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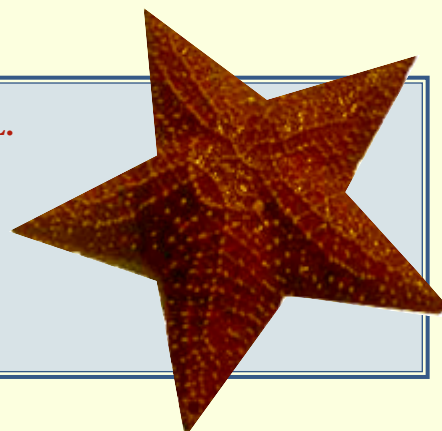


THE SEA GRANT LAW AND POLICY DIGEST is a bi-annual publication indexing the law review and other articles in the fields of ocean and coastal law and policy published within the previous six months. Its goal is to inform the Sea Grant community of recent research and facilitate access to those articles. The staff of the Digest can be reached at: the Sea Grant Law Center, Kinard Hall, Wing E - Room 256, P.O. Box 1848, University, MS 38677-1848, phone: (662) 915-7775, or via e-mail at sealaw@olemiss.edu .

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I. AQUACULTURE

Hargrave, B.T. "A Traffic Light Decision System for Marine Finfish Aquaculture Siting." 45 *Ocean & Coastal Management* 215-235 (2002).

A decision support system (DSS) evaluates variables possibly changed by marine finfish aquaculture. The DSS, currently in use with Canadian salmon farm data, produces scores for ecosystem-level (far-field) and site-specific (near-field) variables. A Traffic Light Method then displays the scores as dark green for acceptable, yellow for provisionally acceptable with caution, and red for unacceptable. Hargrave discusses the applicability of utilizing a Traffic Light Decision System to site aquaculture farms.

Schatzberg, Melissa. "Salmon Aquaculture in Federal Waters: Shaping Offshore Aquaculture Through the Coastal Zone Management Act." 55 *Stanford Law Review* 249-285 (2002).

Salmon farmers in the United States are looking to expand their operations from coastal areas to the federal offshore waters of the Exclusive Economic Zone. Schatzberg examines ways in which the states of Washington and Alaska could utilize the consistency provisions of the CZMA to challenge and mold offshore salmon farming.



II. CAPACITY BUILDING

Kullenberg, G. "The Virtual University Approach." 45 *Ocean & Coastal Management* 709-718 (2002).

The International Ocean Institute's intensive training program for developing nations covering ocean law and governance is made up of Dalhousie University faculty, inter-governmental and governmental institutions, and private businesses. IOI is currently embarking on a new initiative, the creation of the IOI Virtual University. Kullenberg discusses this new initiative and master's degree program.

León, Cuauhtémoc, and Marina Robles. "Developing a Cadre of Professionals with a Global Environmental Perspective." 45 *Ocean & Coastal Management* 633-648 (2002).

León and Robles present four approaches to delimit the problem fields in the education and training of global environmental professionals. Some of the problem areas include education in an asymmetric world, scarcity of resources, and cultural barriers.

Mabudafhasi, Rejoice. "The Role of Knowledge Management and Information Sharing in Capacity Building for Sustainable Development—an Example from South Africa." 45 *Ocean & Coastal Management* 695-707 (2002).

South Africa's Northern Cape coastal areas are rapidly transforming from a mining-dependent economy to one supporting a variety of occupations. Planning and development projects are being implemented, but are hindered by a lack of information. Mabudafhasi suggests using knowledge management (KM) to increase lucidity, cooperation, and the availability of sustainable development information.



McConnell, Moira. "Capacity Building for a Sustainable Shipping Industry: a Key Ingredient in Improving Coastal and Ocean and Management." 45 *Ocean & Coastal Management* 617-632 (2002).

The protection of biodiversity requires integrated methods, but the disorganized maritime industry is not involved in current coastal discussions. McConnell discusses shipping ports and their major impacts on coastal and ocean areas, including the settlement of coastal zones and financial growth.

Montero, Guillermo García. "The Caribbean: Main Experiences and Regularities in Capacity Building for the Management of Coastal Areas." 45 *Ocean & Coastal Management* 677-693 (2002).

Montero explains how UNESCO's Intergovernmental Oceanographic Commission and the United Nations Environment Program strengthened maritime sciences and coastal and marine resources management in the Caribbean. Caribbean scientific and capacity building programs for sustainable development are also discussed.

Reis, E. G., C. R. Tagliani, M. L. Asmus, L. J. Calliari, and M. Bergesch. "The TRAIN-SEA-COAST Programme: New Challenges for the Development of Human Resources on Coastal and Ocean Management in Brazil." 45 *Ocean & Coastal Management* 667- 676 (2002).

Created in 1993 by the UN Division on Ocean Affairs, the TRAIN-SEA-COAST Program strives to increase capacity building at a local level. Reis, Tagliani, Asmus, Calliari, and Bergesch examine the program and discuss current TSC activities in Brazil on port environmental training and international ballast water management.

Smith, Hance D. "The Role of the Social Sciences in Capacity Building in Ocean and Coastal Management." 45 *Ocean & Coastal Management* 573-582 (2002).

Smith discusses the role of social sciences in capacity building of ocean and coastal management, including psychology, history, sociology, politics, economics, archaeology, geography, and social anthropology. Ocean and coastal management topics like human activities, the natural environment, decision-making, information technology, management organizations, policy planning, and the relationship between them are explained.

Tarifeño-Silva, Eduardo. "North-South Educational Partnership on Marine Sciences: the Latin American Experiences and Perspectives." 45 *Ocean & Coastal Management* 649-666 (2002).

Chapter 17 of the 1992 Rio Conference's "Agenda 21" addresses the challenge of determining the appropriate management regime for ocean and coastal ecosystems. Tarifeño-Silva analyzes Latin America's experiences regarding the achievement of the goals enumerated in Agenda 21.

Wescott, Geoff. "Partnerships for Capacity Building: Community, Governments, and Universities Working Together." 45 *Ocean & Coastal Management* 549-571 (2002).



