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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- Coastal Management
- Colorado Journal of International Environmental Law & Policy
- Columbia Journal of Environmental Law
- Ecosystems
- Environmental Law
- Environmental Law Reporter
- Harvard International Law Journal
- International Journal of Marine and Coastal Law
- Journal of Maritime Law & Commerce
- Marine Policy
- Maritime Studies (MAST)
- Nature
- Ocean and Coastal Management
- Ocean Development & International Law
- Pacific Rim Law & Policy Journal
- Santa Clara Law Review
- University of Toledo Law Review
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I. ADMIRALTY


Birmingham, Shaw, and Shields review the opinion of Judge Belloni in Bernert Towboat Co. v. USS Chandler (DDG 996) and examine the law of vessel collisions.


While most judges and trial attorneys are familiar with courtroom battles regarding the admissibility of hearsay, few have experience challenging the credibility of hearsay and fail to take advantage of the opportunity to impeach a hearsay declarant. Douglass argues that the skill of "virtual cross-examination," impeachment of a hearsay declarant who never testified at trial, is essential to modern trial lawyering.


Maloof and Sheridan discuss the options available to maritime attorneys who need to obtain the testimony of individuals who have departed the jurisdiction or are otherwise unavailable. Maloof and Sheridan detail the issue of deposition timing and examine three classes of reluctant witnesses, the departed witness, the departing witness, and the unavailable witness.


The presentation of tangible objects and visible images during a trial can be highly persuasive and can provide the trier of fact with a better understanding of the issues. McHale discusses the use of demonstrative evidence, focusing specifically on its use in admiralty cases.


Federal courts sitting in admiralty are emerging as proper fora for the litigation of international issues related to historic wrecks at sea, due in part to the fact that gaps remain in the international regime when disputing parties are not subject to the jurisdiction of any existing international tribunal. Nafziger notes that the international community is making strides with the UNESCO Convention on the Protection of the Underwater Cultural Heritage, which will provide new protective measures and require cooperation and consultation from nations even if they are not parties to the Convention.
Historically, admiralty and maritime cases were tried before judges, not juries. Sacks and Settergren argue that the complexity of issues and the specialized knowledge required in admiralty cases continue to support the established rule of trial exclusively before judges.

In vessel collision cases, unlike with land-based collisions, it is very difficult to reconstruct the accident, as there are no skid-marks and the wreckage may even sink. In most maritime casualty cases, the seafarers aboard the colliding vessels are the only eyewitnesses to the accident. Sharpe examines how fact finders react to eyewitness testimony in admiralty and maritime cases.

Shields, Shaw, and Birmingham review the 2000 amendments to the Federal Rules of Evidence and discuss recent admiralty-related federal and state evidentiary decisions. The conflict in the circuits regarding the issue of maritime presumptions is also detailed by the authors.

Sterbcow examines the issues surrounding the use of expert witnesses in admiralty proceedings, focusing on maritime law and the Federal Rules of Civil Procedure, as the majority of maritime litigation occurs in federal court.

II. AQUACULTURE
In many shellfish producing nations, community concerns regarding the detrimental environmental impacts of shellfish farming have been increasing. To determine the potential environmental impacts, Crawford conducted a risk assessment of shellfish farming activities in Tasmania. This article reports the results of that study.

Grouper mariculture in Indonesia is encouraged as an alternative income source for fisherman and a means to manage wild grouper populations. Halim reports the results of a study of fishermen and middlemen perceptions towards the adoption of a grouper mariculture program, which indicates that a majority of individuals
surveyed favor the adoption of a program. The implications of program adoption are also discussed.


Hannesson examines the interactions between aquaculture and fisheries in a two-species system of feed fish and edible fish (either wild or farmed). The interactions in three different regimes are analyzed: open access, maximization of return from each species in isolation, and global maximization.


Every two years the Fishery Resources Division reviews the state of the world’s fisheries and aquaculture for the FAO’s Fisheries Resources Committee. The Report contains a global review of aquaculture production, regional production profiles, current issues, and a section discussing the future of aquaculture development. (The Report is available from the FAO at http://www.fao.org/DOCREP/005/Y4490E/Y4490E00.HTM)


Aquaculture farms have recently been established on two islands, Cephallonia and Ithaki, in the Ionian Sea in Western Greece. Processing and packing units have also been built on Cephallonia. Katranidis, Nitsi, and Vakrou examine the acceptance of this aquaculture development by both the residents of and visitors to the islands.


In both Scotland and Norway, the transmission of infectious salmon anaemia appears to have been associated with the harvest of the salmon. Although in aquaculture there is an unavoidable risk of disease transmission during harvesting, the level of risk varies with the type of harvesting technique. Munro, Murray, Fraser, and Peeler examine the different harvesting methods in Scotland and conclude that transport of live fish directly to the processing plant for slaughter may be the safest method.

