

## Economic Losses From Marine Pollution A Handbook For Assessment

*This book describes how man-made litter, primarily plastic, has spread into the remotest parts of the oceans and covers all aspects of this pollution problem from the impacts on wildlife and human health to socio-economic and political issues. Marine litter is a prime threat to marine wildlife, habitats and food webs worldwide. The book illustrates how advanced technologies from deep-sea research, microbiology and mathematic modelling as well as classic beach litter counts by volunteers contributed to the broad awareness of marine litter as a problem of global significance. The authors summarise more than five decades of marine litter research, which receives growing attention after the recent discovery of great oceanic garbage patches and the ubiquity of microscopic plastic particles in marine organisms and habitats. In 16 chapters, authors from all over the world have created a universal view on the diverse field of marine litter pollution, the biological impacts, dedicated research activities, and the various national and international legislative efforts to combat this environmental problem. They recommend future research directions necessary for a comprehensive understanding of this environmental issue and the development of efficient management strategies. This book addresses scientists, and it provides a solid knowledge base for policy makers, NGOs, and the broader public.*

*This report reviews and evaluates the economic impact on the fisheries of the Atlantic and Gulf of Mexico coasts of the United States of other human activities. Four types of impact were considered: production of oil and gas; direct fish mortalities caused by effluent; habitat deterioration; and closure of molluscan fisheries for health reasons. An attempt is made to obtain quantitative (dollar) estimates of the impacts, both negative and positive. The main quantifiable effects are of habitat destruction on species requiring estuaries and similar areas as nurseries (particularly in the Gulf and Middle Atlantic region), and molluscan fisheries (again the Gulf region is particularly affected). Fish kills seem highly variable from year to year.*

*This volume brings together a cross-section of marine experts who provide a comprehensive exploration of the major facets of Asia's marine sector. It considers both the marine mineral and fish stocks in Asian waters. This extensive volume examines "official" statistics with an objective eye and provides an overview of fish stock with much focus on the access and management of tuna. It considers global economic issues concerning fishing rights, looks at joint ventures between nations, and considers law enforcement efforts. The volume devotes a section to sea lanes and another to off shore mineral deposits. It also considers current and growing problems and possible solutions regarding pollution.*

*Marine and Coastal Ecosystem Valuation, Institutions, and Policy in Southeast Asia*

*Hearings Before the Subcommittee on Oceans and Atmosphere ... Ninety-third Congress, First Session on S.1067 ...*

*Material Obligations and Jurisdiction with Special Reference to the Third United Nations Conference on the Law of the Sea*

*The Ocean Economy in 2030*

*Civil Liability for Marine Oil Pollution Damage*

*Contingent Valuation Assessment of the Economic Damages of Pollution to Marine Recreational Fishing*

The papers presented in this work cover themes such as sustainable tourism; ICT and tourism; marine tourism; tourism and education; tourism, economics, and finance; tourism marketing; recreation and sport tourism; halal & sharia tourism; culture and indigenous tourism; destination management; tourism gastronomy; politic, social, and humanities in tourism; heritage tourism; medical & health tourism; film induced tourism; community based tourism; tourism planning and policy; meeting, incentive, convention, and exhibition; supply chain management; hospitality management; restaurant management and operation; safety and crisis management; corporate social responsibility (CSR); tourism geography; disruptive innovation in tourism; infrastructure and transportation in tourism development; urban and rural tourism planning and development; community resilience and social capital in tourism. The 4th ISOT 2020 aimed at (1) bringing together scientists, researchers, practitioners, professionals, and students in a scientific forum and (2) having discussions on theoretical and practical knowledge about current issues in tourism. The keynote speakers contributing to this conference are those with expertise in tourism, either in an academic or industrial context.

Marine pollution is the harmful effect caused by the entry into the ocean of chemicals or particles. An associated problem is that many potentially toxic chemical's adhere to tiny particles which are then taken up by plankton and benthos animals, most of which are either deposit or filter feeders, concentrating upward within ocean food chains. Also, because most animal feeds contain high fish meal and fish oil content, toxins can be found a few weeks later in commonly consumed food items derived from livestock and animal husbandry such as meat, eggs, milk, butter and margarine. One common path of entry by contaminants to the sea are rivers. Many particles combine chemically in a manner highly depletive of oxygen, causing estuaries to become anoxic. This book presents the latest research in the field from around the world.

