

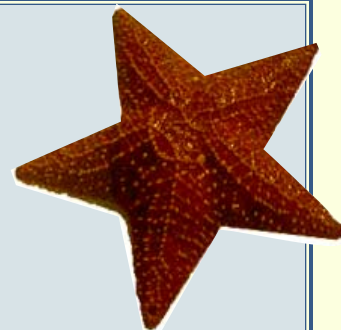


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I.

ADMIRALTY

Robertson, David W., and Michael F. Sturley. "Recent Development: Recent Developments in Admiralty and Maritime Law at the National Level and in the Fifth and Eleventh Circuits." 30 *Tulane Maritime Law Journal* 195 – 309 (2006).

Robertson and Sturley discuss developments in admiralty and maritime law at the national level, including the debate over the treatment of unpublished opinions by the federal appellate courts, analysis of cases decided by the Supreme Court, and analysis of other decisions from around the country. In discussing developments in the Fifth and Eleventh Circuits, the authors highlight various issues, including decisions regarding admiralty tort jurisdiction and vertical choice of law stipulations.



II.

AQUACULTURE

Kristofersson, Dadi, and James L. Anderson. "Is There a Relationship between Fisheries and Farming? Interdependence of Fisheries, Animal Production, and Aquaculture." 30 *Marine Policy* 721 – 725 (2006).

Fishmeal is a critically important feed ingredient for use in animal and aquaculture production. Increasing demand for fishmeal may increase stress on the world's pelagic fisheries and undermine the sustainability of aquaculture systems. Kristofersson and Anderson's research reveals that the fishmeal sector has changed since 1998. The increased cost of fishmeal seems to have acted as a stimulus for innovation, which may have significant implications for the management and health of pelagic fisheries.

Primavera, J. H. "Overcoming the Impacts of Aquaculture on the Coastal Zone." 49 *Ocean and Coastal Management* 531 – 545 (2006).

The opportunities provided by coastal aquaculture, such as increased employment, income, and foreign exchange, have been overshadowed by negative environmental and social effects. Primavera provides recommendations for the attainment of responsible and sustainable aquaculture, such as application of integrated coastal zone management principles.

Rosendal, G. Kristin, et. al. "Access to and Legal Protection of Aquaculture Genetic Resources—Norwegian Perspective." 20 *Conservation Biology* 392 – 412 (2006).

Norwegian fish farmers are faced with a paradox: the need for unencumbered and free access to genetic resources, and the need to ensure a right to the results achieved through breeding and research. Rosendal and co-authors outline the legal issues associated with obtaining this data and provide an assessment of the impact of technological and biological features pertaining to fish genetic resources.

Umemoto, Karen, and Krisnawati Suryanata. "Technology, Culture, and Environmental Uncertainty: Considering Social Contracts in Adaptive Management." 25 *Journal of Planning Education and Research* 264 – 274 (2006).

Umemoto and Suryanata present a case study of mariculture development in Hawaii and suggest that planners and policymakers consider informal social contracts as com-



plements to formal regulatory frameworks. Informal social contracts may increase the viability of adaptive management regimes in the face of uncertainty.



III.

COASTAL MANAGEMENT

Chua, Thia-Eng, et. al. "Dynamics of Integrated Coastal Management: PEMSEA's Experience." 34 *Coastal Management* 303 – 322 (2006).

Achieving the ultimate goal of integrated coastal management (ICM), improvement of the quality of life of coastal inhabitants through achieving sustainable development objectives, is often hindered by policy and financial and capacity barriers. Chua highlights the experience of Xiamen Municipality, People's Republic of China, to showcase how it transformed from an environmentally degraded municipality into a modern, urban garden city in just over a decade. Chua also discusses lessons learned from several other ICM initiatives in East Asia.

Cooper, N. J., and N. I. Pontee. "Appraisal and Evolution of the Littoral 'Sediment Cell' Concept in Applied Coastal Management: Experiences from England and Wales." 49 *Ocean and Coastal Management* 498 – 510 (2006).

Cooper and Pontee review the historic approach to coastal management in England and Wales and the reasons behind the introduction of the littoral "sediment cell" concept to shoreline management planning. The authors discuss the strengths and weaknesses of this approach, make recommendations for improvement, and provide a foundation for enabling sustainable future management decisions.

Glavovic, Bruce C. "The Evolution of Coastal Management in South Africa: Why Blood is Thicker than Water." 49 *Ocean and Coastal Management* 889 – 904 (2006).

This is the first of two articles exploring coastal management in South Africa. Glavovic traces the evolution of coastal management in South Africa and reflects on the challenges of fostering coastal sustainability.

Harding, Simon, et. al. "Baseline Data Analysis as a Tool for Predicting the Conservation Value of Tropical Coastal Habitats in the Indo-Pacific." 49 *Ocean and Coastal Management* 696 – 705 (2006).

Harding and co-authors introduce a technique of data analysis to define the conservation value of the shallow (<30 m) tropical coastal environment. The authors state that subsequent analysis of benthic and reef fish data allows spatial comparison of sites of differing conservation value and the geographic delineation of marine protected areas.

Hills, J. M., et. al. "Capacity Building for Integrated Coastal Management in Asia-Pacific: The Case for Case Studies." 34 *Coastal Management* 323 – 337 (2006).

Increasing awareness and capacity is a central component to the delivery of integrated coastal management (ICM) programs. Hill and co-authors argue that education and training activities must be extremely varied to match both the existing capacity and role of stakeholders. The authors present six case studies from the Asia-Pacific region and conclude that there appears to be a positive link between the involvement of



national/state/regional stakeholders in capacity-building initiatives and impact on a wide variety of indicators of ICM delivery.

Hong, Huasheng, and Xiongzhi Xue. “Building up a Training Base for Integrated Coastal Management through Partnerships in Xiamen.” 49 *Ocean and Coastal Management* 685 – 695 (2006).

Hong and Xue argue that integrated coastal management (ICM), in general, has proven to be a workable management scheme in China. The authors discuss the establishment of the International Training Center for Coastal Sustainable Development and its role in disseminating the experiences and expertise of the Xiamen ICM site; the advancement of public education on ICM; and the expansion of professional education in ICM through a Joint Masters Program in Environmental Management with the University of San Francisco.

Khor, Hui-Min, and Siti Normala Sheikh Obid. “Economic Instruments and their Potential in Conserving the Malaysian Coastal Zone.” 49 *Ocean and Coastal Management* 727 – 738 (2006).

The United States, the United Kingdom, and other European nations have used economic instruments (EIs) as a tool to curb pollution. EIs for environmental protection have not yet been introduced in Malaysia, but general tax incentives coupled with grants and subsidies have been in place for the past ten years. Khor and Obid argue that the present environmental legislation is not effective and that EIs such as green/environmental tax should be considered by the Malaysian Government.

Lane, Marcus B. “Towards Integrated Coastal Management in Solomon Islands: Identifying Strategic Issues for Governance Reform.” 49 *Ocean and Coastal Management* 421 – 441 (2006).

Lane examines the governance arrangements in Solomon Islands with regard to their ability to achieve integrated coastal management. Lane’s research suggests systemic failure of coastal governance in Solomon Islands.

Morin Dalton, Tracey. “Exploring Participants’ Views of Participatory Coastal Marine Resource Management Processes.” 34 *Coastal Management* 351 – 367 (2006).

Morin Dalton examines participants’ perceptions of coastal and marine resource management processes. Responses to semi-structured interviews offer insight into the multiple dimensions of participatory process elements, such as influence on decisions, exchange of information, access to the process, and transparent decision making.

Ocean Studies Board. National Research Council. *Mitigating Shore Erosion Along Sheltered Coasts* (2006).

Sheltered coastal areas experience land loss from erosion and sea level rise, and property owners often reinforce the shoreline with bulkheads and other structures. At the request of the Environmental Protection Agency, the U.S. Army Corps of Engineers, and the Cooperative Institute for Coastal and Estuarine Environmental Technology, the Ocean Studies Board examined the impacts of shoreline management on sheltered



coasts. The report recommends a regional management approach that considers the environmental impacts that could accumulate if hard structures continue to be permitted on a site-by-site basis. The report also recommends a change in the current permitting system to remove the default preference for bulkheads and similar structures. (*Report available online at* <http://www.nap.edu/catalog/11764.html>).

Rakotoson, Lalaina R., and Kathryn Tanner. "Community-based Governance of Coastal Zone and Marine Resources in Madagascar." 49 *Ocean and Coastal Management* 855 – 872 (2006).

The traditional social code in Madagascar, generally known as "*Dina*," has coexisted with the modern law since the pre-colonial era. Rakotoson and Tanner illustrate the role of *Dina* as a mechanism for reconciling modern decentralized and traditional governance of marine resources and the coastal zones.

Rockloff, S. F., and S. Lockie. "Democratization of Coastal Zone Decision Making for Indigenous Australians: Insights from Stakeholder Analysis." 34 *Coastal Management* 251 – 266 (2006).

Rockloff and Lockie argue that, in the absence of an explicit strategy for democratization and capacity-building, community participation is potentially meaningless. The authors examine the shortcomings of participatory processes in coastal resource management and seek to identify and overcome constraints to democratization and capacity-building for Indigenous Australians. Two coastal catchments in Central Queensland are presented as a case study.

Siry, Hendra Yusran. "Decentralized Coastal Zone Management in Malaysia and Indonesia: A Comparative Perspective." 34 *Coastal Management* 267 – 285 (2006).

Siry analyzes decentralized coastal zone management in two neighboring countries, Malaysia and Indonesia. Siry argues that the federal system in Malaysia is able to influence more decentralized coastal zone management and promote community-based management. The diversity of coastal resources and communities combined with a nascent decentralization policy in Indonesia presents more implementation challenges.

Smith, George P., II, and Michael Seeney. "The Public Trust Doctrine and Natural Law: Emanations within a Penumbra." 33 *Boston College Environmental Affairs Law Review* 307 – 343 (2006).

Smith and Seeney discuss the evolution of the public trust doctrine under common law and the Constitution, while exploring how modern resources fit within the doctrine. The authors acknowledge the call for expanding the application of the public trust doctrine and determine that the expansion should be limited by principled economic reasoning.

Smith, Timothy F., et. al. "Improving the Quality of Life in Coastal Areas and Future Directions for the Asia-Pacific Region." 34 *Coastal Management* 235 – 250 (2006).

Smith and co-authors summarize lessons and outcomes from the second international Coastal Zone Asia-Pacific conference (CZAP) on "Improving the Quality of Life in



Coastal Areas,” held in Brisbane in September 2004. Mechanisms to address coastal poverty, sustainable livelihoods, and protection of cultural heritage were explored, as well as the continuing need for integrated planning, environmental management, and effective monitoring and evaluation. The authors argue that two key challenges for ICM in the Asia-Pacific region remain: effective monitoring and evaluation of ICM initiatives and matching future ICM initiatives to emergent priority areas.

Souza Filho, Pedro Walfir M., et. al. “Using Mangroves as a Geological Indicator of Coastal Changes in the Bragança Macrotidal Flat, Brazilian Amazon: A Remote Sensing Data Approach.” 49 *Ocean and Coastal Management* 462 – 475 (2006).

Within mangrove ecosystems, there are close links between geomorphology and vegetation assemblage. Vegetation can change over time as a response to coastal sedimentary processes. Mangrove morphology and sedimentation are therefore good indicators of interactions between relative sea level changes, coastal processes, and sediment supply. Souza Filho and co-authors argue that mangroves are one of the best geo-indicators in global coastal change research.

Thompson, Robert. “Property Theory and Owning the Sandy Shore: No Firm Ground to Stand On.” 11 *Ocean and Coastal Law Journal* 47 – 71 (2006).

Thompson examines the private ownership of the dry sand beach in terms of the leading moral theories that justify the private ownership of land, which are first-in-time, possession, labor theory, personality theory, and aggregate social utility. Thompson concludes that none of these theories provides a clearly satisfactory justification for the private ownership of most beaches and argues that the lack of strong moral arguments can be used to justify different public policies expanding public access to the beaches.

Torrell, Elin, et. al. “Examining the Linkages Between AIDS and Biodiversity Conservation in Coastal Tanzania.” 49 *Ocean and Coastal Management* 792 – 811 (2006).

Torrell and co-authors summarize a field study on the linkages between AIDS and coastal biodiversity in eight coastal villages in the Bagamoyo and Pangani Districts in Tanzania. The authors suggest that there are three categories of direct impacts of AIDS on natural resources — accelerated rate of resources extraction, decreased availability of labor and management capacity, and loss of indigenous knowledge in coastal resource management and biodiversity conservation.