Wescott discusses the worldwide advances in capacity building made through the UN and related groups, regional initiatives, and national methods. Topics covered include local expert utilization, the extension of universities, partnerships, and new courses, and regional partnership improvement across national borders. Wescott also promotes a global ICM capacity building system.



III. COASTAL MANAGEMENT

Davos, Climis A., Peter J.S. Jones, Jonathan C. Side, and Katy Siakavara. "Attitudes Toward Participation in Cooperative Coastal Management: Four European Case Studies." 30 *Coastal Management* 209-220 (2002).

The VALCOAST project in Europe was undertaken, in part, to determine stakeholder willingness to participate and cooperate in coastal management. Case studies and interviews were conducted in Belgium, Greece, Spain and the UK. Davos, Jones, Side, and Siakavara present the findings of this project.

Gilman, Eric. "Guidelines for Coastal and Marine Site-Planning and Examples of Planning and Management Intervention Tools." 45 *Ocean & Coastal Management* 377-404 (2002).

Gilman presents guidelines for the implementation of a sustainable management system in coastal and marine ecosystems. Topics discussed include the selection of a starting point, the organization of complex processes, and the integration of community-based and collaborative management.

Harkes, Ingviold, and Irene Novaczek. "Presence, Performance, and Institutional Resilience of *Sasi*, a Traditional Management Institution in Central Maluku, Indonesia." 45 *Ocean & Coastal Management* 237-260 (2002).

Harkes and Novaczek present the results of a study of *sasi*, a local traditional resource management system in Indonesia. The study compares villages with strong and weak *sasi* systems and the authors argue that the results can assist with the creation of new decentralized, co-management systems, or the revamping of existing organizations. *Sasi* ceremonies, the application of written rules and sanctions, governing structures, and biological/social sustainability are also examined.

Huang, Weigen, and Bin Fu. "Remote Sensing for Coastal Area Management in China." 30 *Coastal Management* 271-276 (2002).

Satellite remote sensing can be used to observe coastal areas. Huang and Fu discuss the applicability of remote sensing techniques to coastal area management in China.

Lowry, Kem. "The Landscape of ICM Learning Activities." 30 *Coastal Management* 299-324 (2002).

Although significant amounts of money have been invested in coastal management, very little has been earmarked for the purpose of determining how program outcomes are shaped by the program itself and by outside factors. Lowry identifies several "inquiry strate-



gies," both formal and informal, which can be used to gather information about program design and implementation and to identify lessons learned from previous experiences.

Masalu, Desiderius C. P. "Coastal Erosion and Its Social and Environmental Aspects in Tanzania: A Case Study in Illegal Sand Mining." 30 *Coastal Management* 347-359 (2002).

One of the major coastal problems in Tanzania is coastal erosion, caused by a variety of factors, including population growth, sea level rise, and illegal sand mining along beaches and coastal rivers. Masalu discusses the social, economic, and environmental aspects of illegal sand mining and proposes several possible control measures.

McCarthy, Elena, and Dennis W. Nixon. "Floating Billboards: Can Commercial Advertising in the Coastal Zone Be Regulated?" 30 *Coastal Management* 193-208 (2002).

A new method of advertising, billboards towed by tugboats, is appearing in United States coastal waters. McCarthy and Nixon examine the legal aspects of regulating such commercial advertising within the context of commercial speech and the navigational servitude, including the applicability of the public trust doctrine and preservation of views.

McGlashan, Derek J. "Coastal Management and Economic Development in Developed Nations: The Forth Estuary Forum." 30 *Coastal Management* 221-236 (2002).

McGlashan examines the issue of economic development as a component of coastal management initiatives in developed countries, focusing on the United Kingdom. The Scottish coastal management system is discussed as well as current hurdles to the integration of economic development issues.

Micallef, A., and A. T. Williams. "Theoretical Strategy Considerations for Beach Management." 45 *Ocean & Coastal Management* 261-275 (2002).

Micallef and Williams examine beach recreational use strategic management as an important aspect of Integrated Coastal Area Management. Four crucial elements are identified: analysis, planning, management, and monitoring. Issues like recreation, shoreline defense, conflict resolution, collection of data, neighborhood involvement, and anthropogenic uses are analyzed.

Olsen, Stephen B. "Assessing Progress Towards the Goals of Coastal Management." 30 *Coastal Management* 325-345 (2002).

In developing countries, the usual model for the achievement of integrated coastal management goals is a four- to six-year project. In general, the actual time needed to implement such management programs far exceeds six years. Olsen suggests two frameworks to assess program progress over extended periods of time, which he then applies to two coastal management programs in the Caribbean and Latin America.

Platt, Rutherford H., David Salvesen, and George H. Baldwin II. "Rebuilding the North Carolina Coast After Hurricane Fran: Did Public Regulations Matter?" 30 *Coastal Management* 249-269 (2002).



In 1996, Hurricane Fran struck the North Carolina coast and inflicted an estimated \$7 billion in public and private damage. Platt, Salvesen and Baldwin examine the North Carolina rebuilding experience to determine the influence of federal, state, and local laws, specifically the state Coastal Area Management Act.

Tobey, James, and Richard Volk. "Learning Frontiers in the Practice of Integrated Coastal Management." 30 *Coastal Management* 285-298 (2002).

Since the 1992 United Nations Rio Conference, coastal managers at both the national and the subnational level have begun to implement integrated coastal management (ICM) principles at an increasing rate. Tobey and Volk review the principles and attributes of ICM and highlight areas requiring additional study and assessment.

Tran, Kim Chi, Jorge Euan, and Maria Luisa Isla. "Public Perception of Development Issues: Impact of Water Pollution on a Small Coastal Community." 45 *Ocean & Coastal Management* 405-420 (2002).

Public participation can be an effective means of achieving sustainable development. A survey was conducted in Holbox, Mexico regarding public perceptions of coastal water pollution. Tran, Euan, and Isla present the results of that survey.

Wind, H.G., and J. -L. de Kok. "Interdisciplinary Modeling: Gaps and Bridges." 26 *Marine Policy* 243-251 (2002).