Contingent Valuation Assessment of the Economic Damages of Pollution to Marine Recreational Fishing

The Law of the Sea

Proceedings of the 4th International Seminar on Tourism (ISOT 2020), November 4-5, 2020, Bandung, Indonesia

## Marine Pollution

A Comparative and Economic Study of the International, US and Chinese Compensation Regime

Technical, Economic and Legal Aspects

The Impact of Marine Pollution

**Marine oil pollution is one of the most damaging environmental liabilities of our time, and is taken very seriously by governments. Although international conventions take the lead in the legal regime underpinning prevention and compensation of marine oil pollution damage, national legal systems differ considerably in how they interpret and apply their monitoring and enforcement responsibilities. This is the first book to present a comparative analysis of the law with respect to marine oil pollution, with expert contributions emphasising particular solutions in Europe, the US, and China. The authors draw on the full range of legal sources, from theory and legislation to procedure and actual case studies. Written by both academics and practitioners?senior academics with a wide experience in the field, and practitioners who have extensively dealt with marine pollution issues?the work is not confined to a mere legal analysis, but offers a more inclusive law and economics perspective, solidly built on a substantial analysis (in English) of the law in the European, US, Chinese, and international contexts. Individual contributors focus on countries with which they have particular expertise or experience. This book will be of interest to corporate counsel, international lawyers, academics, and policy makers, as well as to students of (international) environmental and maritime law. In addition, the book is especially valuable to non-Chinese lawyers for its clear insight into the complex Chinese environmental legal system.**

**This report explores the growth prospects for the ocean economy, its capacity for future employment creation and innovation, and its role in addressing global challenges. Special attention is devoted to the emerging ocean-based industries in light of their high growth and innovation potential, and contribution to addressing challenges such as energy security, environment, climate change and food security. The report examines the risks and uncertainties surrounding the future development of ocean industries, the innovations required in science and technology to support their progress, their potential contribution to green growth and some of the implications for ocean management. Finally, and looking across the future ocean economy as a whole, it explores possible avenues for action that could boost its long-term development prospects while managing the use of the ocean itself in responsible, sustainable ways. This book belongs to the OECD Report Series**

**This book is a compendium of case studies illustrating how economic tools and techniques can be used to address a wide range of problems in the management and conservation of marine and coastal ecosystems in a developing country context. The studies, which were conducted with support from the Economy and Environment Program for Southeast Asia (EEPSEA), cover topics such as mobilizing conservation finance from beneficiaries of marine and coastal ecosystem services; quantifying ecosystem damage and its impact on dependents of ecosystem resources and services; determining the best package of policy reforms that put a price on pollution and regulate economic activities generating pollution with the goal of restoring coastal and marine resources; and analyzing community-based institutions that support sustainable management of fisheries and coastal resources. Studies in the book also provide general guidelines for conducting economic appraisals. It is essential reading for teachers, researchers, students and practitioners in fishery economics, economic development, ecosystem management, and other key issues facing policymakers in the Southeast Asian region.**

**Management of Marine Plastic Debris**

**Harnessing the Benefits of Sustainable Ocean Economies for Developing Countries**

**Resources & Environment in Asia's Marine Sector**

**Pollution of the Baltic Sea**

**Environmental Pollution Control**

*Management of Marine Plastic Debris gives a thorough and detailed presentation of the global problem of marine plastics debris, covering every aspect of its management from tracking, collecting, treating and commercial exploitation for handing this anthropogenic waste. The book is a unique, essential source of information on current and future technologies aimed at reducing the impact of plastics waste in the oceans. This is a practical book designed to enable engineers to tackle this problem—both in stopping plastics from getting into the ocean in the first place, as well as providing viable options for the reuse and recycling of plastics debris once it has been recovered. The book is essential reading not only for materials scientists and engineers, but also other scientists involved in this area seeking to know more about the impact of marine plastics debris on the environment, the mechanisms by which plastics degrade in water and potential solutions. While much research has been undertaken into the different approaches to the increasing problem of plastics marine debris, this is the first book to present, evaluate and compare all of the available techniques and practices, and then make suggestions for future developments. The book also includes a detailed discussion of the regulatory environment, including international*