Valdemoro, Herminia I., and José A. Jiménez. “The Influence of Shoreline Dynamics on the Use and Exploitation of Mediterranean Tourist Beaches.” 34 *Coastal Management* 405 – 423 (2006).

Valdemoro and Jiménez analyze the potential influence of shoreline dynamics on beach use and the exploitation for recreational purposes along the Mediterranean coast. The authors assume that beach carrying capacity is mainly influenced by the available sub-aerial surface, which can be affected by three main aspects of shoreline dynamics: long-term erosion, shoreline reorientations in bayed beaches, and storm-induced changes.



Valdemoro and Jiménez introduce the concept of “optimum beach width” and discuss examples from Spanish beaches.

White, Alan, et. al. “Integrated Coastal Management in Philippine Local Governance: Evolution and Benefits.” 34 *Coastal Management* 287 – 302 (2006).

In 1991, the Philippine government shifted many coastal management responsibilities to local governments and fostered increased local participation in the management of coastal resources. White and co-authors argue that while many local governments have increased public awareness of coastal resource management issues, significant challenges remain such as financial sustainability, inadequate capacities, weak law enforcement, and lack of integrated and collaborative efforts. The authors examine a certification system which was developed to improve strategies and promote incentives for local governments to support integrated coastal management and conclude that implementation is providing tangible benefits to communities.

Wright, Andrew, et. al. “The Cooperative Framework for Ocean and Coastal Management in the Pacific Islands: Effectiveness, Constraints, and Future Direction.” 49 *Ocean and Coastal Management* 739 – 763 (2006).

The framework for management of the ocean and coasts of the Pacific Islands region has been evolving since the early 1970s. Wright and co-authors present a broad overview of regional arrangements for ocean and coastal management in the Pacific Islands region, including the work of the various regional intergovernmental organizations and the consultative arrangements that support coordination and collaboration. The authors argue that consultative arrangements need strengthening on both the national and regional level.



IV.

COASTAL HAZARDS

Kesavan, P. C. “Managing Extreme Natural Disasters in Coastal Areas.” 364 *Philosophical Transactions* 2191 – 2216 (2006).

The coastal communities of developing countries are more vulnerable to catastrophic natural disasters. Kesavan uses India as an example, arguing that the low level of technology development in rural areas combined with social, economic, and gender inequities enhance the vulnerability of the largely illiterate, unskilled, and resource-poor fishing, farming, and landless labor communities. The MS Swaminathan organization seeks to educate people in these regions in boosting their economy and infrastructure, becoming aware of the potential danger, and being able to handle a crisis should they be faced with one.

Marchand, Hélène. “Impacts of the Tsunami on a Marine National Park Area – Case Study of Lanta Islands (Thailand).” 49 *Ocean and Coastal Management* 923 – 946 (2006).

The Lanta Islands are located in the province of Krabi, Thailand. Although the impact of the December 2004 tsunami was not as tragic there, several villages were affected and the biological destruction is still being assessed. These islands include the Marine



National Park (MNP) of Ko Lanta established in 1990. Marchard presents a geographical picture of Ko Lanta MNP through a comparative analysis of conditions before and after the waves.

Obura, David. "Impacts of the 26 December 2004 Tsunami in Eastern Africa." 49 *Ocean and Coastal Management* 873 – 888 (2006).

Although the December 26, 2004 tsunami resulted in the deaths of over 250,000 people, most of eastern Africa was spared massive damages. Obura highlights some of the tsunami impacts experienced in that region.

Pomeroy, Robert S., et. al. "Coping with Disaster: Rehabilitating Coastal Livelihoods and Communities." 30 *Marine Policy* 786 – 793 (2006).

Pomeroy and co-authors examine lessons from past approaches to natural disasters, as well as early lessons from the post-2004 Asian tsunami rehabilitation, to develop general principles for rehabilitating livelihoods in poor coastal communities.



V.

CORAL REEFS

Cinner, J. E., and T. R. McClanahan. "Socioeconomic Factors that Lead to Overfishing in Small-scale Coral Reef Fisheries of Papua New Guinea." 33 *Environmental Conservation* 1 – 8 (2006).

The coral reefs of Papua New Guinea have long been teeming with a diverse array of aquatic life, supporting a rich fishery. Cinner and McClanahan argue that the socioeconomic human element has affected the region through increased commercialization, population growth, promotion of fisheries development projects, and the live-reef food fish trade. The authors examine these issues and how they pertain to six sites in Papua New Guinea. Catch factors such as diversity, trophic level, and body size by landing site are considered.

Kenyon, Jean C., et. al. "Towed-Diver Surveys, a Method for Mesoscale Spatial Assessments of Benthic Reef Habitat: A Case Study at Midway Atoll in the Hawaiian Archipelago." 34 *Coastal Management* 339 – 349 (2006).

Kenyon and co-authors describe an integrated method for benthic habitat assessment in which divers maneuver boards equipped with digital video, temperature, and depth recorders while being towed behind a small boat. The authors present the results of fifteen towed-diver surveys at Midway Atoll in the Hawaiian Archipelago during a mass coral bleaching event and argue that these surveys bridge a gap between large-scale mapping efforts using satellite data and small-scale, roving diver assessments, providing a mesoscale spatial assessment of reef habitats.

Walworth, Nancy. "Regulating Aesthetics of Coastal Maine: *Kroeger v. Department of Environmental Protection*." 11 *Ocean and Coastal Law Journal* 99 – 120 (2006).

Using *Kroeger v. Department of Environmental Protection*, Walworth examines the use of aesthetics as a legitimate basis for regulations protecting visual resources. Specifically, she details the development of nuisance law into a legitimate exercise of police power,



examines where Maine stands in the use of aesthetic regulation after *Kroeger*, and reviews approaches taken by other jurisdictions in applying aesthetic regulations.

Wilkinson, Clive, et. al. "Strategies to Review the Decline in Valuable and Diverse Coral Reefs, Mangroves, and Fisheries." *The Bottom of the J-Curve in Southeast Asia?* 49 *Ocean and Coastal Management* 764 – 778 (2006).

Southeast Asia contains outstanding and diverse tropical marine resources which are now severely threatened. The effectiveness of marine protected areas and other strategies have remained inconsistent. Wilkinson and co-authors argue that deficiencies are linked to the level of economic development, as well as the level of scientific and resource management education and the total amount of marine resources in the country.

Yeemin, Thamasak, et. al. "Coral Reef Restoration Projects in Thailand." 49 *Ocean and Coastal Management* 562 – 575 (2006).

Due to fisheries and tourism pressures, Thailand's coral reefs have deteriorated over the past several decades. Yeemin and co-authors review the achievements of selected coral reef restoration projects and provide guidelines for future restoration initiatives.



VI.

DAMS

Becker, David H. "The Challenges of Dam Removal: The History and Lessons of the Condit Dam and Potential Threats from the 2005 Federal Power Act Amendments." 36 *Environmental Law* 811 – 868 (2006).

The author conveys that the 2005 amendments to the Federal Power Act could complicate attempts to remove dams and to make assured fish passage a requirement in hydropower project relicensing. He also describes how the regulations are procedurally burdensome for those promoting fish passage and will create more prolonged and expensive relicensing processes for dams.



VII.

ECOSYSTEM MANAGEMENT

Christie, Donna R. "Implementing an Ecosystem Approach to Ocean Management: An Assessment of Current Regional Governance Models" 16 *Duke Environmental Law and Policy Forum* 117 – 142 (2006).

Christie examines two ocean policy studies conducted by the Pew Oceans Commission and the United States Commission on Ocean Policy. In the article, she notes the responses of the President, the Senate, and the House of Representatives to the results of the studies. Christie points out that, although all of the entities recognize the need for a regional approach, the proposed methods for enacting regional ocean governance vary widely.

Duda, Alfred M. "Policy, Legal, and Institutional Reforms for Public-private Partnerships Needed to Sustain Large Marine Ecosystems of East Asia." 49 *Ocean and Coastal Management* 649 – 661 (2006).

Biomass and diversity has been dramatically reduced in the marine waters of East Asia due to overfishing, habitat destruction, and pollution loading. Duda argues that reforms



are essential in order to reverse these trends, including global trade reforms and reduction of agricultural/fisheries subsidies in the North.

Light, Alfred R. "The Waiter at the Party: A Parable of Ecosystem Management in the Everglades." 36 *Environmental Law Reporter* 10771 – 10807 (2006).

Using the Florida Everglades as an example, Light explains how adopting more flexible management strategies could help regulators adapt more easily to changing circumstances. He suggests horizontal, intergovernmental networks be used in place of traditional legal or hierarchal structures to assist with policy implementation.

Miclat, Evangeline F. B., et. al. "Planning Across Boundaries for the Conservation of the Sulu-Sulawesi Marine Ecoregion." 49 *Ocean and Coastal Management* 597 – 609 (2006).

In 1999, the World Wide Fund (WWF) for Nature and its partners launched the Sulu-Sulawesi Marine Ecoregion (SSME) Conservation Program. Miclat and co-authors discuss the ecoregion planning process which involved the formulation of a Biodiversity Vision—a 50-year conservation goal—and the development of a stakeholders' Ecoregion Conservation Plan (ECP). The interim mechanisms that operated during the planning phase of the SSME Program are expected to evolve into formal institutional arrangements appropriate for the implementation of the ECP.

Nauen, Cornelia E. "Implementing the WSSD Decision of Restoring Marine Ecosystems by 2015 – Scientific Information Support in the Public Domain." 30 *Marine Policy* 455 – 461 (2006).

In September 2002, at the World Summit on Sustainable Development (WSSD) in Johannesburg, South Africa, participants agreed to the objective of restoring degraded fish stocks to productive levels by 2015. Nauen examines the evidence leading to this decision and documents how public archiving of research results and other knowledge has been effective in counteracting shifting baselines and monitoring progress towards the WSSD goals.

Rieser, Alison. "Properties of Carol Rose: A Celebration: Commons and the Public Domain: Comment: Oysters, Ecosystems, and Persuasion." 18 *Yale Journal of Law and the Humanities* 49 – 55 (2006).

Rieser uses the history of the oyster in the Chesapeake Bay to examine how society has shaped itself around natural resources and places. She discusses the potential for the introduction of a non-native oyster imported from Asia to restore the estuarine ecosystem and the fisheries of the Bay.

Rosenberg, Andrew A. "Oceanic Ecosystem Management: Challenges and Opportunities for Regional Ocean Governance: Regional Governance and Ecosystem-based Management of Ocean and Coastal Resources: Can We Get There from Here?" 16 *Duke Environmental Law and Policy Forum* 179 – 185 (2006).

Two ocean commissions have recommended a regional, ecosystem-based approach to the management of ocean and coastal resources. Rosenberg reviews the benefits of the



ecosystem approach and compares it with the current approaches, which usually focus on a single area of concern. He also suggests the elements necessary to help an ecosystem-based approach succeed.

Salzman, James. "A Field of Green? The Past and Future of Ecosystem Services." 21 *Journal of Land Use and Environmental Law* 133 – 151 (2006).

Salzman discusses the past and present use of ecosystem services, pointing out the barriers to recognition, assessment, and management of such services. He highlights ecosystem services in New Zealand and several Australian states that have utilized land use planning authority throughout an entire watershed, which are the exception to the operation of most ecosystem services.

Sherman, Kenneth. "The Large Marine Ecosystem Network Approach to WSSD Targets." 49 *Ocean and Coastal Management* 640 – 648 (2006).

In 2002, at the World Summit on Sustainable Development (WSSD), over 100 countries agreed on several specific ecosystem-related targets including the introduction of the ecosystems approach to marine resource assessment and management by 2010. The Global Environment Facility (GEF) is assisting developing countries in meeting the WSSD targets by supporting Large Marine Ecosystem (LME) assessment and management projects. Sherman examines these GEF projects.

Stacey, Natasha, et. al. "The Pacific International Waters Project: Aims, Approaches, and Challenges." 49 *Ocean and Coastal Management* 610 – 626 (2006).

Stacey and co-authors review pilot activities being carried out under the Integrated Coastal Watershed Management component of the Pacific International Waters Project (IWP). The authors highlight a two-pronged approach being taken to address the root causes of identified threats and local level activities which are focusing on coastal fisheries, waste management, and freshwater protection.



VIII. ENDANGERED SPECIES

Avissar, Naomi G. "Modeling Potential Impacts of Beach Replenishment on Horseshoe Crab Nesting Habitat Suitability." 34 *Coastal Management* 427 – 441 (2006).

Beach replenishment has been proposed to increase nesting habitat for horseshoe crabs, but replenishment may actually compromise egg development and viability. Avissar argues that beach replenishment should not be recommended for increasing or improving horseshoe crab habitat, unless care is taken to match fill sediment to natural grain size and color.