III. CLIMATE CHANGE


Grossman argues for "tort-based climate change lawsuits based on products liability and public nuisance causes of action" to hold fossil fuel companies and others
liable for some of the harms caused by global warming. Grossman describes why tort law provides the best framework, describes the process of identifying defendants and potential claims, and how the Clean Air Act would affect tort-based climate change suits. Grossman also discusses the applicability of various legal theories to global warming and climate change, including products liability and public nuisance.

IV. COASTAL MANAGEMENT


The coastal zone of Argentina can be divided into four distinct regions: the Great Fluvial, the La Plata River, the Pampean, and the Patagonian. Despite their differences, these regions are confronted with a common set of problems, including privatization of the public domain, urban pollution, and coastal erosion. Argentina, however, currently lacks a single tool or instrument specifically designed to address coastal management. Barragán Muñoz, Dadon, and Matteucci propose to obtain consensus regarding a minimal preliminary basis for the development of a national integrated coastal management program.


An understanding of the linkages and interdependencies of socio-economic and coastal environmental dynamics is crucial in the development and assessment of integrated coastal management programs. Bowen and Riley discuss a variety of frameworks designed to integrate socio-economic indicators into coastal management programs, highlighting the Driver-Pressure-State-Impact-Response (DPSIR) framework.


The role of technology in integrated coastal management is not always adequately considered during the development and implementation of ICZM projects. Capobianco analyzes the role and use of technologies in the European Union Demonstration Programme.

Capobianco, Michele, Pierluigi Caputi, Paolo De Girolamo, et. al. "Integration of Sectoral Management Activities in the Coastal Zone of the Regione Abruzzo, Italy: The Case of RICAMA." 31 Coastal Management 175-185 (2003).

In the coastal area of Regione Abruzzo, Italy, a river-basin approach was developed by managers to support sustainable human activities in the region. The Rationale for Integrated Coastal Area Management (RICAMA) was developed to integrate economic and natural information. Nineteen coastal municipalities, three
provinces, and one regional government were "networked" to promote information sharing and coordination. Capobianco, et. al., examine this "wide area network" and the methodology used to support it.


The Ministry of Marine Affairs and Fisheries in South Korea has begun to implement a national coastal management program, which was legislatively authorized in 1998. At the same time, Korea's coastal regions are being transformed by large reclamation projects and industrialization. Cho and Olsen examine the implications of these changes in light of the current authority and capacity of the new coastal management program and offer principles to guide the current phase of the program.


This article presents the findings of a study of the role of information in delivering integrated coastal management in Europe. Doody discusses the nature of "information" in the context of ICZM, stresses the need for such information, and highlights the importance of information provision as part of an effective ICZM process. The results of InfoCoast '99, a symposium on knowledge and information for coastal management, are also discussed.


Ehler discusses the potential contribution to integrated coastal management of performance assessment indicators of governance processes. Ehler focuses on the evaluation phase and highlights the need to complement process indicators with outcome indicators. The integrated management of marine protected areas provides a context for the proposal of indicators with global applicability.


Difficulties arise in applying integrated coastal management policy in Greece, because of structural weaknesses in the existing planning system. Evangelidou shares the experience of coastal planning projects promoted by the Organization of Athens in Greece, both independent of and within European Union programs, highlighting innovative approaches for the rehabilitation of the Drapetsona-Keratsini Port-Industrial Zone.


The United Kingdom takes a non-statutory approach to coastal management and places a significant emphasis on coastal partnerships (CPs). Fletcher reports the
results of a survey of CPs conducted to investigate the inherent difficulties of a voluntary program. The survey revealed the CPs are vulnerable to misrepresentation, poor inclusivity, and accusations of being non-democratic and unaccountable, because there is considerable variety in membership criteria, unclear decision-making procedures, and unclear representative structures.

Fletcher and Dodds detail and evaluate the use of a Virtual Learning Environment (VLE) to enhance integrated coastal management capacity building within the context of higher education. Fletcher and Dodds found that, when combined with problem based learning, the VLE engaged even poorly motivated students more fully with the material than other delivery methods.

The ICZM project of Magnesia in Greece provided coastal managers a unique opportunity to experiment with integrated coastal planning on a local level. Geskou details the ICZM project, which included developing a Geographical Information System and experimentation with consultation and participation procedures.

Gibson provides an overview of the European Demonstration Programme on International Coastal Zone Management (ICZM). Integrated coastal management within the European Union (EU) raises questions of law, as there is incredible diversity among the thirteen European coastal nations. Gibson argues that although there are provisions of EU and international law that exert an unifying influence, any ICZM initiative must be consistent with the legal principles of solidarity and proportionality. Gibson examines potential mechanisms for ICZM in the EU.