*conventions and standards and national policies. Reviews all available processes and techniques for recovering, cleaning and recycling marine plastic debris Presents and evaluates viable options for engineers to tackle this growing problem, including the use of alternative polymers Investigates a wide range of possible applications of marine plastics debris and opportunities for businesses to make a positive environmental impact Includes a detailed discussion of the regulatory environment, including international conventions and standards and national policies Adopting more sustainable ways of managing the ocean is a global priority: protecting its health will bring benefits to all. Developing countries face specific challenges, as many depend heavily on ocean-based industries and are overly exposed to the consequences of ocean degradation.*

*Originally published in 1980, this book by a group of international lawyers and experts from the energy industries suggests ways in which the law may have to change to cope with developments in the oil and nuclear energy industries and the way they impact on marine pollution. Incorporating issues arising on an international and comparative basis, the book discusses the approaches made to marine pollution problems by the UK, EU and USA.*

*Status of knowledge on their occurrence and implications for aquatic organisms and food safety*

*The Development Dimension Sustainable Ocean for All Harnessing the Benefits of Sustainable Ocean Economies for Developing Countries*

*Implications for Society and Well-Being*

*Suggestions Developed Within the U.S. Government for Consideration by the Secretary General of the 1972 UN Conference on Human Environment*

*Pollution of the Sea - Prevention and Compensation*

*Ocean Pollution*

**Originally published in 1974 this volume brings together contributions from lawyers, a nuclear physicist, a landscape architect, biologist, engineers and a former Inspector of the International Atomic Energy Agency. It covers technical and legal information on air, water, sea, land and noise pollution and provides a comprehensive guide, summary and introduction to the journal literature in separate but relevant disciplines. All of the contributors have specialised in studies in pollution control and contributed to the debate on use and management of the environment.**

**This report explores the growth prospects for the ocean economy, its capacity for future employment creation and innovation, and its role in addressing global challenges. Special attention is devoted to the emerging ocean-based industries.**

**The International Max Planck Research School for Maritime Affairs hosted a global conference addressing marine pollution. At this meeting, academics and practitioners came together to discuss their findings and debate recent developments from an interdisciplinary perspective. This volume reflects those discussions, examining a broad range of topics concerning the ecological, economic, political, and legal aspects of the pollution of the sea.**

**Point Sources of Pollution: Local Effects and their Control - Volume II**

**Current developments in state practice**

**Recent Developments in Europe, China and the US**

**A Two-day Seminar on Legal Problems Concerned with Pollution, Utö, 14th - 15th September, 1985**

**Oceans and Human Health**

**Hearings, Ninety-third Congress, First Session on S. 1067 ... S. 1070 ... [and] S. 1351 ... June 12, 13, and 28, 1973**

An overview of the occurrence and effects of microplastics on aquatic organisms, with recommendations regarding seafood safety and security, environmental risk assessment approaches and targeted monitoring of microplastics in the environment.

This remarkable book – the first in-depth examination of the civil liability regime for marine oil pollution damage from a law and economics perspective – examines the efficiency and effectiveness of the regime, with particular attention to whether it is in fact designed in the public interest or merely a distribution of risks and costs among interested parties. The question is asked: does the liability system give the potential polluter incentives to take precautionary measures to avoid pollution or to reduce the possibility of pollution? The international regime on civil liability for marine oil pollution rests on the International Convention on Civil Liability for Oil Pollution Damage (CLC) and the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (Fund Convention). However, the world's biggest oil consumer and importer – the United States – has ratified neither, preferring its own Oil Pollution Act of 1990 (OPA), and China – currently the world's second oil-consuming country – has not ratified the Fund Convention. Thus it is reasonable to compare the three regimes – international, US, and China – as such a comparative study may reveal some advantages or disadvantages among the three systems. Among the issues raised and tackled head-on by the author are the following: whether the contents of international conventions can be considered as the result of the influence of the various interest groups involve; overview of the regulations of marine pollution; technical standards, rules for operation, professional criteria; to what extent a state may take action against trans-boundary polluting activities; what liability a state may incur for non-action or non-effective action; significance for liability of the charter-party, generally considered the evidence of the hire of a ship, and the bill of lading, considered the evidence of the contract of carriage of goods by sea; the crucial role of the so-called 'International Group' of 13 Protection and Indemnity (P & I)