Blumm, Michael C., et. al. "Practiced at the Art of Deception: The Failure of Columbia Basin Salmon Recovery Under the Endangered Species Act." 36 *Environmental Law* 709 – 810 (2006).

Blumm and co-authors examine NOAA's implementation of the Endangered Species Act with regard to Columbia Basin Salmon. The authors charge that the federal agen-



cies responsible for regulating the Columbia Basin dams have not acted to encourage salmon restoration. The article discusses lawsuits that have been filed challenging NOAA's implementation of the ESA and how those suits have shaped the current judicial climate regarding salmon recovery.

Kaulukukui, Koalani Laura. "The Brief and Unexpected Preemption of Hawaii's Humpback Whale Laws: The Authority of the States to Protect Endangered Marine Mammals Under the ESA and the MMPA." 36 *Environmental Law Reporter* 10712 - 10742 (2006).

Hawaii's humpback whales are protected by the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA), as well as by a state seasonal thrill craft ban. Kaulukukui discusses the role of states in protecting species covered under the ESA and highlights a court case which held Hawaii's laws were preempted by the ESA and the MMPA.

Loomis, John. "Estimating Recreation and Existence Values of Sea Otter Expansion in California Using Benefit Transfer." 34 *Coastal Management* 387 - 404 (2006).

Loomis demonstrates how benefit transfer can quantify tourism and existence values and argues that such an approach would contribute to a more complete economic analysis of endangered species recovery or critical habitat efforts. Loomis' analysis suggests that the benefit estimates of sea otter expansion exceed the costs to commercial fishing.



IX.

ENVIRONMENTAL LAW

Auslander, James M. "Reversing the Flow: The Interconnectivity of Environmental Law in Addressing External Threats to Protected Lands and Waters." 30 *Harvard Environmental Law Review* 481 - 549 (2006).

Auslander examines the Big South Fork National River and Recreation Area, located in Appalachia, to show how current environmental laws may be better used to respond to challenges caused by the extraction of natural resources, such as coal, water, and timber. He offers court cases, legislative history, and other legislative sources to make the case for broadening current environmental laws to offer better protection for all National Parks and surrounding areas.

Cannon, Jonathan. "Environmentalism and the Supreme Court: A Cultural Analysis" 33 *Ecology Law Quarterly* 363 - 441 (2006).

Cannon reviews the Supreme Court's major decisions in environmental cases over the past three decades. He shows how the Court's decisions have helped and hindered environmentalism and highlights the current challenge for environmentalists seeking to influence legal culture.

Lin, Albert C. "The Unifying Role of Harm in Environmental Law." 2006 *Wisconsin Law Review* 897 - 985 (2006).

Lin explores the concept of environmental harm, giving examples from different areas of law, such as environmental torts, environmental statutes, takings law, and the law of



constitutional standing. He discusses philosophers John Stuart Mill and Joel Feinberg, who both studied the concept of harm, and gives an overview of the most recent questions surrounding the concept of harm in environmental law.

Martinez, Peter J., et. al. "Environmental Crimes." 43 *American Criminal Law Review* 381 – 458 (2006).

Martinez analyzes the common issues of liability, defenses, and sentencing surrounding statutes used to enforce federal environmental regulations through criminal prosecution. He includes a discussion of enforcement, among others, of the Clean Air Act, the Clean Water Act, the Safe Water Drinking Act, and the Endangered Species Act.

Plater, Zygmunt J.B. "Law, Media, and Environmental Policy: A Fundamental Linkage in Sustainable Democratic Governance" 33 *Boston College Environmental Affairs Law Review* 511 – 549 (2006).

Plater discusses the relationship of environmental law and the media and its effect on national and international policies. In his analysis, Plater not only provides a snapshot of the larger effect of the media, but also examines its effects on everyday lawyering and local government.

Ruhl, J.B., and James Salzman. "In Defense of Regulatory Peer Review." 84 *Washington University Law Review* 1 – 61 (2006).

Ruhl and Salzman address peer review, comparing its use in the scientific community with its use in agency decision making. The article outlines the arguments for and against the use of regulatory peer review, concluding that its use by regulatory agencies is practicable and useful. The article also reviews current proposals under consideration for the design of regulatory peer review.

Stasch, Anna D. "Arc Ecology v. United States Department of the Air Force: Extending the Extraterritorial Reach of Domestic Environmental Law." 36 *Environmental Law* 1065 – 1095 (2006).

Stach uses *Arc Ecology v. United States Department of the Air Force*, along with three other Ninth Circuit cases, to discuss the analysis a court might use when applying a presumption against extraterritorial application of environmental laws. She also suggests a method to prevent the application of such a presumption.



X.

FISHERIES MANAGEMENT

Allison, Edward H., and Benoit Horemans. "Putting the Principles of the Sustainable Livelihoods Approach into Fisheries Development Policy and Practice." 30 *Marine Policy* 757 – 766 (2006).

The Sustainable Livelihoods Approach (SLA) is widely used in coastal and fisheries development research and informs the design of development programs. Operational experience, however, remains largely undocumented. Allison and Horemans argue that in the Sustainable Fisheries Livelihoods Programme, which involves twenty-five African countries, the SLA has helped align fisheries policy with poverty reduction ini-



tatives and identify opportunities for poverty reduction which do not directly increase pressure on fish resources.

Alpízar, Marco Antonio Quesada. "Participation and Fisheries Management in Costa Rica: From Theory to Practice." 30 *Marine Policy* 641 – 650 (2006).

Although participatory fisheries management is often touted as a useful approach for addressing fisheries programs, the criteria regarding applicability and measures of success are unclear. Alpízar reviews the main concepts and theory behind two participatory resource-management approaches and compares them to the reality of fisheries management in Costa Rica.

Bouwer Utne, Ingrid. "Systems Engineering Principles in Fisheries Management." 30 *Marine Policy* 624 – 634 (2006).

Bouwer Utne discusses the application of systems engineering principles and integration of technology into fisheries management. The systems engineering process facilitates implementation of multi-disciplinary information and may help scientists overcome multi-disciplinary obstacles. Bouwer Utne concludes that the use of systems engineering principles may become a valuable contribution to fisheries management by increasing transparency and reducing risk.

Brandt, Sylvia, and David McEvoy. "Distributional Effects of Property Rights: Transitions in the Atlantic Herring Fishery." 30 *Marine Policy* 659 – 670 (2006).

Brandt and McEvoy use econometric analysis to simulate the potential impact of individual tradable quotas (ITQs) in a fishery. The authors compare the distribution of harvest across participants in the Atlantic Herring fishery under the current open access regime and under a potential ITQ regime, assuming two different levels of future demand. Brandt and McEvoy argue that this analytical approach can help regulators in any fishery assess the potential impact of alternative policy changes under alternative future demand scenarios.

Bryant, Beth C. "NEPA Compliance in Fisheries Management: The Programmatic Supplemental Environmental Impact Statement on Alaskan Groundfish Fisheries and Implications for NEPA Reform." 30 *Harvard Environmental Law Review* 441 – 479 (2006).

The National Environment Policy Act (NEPA) has been the subject of debate at federal agencies in recent years. Bryant uses NOAA Fisheries' programmatic supplemental environmental impact statement on the Alaskan groundfish fishery to discuss the possibility of improving NEPA implementation, without changing the current regulatory framework. Instead, she suggests clarification of areas that cause legal uncertainty.

Catchpole, T. L., et. al. "Resolving the Discard Problem – A Case Study of the English *Nephrops* Fishery." 30 *Marine Policy* 821 – 831 (2006).

Catchpole and co-authors studied the phenomenon of discarding using a multidisciplinary approach which allowed the integration of biological, social and economic data. The authors evaluated the English *Nephrops* fishery to identify specific objectives for discard reduction, identify factors that inhibit discard reduction, and determine the best



means of achieving those objectives. The authors argue that changes in trawl structure offer the best solution while having the least impact on fishing opportunities. An inadequate level of incentive was identified as the main impediment.

Chuenpagdee, Ratana, and Alida Bundy. "What Was Hot at the Fourth World Fisheries Congress?" 7 *Fish and Fisheries* 147 – 150 (2006).

Chuenpagdee and Bundy report on the status of international fisheries management. Their assessment discusses the results of research papers submitted at the Fourth World Fisheries Congress, with the theme 'Reconciling Fisheries with Conservation.' Many of the papers focused on natural sciences, specifically issues such as biodiversity, species at risk, resiliency, ecosystem modeling, and ecosystem indicators. The issue of communicating scientific research findings to the public is also addressed.

Clark, Colin "Fisheries Bioeconomics: Why is it so Misunderstood?" 48 *Population Ecology* 95 – 98 (2006).

Clark reports on the failure of fisheries to avoid the problem of overfishing. Despite catch limits being scientifically based on figures to maintain a healthy stock, many fishermen, in an effort to meet the total catch quota, are forced to compete for business. Additional input from individual fishing quotas (IFQ) is affecting the figures as well, with issues of royalties, risk management, and fees for a publicly owned resource.

Davis, Anthony, and John Wagner. "A Right to Fish for a Living? The Case for Coastal Fishing People's Determination of Access and Participation." 49 *Ocean and Coastal Management* 476 – 497 (2006).

Fisheries management systems around the world are generally dominated by the proprietary claims of nation states, which are embodied in a number of international agreements. Davis and Wagner present research results from Nova Scotia, Canada, which reveal that small-boat fishing families have been continuously fishing the grounds adjacent to their communities for many generations. Those same families must now, however, fish those areas on the basis of a state-granted "privilege" rather than a secure right. Davis and Wagner argue that the principles of adjacency and historic use should apply to individuals and fishing families.

Degnbol, Paul, et. al. "Painting the Floor with a Hammer: Technical Fixes in Fisheries Management." 30 *Marine Policy* 534 – 543 (2006).

Degnbol and co-authors argue that the contributions of biologists, economists, sociologists and others to fisheries management would be improved if they originated from broader, more integrated analytical perspectives. The authors claim that disciplinary boundaries currently narrow the perspectives of fisheries management leading to tunnel vision and standardized technical fixes.

Eagle, Josh. "The Perils of Multiple-Use Management and the Promise of Agency Diversity." 16 *Duke Environmental Law and Policy Forum* 143 – 177 (2006).

Eagle, referencing two high-level committee reports, expresses concern over the problem of overfishing and the degraded state of America's marine environment. He disagrees with the United States' reliance on multiple-use management systems to protect



its oceans. He argues that the current system is failing and should be replaced by an agency diversity model which would divide our oceans into use-priority zones, much like that of public lands.

Field, John C., and Robert C. Francis. "Considering Ecosystem-based Fisheries Management in the California Current." 30 *Marine Policy* 552 – 569 (2006).P

Field and Francis argue that an ecosystem-based approach for marine fisheries in the California Current, along the West Coast of North America, must take into greater consideration such things as the constantly changing climate-driven physical and biological interactions, the trophic relationships between fished and unfished elements of the food web, the adaptation potential of life history diversity, and the role of humans as both predators and competitors. Field and Francis review fisheries-based ecosystem tools management concepts and present a transitional means of implementing an ecosystem-based approach based on current scientific knowledge and existing law.

Frost, Hans, and Peder Andersen. "The Common Fisheries Policy of the European Union and Fisheries Economics." 30 *Marine Policy* 737 – 746 (2006).

Frost and Andersen review the "Roadmap," the document through which the European Union communicated its revision of the Common Fisheries Policy in 2003. The Roadmap focuses on fleet management policy with the aim of reducing overcapacity on a community level. The authors confront the opinion and initiatives proposed by the Commission with the 'conventional' bioeconomic theory to assess to what extent the lessons of the theory could be found in the Roadmap.

Gezelius, Stig G. "Monitoring Fishing Mortality: Compliance in Norwegian Offshore Fisheries" 30 *Marine Policy* 462 – 469 (2006).

In their efforts to manage fish stocks, Norwegian officials strive to obtain accurate figures on fish mortality. Gezelius describes compliance and non-compliance data obtained by the officials from the offshore pelagic fleet of Norwegian fisheries.

Gilman, Eric, et. al. "Reducing Sea Turtle Bycatch in Pelagic Longline Fisheries." 7 *Fish and Fisheries* 2 – 23 (2006).

Efforts are being made to reduce the bycatch of marine turtles in order to contribute to their repopulation. Gilman and his co-authors report data on various fisheries and the numbers of turtles being accidentally caught. Different fishing strategies, including turtle-safe hooks, are proposed.

Hartley, Troy W., and Robert A. Robertson. "Emergence of Multi-stakeholder-driven Cooperative Research in the Northwest Atlantic: The Case of the Northeast Consortium." 30 *Marine Policy* 580 – 592 (2006).