Geomorphic models can assist environmental managers in making informed decisions regarding the management of the coast. Information from these models can provide information to determine the relative significance of a variety of environmental factors, including water circulation and habitat change in clastic coastal depositional environments. Harris and Heap discuss an effort to develop a coastal regionalization model through the classification of 780 of these environments in Australia by their geomorphology.

NOAA’s National Ocean Service commissioned the Heinz Center to undertake a study to identify shared national and state coastal resources goals, based on the objectives of the Coastal Zone Management Act, and to develop a framework for performance-based management. This report shares the result of that study. The Heinz Center empaneled fifteen experts from across the nation from a variety of sectors to develop a framework, which consists of six focus areas. Each focus area is further divided into "dimensions" describing the types of performance indicators that need to be measured. The Heinz Center argues that the report can be used by coastal managers to improve internal management, highlight accomplishments, and identify needs. (*Report available from the Heinz Center at* http://www.heinzctr.org/).


Five areas along the French Atlantic coast were selected and examined in an effort to assess local experience with French coastal management. Henocque discusses the geographic characteristics of the five areas, the major issues, and the types of coastal planning instruments in use. Henocque identifies the strengths and weaknesses of the various planning tools and suggests the development of a "Good Practice Guide" to assist future coastal management programs in France.


Integrated coastal management initiatives have struggled to integrate economic sectors and territorial administrations. This study examines the level of integration achieved in the European Demonstration Programme. Generally in the European Union, integration between sectoral and territorial planning is not possible within a single administrative level, while direct involvement by key administrative actors is impracticable. Humphrey and Burbridge suggest actions which could be taken at central governmental levels to simplify the institutional framework.


A study on the role of participation in Integrated Coastal Zone Management was conducted as part of the European Demonstration Programme. This article reports the findings of that study and recommends that ICZM projects adopt six criteria: a clear process, representativeness, openness, relevant techniques, sufficient resources, and shared learning. King concludes that while participation is important, it is not a cure-all. The study highlights several obstacles to consensus building peculiar to coastal management, such as the historic autonomy of ports, tourism, and suspicion of experts.

A portion of the European Demonstration Programme was aimed at promoting concerted actions for the sustainable development of the Strymonikos coastal zone in Greece. Koutrakis, Lazaridou, and Argyropoulou detail the project, which included the establishment of an Information Center, and the problems encountered, such as lack of data and environmental awareness.


Although the principles of risk assessment and risk management are increasingly utilized in environmental policy making, the use of these principles is proving problematic because they can highlight scientific uncertainties and because of the difference between the technical aspects of risk assessment and the cultural and social dimensions. Leschine, Lind, and Sharma examine the use of risk assessment principles in the development of management standards for contaminated sediments in Puget Sound.


Natural and anthropogenic factors, on a local, national, regional, and global level, threaten the health and stability of Caribbean coastal ecosystems. Linton and Warner review the use of biological indicators focused around particular ecosystems, such as coral reefs and mangroves forests, in the Caribbean and their role in Caribbean integrated coastal management programs.


In order to improve their economies, many developing countries are adopting liberalization policies under the guidance of the World Bank and the International Monetary Fund. These policies do not always give adequate consideration to the interests of local communities, resulting in conflicts over the use of and access to resources. Masalu details an attempt by a private investor to develop a large prawn farm in the Rufiji Delta in Tanzania. Although the project was strongly opposed by the local communities and environmentalists, it received priority from the central government, due to its projected economic impact. The controversial project led Tanzania to develop an integrated coastal management policy.

Many integrated coastal management programs are centralized, created and managed by national governmental offices. Some, however, are decentralized, managed instead by local governments or community groups. McCleave, Xiongzhi, and Huasheng describe two decentralized ICM programs, the Atlantic Coastal Action Program in Canada and the Xiamen ICM Program in China, and examine the differences between the two programs.


Malaysia has begun carrying out its pledge to develop an integrated coastal management policy, which will provide uniform minimum standards, reconcile conflicting uses, and ensure the sustainability of coastal resources. Mokhtar and Ghani Aziz discuss the Malaysian coastal management policy as well as other national policy instruments which are providing guidance to the nation.


The time required to achieve the underlying goals of integrated coastal management, maintaining and restoring coastal ecosystems, far exceeds that of the typical 4-6 year projects carried out in developing countries. Olsen presents two frameworks for assessing the progress of integrated coastal management initiatives over extended periods of time, the four Orders of Outcomes and a version of the more familiar ICM policy cycle.


In order to identify the challenges of using consensus building mechanisms in coastal management, an electronic forum of coastal managers was conducted. Poitras, Bowen, and Wiggin discuss the ten challenges associated with the use of consensus building identified by the participants, identify factors that may affect an individual's willingness to participate, and present strategies to overcome these challenges.


A core project within the International Geosphere-Biosphere Program is "Land-Ocean Interactions in the Coastal Zone" (LOICZ). Focused on the role of the glob-
al climate zone in the cycling of carbon and nutrients, LOICZ resulted in the development of protocols and tools for the assessment of coastal processes. Talaue-McManus, Smith, and Buddemeier review the LOICZ project.

