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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.

Volume 7, Number 2 marks the final issue of the Sea Grant Law and Policy Digest. In the future, summaries of recently published research in the fields of ocean and coastal law and policy may be found on the GulfBase web site, http://www.gulfbase.org . The web site hosts the InfoHub search engine, which contains articles on the laws, science, and socioeconomic issues relevant to management and use of the Gulf of Mexico.



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Journals featured in this issue of the *LAW AND POLICY DIGEST*. For more information, click on the name of the journal.

- Alaska Law Review
- American Criminal Law Review
- ANIMAL LAW
- ARIZONA LAW REVIEW
- Association Pacific Rim Law and Policy Journal
- Berkeley Journal of International Law
- BUFFALO ENVIRONMENTAL LAW JOURNAL
- BOSTON COLLEGE ENVIRONMENTAL AFFAIRS LAW REVIEW
- COASTAL MANAGEMENT
- COLUMBIA JOURNAL OF ENVIRONMENTAL LAW
- CORNELL JOURNAL OF LAW AND PUBLIC POLICY
- DENVER UNIVERSITY LAW REVIEW
- ECOLOGY LAW QUARTERLY
- Environmental Law
- ENVIRONMENTAL LAW REPORTER
- Environs: Environmental Law and Policy Journal
- GEORGE WASHINGTON LAW REVIEW
- HARVARD ENVIRONMENTAL LAW REVIEW
- INDIANA LAW JOURNAL
- JOURNAL OF ENVIRONMENTAL LAW AND LITIGATION
- JOURNAL OF LAND, RESOURCES, AND ENVIRONMENTAL LAW
- JOURNAL OF LAND USE AND ENVIRONMENTAL LAW
- MINNESOTA LAW REVIEW
- MISSOURI ENVIRONMENTAL LAW AND POLICY REVIEW
- NAVAL LAW REVIEW

- New England Law Review
- New York University Environmental Law Journal
- NORTH CAROLINA LAW REVIEW
- NORTH CAROLINA CENTRAL LAW REVIEW
- OCEAN AND COASTAL LAW JOURNAL
- Ocean Development and International Law
- PACE ENVIRONMENTAL LAW REVIEW
- PEPPERDINE LAW REVIEW
- SANTA CLARA LAW REVIEW
- SEA GRANT LAW AND POLICY JOURNAL
- SEATTLE JOURNAL FOR SOCIAL JUSTICE
- ST. JOHN'S JOURNAL OF LEGAL COMMENTARY
- STANFORD ENVIRONMENTAL LAW JOURNAL
- SUSTAINABLE DEVELOPMENT LAW AND POLICY
- SYRACUSE LAW REVIEW
- TEMPLE POLITICAL AND CIVIL RIGHTS LAW REVIEW
- TEXAS LAW REVIEW
- TRANSNATIONAL LAW AND CONTEMPORARY PROBLEMS
- TULANE ENVIRONMENTAL LAW JOURNAL
- UCLA JOURNAL OF ENVIRONMENTAL LAW AND POLICY
- UCLA LAW REVIEW
- UNIVERSITY OF COLORADO LAW REVIEW
- UNIVERSITY OF RICHMOND LAW REVIEW
- VERMONT LAW REVIEW
- VILLANOVA ENVIRONMENTAL LAW JOURNAL
- VIRGINIA ENVIRONMENTAL LAW JOURNAL
- WHITTIER LAW REVIEW
- WILLIAM AND MARY ENVIRONMENTAL LAW AND POLICY REVIEW

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ALTERNATIVE ENERGY

Holahan, Timothy. "A Framework for Alternative Energy Development: Shifting from Drilling Rigs to Renewables." 35 Boston College Environmental Affairs Law Review 321 - 348 (2008).

Holahan notes that in spite of the favorable political and regulatory climate surrounding alternative energy projects, such projects encounter opposition because of projected costs and local concerns. He looks at one program that could allay these concerns, "Rigs to Renewables," which would place renewable energy stations on unused offshore oil rigs. Holahan suggests that the creators of the program should look to the existing "Rigs to Reefs" program when establishing a legal and regulatory framework for the program. He provides an overview of the Rigs to Reefs program, including its regulatory structure.