A growing divide between fishermen, scientists, and managers has marked the past fifty years of fisheries management in the Gulf of Maine and Georges Bank. Hartley and Robertson track the scientific, regulatory, social, and political evolution of this management, which culminated in a distrustful and adversarial climate, a convergence of diverse policy needs, and the emergence of a cooperative research program – the Northeast



Consortium. The authors conclude with a discussion of the role of cooperative research in building mutual understanding and respect, trust, and scientific legitimacy.

Hentrich, Steffen, and Markus Salomon. "Flexible Management of Fishing Rights and a Sustainable Fisheries Industry in Europe." 30 *Marine Policy* 712 – 720 (2006).

Hentrich and Salomon argue that since the European Union (EU) has so far failed to implement sustainable fisheries management, there is an urgent need for a new system which supports reductions in the fishing fleet, increases responsibility among fishermen, and guarantees long-term conservation of natural marine resources. The authors claim that by strengthening individual fishing rights under flexible quota management systems, the EU Member States could conserve fish stocks, reduce excess capacity, and raise the profitability of the fisheries industry.

Hildreth, Richard. "Achieving Fisheries Sustainability in the United States." 36 *Environmental Law Reporter* 10833 – 10857 (2006).

In reviewing the 1996 Sustainable Fisheries Act (SFA), Hildreth looks at the United States' movement toward more sustainable fisheries management. He provides an overview of the global legal framework governing ocean resources. The article also includes information on the multilateral and bilateral fishing agreements to which the United States is a party and outlines the sustainability principles in those agreements that are apparent in the SFA.

Jentoft, Svein. "Beyond Fisheries Management: The *Phronetic* Dimension." 30 *Marine Policy* 671 – 680 (2006).

Building on Flyvbjerg's "Making Social Science Matter" [Flyvbjerg B. Making social science matter: why social inquiry fails and how it can succeed again. Cambridge: Cambridge University Press; 2003], Jentoft argues that the contribution of the social sciences to fisheries resource management must essentially be "phronetic" (after Aristotle's *phronesis*, i.e. practical wisdom), in contrast to the "scientific." In addition, Jentoft draws inspiration from the recent publication "Fish for Life: Interactive Governance for Fisheries" [Kooiman J, Jentoft S, Pullin R, Bavinck M, editors. Fish for life: interactive governance for fisheries. Amsterdam: Amsterdam University Press; 2005], to argue that *phronesis* is basically what the notion of governance adds to management.

Johnson, Derek Stephen. "Category, Narrative, and Value in the Governance of Small-Scale Fisheries." 30 *Marine Policy* 747 – 756 (2006).

Johnson argues that while the category of scale fisheries can be best understood in terms of scale, the underlying reason lies in the values of social justice and ecological sustainability that small-scale fisheries have come to represent. Johnson concludes that fisheries governance may better be served by prioritizing such values rather than by making a fetish out of small-scale fisheries.

Kaiser, Mark J. "The Louisiana Artificial Reef Program." 30 *Marine Policy* 605 – 623 (2006).

The Louisiana artificial reef program (LARP) is the largest rigs-to-reef program in the world, and is unique in its almost exclusive use of oil and gas structures for reef con-



struction. LARP has created over 83 artificial reef sites using over 120 decommissioned platforms. Operators that donate a platform as an artificial reef can often lower the cost of decommissioning below the cost to bring the platform to shore for disposal. Kaiser describes the regulatory background of LARP, discusses the nature of the cost savings, and derives quantitative relations that predict the donation amount. Kaiser also identifies priorities for future research.

Khan, Ahmed. "Sustainability Challenges in the Geoduck Clam Fishery of British Columbia: Policy Perspectives." 24 *Coastal Management* 443 – 453 (2006).

The geoduck clam fishery, worth approximately \$40 million (Canadian) in annual landed value, is British Columbia's most valuable invertebrate fishery. This fishery is co-managed by the Department of Fisheries and Oceans (DFO) and the Underwater Harvesters Association (UHA) since 1989. Khan examines the policy context for fisheries management in the British Columbia (BC) geoduck fishery, discusses the major concerns surrounding the exploitation of the clams, and suggests areas for further research.

Le Gallic, Bertrand, and Anthony Cox. "An Economic Analysis of Illegal, Unreported, and Unregulated (IUU) Fishing: Key Drivers and Possible Solutions." 30 *Marine Policy* 689 – 695 (2006).

To help policymakers obtain a more comprehensive picture of the situation regarding Illegal, Unreported, and Unregulated (IUU) fishing, the OECD Committee for Fisheries recently completed a study addressing the full economic dimensions of IUU fishing in an integrated manner. Le Gallic and Cox present the analytical framework developed by the OECD and some of the key results of the study.

Leadbitter, Duncan, et. al. "Sustainable Fisheries and the East Asian Seas: Can the Private Sector Play a Role? 49 *Ocean and Coastal Management* 662 – 675 (2006).

Wild harvest fisheries support millions of people in Asia and, although governments play a central role in management, Leadbitter and co-authors argue that the private sector is not absolved from acting responsibly. The authors examine the Marine Stewardship Council's certification program and conclude that due to the transport of seafood products across many boundaries, the certification and eco-labeling approach facilitates both cooperation and the adoption of best practices.

Lejano, Raul P., and Alma Ocampo-Salvador. "Context and Differentiation: Comparative Analysis of Two Community-based Fishers' Organizations." 30 *Marine Policy* 726 – 736 (2006).

Interest in decentralized modes of governance over fisheries and other marine resources, particularly that of community-based resource management, has grown in recent years. Lejano and Ocampo-Salvador use organizational theory to argue that a rich variation of institutional forms exists. The authors illustrate their analysis by highlighting the differences in two ostensibly similar fishers' organizations in Batangas, Philippines.



Mahon, Robin. "On the Role of Consulting in Fisheries Development." 30 *Marine Policy* 593 – 595 (2006).

Mahon argues that fisheries development programs should explicitly build capacity of local and regional consultants. Consultants are an importance source of expertise, which will increase as small fisheries departments reorient towards people-based approaches to management. Mahon claims consultants are currently undervalued and underdeveloped for a number of reasons, including donor country preferences for using their own nationals.

Nielsen, Max. "Supply Regimes in Fisheries." 30 *Marine Policy* 596 – 603 (2006).

Nielsen argues that since most fisheries worldwide are neither pure open access, nor optimally managed, the traditional understanding of supply regimes in fisheries needs modification. Using a case study of the East Baltic cod fishery supply regimes, Nielsen develops an age-structured Beverton–Holt-based bio-economic supply model. Nielsen's research reveals that the effects on supply following from trade liberalization and reductions of subsidies are probably small in most fisheries worldwide.

Ocean Studies Board. National Research Council. *Dynamic Changes in Marine Ecosystems: Fishing, Food Webs, and Future Options* (2006).

Recent scientific literature has raised numerous concerns about whether fisheries have caused more extensive changes to ecosystems and marine populations than previously thought. In response to a request by the National Oceanic and Atmospheric Administration, the Ocean Studies Board reviewed recent scientific reports and weighed the collective evidence for fisheries-induced changes to the dynamics of marine ecosystems. The Board concludes that ecosystem-level effects of fishing are well supported in the literature and that food-web interactions should be evaluated in future fisheries management decisions. (*Report available online at* <http://www.nap.edu/catalog/11608.html>).

Ocean Studies Board. National Research Council. *Review of Recreational Fisheries Survey Methods* (2006).

Recreational fishing in the U.S. is an important component of many marine fisheries. Collectively, these sport fisheries can take a significant portion of the yearly catch. The Ocean Studies Board reviews the types of survey methods used to estimate catch in recreational fisheries and finds that both telephone survey and onsite access components of current monitoring systems require improvements. The report recommends the establishment of a comprehensive, universal sampling framework with national coverage. (*Report available online at* <http://fermat.nap.edu/catalog/11616.html>).

Ovetz, Robert. "The Bottom Line: An Investigation of the Economic, Cultural, and Social Costs of Industrial Longline Fishing in the Pacific and the Benefits of Sustainable Use Marine Protected Areas." 30 *Marine Policy* 809 – 820 (2006).

While much attention has been attributed to the impact of industrial longlines on the marine ecosystem, Ovetz suggests that little is known about the impact of longline fishing on local food security, employment, cultural belief systems and traditions, revenue generation from marine tourism, and climate change. Ovetz argues that new data



demonstrates that the contributions of marine protected areas, marine tourism, and recreational fishing to local coastal economies dwarf the contributions of longline fishing. Policies promoting sustainable fisheries must therefore be expanded to take into account these other factors.

Pappas, Mike. "Buying the Way to a Better Gulf Fishery: Buybacks for Hurricane Relief and Fisheries Rationalization in the Gulf of Mexico." 36 *Environmental Law Reporter* 10800 - 10837 (2006).

After Hurricanes Katrina and Rita, Gulf fisheries were severely damaged. Pappas notes that buyback programs have been successful in other areas of the country and that a similar program could be an important first step in the recovery of the Gulf fisheries.

Pinto da Silva, Patricia, and Andrew Kitts. "Collaborative Fisheries Management in the Northeast U.S.: Emerging Initiatives and Future Directions." 30 *Marine Policy* 832 - 841 (2006).

Pinto da Silva and Kitts argue that the nature of participation by fishing organizations in fisheries management in the Northeast U.S. is changing. The authors explore emerging collaborative or co-management arrangements in this region and the shift towards an ecosystem-based approach.

Polacheck, Tom. "Tuna Longline Catch Rates in the Indian Ocean: Did Industrial Fishing Result in a 90% Rapid Decline in the Abundance of Large Predatory Species?" 30 *Marine Policy* 470 - 482 (2006).

Polacheck reports on data obtained from Myers and Worm indicating a rapid decrease in the numbers of tuna and billfishes. Some scientists involved in pelagic and tuna fishery research claim that the information presented by Myers and Worm is misleading and that more information should be focused on the implementation of fishery management and policy. Polacheck discusses the Myers and Worm research as well as possible methods to present an accurate account of the data.

Proutiere-Maulion, Gwenaele. "From Resource Conservation to Sustainability: An Assessment of Two Decades of the European Union's Common Fisheries Policy." 11 *Ocean and Coastal Law Journal* 37 - 45 (2005/2006).

Proutiere-Maulion discusses the significance of the fishing industry in the European Union (EU) and the importance of regulating the industry in a manner that will maintain fishery resources and help coastal populations maintain fishing as an economically viable enterprise. The author examines the history of the Common Fisheries Policy and concludes that the current policy should help the EU manage future challenges.

Riddle, Kevin W. "Illegal, Unreported, and Unregulated Fishing: Is International Cooperation Contagious?" 37 *Ocean Development and International Law* 265 - 297 (2006).

Illegal, unreported, and unregulated (IUU) Fishing is considered a major threat to high seas fish stocks. Each of the international regional fishery management organizations (RFMOs) are combating some form of IUU fishing and this led the Food and



Agriculture Organization of the United Nations (FAO) to adopt the International Plan of Action to Deter, Prevent and Eliminate IUU Fishing (IPOA-IUU). Riddle analyzes the issues involved with IUU fishing, examines the recommendations in the IPOA, and considers examples of successful management and enforcement measures in use by states and RFMOs. Finally, recent developments in China are presented as an example of how international cooperation is contagious. (*Abstract courtesy of Ocean Development and International Law*).

Ryu, Jeong-Gon, Jongoh Nam, and John M. Gates. "Limitations of the Korean Conventional Fisheries Management Regime and Expanding Korean TAC system toward Output Control Systems." 30 *Marine Policy* 510 – 522 (2006).

Ryu and co-authors introduce the policies of Korean fishery management under the jurisdiction of the Korean Conventional Fisheries Management Regime. Problems and limitations are discussed as well as an assessment of the Korean TAC policies currently in place to regulate the catch per species that are currently in place. The paper culminates with a perspective of expanding the TAC into output control systems.

Sanchirico, James N., et. al. "Catch-quota Balancing in Multispecies Individual Fishing Quotas." 30 *Marine Policy* 767 – 785 (2006).

Because of the difficulties in matching quota holdings with catches, some commentators claim that Individual Fishing Quotas (IFQs) are not appropriate for multispecies fisheries. Using on-the-ground-experience with multispecies IFQ fisheries in Iceland, New Zealand, Australia, and Canada, Sanchirico and co-authors assess the design and use of catch-quota balancing mechanisms and find that a combination of incentives and limits on use rates provide sufficient flexibility without incurring excessive levels of overexploitation risk. The authors argue that these programs provide evidence that it is possible to implement IFQ programs for multispecies fisheries which are profitable and sustainable.