Wind and de Kok discuss recent developments in Decision Support Systems for estuarine and coastal management. The decision-support system for the management of the Wadden Sea is discussed in detail.

IV. CORAL REEFS

Hoffman, Tegan Churcher. "The Reimplementation of the Ra-ui: Coral Reef Management in Rarotonga, Cook Islands." 30 *Coastal Management* 401-418 (2002).

Hoffman presents the results of an assessment of coral reef health of two study sites in Rarotonga, Cook Islands, in the South Pacific region. The different marine management practices utilized at each site are discussed and data on the ecological condition of the sites is presented. Hoffman concludes that the implementation of tradition institutions at the Ra-ui site is an effective conservation management mechanism.

V. ECONOMICS

Giraud, Kelly, Branka Turcin, John Loomis, and Joseph Cooper. "Economic Benefit of the Protection Program for the Steller Sea Lion." 26 *Marine Policy* 451-458 (2002).

Giraud, Turcin, Loomis, and Cooper conducted a study examining the willingness of individuals to pay for an endangered species across various geographic regions. The study revealed that the willingness to pay was highest for the U.S. as a whole and lowest for the critical habitats.



Hunt, Colin. "Economic Globalism Impacts on Pacific Marine Resources." 27 *Marine Policy* 79-85 (2003).

Hunt discusses the effects of trade and investments on Pacific Island marine resources, focusing on the depletion of tuna as a result of increased fishing and implementation of new technology. Additionally, potential effects of global warming on national economies are explored, as well as ideas for lessening global impact.

Ledoux, L., and R. K. Turner. "Valuing Ocean and Coastal Resources: a Review of Practical Examples and Issues for Further Action." 45 *Ocean & Coastal Management* 583-616 (2002).

Economic valuation is an important informational tool available to decision-makers. Ledoux and Turner examine the importance of valuing environmental resources in the context of sustainable development. Valuation examples of practical policy are given, while progress and obstacles are discussed. The incorporation of monetary, communal, and natural science criteria is suggested.

Letson, David, and J. Walter Milon, eds. *Florida Coastal Environmental Resources: A Guide to Economic Valuation and Impact Analysis*. Florida Sea Grant College Program (2002).

Environmental economics is a key element of coastal and marine management. The economic impacts of a proposed regulation or project are central to many policy and management debates at all levels of government. To demonstrate the application of environmental economics, NOAA and the National Sea Grant College Program sponsored the development of regional projects. *Florida Coastal Environmental Resources* was one of these regional projects. Eleven case studies of the application of environmental economics to Florida coastal management are presented. (Report available from Florida Sea Grant College Program at <http://www.flseagrant.org/>).



VI. ECOSYSTEM MANAGEMENT

Foucat, V. S. Avila. "Community-based Ecotourism Management Moving Towards Sustainability, in Ventanilla, Oaxaca, Mexico." 45 *Ocean & Coastal Management* 511- 529 (2002).

Community-based ecotourism is an option for the development of rural areas, but unfortunately, few attempts have been sustainable. Foucat examines the sustainability of the Ventanilla, Mexico community-based ecotourism management (CBEM) project. Foucat identifies several sustainability indicators, such as community cohesion and commitment to conservation.

Hildebrand, Lawrence P., Victoria Pebbles, and David A. Fraser. "Cooperative Ecosystem Management Across the Canada-US Border: Approaches and Experiences of Transboundary Programs in the Gulf of Maine, Great Lakes and Georgia Basin/Puget



Sound.” 45 *Ocean & Coastal Management* 421-457 (2002).

The Bay of Fundy/Gulf of Maine, the interior Great Lakes, and the Georgia Basin/Puget Sound, are currently managed cooperatively by the United States and Canada. Hildebrand, Pebbles, and Fraser examine these management plans, including their objectives, hierarchical structures, potential problems, and current status, and suggest that these cooperative programs offer useful insight for the cooperative management of other ecosystems.



VII. ECO-TOURISM

Hoyt, Erich, and Glen T. Hvenegaard. “A Review of Whale-Watching and Whaling with Applications for the Caribbean.” 30 *Coastal Management* 381-399 (2002).

Whaling and whale-watching are often viewed as incompatible uses of a finite resource. Both whale-watching and whaling occur in the Caribbean. Hoyt and Hvenegaard evaluate the potential impacts of whaling on the whale-watching industry in the Caribbean and highlight the need for additional research into the roles and impacts of these two industries.

Johnson, David. “Environmentally Sustainable Cruise Tourism: A Reality Check.” 26 *Marine Policy* 261-270 (2002).

As cruise tourism grows, socio-economic, cultural and environmental considerations need to be continually analyzed and monitored. Johnson examines the environmental impacts of cruise tourism and minimization strategies.

Orams, Mark B. “Humpback Whales in Tonga: An Economic Resource for Tourism.” 30 *Coastal Management* 361-380 (2002).

Worldwide, whale-watching is a valuable resource for tourism. The Vava'u island group in the Kingdom of Tonga in the South Pacific has a burgeoning humpback whale-watching industry. Due to the unknown value of the whales for tourism, a study was undertaken to assess the economic impacts of these whales. Orams presents the results of that study.



VIII. ESTUARIES

Korfmacher, Katrina Smith. “Science and Ecosystem Management in the Albemarle-Pamlico Estuarine Study.” 45 *Ocean & Coastal Management* 277-300 (2002).

Implementation of ecosystem management is not widely accepted, partly, Korfmacher argues, because ecosystem management advocates often expect science to resolve stakeholder disputes, decrease uncertainty, and suggest an appropriate course of action. The utilization of science in ecosystem management and planning is discussed and evaluated in the context of the Albemarle-Pamlico Estuarine Study.

Townend, Ian. “Marine Science for Strategic Planning and Management: the Requirement of Estuaries.” 26 *Marine Policy* 209-219 (2002).



Growing pressures from human ingenuity upon natural river and estuary systems increase the risk that important habitats, like mudflats and saltmarsh, will be lost or severely diminished. Townsend argues that an integrated approach to management of these areas is needed to address multiple uses and interests, with sustainability of the systems central to the management process.