V. CORAL REEFS

Mistr and Bercovici present a mathematical model of coral growth subject to unidirectional ocean currents, using concepts of porous-media flow and nonlinear dynamics in chemical systems. The model predicts that the growth of solid coral structure will be aligned perpendicular to the flow of the ocean currents.

VI. DAM REMOVAL

Anadromous fish can be prevented access to key habitat areas by dams and other types of stream blockages. To address this problem, the NOAA Community-Based Restoration Program (CRP) supports habitat restoration projects. Lenhart reviews the biological benefits provided by 18 dam removal and fish passage projects supported by CRP between 1996 and 1999.

VII. DISPUTE RESOLUTION

The compulsory dispute settlement regime included in the 1982 Law of the Sea Convention is recognized as one of the most comprehensive in a modern international convention. Yet, in the recent application of this regime, the question has arisen as to whether the procedural prerequisites associated with the Convention's compulsory dispute settlement mechanism are so arduous as to avoid binding and compulsory jurisdiction in most instances. Colson and Hoyle address that question by examining, in particular, the reasoning of the Southern Bluefin Tuna arbitration tribunal, which found Article 281 of Section 1 of the Convention to bar jurisdiction to the compulsory dispute settlement mechanism prescribed by the Convention, and offers suggestions as to how states might distinguish or overcome the barriers imposed by the Southern Bluefin Tuna tribunal in future cases. (Abstract courtesy of Ocean Development and International Law).

VIII. ECONOMICS

Carter reviews the current research on the economics of marine protected areas,
closely examining the costs and benefits of MPAs in terms of consumptive and nonconsumptive marine resource interests.


A significant portion of the aid entering Pacific island countries is received from distant water fishing nations, such as Japan, in exchange for access to the Western and Central Pacific tuna fishery. Peterson argues that dependency on foreign aid reduces the transparency of fishery treaties, exposes the Pacific nations to financial risks associated with potential withdrawal of the aid, and hinders the region's efforts in fisheries management and economic development.

IX. ECOSYSTEM MANAGEMENT


During the second half of the twentieth century interest in the development of integrated ocean governance has continued to grow, within individual states and on the international level as well. In the United States the work of the Stratton Commission led to the creation of the National Oceanic and Atmospheric Administration (NOAA) and the passage of the Coastal Zone Management Act. These developments were but the start of what has become ongoing concern with establishing coherent and comprehensive approaches to the management of ocean and coastal space. Globally, interest in more systemic approaches to ocean management increased with the negotiations for the 1982 United Nations Law of the Sea Convention and was further sparked by the issues raised at the 1972 Stockholm Conference on the Human Environment and the 1992 United Nations Conference on Environment and Development held in Rio de Janeiro. Several states have recently undertaken new initiatives to further the development of integrated ocean policies that reflect recognition of the need for ecosystem-based management. Juda examines developments in three states, the United States, Canada, and Australia, that have given this subject substantial attention to assess the efforts being made and the nature of the problems that are being encountered. (Abstract courtesy of Ocean Development and International Law).


In 1997, the nations surrounding the North Sea agreed to develop an ecosystem approach for the management of the North Sea fisheries and the marine environment. Kabuta and Laane describe the process utilized by the North Sea countries to develop a set of ecological indicators for the management of the North Sea ecosystem.

A tropical coastal seascape often consists of a variety of environments, including mangrove, coral reefs, and sea grass beds. Moberg and Rönnbäck examine a number of attempts to artificially replace these environments and the ecosystem services they provide, questioning the degree to which technologies can substitute for ecosystem services, the capacity of restoration projects to reestablish ecosystem functions, and a system's ability to deal with future disturbances.


America's Living Oceans: Charting a Course for Sea Change is the result of a three-year nationwide study of the oceans by the Pew Oceans Commission. The Report cites overfishing, over-development along U.S. coastlines, and pollution as the major threats to the health of the oceans. Some of the major recommendations in the report include an immediate overhaul of the U.S. management system to protect ocean ecosystems and restore wildlife, a doubling of the budget for federal ocean research, and a moratorium on the expansion of finfish aquaculture until the promulgation of national standards. (*The Report is available from the Pew Oceans Commission at [http://www.pewoceans.org/](http://www.pewoceans.org/).*


Over the years, ecologists have proposed hundreds of quantitative indicators for the evaluation of the status of marine ecosystems. Rice examines the common classes of ecosystem status indicators and explores alternative approaches to documenting the information content of various indicators and alternative means of identifying reference points.