Sumaila, U.R., et. al. "Global Scope and Economics of Illegal Fishing." 30 *Marine Policy* 696 – 703 (2006).

Sumaila and co-authors present a conceptual model for the analysis of the costs and benefits of the risk inherent in illegal, unreported, and unregulated (IUU) fishing activity. The authors' research suggests that the expected benefits from IUU fishing far exceed the expected cost of being apprehended. For an assumed 1 in 5 chance of being apprehended, their calculations reveal that fines will have to be increased by 24 times for the expected cost to equal the expected benefits.

Tzanatos, Evangelos, et. al. "Principal Socio-economic Characteristics of the Greek Small-Scale Coastal Fishermen." 49 *Ocean and Coastal Management* 511 – 527 (2006).

Tzanatos and co-authors examine the development of a typology of the Greek small-scale fishermen. The authors discuss the nature of the fishing licensing system and its implications for management. The system is also compared to other European and Mediterranean countries.



Ukwe, Chika N., et. al. "A Sixteen Country Mobilization for Sustainable Fisheries in the Guinea Current Large Marine Ecosystem." 49 *Ocean and Coastal Management* 385 – 412 (2006).

The Guinea Current Large Marine Ecosystem (GCLME), which extends from Bissagos Island (Guinea Bissau) in the north to Cabinda (Angola) in the south, is an important center of marine biodiversity and marine food production. Overfishing, pollution, habitat destruction, and coastal development are rapidly depleting the rich fisheries resources. Ukwe and co-authors discuss the efforts of sixteen countries bordering the GCLME to implement priority management actions identified in a preliminary Strategic Action Programme for the recovery of depleted fish stocks and restoration of degraded habitats.

Vetemaa, Markus, et. al. "The Transition from the Soviet System to a Market Economy as a Cause of Instability in the Estonian Coastal Fisheries Sector." 30 *Marine Policy* 635 – 640 (2006).

Vetemaa and co-authors analyze how political and economic changes during the past decade have affected the Estonian coastal fishery of the Baltic Sea. In the early nineties, the opening of new markets greatly increased the fishing pressures on certain stocks. Despite the increased demand for fish, the overall wealth of fishermen declined. The article highlights the fact that countries in transition may encounter serious difficulties in their fisheries sectors, which may continue to affect the fisheries for years.

Walmsley, S., et. al. "The Role of Small-scale Fisheries Management in the Poverty Reduction Strategies in the West Indian Ocean Region." 49 *Ocean and Coastal Management* 812 – 833 (2006).

Walmsely and co-authors consider the linkages between fisheries management, livelihoods, and poverty reduction and how these have been incorporated in the poverty reduction strategy (PRS) approach being implemented in the West Indian Ocean region. The authors conclude that this sector has not always been adequately addressed in the poverty reduction strategy plans.

Wilson, Douglas Clyde, et. al., "Cross-scale Linkages and Adaptive Management: Fisheries Co-management in Asia." 30 *Marine Policy* 523 – 533 (2006).

Wilson and his co-authors report on the research conducted by a multitude of Asian countries as presented in the second phase of the Worldwide Collaborative Research Project on Fisheries Co-management. Drawing upon results of the previous phase, the authors collectively focus on issues of stakeholder conflict and social and geographical scale. Efforts to improve cross-scale fishery management are addressed.

Wilson, Douglas Clyde, et. al. "Local Ecological Knowledge and Practical Fisheries Management in the Tropics: A Policy Brief." 30 *Marine Policy* 794 – 801 (2006).

Wilson and co-authors present a policy brief which is a summary product of seven case studies examining the integration of local ecological knowledge in fisheries management. The authors found that allocation and knowledge issues are closely interlinked and that the negotiation of shared understandings between multiple sources of knowl-



edge must be a continuous process within an adaptive framework rather than a question of identifying a fixed set of indicators.

Wood, Mary Christina. "Restoring the Abundant Trust: Tribal Litigation in Pacific Northwest Salmon Recovery." 36 *Environmental Law Reporter* 10163 – 10219 (2006).

Wood outlines three cases in the Pacific Northwest in which Native American tribes are attempting to protect their fisheries. The tribes are asking for either stricter enforcement of the Endangered Species Act or to have their unique property rights enforced.

Xue, Guifang (Julia). "China's Distant Water Fisheries and its Response to Flag State Responsibilities." 30 *Marine Policy* 651 – 658 (2006).

Xue discusses China's policy adjustments in response to the United Nations Fish Stocks Agreement and the Compliance Agreement. Xue argues that China has taken concrete steps to align its management practices with the requirements of international fisheries instruments and thereby meet its international obligations as a flag state.

Xue Guifang. "Improved Fisheries Co-operation: Sino-Vietnamese Fisheries Agreement for the Gulf of Tonkin." 21 *International Journal of Marine and Coastal Law* 217 – 234 (2006).

Xue discusses fisheries co-operation between China and Vietnam for the Gulf of Tonkin. Xue reviews their fisheries relations and management measures under the Sino-Vietnamese Fisheries Agreement and highlights some key achievements.



XI.

INTERNATIONAL TRADE

Chen, Jim. "There's No Such Thing as Biopiracy ... and It's a Good Thing Too." 37 *McGeorge Law Review* 1 – 32 (2006).

Entering the debate on international law of environmental protection and intellectual property, Chen seeks to deconstruct the biopiracy narrative, which involves instances of large corporations deriving genetic resources and traditional knowledge without compensating the local community. The article assesses biopiracy using the physical, logical, and contextual layers of information platforms.

van Mulekom, Leo, et. al. "Trade and Export Orientation of Fisheries in Southeast Asia: Under-priced Export at the Expense of Domestic Food Security and Local Economies." 49 *Ocean and Coastal Management* 546 – 561 (2006).

Much of Southeast Asia's economic success is based on the under-priced export of valuable natural resources, such as fisheries. van Mulekom and co-authors argue that current fisheries management policies are not contributing to domestic food security; development of shrimp aquaculture has a negative impact; and that the fisheries resources should be used and managed to ensure domestic food security and economic development.



Zoltani, Anne. "Desertification in the Mediterranean: Environmental Risks of a Mediterranean Free Trade Agreement." 17 *Colorado Journal of International Environmental Law and Policy* 385 - 418 (2006).

Zoltani examines the effect of desertification on agriculture in the Mediterranean Basin. She discusses the establishment of the Mediterranean Free Trade Zone in 2010 and its possible detrimental effects on the environment. She suggests that side agreements should be made along with the final agreement, as a means of defraying harmful environmental impacts and improving the region's economy.



XII.

INVASIVE SPECIES

Flagella, Maria Monia, et. al. "Shipping Traffic and Introduction of Non-indigenous Organisms: Case Study in Two Italian Harbors." 49 *Ocean and Coastal Management* 947 - 960 (2006).

Flagella and co-authors, in order to study the role of ballast water in introducing non-indigenous organisms in the Mediterranean Sea, analyzed the maritime traffic in the harbors of Naples and Salerno, two important commercial ports in southern Italy.

McCarraher, Albert G. "The Phantom Menace: Invasive Species." 14 *New York University Environmental Law Journal* 736 - 760 (2006).

McCarraher discusses the dangers posed by invasive species and addresses how international law may best deal with the problem. He proposes that the best solution to invasive species under international law would be to assemble a comprehensive framework convention that governs all the means by which invasive species are spread throughout the world.



XIII.

LAW OF THE SEA

Bates, Candace L. "U.S. Ratification of the U.N. Convention on the Law of the Sea: Passive Acceptance Is Not Enough to Protect U.S. Property Interests." 31 *North Carolina Journal of International Law and Commercial Regulation* 745 - 792 (2006).

Bates asks whether the United States, by not ratifying UNCLOS, has lost out on intellectual and real property rights. The author discusses the historical context in which UNCLOS was created, as well as the benefits that it would provide the environment and the United States government, including protection of national security interests and improved management of the high seas' fish stock.

Carleton, Chris. "Article 76 of the UN Convention on the Law of the Sea - Implementation Problems from the Technical Perspective." 21 *International Journal of Marine and Coastal Law* 287 - 308 (2006).

Carleton discusses the technical problems experienced by coastal States preparing claims for an extended continental shelf in accordance with Article 76 and Annex II to the United Nations Convention on the Law of the Sea. Carleton examines the data gathering phase and outlines the vexed question of claims on ridges, focusing on what a ridge actually is within the wording of Article 76.



Doelle, Meinhard. "Climate Change and the Use of the Dispute Settlement Regime of the Law of the Sea Convention." 37 *Ocean Development and International Law* 319 – 337 (2006).

Doelle explores the connection between obligations to reduce greenhouse gas (GHG) emissions under the climate change regime and obligations to protect the marine environment under the United Nations Convention on the Law of the Sea (UNCLOS). Within the context of the state of the science on the links between climate change and the marine environment, the article considers whether the emission of greenhouse gases as a result of human activity constitutes a violation of various obligations under the UNCLOS. Having identified a number of possible violations, Doelle proceeds to consider the application of the binding dispute settlement process under the UNCLOS and the possibility of a successful claim. (*Abstract courtesy of Ocean Development and International Law*).

Duff, John A. "The United States and the Law of the Sea Convention: Sliding Back from Accession and Ratification." 11 *Ocean and Coastal Law Journal* 1 – 35 (2006).

The United States has not signed or acceded to the United Nations Convention on the Law of the Sea. Duff asks why the Senate has not voted on the Convention, whether the U.S. is likely to become a party to the Convention, and how the United States will protect its ocean interest if it does not become a party to the convention.

Lodge, Michael W. "The International Seabed Authority and Article 82 of the UN Convention on the Law of the Sea." 21 *International Journal of Marine and Coastal Law* 323 – 333 (2006).

Lodge discusses Article 82 of the United Nations Convention on the Law of the Sea, which provides that payments or in-kind contributions in kind are to be made by coastal states for exploitation of the non-living resources of the continental shelf beyond 200 nautical miles. Those payments or contributions are to be distributed by the International Seabed Authority to developing states. Lodge illustrates some of the difficult issues of principle and of practice that Article 82 raises.

Macnab, Ron, and Lindsay Parson. "Continental Shelf Submissions: The Record to Date." 21 *International Journal of Marine and Coastal Law* 309 – 322 (2006).

Macnab and Parson summarize the continental shelf submissions as of 2005. At that time, four coastal States had completed their continental shelf submissions for transmittal to the Commission on the Limits of the Continental Shelf (CLCS): Russia (2001), Brazil (2004), Australia (2004), and Ireland (2005). Only Russia's has been subjected to a full review by the CLCS.

Miles, Edward L. "Negotiating a New Design for a World Ocean Regime." 6 *Global Environmental Politics* 43 – 57 (2006).

In a 2002 study assessing the effectiveness of international environmental regimes, the negotiations of the Third United Nations Conference on the Law of the Sea was excluded as a case study because of its complexity and the fact that it is not an environmental regime *per se*. Miles applies the analytic structure of the environmental regime



effectiveness study to the UNLCOS III negotiations to assess what value, if any, would now be added to a comprehensive analysis of those negotiations.

Mingay, George. “Article 82 of the LOS Convention — Revenue Sharing — The Mining Industry’s Perspective.” 21 *International Journal of Marine and Coastal Law* 335 – 346 (2006).

Mingay provides an overview of Article 82 of the U.N. Convention on the Law of the Sea and examines the philosophy and intention behind its revenue sharing provisions. Mingay also takes a look at some of the specific incentives and disincentives that Article 82 brings for the mining industry.

Oude Elferink, Alix G. “Article 76 of the LOSC on the Definition of the Continental Shelf: Questions Concerning its Interpretation from a Legal Perspective.” 21 *International Journal of Marine and Coastal Law* 269 – 285 (2006).

The establishment of the outer limits of the continental shelf beyond 200 nautical miles under Article 76 of the United Nations Convention on the Law of the Sea is a complex process. Oude Elferink examines the origins of Article 76 and considers a number of provisions of Article 76 to illustrate the questions which still exist in connection with its application and interpretation.

Pedersen, Torbjørn. “The Svalbard Continental Shelf Controversy: Legal Disputes and Political Rivalries.” 37 *Ocean Development and International Law* 339 – 358 (2006).

Norway’s claim to exclusive rights over the continental shelf surrounding the former *terra nullius* Arctic archipelago of Svalbard is controversial, with the unclear scope of the Svalbard Treaty recognized as “a main challenge” by Norway’s parliament. Pedersen explores the nature of this challenge by: (1) giving an account of the legal basis of the conflict; (2) analyzing its political context; and (3) discussing the contemporary judicial and political processes which may or may not resolve the conflict. Pedersen concludes that the issue seems to escape judicial settlement, rendering the controversy a matter of international politics. With the world’s eyes increasingly on the petroleum resources of the Arctic, a clarification over the legal status of the Svalbard shelf is not in sight. (*Abstract courtesy of Ocean Development and International Law*).