IX. FISHERIES MANAGEMENT

Alder, Jacqueline, and Gail Lugten, "Frozen Fish Block: How Committed Are North Atlantic States to Accountability, Conservation, and Management of Fisheries?" 26 *Marine Policy* 345-357 (2002).

Alder and Lugten present the results of an examination of the compliance of North Atlantic states with fisheries management instruments. Of some import to developing fisheries law is the observation that most Northern Atlantic fisheries are overfished, at risk, or collapsing, possibly due to a lack of orderly regional programs to accurately monitor and evaluate compliance.

Årland, Kristin, and Trond Bjørndal. "Fisheries Management in Norway - an Overview." 26 *Marine Policy* 307-313 (2002).

The complex Norwegian fisheries management regime has evolved over decades and includes allowable catch quotas and restrictions of access. Årland and Bjørndal present an overview of the current management system and its evolution and undertake an economic appraisal of the system.

Bodiguel, Clotilde. "Fisherman Facing the Commercial Lobster Fishery Licensing Policy in the Canadian Maritime Provinces: Origins of Illegal Strategies, 1960 - 2000." 26 *Marine Policy* 271-281 (2002).

Lobster fisherman in the Canadian Maritime Provinces have developed illegal practices of marketing licenses and holding multiple licenses. Bodiguel traces the development of these practices and examines recent changes to limited entry policies in Maine and Massachusetts which have attempted to avoid similar problems.

Cheong, So-Min. "Privatizing Tendencies: Fishing Communities and Tourism in Korea." 27 *Marine Policy* 23-29 (2003).

Through the examination of tourism in Korean fishing communities, Cheong explores ways that local villages and businesses are improved by privatization of fishing grounds and financial aid from the state.

Dayton, P.K., S. Thrush, and F.C. Coleman. *The Ecological Effects of Fishing in Marine Ecosystems in the United States*. Pew Oceans Commission (2002).

One component of ecosystem-based management is the knowledge regarding the ecological consequences of exploitation. In the marine environment, overfishing, bycatch, and habitat degradation all effect the structure, productivity, and resilience of marine ecosystems. Dayton, Thrush, and Coleman discuss the ecological consequences of fishing and



make recommendations for the implementation of ecosystem-based fisheries management in the U.S. (*Report available at* <http://www.pewoceans.org>).

D’Incao, F., and E. G. Reis. “Community-based Management and Technical Advice in Patos Lagoon Estuary (Brazil).” 45 *Ocean & Coastal Management* 531-539 (2002).

The multi-partner Forum of Patos Lagoon was created to coordinate the fishery in the Patos Lagoon estuary. Research designs are being planned to serve the needs of the anglers and the community through use of the Forum. D’Incao and Reis discuss this research process, which is designed to meet both community needs and science requirements while achieving ecological goals and economic benefits.

Dobson, Tracy, Henry A. Regier, and William Taylor. “Fish and Other Migrating Species in the Canada/U.S. Context: Governing Human Interactions With Migratory Animals, With a Focus on Humans Interacting with Fish in Lake Erie: Then, Now, and in the Future.” 28 *Canada-United States Law Journal* 389-446 (2002).

Dobson, Regier, and Taylor discuss the legal aspects of managing migratory species that cross jurisdictional boundaries, focusing on the species in the Great Lakes/St. Lawrence River Basin. The authors examine the policy and biological aspects of migratory species and provide some possible management strategies.

Ebbin, Syma A. “Enhanced Fit Through Institutional Interplay in the Pacific Northwest Salmon Co-management Regime.” 26 *Marine Policy* 253-259 (2002).

In Washington State, courts have established a regime for the co-management of salmon by state and tribal governments. Ebbin examines this institutional structure for Pacific salmon management and allocation.

Garrison, Karen. “Extinction of Ocean Fish: A Growing Threat.” 19 *Endangered Species Update* 217-221 (2002).

Despite active management, many marine fish species are still at serious risk of extinction. Garrison examines the current state of U.S. marine fisheries management and discusses recent actions by the Pacific Fishery Management Council and the State of California, which indicate a move towards the use of marine reserves and zones in fisheries conservation.

Garza-Gil, M. Dolores, Manuel M. Varela-Lafuente, and Carlos Iglesias-Malvido. “Spain’s North Atlantic Swordfish Fishery.” 27 *Marine Policy* 31-37 (2003).

Garza-Gil, Varela-Lafuente, and Iglesias-Malvido examine institutional and economic factors affecting a fishery through the study of Spanish swordfish fishery management instruments. Additionally, revenues, costs and total generated income are estimated.

Gunatilake, H.M., and Pin Sun Leung. “Technology and Management of Bottomfish Fisheries in Northwestern Hawaiian Islands.” 27 *Marine Policy* 59-67 (2003).

Gunatilake and Leung used statistical tests to evaluate the technology and economic inter-



dependencies in the Northwestern Hawaiian Island's (NWHI) bottomfish fishery. They conclude that multi-species production theory is more effective than the use of single species biological response functions for management of the NWHI bottomfish fishery.

Halim, Abdul. "Adoption of Cyanide Fishing Practice in Indonesia." 45 *Ocean & Coastal Management* 313-323 (2002).

Despite the many dangers and illegal nature of cyanide fishing, it is prevalent throughout Indonesian live reef fishing villages. Halim discusses the adoption of cyanide fishing practices in Indonesia.

Hønneland, Geir, and Anne-Kristin Jørgensen. "Implementing International Fisheries Agreements in Russia—Lessons from the Northern Basin." 26 *Marine Policy* 359-367 (2002).

Hønneland and Jørgensen discuss the difficulties of fisheries management in post-Soviet Russia, focusing on the northern fishery basin and the implementation of international fisheries agreements. The authors suggest that confusion of management duties between traditional agencies and new administrative bodies is a likely cause of deficiency in implementation performance and target compliance.

Iglesias-Malvido, Carlos, Dolores Garza-Gil and Manuel Varela-Lafuente. "Management Systems in the EU Fisheries." 26 *Marine Policy* 403-413 (2002).