Clubs, non-profit organizations specializing in liability insurance; the main international players - the International Maritime Organization (IMO), the Comité Maritime International (CMI), and industry organizations such as INTERTANKO and the Oil Companies International Marine Forum (OCIMF); the particular regime on offshore facility pollution liability in the United States; port state control; criminal liability; and EU and other regional initiatives. In addition, a detailed study of the Erika case reveals some of the rationale for many of the persistent features of marine pollution liability regimes. The well-thought-out legal and economic analysis provided in this book, along with its clearly stated policy recommendations and constructive perspectives for future development of the liability system, will be immeasurably valuable to lawyers and policymakers active in this highly visible area of international law.

Human health and well-being are tied to the vitality of the global ocean and coastal systems on which so many live and rely. We engage with these extraordinary environments to enhance both our health and our well-being. But, we need to recognize that introducing contaminants and otherwise altering these ocean systems can harm human health and well-being in significant and substantial ways. These are complex, challenging, and critically important themes. How the human relationship to the oceans evolves in coming decades may be one of the most important connections in understanding our personal and social well-being. Yet, our understanding of this relationship is far too limited. This remarkable volume brings experts from diverse disciplines and builds a workable understanding of breadth and depth of the processes - both social and environmental - that will help us to limit future costs and enhance the benefits of sustainable marine systems. In particular, the authors have developed a shared view that the global coastal environment is under threat through intensified natural resource utilization, as well as changes to global climate and other environmental systems. All these changes contribute individually, but more importantly cumulatively, to higher risks for public health and to the global burden of disease. This pioneering book will be of value to advanced undergraduate and postgraduate students taking courses in public health, environmental, economic, and policy fields. Additionally, the treatment of these complex systems is of essential value to the policy community responsible for these questions and to the broader audience for whom these issues are more directly connected to their own health and well-being. "The seas across this planet and their effects on human society and its destiny are a fascinating subject for analysis and insights derived from intellectual inquiry. This diverse and complex subject necessarily requires a blending of knowledge from different disciplines, which the authors of this volume have achieved with remarkable success." "The following pages in this volume are written in a lucid and very readable style, and provide a wealth of knowledge and insightful analysis, which is a rare amalgam of multi-disciplinary perspectives and unique lines of intellectual inquiry. It is valuable to get a volume such as this, which appeals as much to a non-specialist reader as it does to those who are specialists in the diverse but interconnected subjects covered in this volume." (From the "Foreword" written by, R K Pachauri, Director General, TERI and Chairman, IPCC)

Marine Anthropogenic Litter

A National Strategy to Meet the Challenges of a Changing Ocean

Economic Impact of the Effects of Pollution on the Coastal Fisheries of the Atlantic and Gulf of Mexico Regions of the United States of America

New Research

Impacts of Marine Litter

Economic Aspects of the Effects of Pollution on the Marine and Anadromous Fisheries of the Western United States of America

An overview of marine pollution issues as they interface with the dynamic and rapidly evolving area of the Law of the Sea. Includes not only the "basics" of international and environmental law but an in-depth analysis of the Law of the Sea. 2 vol. supplement Appendix and Index (loose leaf). Appendixes volume includes 1992 update; Appendixes and Index volume includes 2001 Revision. William S. Hein & Co., Inc., 1986

Economic Losses from Marine Pollution A Handbook For Assessment Island Press

Point Sources of Pollution: Local Effects and their Control is a component of Encyclopedia of Environmental and Ecological Sciences, Engineering and Technology Resources in the global Encyclopedia of Life Support Systems (EOLSS), which is an integrated compendium of twenty one Encyclopedias. Point sources of pollution are the major causes of degradation of ecosystems, and may have significant effects on human health if they are not properly controlled. They can be classified in terms of sources, the discharged media, and the pollutants themselves. Broadly speaking, the sources include municipal and industrial sector activities, and the media include water, air, and solids. Noise is also an important form of pollution. Pollutant compositions from point sources can be vast, varied, and complex, and can vary between different countries and regions. The Theme discusses matters of great relevance to our world such as: Vehicular Emissions; Industrial Pollution; Domestic Pollution; Environmental Pollutants and Their Control; Technologies for Air Pollution Control; and Technologies for Water Pollution Control. These two volumes are aimed at the following five major target audiences: University and College students Educators, Professional

practitioners, Research personnel and Policy analysts, managers, and decision makers and NGOs.