The objective of the Madrid Protocol on Environmental Protection to the Antarctic Treaty is to provide a comprehensive regime for the protection of the Antarctic environment and to preserve its value as an area for scientific research. Some Treaty nations have interpreted the reach of the Protocol to be limited with respect to the marine environment. Important environmental safeguards have not been enacted in this area, casting the effectiveness of the Protocol into doubt. Wood examines three artifacts of regime design leading to the Protocol's uncertain fate in the Antarctic maritime area and makes several recommendations for improved effectiveness. (*Abstract courtesy of Ocean Development and International Law).*
ENDANGERED SPECIES

The Patagonian toothfish is in danger of commercial extinction. As an important element of the Antarctic’s fragile ecosystem, its sudden demise could have serious implications for the biodiversity of the Southern Ocean. The high market value of Toothfish has made the species a prime target for illegal, unregulated, and unreported (IUU) fishing in the area under the regulatory control of the Commission established by the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR). Bialek reviews the conservation measures adopted by the Commission in an attempt to slow the "race for the Toothfish" and analyzes the likely effectiveness of the CCAMLR Catch Documentation Scheme (CDS), first adopted in 1999, including the consistency of its design and application with the international trade rules of the World Trade Organization (WTO). Finally, Bialek considers the appropriateness of a possible listing of the toothfish under the Convention on International Trade in Endangered Species (CITES). (Abstract courtesy of Ocean Development and International Law).

ESTUARIES

Determining the cause of estuarine fish kills at the ecosystem level is very difficult. Although fish kills have become a serious problem along the mid-Atlantic coast, research conducted in 1999 failed to unequivocally implicate the toxic dinoflagellate Pfiesteria as the cause. Brownie and his co-authors believe that it is necessary to re-examine this relationship. Data from extensive monitoring programs and the individual fish kill events was re-evaluated by the authors, who suggest that their results provide considerable evidence linking the toxic Pfiesteria to the fish kills.


Stow and Borsuk argue that the causal connection between fish kills and the dinoflagellate Pfiesteria piscicida in the Neuse River Estuary in North Carolina cannot be determine solely by observational data. Rather, researchers should also consider the presence of a broader class of more easily measured Pfiesteria-like organisms (PLOs). Stow and Borsuk suggest that PLOs are stimulated to become actively toxic by the presence of dying fish and do not actually cause the fish kills. However, since a common cause of both Pfiesteria toxicity and fish kills cannot be ruled out, further investigation of the causal associations is necessary.
XII. FISHERIES MANAGEMENT


The Convention for the Conservation of Migratory Species of Wild Animals (CMS) was developed to protect and conserve migratory species and their habitats. Bache and Rajkumar examine the Convention and its subsidiary instruments as they relate to bycatch management and propose methods to facilitate the development of a comprehensive approach to the incidental catch of marine wildlife.


Bache discusses three elements utilized by successful bycatch mitigation programs around the world. Bache begins by discussing the selection and prioritization of bycatch stocks and concludes by examining two bycatch mitigation tools: (1) the individual transferable quota and allowable catch limits and (2) mandatory gear adaptations or restrictions.


In response to the disastrous human and economic toll of the recession in the French fishing industry in the early 1990s, a quality scheme was implemented to ensure the freshness and quality of the fishery products and to enhance profitability. Charles, Boude, Murray, and Paquotte analyze the fishermen's reaction to this program and the impact of the program on income and resource use.


Cole analyzes the debate regarding globalization in the context of international fisheries governance. Changes in fisheries policy-making and governance are illustrated by comparing the U.N. Food and Agricultural Organization's Code of Conduct for Responsible Fisheries and the Straddling Fish Stocks Agreement in the areas of international economics and law-making.


China, Japan, and Korea, as signatories to the Law of the Sea Convention, have worked to domestically implement the policies of the Convention and develop relations with neighboring countries. Kang discusses the steps undertaken by the three countries to update internal policies and existing bilateral treaties and some of the problems that remain to be solved by the three countries.

Keyuan reviews the Sino-Japanese fisheries relations from the 1950s to date. Keyuan discusses the early efforts made by both sides to improve relations, the existing legal and environmental challenges, the new bilateral agreement between China and Japan, and the creation of a joint fishery management regime.


In the late 1990s, China, Japan, and South Korea ratified the U.N. Law of the Sea Convention and proclaimed their exclusive economic zones. Kim examines the new fisheries agreements and the potential boundary conflicts between the three nations.


Using the sea urchin fishery as a test case, a project was undertaken in Barbados to establish a co-management mechanism that could be operated by the fishers, with support from the appropriate governmental offices. Technology of Participation methodology, developed by the Institute of Cultural Affairs, was utilized, including focused conversation and participatory strategic planning. Mahon and co-authors believe this is the first time such methodology was applied to small-scale fisheries and conclude it successfully facilitated both fisher and governmental input.


McGarvey presents a fishery management approach which integrates a buyback of fishing vessels program with a management tax on seafood. The advantages and disadvantages of such a policy, as compared to individual transferable quotas, are discussed.