Iglesias-Malvido, Garza-Gil, and Varela-Lafuente propose to correct inconsistent forms of management and fishing rights instruments through implementing a new concept which distinguishes the instrument from the institutional structure under which it is applied. The authors emphasize the need to involve fishermen in the creation of fisheries policy.

Jensen, Carsten Lynge. "Reduction of the Fishing Capacity in 'Common Pool' Fisheries." 26 *Marine Policy* 155-158 (2002).

Overcapacity in common pool fisheries has often been addressed in ineffective ways, including decommissioning schemes and administrative regulations on the fishing capacity. Jensen proposes a means to reduce the tendency for overcapacity by using lump sum taxation of the capital, thereby altering the incentives in capital formation.

Kalikoski, Coswig Daniella, Marcelo Vasconcellos, and Les Lavkulich. "Fitting Institutions to Ecosystems: the Case of Artisanal Fisheries Management in the Estuary of Patos Lagoon." 26 *Marine Policy* 179-196 (2002).

In the Patos Lagoon on the Southern Brazilian coastline, fisheries resources are decreasing sharply and affecting over 6000 small-scale, artisanal fisheries. Kalikoski, Vasconcellos, and Lavkulich attribute this problem to the overall mismanagement of coastal resources through existing institutions and suggest that a mismatch between institutions and ecosystems leads to resource over-exploitation.



Kearney, R.E. "Co-management: the Resolution of Conflict Between Commercial and Recreational Fishers in Victoria, Australia." 45 *Ocean & Coastal Management* 201-214 (2002).

In response to a fishery resources dispute between recreational and commercial fishers in Victoria's inshore waters, a co-management approach was used to examine fish resource use and suggest remedies. The danger of environmental degradation outweighed that of fishing when long-term resource stability was considered, and, as such, a policy against the short-term re-allocation of resources between the two competing fishing groups was proposed and agreed to. Kearney argues that the Victorian co-management model was successfully implemented, as evidenced by the acceptance of the agreement by fishers.

Mardle, Simon, et. al. "Objectives of Fisheries Management: Case Studies from the UK, France, Spain and Denmark." 26 *Marine Policy* 415-428 (2002).

The authors compare case studies of fisheries from various countries in the European Union and identify key objectives for fisheries management systems throughout the world.

Maunder, Mark N., and Paul J. Starr. "Industry Participation in Stock Assessment: the New Zealand SNA1 Snapper (*Pagrus auratus*) Fishery." 26 *Marine Policy* 481-492 (2002).

Through an analysis of industry funded contributions to the assessment of the SNA1 snapper fishery in New Zealand, Maunder and Starr conclude that industry funded assessments are necessary for any fisheries management system.

Maurstad, Anita. "Fishing in the Murky Waters - Ethics and Politics of Research on Fisher Knowledge." 26 *Marine Policy* 159-166 (2002).

Fisher knowledge is extremely useful information for academics, management, and for commercial exploitation. Maurstad explores the dilemma of expanding fisher knowledge beyond local fishers and into the academic, scientific, and commercial world, and presents strategies to control the use of fisher knowledge.

Myongsop, Pak, and Joo MoonBae. "Korea's Fisheries Industry and Government Financial Transfers." 26 *Marine Policy* 429-435 (2002).

Myongsop and MoonBae analyze the status of the Korean fishery industry which is currently coping with international pressure for reduction or abolition of fishery subsidies.

National Research Council. Ocean Studies Board. *Science and its Role in the National Marine Fisheries Service* (2002).

The National Marine Fisheries Service manages the marine fisheries of the United States under a very complex set of laws. NMFS regulations tend to be controversial and the Service is embroiled in an enormous amount of litigation. In 2001, Congress requested that the National Academy of Sciences provide "a summary review of the adequacy of the data, scientific foundations, models, and processes used by NMFS to guide resources



management, meet regulatory requirements, and provide support in response to litigation.” This report presents the findings of the Committee established by the National Research Council pursuant to the above Congressional mandate. (*Report available at <http://www4.nationalacademies.org/dels/osb.nsf>*).

Peterson, Elizabeth. “Economic Policy, Institutions and Fisheries Development in the Pacific.” 26 *Marine Policy* 315-324 (2002).

Peterson argues that poor economic policy is one explanation for the Pacific Island countries’ problem in achieving significant economic returns from the world’s largest and most valuable tuna fishery. Powerful, cost-effective fishery governance programs, in addition to social and economic governance, suggests Peterson, would allow optimum exploitation of the South Pacific tuna industry.

Pew Oceans Commission. *Managing Marine Fisheries in the United States* (2003).

In order to understand the current status of fisheries management in the United States, the Pew Oceans Commission assembled a group of distinguished fisheries experts, scientists, and economists to participate in a July 2001 workshop. This report contains the papers prepared by the participants for the workshop. Topics covered include: the existing legal framework for federal fisheries management, historic and emerging fisheries management tools, examination of current institutional structures, economics of fisheries management, and methods to improve the scientific support. (*Report available at www.pewoceans.org*)

Phillips, Gregory, Lorne Kriwoken, and Peter Hay. “Private Property and Public Interest in Fisheries Management: the Tasmanian Rock Lobster Fishery.” 26 *Marine Policy* 459-469 (2002).

Phillips, Kriwoken, and Hay argue that the management system based on individual transferable quotas introduced in the Tasmanian rock lobster fishery in 1998 indicates an on-going management trend advancing economic efficiency over jobs and fishery access. The authors address Tasmanian historical, social, and political issues affecting management trends and examine the implications of these trends.

Polacheck, Tom. “Experimental Catches and the Precautionary Approach: The Southern Bluefin Tuna Dispute.” 26 *Marine Policy* 283-294 (2002).

The Southern Bluefin Tuna (SBT) is a depleted stock, but large difference exist in the estimates of recovery probabilities. Although experimental fishing had been considered as a means of obtaining more accurate stock assessment, international legal proceedings halted unilateral experimental fishing. Polacheck examines the SBT dispute in relation to adaptive management and the precautionary approach.

Polacheck, Tom. “Will ‘Small Core’ Fisheries Solve The Fishery Management Dilemma?” 26 *Marine Policy* 369-371 (2002).