Rangel, Vicente Marotta. “Settlement of Disputes Relating to the Delimitation of the Outer Continental Shelf: The Role of International Courts and Arbitral Tribunals.” 21 *International Journal of Marine and Coastal Law* 347 – 362 (2006).

Rangel provides an assessment of the actual judicial control concerning the delimitation of the continental shelf. Rangel discusses the different categories of delimitation, the coastal state’s rights over its continental shelf, and outlines historic precedents of international disputes.

Sage, Bénédicte. “Precautionary Coastal States’ Jurisdiction.” 37 *Ocean Development and International Law* 359 – 387 (2006).

The UN Convention on the Law of the Sea establishes a flexible balance of powers between flag and coastal states, a balance which is seemingly tilting in favor of the lat-



ter. Sage explores the recent and foreseeable further extension of coastal states' authority to monitor and control international shipping in coastal areas under their jurisdiction, principally on the grounds of environmental protection and the precautionary principle. Legal tools such as Particularly Sensitive Sea Areas, ships' routing measures, and Vessel Traffic Services can be seen as precautionary measures at the disposal of coastal states to strengthen their powers toward foreign ships. (*Abstract courtesy of Ocean Development and International Law*).

Serdy, Andrew. "Towards Certainty of Seabed Jurisdiction beyond 200 Nautical Miles from the Territorial Sea Baseline: Australia's Submission to the Commission on the Limits of the Continental Shelf." 36 *Ocean Development and International Law* 201 - 217 (2005).

On 15 November 2004, Australia lodged only the third submission by a coastal state to the Commission on the Limits of the Continental Shelf. The ten discrete areas in which Australia's continental shelf extends beyond 200 nautical miles from the territorial sea baseline total over 3 million square kilometers. Serdy outlines Australia's submission on the basis of the published executive summary and the procedural rules of the Commission that are to govern its examination, exploring some of the submission's implications for other states in terms of Article 76 of the Law of the Sea Convention. (*abstract courtesy of Ocean Development and International Law*).

Symmons, Clive R. "The Irish Partial Submission to the Commission on the Limits of the Continental Shelf in 2005: A Precedent for Future Such Submissions in the Light of the "Disputed Areas" Procedures of the Commission?" 37 *Ocean Development and International Law* 299 - 317 (2006).

On May 25, 2005, Ireland lodged the first example of a so-called "partial submission" to the Commission on the Limits of the Continental Shelf in respect of an allegedly "undisputed" area of seabed beyond 200 nm sandwiched between disputed and extensive seabed claims to the north (Hatton-Rockall Area) by Denmark/Faroes and Iceland, and an as yet undelimited seabed area to the south (the Celtic Shelf) where the United Kingdom, France, and Spain may also have seabed claims. Symmons considers the problems that may arise even from this supposedly uncontroversial type of submission in the light of the diplomatic reaction by both Denmark/Faroes and Iceland in August 2005. (*Abstract courtesy of Ocean Development and International Law*).



XIV.

MARINE PROTECTED AREAS

Aguilar-Perera, Alfonso, et. al. "Marine Protected Areas in Puerto Rico: Historical and Current Perspectives." 49 *Ocean and Coastal Management* 961 - 975 (2006).

In Puerto Rico, the environmental legislation for establishing marine protected areas (MPAs) is complex due to its political position with the United States. Most MPAs in Puerto Rico were implemented using a top-down approach following U.S. federal guidelines for protecting endangered species, critical habitats, and natural and cultural resources. Aguilar-Perera and co-authors suggest, however, that the development of management plans for MPAs on the island increasingly means adopting a public participatory process.



Mize, James. "Lessons in State Implementation of Marine Reserves: California's Marine Life Protection Act Initiative." 36 *Environmental Law Reporter* 10376 - 10391 (2006).

Although most marine reserve initiatives are undertaken by the federal government, several states have taken steps to create their own reserves. In reviewing California's Marine Life Protection Act Initiative, Mize outlines the importance of marine reserves and offers recommendations for other states considering creating marine reserves.

Springer, Emilie. "Community Participation in Marine Protected Area Implementation: A Case Study of the Sitka Local Area Management Plan." 34 *Coastal Management* 455 - 465 (2006).

Springer examines the underlying semantic confusion surrounding the promotion of "social science" in the design and establishment of marine protected areas and demonstrates the successful community processes that led to the designation of Sitka, Alaska's Local Area Management Plan (LAMP) for halibut fishing. Springer argues that the development of the Sitka LAMP designation demonstrates the importance of community collaboration and could provide a model for other locations.

Tobey, James, and Elin Torrell. "Coastal Poverty and MPA Management in Mainland Tanzania and Zanzibar." 49 *Ocean and Coastal Management* 834 - 854 (2006).

Tobey and Torrell summarize selected results of a study on poverty alleviation and marine protected areas (MPAs) in Tanzania and Zanzibar. The authors conclude that the effectiveness and success of the MPA programs in achieving both conservation and development goals varies, but communities' perceptions of impacts and progress are more positive in those programs with the longest and greatest investment of time and resources.

Wescott, Geoff. "The Long and Winding Road: The Development of a Comprehensive Adequate and Representative System of Highly Protected Marine Protected Areas in Victoria, Australia." 49 *Ocean and Coastal Management* 9095 - 9122 (2006).

In 2002, the state of Victoria, Australia increased its "no-take" marine protected areas 100 fold to cover over five percent of its coastal waters in a comprehensive, adequate and representative system of marine national parks and sanctuaries. Wescott discusses the factors that contributed to the establishment of the Victorian system and the relevance of these factors to other jurisdictions.



XV.

MARINE SECURITY

DeCaro, Phil. "Safety Among Dragons: East Asia and Maritime Security." 33 *Transportation Law Journal* 227 - 248 (2006).

DeCaro looks at cargo and port security measures implemented by the United States after September 11th. The article examines the impact of the measures on the East Asia region, specifically examining Thailand, Malaysia, Singapore, Bangladesh, and Vietnam.

He addresses the International Maritime Organization's compliance with those measures and the protection that they will provide from terrorist attacks.

Valencia, Mark J., and Kazumine Akimoto. "Guidelines for Navigation and Overflight in the Exclusive Economic Zone." 30 *Marine Policy* 704 – 711 (2006).

Several significant international incidents in Asian exclusive economic zones (EEZs) have underscored the ambiguity and lack of agreement regarding the regime governing foreign military activities. From 2002 – 2005, a group of senior officials and analysts discussed the issues with a view to improving mutual understanding of the regime and finding areas of agreement. Valencia and Akimoto discuss the voluntary, non-binding guidelines developed by the participants at a September 2005 meeting in Tokyo, Japan.



XVI.

MARITIME BOUNDARIES

Mangone, Gerard J. "Marine Boundaries: States and the United States." 21 *International Journal of Marine and Coastal Law* 121 – 171 (2006).

Since the Submerged Lands Act of 1953, disputes between states and the federal government over title to valuable resources in the three-mile coastal area measured from the shoreline have been sharp and continuous. Mangone explores the legal basis for the delimitation of marine zones, including common law, statutes and international law, highlighting the reliance of courts on all three sources in addition to equitable principles.

Oduntan, Gbenga. "Maritime Pyrrhic Victories: Evaluation of the de facto Regime of Common Fishing Grounds Created in the Land and Maritime Boundary case (*Cameroon v. Nigeria*)." 37 *Journal of Maritime Law and Commerce* 425 – 452 (2006).

Oduntan examines the implication of the International Court of Justice's (IJC) decision regarding Cameroon and Nigeria's dispute over the land and maritime boundaries of the Bakassi Peninsula and Lake Chad. The article discusses the possible approaches for developing a viable management system for the fishing rights of native populations affected by the IJC's decision.



XVII.

OCEAN GOVERNANCE

Baird, Brian E., and Amber J. Mace. "Oceanic Ecosystem Management: Challenges and Opportunities for Regional Ocean Governance: Regional Ocean Governance: A Look at California." 16 *Duke Environmental Law and Policy Forum* 217 – 226 (2006).

Baird and Mace examine California's regional approach for protecting and managing its ocean and coastal resources, illustrating how regional approaches that incorporate research and resource management may work. The authors also discuss the attempts of California, Oregon, and Washington to identify regional ocean and coastal resource management issues and research priorities that may benefit from a regional approach.

Cho, Dong Oh. "Evaluation of the Ocean Governance System in Korea." 30 *Marine Policy* 570 – 579 (2006).



Despite the importance of oceans to Korea, with its dense population and poor natural resources, Cho argues that recognition of oceans has been weak in Korean society. A series of marine accidents and policy failures, however, led to the establishment of a single ocean-related government agency in 1996. Cho evaluates ocean governance and discusses the opportunities and constraints to oceans policy in Korea.

Fletcher, Kristen M. "Oceanic Ecosystem Management: Challenges and Opportunities for Regional Ocean Governance: Article: Regional Ocean Governance: The Role of the Public Trust Doctrine." 16 *Duke Environmental Law and Policy Forum* 187 - 204 (2006).

Fletcher discusses the role of the public trust doctrine in regional ocean governance (ROG), a tool that may be used to manage ocean and coastal resources. The article discusses whether the public trust doctrine precludes the need for states to participate in ROG and examines regional and national issues regarding the application of the public trust doctrine in light of ROG.

Hanna, Susan Steele. "Implementing Effective Regional Ocean Governance: Perspectives from Economics." 16 *Duke Environmental Law and Policy Forum* 205 - 216 (2006).

The United States Commission on Ocean Policy (USCOP) made several suggestions for ecosystem based governance, including a recommendation for a national ocean policy framework among federal agencies and voluntary regional ocean councils. Using the example of Pacific salmon, Hanna looks at the institutional incentive problems that may occur in the construction of new governance structures, suggesting that such problems could be alleviated by anticipating them at the design stage.

Hershman, Marc J., and Craig W. Russell. "Regional Ocean Governance in the United States: Concept and Reality." 16 *Duke Environmental Law and Policy Forum* 227 - 265 (2006).

Hershman and Russell present a summary and interpretation of the approaches to Regional Ocean Governance in the United States over the past two years. The article proposes reform in three areas: promoting institutional change, advancing ecosystem-based management, and developing regional stewards.

Kirk, Elizabeth A., and Harriet M. Silfverberg. "Harmonization in the Baltic Sea Region." 21 *International Journal of Marine and Coastal Law* 235 - 258 (2006).

Kirk and Silfverberg explore the harmonization of international regimes in the context of the harmonization project undertaken by HELCOM in 2000-01. The authors suggest that there are four main factors that influence the likelihood of harmonization of measures: pragmatism and geographic, economic, and political factors.

Li, Haiqing. "The Impacts and Implications of the Legal Framework for Sea Use Planning and Management in China." 49 *Ocean and Coastal Management* 717 - 726 (2006).

With the enactment of the Law on the Management of Sea Use, a new legal framework for strengthening integrated coastal management was introduced in China. Li examines



the situation in China prior to its enactment and discusses its implementation at national and local levels.

Nugent, Ingrid, and Laura Cantral. "Oceanic Ecosystem Management: Challenges and Opportunities for Regional Ocean Governance: Charting a Course Toward Ecosystem-Based Management in the Gulf of Mexico." 16 *Duke Environmental Law and Policy Forum* 267 – 292 (2006).

Nugent and Cantral propose that the three themes of systems management, meaningful integration of people, and adaptive management have emerged from the discussions on ecosystem-based management. The article discusses the use of these elements in the U.S. Commission on Ocean Policy, the Pew Oceans Commission, and the Bush Administration's U.S. Ocean Action Plan. The authors include a discussion on the Gulf of Mexico Alliance and its relationship to the themes of ecosystem-based management.

Rosenberg, Andrew A. "Oceanic Ecosystem Management: Challenges and Opportunities for Regional Ocean Governance: Regional Governance and Ecosystem-based Management of Ocean and Coastal Resources: Can We Get There from Here?" 16 *Duke Environmental Law and Policy Forum* 179 – 185 (2006).

Two ocean commissions have recommended a regional, ecosystem-based approach to the management of ocean and coastal resources. Rosenberg reviews the benefits of the ecosystem approach and compares it with the current approaches, which usually focus on a single area of concern. He also suggests the elements necessary to help an ecosystem-based approach succeed.

South, G. Robin. "IOI-OceanLearn: Rationalizing the IOI's Education and Training in Ocean Governance." 49 *Ocean and Coastal Management* 676 – 684 (2006).