Analyzing all available data from the beginning of fishery exploitation from five ocean basins, Myers and Worm estimate that over 90% of large predatory fish, such as tuna and swordfish, have been lost from the world's oceans due to industrialized fishing. The study was conducted by constructing trajectories of biomass and composition of large predatory fish communities. The study revealed that community biomass will typically be reduced by 80% within the first 15 years of exploitation. Myers and Worm argue that the decline of large predators in coastal regions extends throughout the ocean with potentially serious ecosystem consequences.

Okey argues that the failure of fisheries management in the United States is due to the over-representation of extractive interests, mainly commercial fishing, on the eight regional fisheries management councils. Okey suggests that the relative dominance of extractive interests could be adjusted through a legally mandated apportionment formula in order to optimize the interests of the general public.


During their lifetimes, Pacific salmon cross many boundaries, both ecological and jurisdictional. The majority of attempts to reach international consensus on salmon management have focused on harvest. Phelan examines the existing harvest-based international agreements for salmon management and explores other international agreements and institutions which could assist with the creation of a comprehensive Pacific Rim salmon conservation program.


Canada is a strong supporter of the United Nations Fish Stocks Agreement. Whether Canada’s support is matched by its actions in strengthening regional fisheries organizations and arrangements dealing with straddling and highly migratory fish stocks is thus worthy of investigation. Rayfuse examines Canadian activities within regional fisheries organizations with particular reference to implementation of the precautionary and ecosystem approaches and the issue of enforcement of conservation and management measures. Although Canadian actions appear generally to be furthering implementation of the Agreement, comprehensive integration of words and deeds remains to be achieved. (Abstract courtesy of Ocean Development and International Law).


Scottish fishermen participated in a study designed to gauge their knowledge and the potential application of that knowledge to fisheries management. Rossiter and Stead found that when asked to offer an alternative to the total allowable catch system, most fishermen favored the abolition of quotas and the implementation of an effort control, or days at sea, system.


For most of the second half of 2001, by the United Nations Secretariat’s "official" tally there were 29 ratifications and accessions of the UN Fish Stocks Agreement,
one short of the number required under Article 40(1) of the Agreement to bring it into force. However, there had been two ratifications withdrawn and a third not counted. Reviewing the facts in light of the Secretariat’s published treaty policy, Serdy concludes that the better view is that by May 2001, at the latest, the Agreement had received sufficient ratifications and accessions to be considered in force. (Abstract courtesy of Ocean Development and International Law).


Co-management of fisheries resources is gaining support throughout the world as an alternative to state management, which is increasingly viewed as a failed mechanism. After conducting a review of indigenous co-management in the South African fisheries from 1905 - 1939, van Sittert concludes that co-management is unlikely to be successfully imported into South Africa.


New Zealand is developing a co-management fisheries regime by devolving certain management duties to Commercial Stakeholder Organizations (CSOs). Yandle discusses the results of a mail survey, which gathered data on CSO characteristics and the expectations of CSO leaders.

XIII. INTERNATIONAL TREATY LAW


Recently, Cuba attempted to implement a reservation to the Protocol Concerning Specially Protected Areas and Wildlife (SPAW) after having ratified SPAW and Iceland implemented a reservation to the commercial whaling moratorium in the International Convention for the Regulation of Whaling. In this article, Wold illustrates the functioning capacity of Article 19, which requires a reservation to be legally compatible with a treaty's purpose, and Article 20, giving states the ability to accept or reject a reservation based on policy grounds, of the Vienna Convention. Wold also gives an historical account of the law of reservations and analyzes Cuba's and Iceland's particular situations.

XIV. INVASIVE SPECIES


With the expansion of world trade, the threat posed by aquatic invasive species has increased dramatically. Doelle reviews recent efforts, both internationally and domestically, to prevent, eradicate, and control aquatic invasive species and surveys the existing legal tools which are available to address invasions.
XV. MARINE BIODIVERSITY


Currently, the most significant interplay between the biodiversity regime introduced in the Convention for Biological Diversity and conservation and fisheries management institutions occurs on a global level, where several ocean-related regimes are affected by some of the concerns raised in the Convention. At lower governmental levels, the institutions managing marine and coastal biodiversity are typically entrenched within conventional fisheries management structures. Hoel examines the potential long-term impact of the creation and operation of the Convention on various fisheries regimes.

XVI. MARINE MAMMALS


In 2001, the National Research Council undertook a study of the impact of the Pacific groundfish fisheries on the Stellar sea lions. The Report evaluates the many hypotheses which have been proposed over the years to explain the sea lion decline to determine which causes are most consistent with the data. The Report also reviews management strategies which could assist in determining the impact of the fisheries. (Report available from the Ocean Studies Board at http://www7.nationalacademies.org/osb/index.html).