“Small core” fisheries, a new approach to fisheries management, have been proposed as a possible solution to the problem of overfishing. Polacheck examines this approach and



concludes that it would fail to solve common problems, such as variability in supply and catches, that arise even in traditional fishery management.

Pontecorvo, Giulio. "Insularity of Scientific Disciplines and Uncertainty About Supply: The Two Keys to the Failure of Fisheries Management." 27 *Marine Policy* 69-73 (2003).

Pontecorvo examines how variability in supply is tied to growing comprehension of the complex ocean environment and the effects of human consumption on fisheries stock, stressing that environmental change brings about innovative management methods. Pontecorvo concludes that failures in current commercial fisheries management systems are linked to a variety of problems, including variability of supply function.

Sibert, John, and John Hampton. "Mobility of Tropical Tunas and the Implications for Fisheries Management." 27 *Marine Policy* 87-95 (2003).

By analyzing data from three tuna tagging experiments in the Western and Central Pacific Ocean (WCPO), Sibert and Hampton conclude that optimum conservation requires international agreements among neighboring exclusive economic zones. Pacific Island countries, however, can also reap numerous benefits from domestic conservation and fishery development policies.

Singh-Renton, Susan, Robin Mahon, and Patrick McConney. "Small Caribbean (CARI-COM) States Get Involved in Management of Shared Large Pelagic Species." 27 *Marine Policy* 39-46 (2003).

To improve country quota allocations, the Caribbean Community recently implemented new catch allocation criteria pursuant to the International Commission for the Conservation of Atlantic Tunas. Singh-Renton, Mahon, and McConney discuss the management of large coastal pelagic species in a Caribbean context.

Soma, Katrine. "How to Involve Stakeholders in Fisheries Management—A Country Case Study in Trinidad and Tobago." 27 *Marine Policy* 47-58 (2003).

The analytic hierarchy process (AHP) was applied in the Trinidad and Tobago shrimp fishery. Soma presents the results of this study, which demonstrates how this methodology can create desired changes within the fisheries sector. Soma concludes that countries in the process of transition to more stable and sustainable fisheries management will find AHP to be an effective support for decision-making.

Standal, Dag, and Benrt Aarset. "The Tragedy of Soft Choices: Capacity Accumulation and Lopsided Allocation in the Norwegian Coastal Cod Fishery." 26 *Marine Policy* 221-230 (2002).

Despite government implementation of "access closure" and vessel quotas to control the capture capacity of cod stocks in the coastal fleet, the capacity of the Norwegian cod fishery during the 1990s continued to increase. Dag and Aarset outline this increase in capture capacity and argue that a new policy and regulation are needed to halt this trend.



Sydnies, Are K. "Regional Fishery Organizations in Developing Regions: Adapting to Changes in International Fisheries Law." 26 *Marine Policy* 373-381 (2002).

Sydnies gives a historical assessment of the fishery organizations of developing regions, concluding that their adaptation to changes in international fisheries law reflects the interests of member-countries.

Valencia, Mark J, and Yong Hee Lee. "The South Korea-Russia-Japan Fisheries Imbroglio." 26 *Marine Policy* 337-342 (2002).

When Russia permitted South Korea to fish for saury in an area disputed by Russia and Japan, the resulting political dispute strained political and economic relations between the three countries. Valencia and Hee Lee chronicle this dispute and suggest that, in the future, fisheries policy makers consider possible political complications resulting from decisions involving Northeast Asia.

van Sittert, Lance. "Those Who Cannot Remember the Past Are Condemned to Repeat It: Comparing Fisheries Reforms in South Africa." 26 *Marine Policy* 295-305 (2002).

van Sittert argues that the reduction of history to "apartheid" has hindered efforts to reform South African fisheries, by privileging race over class and state. The current reform process is compared to the process in the 1940s.

Witbooi, Emma. "South Africa: Subsistence Fishing in South Africa: Implementation of the Marine Living Resources Act." 17 *The International Journal of Marine and Coastal Law* 431-440 (2002).

On September 1, 1998, the national Marine Living Resources Act came into effect in South Africa. The Act expressly recognized subsistence harvesters as a legitimate category of fishermen and granted them rights of access to coastal resources. Witbooi discusses the recent implementation efforts of the South African government.



X. MARINE BIOTECHNOLOGY

National Research Council. Ocean Studies Board. *Marine Biotechnology in the Twenty-First Century: Problems, Promise, and Products* (2002).

In 1999 and 2001, the National Academy of Sciences held workshops to discuss environmental and biomedical applications of marine biotechnology. These workshops highlighted new developments in the field of marine biotechnology and identified factors impeding the development of the industry. This report provides overviews of the workshops and identifies the barriers currently restricting progress in the application of marine biotechnology to biomedicine and environmental science. (*Report available at <http://www4.nationalacademies.org/dels/osb.nsf>*).



XI. MARINE BOUNDARIES

McDorman, Ted L. "The Role of the Commission on the Limits of the Continental Shelf: A Technical Body in a Political World." 17 *The International Journal of Marine and Coastal Law* 301-324 (2002).



The 1982 U.N. Convention on the Law of the Sea created the Commission on the Limits of the Continental Shelf to assist in the determination of the outer limits of the continental shelf. McDorman explores the Commission's role when a coastal state seeks to establish its continental shelf limits under UNCLOS.

Triggs, Gillian, and Dean Bialek. "Australia Withdraws Maritime Disputes from the Compulsory Jurisdiction of the International Court of Justice and the International Tribunal for the Law of the Sea." 17 *The International Journal of Marine and Coastal Law* 423-430 (2002).

In March, 2002, Australia enacted legislation removing all disputes relating to the delimitation of maritime zones from the jurisdiction of the ICJ and the International Tribunal for the Law of the Sea. Although Australia has remained committed to the ICJ since 1975, the withdrawal appears motivated by the uncertainty regarding sovereignty of the seabed between Australia and East Timor. Triggs and Bialek discuss the international legal issues raised by Australia's action.