The International Ocean Institute (IOI), established in 1972, has been engaged in training and education in ocean governance for the past twenty-five years. A variety of courses are delivered in a multi-modal manner. South argues that IOI, through "IOI-OceanLearn," is responding to the need for interdisciplinary, global training programs to address the capacity-building requirements in ocean governance resulting from the United Nations Convention on the Law of the Sea, the UN Conference on Environment and Development, and Agenda 21.



XVIII. OIL PRODUCTION

Bakir, Vian. "Policy Agenda Setting and Risk Communication: Greenpeace, Shell, and Issues of Trust." 11 *The Harvard International Journal of Press/Politics* 67 – 88 (2006).

Bakir uses a qualitative case study approach to examine policy-oriented risk communication in the battle between Greenpeace and Shell over the disposal of the Brent Spar oil structure. Bakir's analysis reveals that in attempting to influence policy, Greenpeace and Shell redefine risk according to their own strategic needs and arenas of operation. The research also suggests that media exposure impacts policy both by shaping public perception of *risk* (rather than of policy) and by shaping policymakers' perception of public opinion.



Gramling, Robert, and William R. Freudenburg. "Attitudes towards Offshore Oil Development: A Summary of Current Evidence." 49 *Ocean and Coastal Management* 442 – 461 (2006).

Gramling and Freudenburg summarize the accumulated evidence regarding attitudes towards offshore oil development and examine two regions that represent the polar extremes, southern Louisiana and northern California.

Joyner, Christopher C., and Kelly Zack Walters. "The Caspian Conundrum: Reflections on the Interplay between Law, the Environment, and Geopolitics." 21 *International Journal of Marine and Coastal Law* 173 – 216 (2006).

Joyner and Walters examine the controversy over the legal condition of the Caspian Sea, both in terms of delimitation questions and its status as a lake or a semi-enclosed sea. The authors also assess the natural resource potential of the Caspian, as well as the environmental implications posed by development of industry and pipelines throughout the region. The study concludes with an evaluation of the realistic prospects for collaboration among the Caspian states to protect the environment.



XIX.

POLLUTION

Angelo, Mary Jane. "Embracing Uncertainty, Complexity, and Change: An Eco-pragmatic Reinvention of a First-Generation Environmental Law." 33 *Ecology Law Quarterly* 105-202 (2006).

Angelo endeavors to show how an eco-pragmatic framework may be applied to environmental pollution law by examining current pesticide law and the EPA's implementation of that law. Angelo also cites areas of the law that may be improved using eco-pragmatic values.

Barkas, Jessica A. "Pumping Pollution: An In-Depth Analysis of *Miccosukee* and Notes on *S.D. Warren Co. v. Maine Board of Department of Environmental Protection*, with Comments on Improving the State and Federal Regulation of Activities that Cause Water Quality Degredation." 14 *Penn State Environmental Law Review* 587 – 642 (2006).

Barkas reviews the arguments in *South Florida Management District v. Miccosukee Tribe of Indians*, highlighting issues of water law such as federalism concerns under Section 101(g) of the Clean Water Act and water diversion and use rights. The article also reviews water transfer cases involving the CWA that have been brought in the Supreme Court and the courts of appeals. In discussing the arguments of the case, Barkas also reviews news stories and law review articles published in relation to the case.

Brull, Sarah. "An Evaluation of Nonpoint Source Pollution Regulation in the Chesapeake Bay." 13 *University of Baltimore Journal of Environmental Law* 221 – 249 (2006).

Using the Chesapeake Bay as an example of American water law, Brull analyzes and critiques nonpoint source pollution regulations. She focuses on the effects of agricultural pollution on the Chesapeake and the regulations in place to help minimize those



effects. The article suggests that for the pollution to be minimized, proposed solutions must eliminate the recurring problems in the regulatory framework.

Craig, Robin Kundis. "Urban Runoff and Ocean Water Quality in Southern California: What Tools Does the Clean Water Act Provide?" 9 *Chapman Law Review* 313 – 363 (2006).

Craig examines the problem that urban stormwater runoff poses to coastal water quality. The article presents an overview of the Clean Water Act and its stormwater permit program. Craig argues that under the stormwater permit program, urban runoff can be subjected to the Clean Water Act's other protections for coastal water quality.

Garza-Gil, M. Dolores, et. al. "Assessment of Economic Damages from the *Prestige* Oil Spill." 30 *Marine Policy* 544 – 551 (2006).

The *Prestige* oil spill was one of the worst spills in recent years. Almost the entire Galicia coastline was affected and some parts of North Spain and Southwest France. Garza-Gil and co-authors estimate the short-term economic damage to the fishing and aquaculture sectors and conclude that the zones which received more spills sustained the biggest economic losses.

Given, Suzan, et. al. "Regional Public Health Cost Estimates of Contaminated Coastal Waters: A Case Study of Gastroenteritis at Southern California Beaches." 40 *Environmental Science and Technology* 4851 – 4858 (2006).

Given and co-authors present estimates of annual public health impacts attributable to excess gastrointestinal illnesses caused by swimming in contaminated coastal waters at beaches in southern California. The authors estimate that between 627,800 and 1,479,200 excess gastrointestinal illnesses occur at beaches in Los Angeles and Orange Counties each year corresponding to an annual economic loss of \$21 or \$51 million depending upon the underlying epidemiological model used (in year 2000 dollars).

Grossman, Margaret Rosso. "Agriculture and the Polluter Pays Principle: An Introduction." 59 *Oklahoma Law Review* 1 – 51 (2006).

Grossman examines the Polluter Pays Principle (PPP), as adopted and developed by the Organization for Economic Co-operation and Development (OECD) and the European Community (EC). She discusses the PPP within other international agreements, the meanings of PPP, and its application to the field of agriculture in OECD documents and in U.S. agriculture.

Hajkowicz, Stefan. "Cost Scenarios for Coastal Water Pollution in a Small Island Nation: A Case Study from the Cook Islands." 34 *Coastal Management* 369 – 386 (2006).

Hajkowicz presents scenarios of watershed pollution costs in Rarotonga, the largest of the Cook Islands in the South Pacific and explores the practical, theoretical, and policy issues surrounding the valuation of water resources in the context of small island nations. Hajkowicz argues that rough estimates of opportunity costs can supply governments with sufficient information to assess the relative importance of watershed pollution.



Jones, P. D. "Water Quality and Fisheries in the Mersey Estuary, England: A Historical Perspective." 53 *Marine Pollution Bulletin* 144 – 154 (2006).

The Mersey Estuary region in Northwest England has long been the victim of the pollution and industrial waste from local factories. Jones examines the impact the toxins have had on the water quality and fisheries in the estuary, the effort made to restore it to a healthier state, and the economic strain on the region.

Osborn, David, and Anjan Datta. "Institutional and Policy Cocktails for Protecting Coastal and Marine Environment from Land-based Sources of Pollution." 49 *Ocean and Coastal Management* 576 – 596 (2006).

The ecological integrity of coastal and near-shore environments is at the mercy of social, business, institutional, and regulatory norms that dictate human behavior. Osborn and Datta review the strengths and weaknesses of regulatory and non-regulatory options to manage the activities of their citizens in coastal and marine environments. The authors advocate for a strategic "cocktail" of instruments that best suit respective natural, cultural, constitutional, and economic scenarios.

Shalla, Nicole. "People to Save the Sheyenne River, Inc. v. North Dakota Department of Health: Setting a Permit Precedent, While Allowing Pollution to Transcend International Borders." 10 *Great Plains Natural Resources Journal* 73 – 84 (2006).

Shalla examines *People to Save the Sheyenne River, Inc. v. North Dakota Department of Health* (NDDH), in which the North Dakota Supreme Court considered NDDH's issuance of a permit for the construction of a water outlet that would ultimately allow the free flow of nutrients into the waters of Minnesota, Manitoba, and North Dakota. Shalla looks at states' requirements under the Clean Water Act and the court's review of NDDH permit requirements. She also brings up two arguments not considered by the court and ultimately makes suggestions for appellants in the case.

Zhang, Zhaohui, et. al. "Monitoring and Managing Pollution Load in Bohai Sea, PR China." 49 *Ocean and Coastal Management* 706 – 716 (2006).

The Bohai Sea, China's only inland sea, has suffered serious pollution due to rapid economic development. Zhang and fellow authors discuss the current situation, the environmental impacts, and the existing pollution management mechanisms and pollution abatement programs.



XX.

SHIPPING

Bagot, Michael H., Jr. "The Ebb and Flow of East River: Consideration of the Supreme Court's Decision on Products Liability in Shipbuilding Contracts." 30 *Tulane Maritime Law Journal* 137 – 162 (2006).

Twenty years after the Supreme Court's decision in *East River S.S. Corporation v. Transamerica Delaval, Inc.*, Bagot looks at the case, its constraints, and the *M/S Bremen v. Zapata Offshore Oil Co.* opinion. The article aims to help practitioners and their clients in dealing with product liability issues in a maritime context.



Marlow, Peter, and Rawindaran Nair. "Liner Shipping and Information Exchange – a European Perspective." 30 *Marine Policy* 681 – 688 (2006).

The European Commission (EC) is currently reviewing Council Regulation 4056/86, which includes the proposal by the European Liner Affairs Association (ELAA) calling for an information exchange system. Marlow and Nair examine the White Paper of the EC, issued in 2004, which provides a comprehensive discussion of the key issues. The authors also examine the implications of the removal of Regulation 4056/86 and the adoption of the ELAA-proposed information exchange instrument.

Montero Lacer, Francisco J. "Port Privatization in Panama." 30 *Marine Policy* 483 – 495 (2006).

Montero Lacer explores the port system of the Panama Canal from its implementation and initial control by the United States to its current governance by Panama. The elements of port privatization are addressed as well as a potential model for other countries in other Latin American nations.

Sucharitkul, Sompong. "Section III: Commercial and Labor Law: Liability and Responsibility of the State of Registration or the Flag State in Respect of Sea-Going Vessels, Aircraft and Spacecraft Registered by National Registration Authorities." 54 *American Journal of Comparative Law* 409 – 442 (2006).

Sucharitkul discusses the civil liability of governments with regard to its registered sea-going vessels, aircraft, and spacecraft. The article examines the liability practices of the United States, including the practices of its registration authorities like the Federal Aviation Administration.

Wyatt, Marva Jo. "COGSA Comes Ashore ... And More: The Supreme Court Makes Inroads Promoting Uniformity and Maritime Commerce in *Norfolk Southern Railway v. Kirby*." 30 *Tulane Maritime Law Journal* 101 – 136 (2006).

Wyatt reviews the Supreme Court's decision in *Norfolk Southern Railway v. Kirby*, giving a detailed look at modern intermodal transportation. She concludes that *Kirby* calls for new formulas to be developed that will determine whether shipping contracts are part of maritime commerce.

Zhu, Jianxin. "Asia and IMO Technical Cooperation." 49 *Ocean and Coastal Management* 627 – 636 (2006).

Asia is an important maritime region and plays a key role in international shipping. Each individual country, however, varies significantly in terms of maritime infrastructure, management, and resources. Zhu discusses the assistance provided by the International Maritime Organization in support of these countries to strengthen their maritime activities.



XXI.

SUSTAINABILITY

Barnhizer, David. "Waking from Sustainability's 'Impossible Dream:' The Decisionmaking Realities of Business and Government." 18 *Georgetown International Environmental Law Review* 595 – 690 (2006).



Barnhizer explores the motivation behind decisions by business entities and governmental decisionmakers with regard to environmental and social issues. The author argues that the current concept of sustainability is untenable, because it does not consider human nature. He suggests that to be effective, law must have real sanctions to effectively cull desirable human behavior.

Perhay, Judith. "The Natural Step: A Scientific and Pragmatic Framework for a Sustainable Society." 33 *Southern University Law Review* 249 – 311 (2006).

Perhay discusses The Natural Step, an organization formed in Sweden for the purpose of guiding environmentally-friendly decision-making and action. The article focuses on the origins of the organization and its "Four System Conditions," which provide a framework for sustainable human activities. Perhay also includes examples of adoption and implementation of The Natural Step in the corporate world.

Scherr, S. Jacob, and R. Juge Gregg. "Johannesburg and Beyond: The 2002 World Summit on Sustainable Development and the Rise of Partnerships." 18 *Georgetown International Environmental Law Review* 425 – 463 (2006).

Scherr reveals how the World Summit on Sustainable Development in Johannesburg, South Africa, resulted in a number of partnerships that could contribute to sustainable development. He specifically discusses the United States' role in the summit and its implementation of three partnerships announced at the meeting, including the Water for the Poor Initiative, the Congo Basin Forest Partnership, and the Clean Energy Initiative.