Rosenberg, Ronald H. "Making Renewable Energy a Reality—Finding Ways to Site Wind Power Facilities." 32 William and Mary Environmental Law and Policy Review 635 – 684 (2008).

Rosenberg discusses the complicated task of siting wind power facilities. He addresses the decisionmaking process that should be used in siting wind-power facilities, what analytical factors should be addressed in siting decisions, and who should make those decisions. Rosenberg presents a framework for a state-level facility siting procedure.

Ziza, Iva. "Siting of Renewable Energy Facilities and Adversarial Legalism: Lessons from Cape Cod." 42 New England Law Review 591 - 629 (2008).

Cape Wind is an offshore wind farm proposed for construction in federal waters close to Massachusetts' Cape Cod and the islands of Martha's Vineyard and Nantucket. Ziza describes the extensive permitting processes surrounding Cape Wind and the administrative and judicial challenges to the project. He suggests that the administrative delays in permitting this project and others negatively impact efforts to curb global warming. Finally, Ziza suggests that the courts should show high deference to agency decisions on renewable energy projects.

AQUACULTURE

Maxwell, Vanessa J., et al. "Aquaculture Parks in the Coastal Zone: A Review of Legal and Policy Issues in the Gulf of Mexico State Waters." 36 *Coastal Management* 241 – 253 (2008).

Maxwell and co-authors attempt to apply industrial park concepts to the development of aquaculture parks in public waters. They identify the permitting process, relevant agencies, and legislation needed to facilitate development. Based on a survey of Gulf of Mexico states, the authors determined: private parks exist in Florida, but no public parks have developed yet; plans for parks exist in Mississippi, but lack of funding prevents development; no regulations prohibit parks in Alabama, although none currently exist; Texas regulations hinder development of parks; and an experimental park has been proposed in Louisiana, but regulatory gaps have delayed permit issuance. *Abstract Courtesy of Coastal Management*

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Michler-Cieluch, Tanja. "Mussel and Seaweed Cultivation in Offshore Wind Farms: An Opinion Survey." 36 Coastal Management 392 - 411 (2008).

German coastal regions and adjacent offshore waters are claimed for a variety of different, and often overlapping, uses. Conflicts of interest are expected to increase due to the planned construction of offshore wind farms. The development of an integrated approach combining different commercial activities, such as open ocean aquaculture and wind farming, could be a possible solution to overcome these conflicts. To illuminate existing perception and opinions on this multiple-use idea, this study examines the attitudes of representatives of eight different actor groups toward potential offshore wind farm-mariculture integration in the German North Sea. Results from the questionnaire survey show that the respondents' attitudes toward the suggested multiple-use setting seem to be largely influenced by their general opinion toward offshore wind farms. The Fisheries actor group differs from the other questioned groups in that negative attitudes are overall predominant. This case study points to the need for a credible mechanism that more successfully integrates key actor groups, such as fisheries, into future planning and research issues.

Abstract Courtesy of Coastal Management

Szuster, Brian W. "Detecting and Managing Coastal Fisheries and Aquaculture Gear Using Satellite Radar Imagery." 36 Coastal Management 318 – 329 (2008).

Fishing and shellfish aquaculture are important sources of income for coastal communities in Thailand and other parts of tropical Asia, but environmental impacts associated with these small-scale activities can affect water quality, nearshore habitats, and fish populations. The management of coastal fisheries and aquaculture has, therefore, become a major concern for government fisheries officials who are searching for cost effective measures to improve the regulation of these sectors. Synthetic aperture radar (SAR) images from the RADARSAT-1 satellite were acquired to determine if stationary fishing and aquaculture gears within a coastal study site in the Upper Gulf of Thailand could be identified, and if automatic signature separation of gear types was possible. The use of SAR imagery for a coastal monitoring application was also evaluated and the potential of this technology to improve resource management outcomes considered.