The impact of human-generated noise in the marine environment on marine mammals is an issue of growing concern and increasingly in the spotlight, most recently after a mass stranding of beaked whales was linked to sonar testing. At the request of the National Ocean Partnership Program, with funding from NOAA and the Office of Naval Research, among others, the National Research Council studied the effect of ocean noise on marine mammals. The report examines the various contributions to marine ambient noise, outlines the research needed to evaluate impacts, identifies gaps in the existing marine noise databases, and discusses research which is needed to develop an ocean noise model. (Report available from the Ocean Studies Board at http://www7.nationalacademies.org/osb/index.html).

XVII. MARINE PROTECTED AREAS


Although marine reserves continue to be controversial because of their impacts on the fishing industry, field research suggests that marine reserves lead to increases in abundance, size, and reproductive output of fisheries. Temporary fisheries closures can also lead to similar results. Gell and Roberts analyze existing studies of marine reserves and fisheries closures to determine their beneficial impacts on fisheries.
Numerous case studies are discussed from around the world, including Fiji, New Zealand, South Africa, Spain, and the United States. (Report available from the World Wildlife Fund at http://www.worldwildlife.org/oceans/fishery_effects.pdf)

XVIII. MARITIME BOUNDARIES


The dispute between Greece and Turkey regarding the boundaries of the Aegean Sea is a classic law of the sea conflict, which almost led to war in 1987 and 1996. However, the conflict has one unique element, Turkish accession to the European Union, which could help facilitate conflict resolution. Keefer discusses the history of the conflict, the relevant elements of the law of the sea, and the proper forum for resolution of the conflict.


The delimitation award of the Tribunal in the Second Phase of the Arbitration between Newfoundland and Labrador and Nova Scotia is analyzed in light of the terms of reference establishing the Tribunal and the positions of the Parties throughout the delimitation phase of the Arbitration. The application of the principles of international law governing maritime boundary delimitation and the reasoning of the Tribunal in the creation of this boundary puts the Newfoundland and Labrador-Nova Scotia boundary on a par with international maritime boundary awards. (Abstract courtesy of Ocean Development and International Law).


With the independence of Namibia in 1990, South Africa, Angola, and Namibia began negotiations to determine the maritime boundaries of Namibia. The negotiation process has been relatively slow. Moller discusses the delimitation process and the cooperative efforts of the three nations which have moved forward without formal boundary agreements.


On two separate occasions, North and South Korea clashed over the Yellow Sea, mainly because of an ongoing maritime boundary dispute and competition for blue crab. Van Dyke, Valencia, and Miller Garmendia discuss the two incidents, analyze the boundary dispute, and propose possible solutions.
XIX. MARITIME LAW ISSUES


Both the Tampa and the Castor incidents, situations in which ships carrying refugees or in distress were denied access to territorial waters and ports, received significant media attention and resulted in the International Maritime Organization placing the issues of the treatment of persons at sea and places of refuge high on its agenda. Allen examines the dichotomy between two traditional duties, the duty to assist and the obligation to rescue, and the response of the IMO to the recent "perceived" lapses by Australia and several Mediterranean countries.


In August 2001, Australia refused sea-borne asylum seekers access to its ports. The interpretations of law, both domestic and international, that surfaced in the wake of the Tampa affair, highlight the inadequacy of the legal regime for the protection of refugees. Crock examines the Tampa Incident and its aftermath from the perspective of international refugee law.


Davies addresses the issue of rescued refugees aboard vessels wishing to port in states en route to their final destination in order to drop off the refugees. There is a conflict of interest between the sea captain, who may have a moral or professional obligation as a captain at sea to save distressed persons, and the commercial consequences of undertaking a rescue. Davies argues that the legal incentives to rescue are tremendously offset by commercial disincentives.


Gaskell examines the decision making process of the Legal Committee of the International Maritime Organization, detailing the introduction and drafting of proposals, the negotiation process, and the influence exerted by states and non-governmental organizations.

The 1951 Convention Relating to the Status of Refugees is the backbone of the international refugee protection regime. Viewed by many to be an historic relic unable to accommodate today’s "new" classes of refugees, those fleeing ethnic or gender-based persecutions, Goodwin-Gill discusses options available to strengthen the Refugee Convention and fill the current gaps in the international regime.


In 1996, Congress passed legislation rendering Coast Guard marine casualty reports inadmissible as evidence in civil or administrative proceedings. Despite this language, these reports can be used in certain circumstances. Lambert examines the use of Coast Guard accident investigation reports in civil litigation.


McAllister and Bloom examine the unique evidentiary rules for arbitrations conducted in the United States or controlled by U.S. law. McAllister and Bloom also discuss the limitations on an arbitrator’s power to accept evidence and the prudential guidelines of the arbitration process.