XII. MARINE ENVIRONMENTAL PROTECTION

Hey, Ellen. "The International Regime for the Protection of the North Sea: From Functional Approaches to a More Integrated Approach." 17 *The International Journal of Marine and Coastal Law* 325-350 (2002).

Currently there is no treaty that focuses solely on the protection of the North Sea ecosystem, but an international regime for the North Sea is created by a network of multilateral and regional treaties. Hey argues that this "international regime for the protection of the North Sea" has begun to move towards a more integrated approach. Hey discusses the legal and institutional framework of the North Sea regime and analyzes the process of change from a functional to an integrated approach.

Marsh, T.D., M.W. Beck, and S.E. Reisewitz. *Leasing and Restoration of Submerged Lands: Strategies for Community-based, Watershed-scale Conservation.* The Nature Conservancy (2002).

One successful management tool for the conservation of land is direct acquisition, through purchase, easement, or lease, for conservation purposes. This strategy can also be used to conserve coastal and marine ecosystems. Marsh, Beck and Reisewitz explore the feasibility of leasing submerged lands for conservation and shellfish restoration. (Report available at http://nature.org/files/lease_sub_lands.pdf).

Strain, P. M., and R. W. Macdonald. "Design and Implementation of a Program to Monitor Ocean Health." 45 *Ocean & Coastal Management* 325-355 (2002).

Strain and Macdonald present a framework for the implementation of an ocean health monitoring program. The purpose and core concepts of a monitoring program are discussed and a strategy for the early stages of a program is provided. Examples from Strain and Macdonald's experiences in Canada are used to illustrate several principles of ocean health monitoring.



Suárez de Vivero, Juan. L., and Juan. C. Rodrigues Mateos. "The Mediterranean and Black Sea: Regional Integration and Maritime Nationalism." 26 *Marine Policy* 383-401 (2002).

Suárez de Vivero and Rodrigues Mateos stress cooperation as the key to management of enclosed and semi-enclosed seas, such as the Mediterranean and Black Sea, where various political stresses exist alongside declining environmental conditions.



XIII. MARINE PROTECTED AREAS

Banks, Simon A., and Greg A. Skilleter. "Mapping Intertidal Habitats and an Evaluation of their Conservation Status in Queensland, Australia." 45 *Ocean & Coastal Management* 485-509 (2002).

Banks and Skilleter evaluate the use of a representative system of marine protected areas (MPAs) to accomplish the biodiversity conservation goals of protecting ecosystems, species and genetic diversity. Biodiversity surrogates, such as habitats, have an important role in the identification of potential MPA sites. An intertidal shoreline habitat surrogate used to describe Queensland's coastline illustrates these principles.

Don, Christen. "Could the San Juan Islands National Wildlife Refuge Serve to Protect Marine Areas? Building on Existing Institutions and Legal Authorities to Create Marine Protected Areas." 30 *Coastal Management* 421-426 (2002).

Within the San Juan Island National Wildlife Refuge, vessels are required to maintain a 200 yard buffer zone around refuge sites to protect birds and marine mammals. The refuge is not a formal marine protected area, but Don explores whether the existence of such areas could be built upon to provide an economical and feasible method for the establishment of marine protected areas.

Palumbi, Stephen. Pew Oceans Commission. *Marine Reserves: A Tool for Ecosystem Management and Conservation* (2003).

Marine ecosystems around the world are threatened by overfishing, pollution, tourism, and coastal development, to name a few. One technique available to manage these ecosystems is the creation of marine reserves. Palumbi argues that the best way to preserve valuable marine resources is for the nation to embark upon the establishment of a wide network of marine reserves. An overview of marine reserves is provided, along with a discussion of the current threats to ocean ecosystems and utilizing marine reserves as a tool for ecosystem-based management. (*Report available at www.pewoceans.org*).

Russ, Garry R., and Dirk C. Zeller. "From *Mare Liberum* to *Mare Reservarum*." 27 *Marine Policy* 75-78 (2003).

Through the examination of various ecological, economic and policy ideas, Russ and Zeller propose a change from the "free and open" oceans concept, introduced over 400 years ago by Hugo Grotius, to an ocean zoning system, which they consider necessary to address the global problem of over-fishing.



Stevens, Tim. "Rigor and Representativeness in Marine Protected Area Design." 30 *Coastal Management* 237-248 (2002).

Most marine conservation planning and management models need to improve the methods used to identify and characterize the habitats and processes within the protected area. Stevens examines the emerging theme of representativeness, or representative systems of marine protected areas.



XIV. MARITIME ISSUES

Haralambides, Hercules E., and Jiaqi Yang. "A Fuzzy Set Approach to Flagging Out: Towards a New Chinese Shipping Policy." 27 *Marine Policy* 13-22 (2003).

Through the use of fuzzy set theory and related models, Haralambides and Yang analyze the development of flagging out, both worldwide and in China, and factors contributing to flag choice. The authors conclude that China's best policy alternative to flagging out would be to create a second international ship register.

Mokaski, A.J., J. Wang, and A.K. Vermar. "A Study of Reliability-centered Maintenance in Maritime Operations." 26 *Marine Policy* 325-335 (2002).

Mokaski, Wang, and Vermar outline specific hurdles to be surmounted in the implementation of reliability-centered maintenance (RCM), already common in aviation, in the maritime industry. The authors conclude that RCM should be viewed philosophically and its principles used to plan maritime maintenance strategy.

Murry, Christopher F. "Any Port in a Storm? The Right of Entry for Reasons of Force Majeure or Distress in the Wake of the *Erika* and the *Castor*." 63 *Ohio State Law Journal* 1465-1506 (2002/2003).

Emergency situations at sea implicate various and, oftentimes, complex aspects of international, environmental, and maritime law. Murry discusses the recent experiences of two tanker ships, the *Erika* and the *Castor*, who requested permission to enter protected State waters after finding themselves in distress at sea. Murry examines the tension between the rights of coastal states and a ship's right of entry.

Paixão, A.C., and P.B. Marlow. "Strength and Weaknesses of Short Sea Shipping." 26 *Marine Policy* 167-178 (2002).