Abstract Courtesy of Coastal Management

CLIMATE CHANGE

K III.

Burleson, Elizabeth. "A Climate of Extremes: Transboundary Conflict Resolution." 32 Vermont Law Review 477 – 523 (2008).

Burleson argues that climate change threatens international peace and security. In this article, she examines various climate change policies. She first looks at a recent U.S. Supreme Court decision on the regulation of greenhouse gas emissions, *Massachusetts v. EPA*. Next, she looks at multilateral measures to reduce greenhouse gas emissions, focusing on the use of renewable energy. Burleson also considers whether climate change will become a national security priority. Finally, she examines adaptation to climate change. Burleson concludes that an international body should coordinate efforts regarding greenhouse gas reduction and climate change adaptation.

Burns, William C.G. "A Voice for the Fish? Climate Change Litigation and Potential Causes of Action for Impacts under the United Nations Fish Stocks Agreement." 48 *Santa Clara Law Review* 605 – 647 (2008).

Burns explores the potential for the United Nation's Fish Stocks Agreement to address the threat of climate change. He provides an overview of climate change science, including the effect of climate change on certain fish species. Burns also examines the national and international responses to climate change, concluding that the responses have been inadequate.

Craig, Robin Kundis. "Climate Change, Regulatory Fragmentation, and Water Triage." 79 University of Colorado Law Review 825 - 927 (2008).

Freshwater resources are subject to multiple regulatory authorities. Craig argues that the fragmented regulation of freshwater resources negatively impacts downstream marine ecosystems. Craig uses the specific example of atmospheric deposition of mercury to demonstrate this point. The author also presents some of the legal conflicts regarding the use and regulation of freshwater. Craig suggests that taking marine ecosystems into consideration in forming regulatory schemes could result in ecosystembased regulatory goals and provide a basis for organizing regulatory options for fresh water resources.

Djoghlaf, Ahmed. "Environmental Change in Polar Regions: Climate Change and Biodiversity in Polar Regions." 8 Sustainable Development Law and Policy 14 – 16 (2008).

Djoghlaf discusses the effect of climate change on biodiversity in polar regions. He examines potential adaptation and mitigation strategies to reduce the risk to human and natural ecosystems. Djoghlaf explores the role of the Convention on Biological Diversity in implementing these strategies.

Hurd, Brian H. "Challenges of Adapting to a Changing Climate." 26 UCLA Journal of Environmental Law and Policy 77 – 92 (2008).

Adaptation to climate change is a complex concept. Using studies on climate change impacts, vulnerability assessment, and adaptation capacity building, Hurd provides a nontechnical discussion of issues related to climate change adaptation. Throughout the article, he illustrates the concept of adaptation using changes in water resources as an example.

Jancaitis, Kelley M. "Florida on the Coast of Climate Change: Responding to Rising Seas." 31 Environs: Environmental Law and Policy Journal 157 - 194 (2008).

Jancaitis explores Florida's preparedness for future sea level rise caused by climate change. She looks at methods of reducing greenhouse gases through the creation of a carbon tax, the development and use of alternative technology, and improving energy efficiency. Jancaitis presents methods to minimize damage caused by sea level rise and to adapt to coastline changes.

Long, Andrew. "Globalism in Massachusetts v. EPA." 23 Journal of Environmental Law and Litigation 73 - 123 (2008).

Long examines several of the overlooked aspects of *Massachusetts v. EPA*, a U.S. Supreme Court case on standing, climate change, and judicial review of agency action. He provides a discussion of the role of environmentalism in the standing analysis. Long also addresses the Court's recognition of the scientific consensus on climate change and its analysis of the EPA's role in resolving climate change.

Mills, Evan. "The Role of U.S. Insurance Regulators in Responding to Climate Change." 26 UCLA Journal of Environmental Law and Policy 129 - 168 (2008).