Although Federal Rule of Civil Procedure 44.1 provides for the application of foreign law in U.S. courts, federal judges have been slow to apply foreign law, preferring to apply the law of the forum. Teitz argues that the imposition of a choice of law theory with regard to the application of foreign law has hindered the development of precedent and resulted in significant variation among the circuits.

XX. OCEAN OBSERVING SYSTEMS


Christian details an initiative under the auspices of the Global Terrestrial Observing System (GTOS) to develop a land-based coastal observing system. This initiative will ultimately lead to the integration of terrestrial and freshwater observations with marine observations under the Global Oceanographic Observing System (GOOS). Christian also discusses some of the major challenges of the project, including the identification of indicators and evaluation.
XXI. PIRACY


Piracy has increased significantly in Southeast Asia during the last decade. Although increasingly connected to other forms of international crime, piracy in Southeast Asia is not a new phenomenon. Teitler analyzes the present situation through comparisons with the past experiences of the Dutch colonial governments.

XXII. POLLUTION


Disparities exist between the United States’ approach to oil spill liability and compensation and that of the rest of the world, most significantly regarding the limits of responsible parties and the scope of recoverable damages. Kim argues that the maritime community would benefit from the harmonization of the two regimes and, ultimately, a unified international regime.


May reviews developments in Clean Water Act litigation since January 2002 and discusses issues such as jurisdiction, permitting, water quality standards and total maximum daily loads, citizen suits, and enforcement.


Viladrich-Grau analyzes the policies of the United States Coast Guard regulating the transfer of oil in U.S. harbors. Particular attention is paid to the monitoring and enforcement programs requiring a certain level of care be observed when transferring oil between shore facilities and barges or tankers.

XXIII. REGIONAL MANAGEMENT


China and Japan have led the way in developing a "conflict avoidance" regime for the East China Sea where the two have extensive overlapping claims. The current regime includes a joint regulation and fishing zone and a prior notification regime for scientific research. The next step should be a regime regarding the use of force and military and intelligence-gathering activities in the EEZ. Valencia and Amae review the progress made in building this conflict avoidance regime and examine the need for and ways to expand it to cover military activities in the EEZ. (Abstract courtesy of Ocean Development and International Law).
XXIV. SCIENTIFIC RESEARCH


The 1982 United Nations Convention on the Law of the Sea has created a consent regime for coastal states to manage, control, and promote marine scientific research in offshore areas within their national jurisdiction. China, as a party to the Law of the Sea Convention, has promulgated laws and regulations on foreign-related marine scientific research conducted within its jurisdictional waters. Keyuan addresses the legal regime on marine scientific research in general and the Chinese legal governance in particular. (Abstract courtesy of Ocean Development and International Law).

XXV. TAKINGS


The Supreme Court’s decision in Palazzolo appears to have been a significant victory for property owners in the field of federal takings law. Cordes examines the state of regulatory takings laws in light of Palazzolo, paying particular attention to regulatory controls on environmentally sensitive land.


The U.S. Supreme Court’s decision in Palazzolo v. Rhode Island concerned the Takings Clause of the U.S. Constitution and the investment-backed expectations of a property owner. Zazycki examines whether the investment-backed expectations portion of the test set forth in Penn Central v. New York is clarified in light of the Palazzolo decision, concluding that the decision did nothing to advance private property rights.

XXVI. TOURISM


Irving Oxley and Brown present the findings of a study on the potential long-term sustainability of sea kayaking in the Bay of Fundy, Canada.


In Western Australia, the coastal recreation impacts of four-wheel drive vehicles has significantly increased since the 1960s. To determine the effects of this increase, a study was conducted on the physical impacts of four-wheel drive related nature-based tourism in the Central Coastal Region of Western Australia. Priskin reports the results of this study.

Izola is a coastal fishing community in the Northeast of the Upper Adriatic. With the break-up of Yugoslavia, a new state border caused the loss of fishing territory along the Croatian coast. One of the adaptive strategies developed by the Izola fishermen is to combine fishing with tourism. Rogelja discusses this connection between the fishery and tourism on two levels: (1) fishermen as tourist workers and (2) the fishery as a part of the tourist landscape, highlighting the emerging tourism discourse of the new Slovene state and the fishermen's perspective on tourism.

XXVII. UNDERWATER CULTURAL HERITAGE


On November 2, 2001, the General Assembly of the United Nations Scientific, Economic and Cultural Organization (UNESCO) adopted the convention on the Protection of the Underwater Cultural Heritage. Among the many complex issues addressed in the convention is the legal status of sunken state-owned vessels, including warships. Prior to the adoption of this convention, no conventional or customary international law existed with regards to the question of abandonment of state-owned vessels or the application of the principle of sovereign immunity to sunken state vessels. While difficulties between coastal states and maritime and former colonial powers resulted in a regime that does not comprehensively address the issues, the convention does provide some guidance in this regard and may provide a basis for further development. (*Abstract courtesy of Ocean Development and International Law*).