A shift of freight transport from road to sea, in the form of short sea shipping, is a major objective of the common transport policy of the European Union. Paixão and Marlow evaluate the strengths and weaknesses of short sea shipping.

Roberts, Stephen E., and Peter B. Marlow. "Casualties in Dry Bulk Shipping (1963-1966)." 26 *Marine Policy* 437-450 (2002).

A study was undertaken, using Lloyd's of London casualty reports, to determine risk factors affecting structural failure, foundering, and human casualties associated with



bulk carriers. Roberts and Marlow present the results of the study and conclude that additional safety measures may be required to bring about reduced casualty rates.

Suárez de Vivero, Juan, and Juan C. Rodriguez Mateos. "Spain and the Sea. The Decline of an Ideology, Crisis in the Maritime Sector and the Challenges of Globalization." 26 *Marine Policy* 143-153 (2002).

Spanish ocean policy has been rooted in a philosophy called "navalist ideology." Suárez de Vivero and Rodriguez Mateos argue that the traditional approach to marine policy is crumbling away and that a new policy is needed to address scientific and technological changes, effective protection of coastal areas, and marine resources.

XV. OFFSHORE RESOURCES

Pelc, Robin, and Rod M. Fujita. "Renewable Energy from the Ocean." 26 *Marine Policy* 471-479 (2002).

Pelc and Fujita argue that the exploration of methods to solve the problem of global climate change increases research in renewable ocean energy technologies. The need to protect the ocean while researching new technologies is stressed, but renewable energy sources from the ocean may be developed without harming the marine environment if projects are well-designed and environmental guidelines are followed.

Side, Jonathan, and Paul Jowitt. "Technologies and Their Influence on Future UK Marine Resource Development and Management." 26 *Marine Policy* 231-241 (2002).

Side and Jowitt examine the future trends in marine resource development and management in the UK.

XVI. OFFSHORE STRUCTURES

Kaiser, Mark J., Dmitry V. Mesyanzhinov, and Allan G. Pulsipher. "Explosive Removals of Offshore Structures in the Gulf of Mexico." 45 *Ocean & Coastal Management* 459-483 (2002).

Kaiser, Mesyanzhinov, and Pulsipher provide statistics on the removal of offshore structures using explosives in the Gulf of Mexico. Factors such as the depth of water, planning area, and the type and age of the structure all influence whether explosives are used to remove a structure. The authors also provide an estimate of how many structures will be eliminated from the Gulf in the near future.

XVII. POLLUTION

Brusendorff, Anne Christine, and Peter Ehlers. "The HELCOM Copenhagen Declaration: A Regional Environmental Approach for Safer Shipping." 17 *The International Journal of Marine and Coastal Law* 351-395 (2002).

The Baltic Sea region, with its archipelago areas, narrow straits, and shallow depths, is particularly concerned with the prevention of pollution from maritime transportation,



which has been steadily increasing. The Convention on the Protection of the Marine Environment of the Baltic Sea Area (the Helsinki Convention) was signed in 1974 to facilitate international cooperation in the region regarding marine pollution. In March, 2001, a ship collision resulted in 2700 tons of oil spilling into the Baltic Sea. The Helsinki Commission responded by holding a special meeting in September, 2001. Brusendorff and Ehlers discuss the measures adopted by the Contracting Parties at that meeting.

Kim, Inho. "Ten Years After the Enactment of the Oil Pollution Act of 1990: a Success or Failure." 26 *Marine Policy* 197-207 (2002).

Kim reviews and analyzes the changes in the pattern of oil spills in US waters and the impact of the Oil Pollution Act since its passage in 1990.

Mason, Michael. "Civil Liability for Oil Pollution Damage: Examining the Evolving Scope for Environmental Compensation in the International Regime." 27 *Marine Policy* 1-12 (2003).

Mason examines the limits of environmental liability for oil pollution damage, in particular the admissibility of reinstatement costs and geographic scope of compensation norms. According to Mason, the liability regime, despite the attention given to environmental claims, is limited by a restricted definition of damage and national boundaries of entitlement.

Mohammed, S.M. "Pollution Management in Zanzibar: the Need for a New Approach." 45 *Ocean & Coastal Management* 301-311 (2002).

Coastal pollution in Zanzibar is seriously affecting coastal economies by killing mangroves, sea grass beds, coral, and tourism and also causing regular epidemics of cholera, diarrhea and gastroenteritis. Mohammed suggests a holistic approach to remedy the pollution problem, including integrated coastal zone management initiatives.

National Research Council. Ocean Studies Board. *Oil in the Sea III: Input, Fates, and Effects* (2002).

Petroleum and petroleum products present a significant threat to the marine environment. Petroleum enters the ocean through many pathways, including spillage from vessels, releases from oil and gas exploration, and urban runoff. *Oil in the Sea III* is the third report issued by the National Research Council on petroleum releases and their effect on the environment. The Council proposes a methodology for estimating petroleum inputs and makes recommendations for monitoring and assessment. (*Report available at <http://www4.nationalacademies.org/dels/osb.nsf>*).



XVIII. REGIONAL MANAGEMENT

Van Dyke, Jon M. "North-East Asian Seas - Conflicts, Accomplishments and the Role of the United States." 17 *The International Journal of Marine and Coastal Law* 397-421 (2002).



As a region, North-east Asia does not have a formal maritime regime and, as a result, has had to deal with boundary disputes, military situations, and sovereignty conflicts on an *ad hoc* basis. Despite their differences, these nations have been able to forge bilateral agreements addressing the exploitation of resources. Van Dyke discusses the conflicts of the region and the efforts that have been undertaken to address them. Van Dyke also examines the role played by the United States in the region.

★ **XIX. WATERSHED MANAGEMENT**
Smith, Courtland L. "Institutional Mapping of Oregon Coastal Watershed Management Options." 45 *Ocean & Coastal Management* 357-375 (2002).

The restoration of salmon, improvement of water quality, forest management, and land-use planning all influence watershed management. Courtland evaluates the feasibility of utilizing institutional mapping techniques, which measure scale, power, and capital, to determine which institutions have the greater potential for improving watershed health in coastal settings.