Mills provides a summary of the impact of climate change on insurers. Mills addresses three issues identified in the National Association of Insurance Commissioners' (NAIC) Climate Change and Global Warming Task Force charter: the implications of climate change on the insurance sector; insurers' knowledge of potential climate change impacts; and, recommendations on steps that regulators could take to assure adequate monitoring of insurers' activities with regard to managing the financial condition and performance of insurance markets. He focuses on the latter two issues, offering recommendations on how the NAIC can play a leadership role in the insurance industry's treatment of climate change.

Nichols, Sandra S., and Carl Bruch. "New Frameworks for Managing Dynamic Coasts: Legal and Policy Tools for Adapting U.S. Coastal Zone Management to Climate Change." 1 Sea Grant Law and Policy Digest 19 – 41 (2008).

Nichols and Bruch discuss legal and policy tools that will help the United States adapt to climate change. The authors give an overview of the impacts of climate change and argue that the effects of climate change will require governance structures to incorporate adaptive approaches. Nichols and Bruch provide examples of how these new structures could impact coastal management law and policy. The authors discuss issues that may come up in the transition to an adaptive governance approach and propose steps for initiating the transition.

Olmstead, James L. "The Global Warming Crisis: An Analytical Framework to Regional Responses." 23 Journal of Environmental Law and Litigation 125 – 189 (2008). Olmstead discusses the causes of global warming and regional responses to the crisis, noting the successes and failures of these responses. He suggests additional responses for the regions, focusing on adaptation to the global warming crisis through the protection of natural resources. Olmstead specifically examines Oregon's response to the problem.

Owen, Dave. "Climate Change and Environmental Assessment Law." Columbia Journal of Environmental Law 57 - 119 (2008).

Although Owen notes that new environmental laws may be necessary to address the effects of climate change, he argues that current laws may be employed to deal with the issue. He focuses on one law, the California Environmental Quality Act (CEQA), showing how the model may be used by other state and local agencies to address climate change.

IV.

COASTAL HAZARDS

Abbott, Ernest B. "Floods, Flood Insurance, Litigation, Politics – and Catastrophe: The National Flood Insurance Program" 1 Sea Grant Law and Policy Digest 129 – 155 (2008).

Following Hurricane Katrina, many homeowners and businesses found that their insurance did not cover damage caused by the storm. Abbott discusses the role of the National Flood Insurance Program (NFIP) in the face of such catastrophic coastal disasters. He examines the history of the NFIP, including its efforts to become financially self-sustaining. Finally, Abbot ponders the future of the NFIP, analyzing the proposed bills to reauthorize the program.

Alderman, Derek H., and Heather Ward. "Writing on the Plywood: Toward an Analysis of Hurricane Graffiti." 36 Coastal Management 1 – 18 (2008).

People often paint graffiti-like messages on the plywood used to cover windows and doors during a hurricane. The content of these landscape inscriptions ranges from practical information to deeper expressions of emotion and beliefs. Hurricane graffiti is an under-analyzed yet potentially useful indicator of the range of psychological needs, social tensions, and environmental attitudes circulating within coastal communities. First, Alderman and Ward begin establishing the analytical significance of reading and interpreting hurricane graffiti. The second purpose of this article is to document the meaning and functions of graffiti written by coastal residents and business owners in the southeastern United States during the very active 2004 and 2005 hurricane seasons. The final intent is to speculate on the value of hurricane graffiti to coastal management. *Abstract Courtesy of Coastal Management*

Baker, Earl J. "Are We Any Safer? Comprehensive Plan Impacts on Hurricane Evacuation and Shelter Demand in Florida." 36 *Coastal Management* 294 – 317 (2008). Five coastal counties in Florida were studied to assess the effect of state-mandated local comprehensive plan policies on hurricane evacuation clearance times and public shelter demand. Numbers of residential units in 2002 and at the time of plan approval were estimated from property parcel data. Abbreviated transportation models were used to calculate 2002 evacuation times and shelter demand and to ascertain the impacts of postplan residential growth within hurricane hazard areas. Calculated increases in clearance times and shelter demand are not in concert with the state's mandate to maintain or reduce clearance times. State law currently limits the leverage of the state planning agency to compel local governments to implement the required comprehensive plan policies. Baker recommends a concurrency management strategy that parallels the state's requirement to provide adequate transportation facilities to accommodate the impacts of future residential growth. Such a policy could be employed in other states as well. *Abstract Courtesy of Coastal Management*

