONMENTAL STUDIES PROGRAM -- Mandate -- History of the Environmental Studies Program -- THE PRESENT STUDY -- PLANNING AND PROCUREMENT OF

ENVIRONMENTAL STUDIES -- Development of a Studies Plan --
Implementation of Studies According to Lease-Sale Schedules -- WHY
MMS NEEDS PHYSICAL OCEANOGRAPHIC INFORMATION -- ACQUISITION
AND USE OF PHYSICAL OCEANOGRAPHIC INFORMATION -- WHAT
INFORMATION IS NEEDED -- Information Needed for Leasing Decisions
-- Information Needed for Development and Production Decisions --
Criteria for Judging Adequacy of Scientific Information -- 2 State-of-
the-Art Overview: Physical Oceanographic Processes, Features, and
Methods of Potential I... -- INTRODUCTION -- The Problem of
Assessing Impacts of Oil Exploration: A Physical Oceanographic
Perspective -- Transport Processes in the Water Column -- Sediment
Transport Processes -- Space and Time Scales -- Forcing Mechanisms
-- Oil Spill and Circulation Models -- Scope of the Overview --
TRANSPORT, STIRRING, AND MIXING PROCESSES -- Wind Stress-Drag
Coefficient and Space and Time Resolution -- Surface Wind Drift and
Ekman Dynamics -- Definition Of The Mixed Layer -- Mixed Layer
Turbulence -- Surface Waves and Stokes Drift -- Response To Severe
Storms -- Organized Motions.
Diurnal Cycle and Shallowing Mixed Layers -- Monitoring -- Coastal-
Trapped Waves -- Mean-Flow Generation -- Interactions Of Western
Boundary Currents With Shelves -- Mesoscale Features: Jets, Eddies,
Squirts, And Filaments -- Fronts And Convergences -- Cross-Shelf
Transport -- Buoyancy-Driven Flows -- Tides -- Internal Waves --
Lagrangian Motions -- NUMERICAL MODELS -- Circulation Modeling --
Testing Of Numerical Models -- Modeling The Spreading And
Dispersion Of Oil -- Spreading -- Dispersion -- SEA ICE -- Ice
Modeling -- Ice-Oil Interaction -- Numerical Models Including Oil-Ice
Interactions -- SEDIMENT TRANSPORT -- Bottom Boundary Layer and
Transport of Suspended Materials -- Sediment Transport and The
Effect of Oil -- 3 Regional Oceanography and Evaluation of The
Regional Studies Programs and Washington Office Gener... --
INTRODUCTION -- THE ALASKA REGION -- Meteorology and Circulation
-- Gulf of Alaska -- Meteorology -- Circulation -- Interannual
Variability -- Bering Sea -- Meteorology -- Circulation -- Interannual
Variability -- Hydrography -- The Arctic Chukchi Sea and Bering Strait
-- The Arctic: Beaufort Sea -- Meteorology -- Circulation -- Orography
-- Sea Ice in Alaskan Waters -- Evaluation of Mms-Funded Research in
the Alaska Region -- Synopsis -- Gulf of Alaska -- Bering Sea -- Arctic
-- Sea Ice -- Evaluation of Observational Studies -- Evaluation of
Modeling Studies -- THE PACIFIC REGION -- Meteorology and
Circulation -- Mean and Seasonal Winds -- Circulation -- El Nino-
Southern Oscillations and Interannual Variations -- Upwelling and
Associated Events -- Internal Waves -- Bottom Boundary Layer --
Topographic Effects-Canyons and Capes -- Modeling -- Evaluation of
Mms-Funded Research in the Pacific Region -- History of Mms-Funded
Research in the Pacific Region -- Evaluation of Observational Studies --
Evaluation Of Modeling Studies.
THE GULF OF MEXICO REGION -- Meteorology and Circulation --
Meteorology -- Circulation -- General Circulation Features -- Major
Circulation Features -- Shelf Circulation -- Evaluation of MMS-Funded
Research in the Gulf of Mexico Region Observational Studies --
Observational Studies -- Eastern Gulf Of Mexico -- Western Gulf of
Mexico -- North-Central Gulf of Mexico -- Evaluation of Observational
Studies -- Modeling Studies -- Southwest Florida Shelf Model --
Texas-Louisiana Shelf Model -- Basin-wide Circulation Model --
Evaluation of Modeling Studies -- THE ATLANTIC REGION --
Meteorology and Circulation -- Meteorology -- Circulation -- The
South Atlantic Bight -- The Mid-Atlantic Bight And Georges Bank --

Evaluation of MMS-funded Research in the Atlantic Region -- History of
MMS-funded Research in the Atlantic Region -- Evaluation of
Observational Studies -- Evaluation of Modeling Studies --
Environmental Impact Statements -- THE WASHINGTON OFFICE -- 4
Conclusion and Recommendations -- INTRODUCTION -- THE ROLE OF
PHYSICAL OCEANOGRAPHY IN THE ESP -- CONCLUSIONS -- Acquisition
and Use of Physical Oceanographic Information -- Physical
Oceanographic Models and Processes of Importance to the Esp --
Regional Oceanography -- Evaluation of Regional Programs --
RECOMMENDATIONS -- References -- Appendices -- Appendix A
Glossary Of Physical Oceanography Terms -- Appendix B Workshop On
Modeling In Physical Oceanography -- Physical Oceanography Panel
Workshop On Oil-Spill Modeling August 5-6, 1987 -- Participants --
Workshop Recommendations -- Appendix C Physical Oceanography
Study Contracts Awarded By The Minerals Management Service 1973-
1989.