Sobhee, Sanjeev. "Fisheries Biodiversity Conservation and Sustainable Tourism in Mauritius." 49 *Ocean and Coastal Management* 413 – 420 (2006).

Sobhee examines the sustainability of the tourism sector in Mauritius, a Small Island Developing State. Sobhee's research suggests that fisheries biodiversity plays a major role in enhancing tourism revenue.



XXII. UNDERWATER CULTURAL HERITAGE

Miller, Marian Leigh. "Underwater Cultural Heritage: Is the Titanic Still in Peril as Courts Battle over the Future of the Historical Vessel?" 20 *Emory International Law Review* 345 – 395 (2006).

Miller discusses Underwater Cultural Heritage (UCH), giving an overview of its history, the law of salvage, and national and international laws affecting UCH. As an example, she examines the treatment of the R.M.S. *Titanic* in court, outlining important points from the case for future court decisions.

Monfils, Rean, et. al. "Sunken WWII Shipwrecks of the Pacific and East Asia: The Need for Regional Collaboration to Address the Potential Marine Pollution Threat." 49 *Ocean and Coastal Management* 779 – 788 (2006).

Oil, chemicals and unexploded ordinances onboard sunken World War II (WWII) warships and merchant vessels pose a real and significant marine pollution risk. Monfils and



fellow authors highlight the extent of the risks posed by sunken WWII vessels to fisheries, and other marine and coastal resources of the Pacific and East Asian regions, as well as the issues of ownership and responsibility.

Street, Thomas. "Underwater Cultural Heritage Policies of the United States Coastal Zone." 34 *Coastal Management* 467 – 480 (2006).

Domestic management of historic shipwrecks and other Underwater Cultural Heritage (UCH) resources located in the United States coastal zone is extensively fragmented. In the United States coastal zone, UCH falls under one of three general regimes: general maritime law, the Abandoned Shipwreck Act, and the Marine Protection, Research and Sanctuaries Act, also known as the Marine Sanctuaries Act. Street examines the development of and current status of these regimes and suggests policies for a stronger, more coordinated federal management regime in United States coastal waters.



XXIII. WATER LAW

Arnold, Craig A. "Symposium: Eastern Water Law Symposium: Integrating Land Use and Water Law: The Obstacles and Opportunities: Clean-Water Land Use: Connecting Scale and Function." 23 *Pace Environmental Law Review* 291 – 350 (2006).

Arnold discusses the impacts of land use on water quality and watersheds. In analyzing five categories of plans for watershed agencies to address influences of land use, Arnold finds that each of the proposals fails to contemplate the connections between watershed scale and function, land use scales, and land use functions. He suggests a new model of clean-water land-use by linking watershed scale and function to land use scale and function.

Bogert, Laurence Michael. "The Future is no Place to Place Your Better Days: Sovereignty, Certainty, Opportunity, and Governor Kempthorne's Shaping of the Nez Perce Agreement." 42 *Idaho Law Review* 673 – 716 (2006).

Bogert looks at the negotiations leading to the Nez Perce Water Rights Agreement, focusing on the contribution of Idaho Governor Dirk Kempthorne during the Snake River Basin Adjudication. He examines the factors that led to the successful settlement of the Nez Perce Tribe's water rights claims.

Cosens, Barbara. "Nez Perce Water Right Settlement: Truth or Consequences: Settling Water Disputes in the Face of Uncertainty." 42 *Idaho Law Review* 717 – 762 (2006).

The Nez Perce Tribe in Idaho reached an agreement with the United States concerning its water right claims, including rights stemming from its right to fish at the usual and accustomed places. Cosens uses the claims of water rights by the Nez Perce to analyze the role of legal and scientific uncertainty in natural resource dispute resolution and concludes by suggesting options available to entities looking for help in solving natural resource disputes where there is little scientific certainty.



Hays, Alexander V. "The Nez Perce Water Rights Settlement and the Revolution in Indian Country." 36 *Environmental Law* 869 – 899 (2006).

In light of the Nez Perce Water Rights settlement agreement with the federal government, the State of Idaho, and Idaho water users, Hays examines the historical and political forces that influenced the agreement. The article gives an overview of the settlement process, explains the effect of two adverse court rulings on the agreement, and the role of the "revolution in Indian Country" in the agreement.

Strack, Steven W. "Pandora's Box or Golden Opportunity? Using the Settlement of Indian Reserved Water Right Claims to Affirm State Sovereignty over Idaho Water and Promote Intergovernmental Cooperation." 42 *Idaho Law Review* 633 – 672 (2006).

Strack examines the Snake River Basin Adjudication (SRBA), stressing that it was an integral step to the formation of the Nez Perce Water Rights Settlement Agreement (Agreement). He looks at the initiation of the SRBA and the extent to which the Tribe's claims were susceptible to settlement. He concludes the Agreement, while controversial, has provided a positive outcome for the resolution of the Tribe's water rights claims.

Westbrook, Esther L. "Recognizing the Limits of Water Rights: Rejecting Takings Claims in *Klamath Irrigation District v. United States*" 36 *Environmental Law Reporter* 10726 – 10750 (2006).

Using *Klamath Irrigation District v. United States*, Westbrook explores the legal issues implicated when conflicts arise regarding water rights, unsustainable land use, and endangered species. She also discusses the takings clause, highlighting *Tulare Lake Basin Water Storage District v. United States*.



XXIV. WATER RESOURCES

Andreen, William L. "Developing a More Holistic Approach to Water Management in the United States." 36 *Environmental Law Reporter* 10277 – 10303 (2006).

Andreen suggests that an improved understanding of the relationship between land use and water, along with enhanced institutional capabilities, could help better protect freshwater resources in the United States. The article gives examples of several reforms available within the existing U.S. legal system.

Houck, Oliver. "O Canada!: The Story of Rafferty, Oldman, and the Great Whale." 29 *Boston College International and Comparative Law Review* 175 – 243 (2006).

Houck examines three water resource development schemes developed in Canada in the late 1980s. He explains how the schemes prompted litigation that helped develop and shape federal environmental authority, emphasizing the importance of environmental and judicial review in safeguarding environmental resources.

Huffman, Jared, et al., "Symposium: Desalination in California: Should Ocean Waters be Utilized to Produce Freshwater?" 57 *Hastings Law Journal* 1343 – 1366 (June 2006).



Huffman, of the Marin Municipal Water District, moderates panelists from the Surfrider Foundation, the California Coastal Commission, and Poseidon Resources Corporation. The panelists discuss the history of desalination along the California coast, the issues surrounding the process, and the technology involved.

Lazarus, Richard J. "Symposium: Properties of Carol Rose: A Celebration: Nature: Comment: Crystals and Mud in Nature." 18 *Yale Journal of Law and Humanities* 134 – 140 (2006).

Lazarus provides commentary on James Salzman's article, *Thirst: A Short History of Drinking Water*, explaining the article's examination of the creation of laws relating to drinking water. Lazarus notes his reactions to the article, namely that the article's narrow focus may undermine some of its conclusions and that the article made him think about the juxtaposition of water and dirt in natural resources law.

Maryland, Kirt. "Navigating the Murky Waters of Connecticut's Water Allocation Scheme." 24 *Quinnipiac Law Review* 685 – 755 (2006).

Maryland explores the deficiencies in Connecticut's water allocation policy and examines obstacles to establishing a statewide water policy. He specifically focuses on water quantity and withdrawal issues and suggests a comprehensive water allocation policy to deal with the current water crisis.

West, Chad. "Show Me the Water! It Is Time for Congress to Acknowledge the Human Right to Water Access." 36 *Environmental Law Reporter* 10047 – 10077 (2006).

West posits that the right to water is a fundamental right and Congress should take steps to protect it. He endorses two actions that will provide water that meets World Health Organization Standards: the Water for the World Resolution and the Senator Paul Simon Water for the Poor Act of 2005.

Wouters, Patricia. "What Lessons from Europe? A Comparative Analysis of the Legal Frameworks that Govern Europe's Transboundary Waters." 36 *Environmental Law Reporter* 10290 – 10336 (2006).

Wouters discusses international interdependencies on water sources, highlighting the rules of international law that govern the shared waters. She compares examples of Europe's transboundary government regimes, explaining how national water policy is pursued in light of the dual-track governance regimes.



XXV. WETLANDS

Breedon, Kimberly. "The Reach of Raich: Implications for Legislative Amendments and Judicial Interpretations of the Clean Water Act." 74 *University of Cincinnati Law Review* 1441 – 1476 (2006).

Breedon discusses the inconsistencies surrounding the application of the Clean Water Act to wetlands, noting the legislative and judicial histories of the CWA, the Supreme Court's decisions regarding Congress's regulation of interstate commerce, and federal court decisions concerning the CWA and the Commerce Clause. She suggests that to



overcome the inconsistencies found when applying the CWA to wetlands there should be a scientifically-based interpretive framework for courts and an expansion of the term “channels of commerce” to include activities that substantially affect channels of commerce.

Farrell, Jim, and Marie Quintin. “A Practitioner’s Guide to Protecting Wetlands in a Post-Rapanos World.” 36 *Environmental Law Reporter* 10814 – 10853 (2006).

The recent plurality opinion of the U.S. Supreme Court in *Rapanos v. United States* left questions about federal jurisdiction of wetlands under the Clean Water Act. Farrell and Quintin help clarify the tests outlined by Justice Scalia and Justice Kennedy and explain how to construe a plurality opinion.

Kerns, Jack. “A Nexus Runs Through It: Wetlands, Hydrological Connections, and Federal Jurisdiction in the Post-SWANCC World.” 36 *Environmental Law Reporter* 10222 – 10247 (2006).

Kerns examines the circuit and district court decisions following *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC). He concludes that groundwater can serve as a jurisdictional basis for including wetlands in the definition of “waters of the United States.”

Ocean Studies Board. National Research Council. *Drawing Louisiana’s New Map: Addressing Land Loss in Coastal Louisiana* (2006).

The Ocean Studies Board (OSB) reviews a restoration plan proposed by the U.S. Army Corps of Engineers and the state of Louisiana to address land loss along the Louisiana coast. The OSB found that although individual projects are scientifically sound, more larger-scale projects are needed to provide a comprehensive approach. The report recommends that restoration be guided by a detailed map of the expected future landscape developed from agreed upon goals for the region and the nation. (Report available online at <http://www.nap.edu/catalog/11476.html>).

Sapp, William W., et. al. “From the Fields of Runnymede to the Waters of the United States: A Historical Review of the Clean Water Act and the Term ‘Navigable Waters.’” 36 *Environmental Law Reporter* 10190 – 10240 (2006).

Written prior to the Supreme Court’s decision in *Rapanos*, Sapp and co-authors provide an overview of the legislative history of the Clean Water Act (CWA), focusing on the term “navigable waters.” The authors conclude the CWA was intended to include wetlands, with the exclusion of truly isolated intrastate waters.

Want, William. “U.S. Supreme Court Review of *Rapanos v. United States* and *Carabell v. United States Army Corps of Engineers*” 36 *Environmental Law Reporter* 10214 – 10230 (2006).

Prior to the U.S. Supreme Court’s decision in *Rapanos*, Want gives his opinion on how the case should be solved while providing an overview of the Clean Water Act and court precedent with regard to deciding wetlands jurisdiction.

Young, Richard C. "The Tennessee In-Lieu-Fee Program: Application of Habitat Equivalency Analysis in Estimating Lost Resource Services Associated with After-the-Fact Compensatory Mitigation." 14 *Southeastern Environmental Law Journal* 223 - 245 (2006).

Young asks what additional mitigation should be provided to compensate for the delay that may be incurred from the time an environmental impact occurs to the time the mitigation is put in place. He argues that not knowing when mitigation will begin hinders the calculation of the final value of the mitigation needed. The author examines the application of the habitat equivalency analysis, highlighting the Tennessee In-Lieu-Fee Program.

XXVI. WHALING

Heazle, Michael. "Lessons in Precaution: The International Whaling Commission Experience with Precautionary Management." 30 *Marine Policy* 496 - 509 (2006).

The precautionary principle (PP) is a management approach that requires proof that an activity or substance is harmless as opposed to trial and error. Heazle critiques PP, with regards to the International Whaling Commission, addressing the potential problems of limitation, vagueness, and uncertainty.

Morishita, Joji. "Multiple Analysis of the Whaling Issue: Understanding the Dispute by a Matrix." 30 *Marine Policy* 802 - 808. (2006).

The dispute over commercial whaling has many faces. It is a scientific dispute over resource management, a collision between nations that regard whales as food and nations that see whales as special, and a political game played by politicians and economic interests. Morishita develops a matrix in an attempt to provide a comprehensive picture of this complex dispute and presents options for making progress.