Economic Losses from Marine Pollution

Microplastics in fisheries and aquaculture:

Economic Impact of Proposed Extension of Rule 702(e), Chapter 3, Illinois Pollution Control Board Rules and Regulations (R79-1)

Marine Pollution and the Law of the Sea

Prevention and Compensation of Marine Pollution Damage

Impact of Marine Pollution on Society

New to this latest edition of Marine Pollution is a greater emphasis on events outside UK waters and extensive coverage of eutrophication that is now a major marine environment threat.

This book outlines a framework for analysis of marine resource management incorporating ecological and economic considerations and technological feasibility. Ecologonomics - a new emerging science combining economic and ecological concepts and principles - is introduced. Its use in studying changes in natural processes occurring in the marine environment in combination with analysing economic consequences of human impact on marine ecosystems is demonstrated. A unique book, which offers a rare insight into the research achievements of Russian scientists.

The ocean has absorbed a significant portion of all human-made carbon dioxide emissions. This benefits human society by moderating the rate of climate change, but also causes unprecedented changes to ocean chemistry. Carbon dioxide taken up by the ocean decreases the pH of the water and leads to a suite of chemical changes collectively known as ocean acidification. The long term consequences of ocean acidification are not known, but are expected to result in changes to many ecosystems and the services they provide to society. Ocean Acidification: A National Strategy to Meet the Challenges of a Changing Ocean reviews the current state of knowledge, explores gaps in understanding, and identifies several key findings. Like climate change, ocean acidification is a growing global problem that will intensify with continued CO<sub>2</sub> emissions and has the potential to change marine ecosystems and affect benefits to society. The federal government has taken positive initial steps by developing a national ocean acidification program, but more information is needed to fully understand and address the threat that ocean acidification may pose to marine ecosystems and the services they provide. In addition, a global observation network of chemical and biological sensors is needed to monitor changes in ocean conditions attributable to acidification.

Marine Pollution in International Law

A Handbook For Assessment

Submitted in Compliance with Sections 201 and 202, Title II of the Marine Protection, Research, and Sanctuaries Act of 1972 (Public Law 92-532).

The Ecology and Economics of Marine Natural Resources Management

Ocean Acidification

Marine Ecologonomics

Marine pollution causes significant damage to fisheries and other economically productive uses of the ocean. The value of that damage can be quantified by economists, but the meanings of those valuations and how they are derived are often obscure to noneconomists. Economic Losses from Marine Pollution brings a fuller understanding of the variety and extent of marine losses and how they are assessed to scientists, lawyers, and environmentalists by systematically identifying and classifying marine losses and relating them to models and methods of economic valuation. The authors use a step-by-step approach to show how economists have used these methods and how they approach the problem of assessing economic damage. The book begins by describing the importance of economic valuation of marine damages, the history of concern over marine pollution, and the development of economic methodologies to assess damage from it. Following that, the book: considers types of marine pollution and their effects on organisms, ecosystems, and humans, and the corresponding economic effects of those biological impacts introduces the economic principles and methods needed to understand and to assess economic damages expresses losses from water quality impairments in terms of economic value introduces the basic economic techniques that have been developed and used to measure changes in economic value discusses how to apply those economic techniques, and presents a variety of practical examples explores limitations and problems that can arise in such applied work. Economic Losses from Marine Pollution includes all of the relevant economic theory together with specific examples of how that theory has been and can be applied. It offers environmental professionals with little or no background in economics the basic economic tools needed to understand economic valuations of environmental damage, and represents a unique handbook for environmental and marine scientists, lawyers, economists, policy professionals, and anyone interested in issues of marine water quality.

National Marine Pollution Program Plan, Federal Plan for Ocean Pollution Research, Development & Monitoring

Promoting Creative Tourism: Current Issues in Tourism Research

Report to the Congress on Ocean Pollution, Monitoring and Research

International Cooperation for the Prevention of Marine Oil Pollution