D'Agostino, John R. "Coastal Hazard Policy, Science, and Planning in New Jersey." 1 Sea Grant Law and Policy Digest 116 - 129 (2008).

New Jersey's approach to coastal resiliency includes various regulatory tools and authorities. D'Agostino discusses coastal hazard policy, science, and planning in the state. He provides an overview of the state's mitigation efforts with respect to coastal hazards.

Higgins, Megan. "Legal and Policy Impacts of Sea Level Rise to Beaches and Coastal Property." 1 Sea Grant Law and Policy Digest 43 - 64 (2008).

Higgins discusses the legal and policy impacts of sea level rise on coastal property, focusing on state and local policy measures that have been successfully used in litigation. She includes an explanation of the measurement of sea level rise, including an evaluation of which sea level rise predictor estimate is accurate. Higgins discusses the implications of existing sea level rise policies to several legal concepts, including the public trust doctrine, takings, and nuisance.

Hodge, Sharon H. "Government and Academic Institutional Involvement in Gulf Coast Resiliency." 1 Sea Grant Law and Policy Digest 1 - 16 (2008).

Hodge provides an overview of the government and academic institutional roles in Gulf of Mexico coastal resiliency. Hodge describes the concept of resiliency and specifically discusses the development of resiliency planning and implementation related to Hurricane Katrina. She provides a survey of resiliency efforts by the federal government, Gulf Coast States, academic institutions, and the private and charitable sectors. Hodge concludes with an overview of the obstacles facing the coast of the northern Gulf of Mexico and some recommendations to address those challenges.

Kite-Powell, Hauke, et al. "Estimating the Economic Benefits of Regional Ocean Observing Systems." 36 Coastal Management 125 - 145 (2008).

Kite-Powell introduces a theme issue of the *Coastal Management* journal comprising a set of articles on the potential economic benefits from new investments in coastal ocean observing systems. The authors describe a methodology to estimate these benefits, and apply this methodology to generate preliminary estimates of such benefits. The approach focuses on coastal ocean observing information within ten geographic regions encompassing all coastal waters of the United States, and within a wide range of industrial and recreational activities including recreational fishing and boating, beach recreation, maritime transportation, search and rescue operations, spill response, marine hazards prediction, offshore energy, power generation, and commercial fishing. The findings suggest that annual benefits to users are likely to run in the multiple \$100s of millions of dollars. The project results should be considered first-order estimates that are subject to considerable refinement as the parameters of regional observing systems are better defined, and as the understanding of user sectors improves.

Abstract Courtesy of Coastal Management

Ruppert, Thomas K. "Eroding Long-Term Prospects for Florida's Beaches: Florida's Coastal Construction Control Line Program." 1 Sea Grant Law and Policy Digest 65 – 97 (2008).

Ruppert discusses Florida's Coastal Construction Control Line Program. He presents an overview of the causes of erosion and how the Program contributes to the problem of coastal erosion. Ruppert also provides suggestions to reform the Program. V.

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COASTAL MANAGEMENT

Ariza, Eduard. "Beyond Performance Assessment Measurements for Beach Management: Application to Spanish Mediterranean Beaches." 36 Coastal Management 47 - 66 (2008).

Performance assessment measures have traditionally been used by beach managers to guarantee beach quality. In order to gauge the effectiveness of the ones applied to the Mediterranean coast and assess how functions assigned to beaches are covered, fourteen beach management criteria were selected. The study examines how one standard (the Blue Flag award) and three rating systems (the ACA, CEDEX, and Cantabria indexes) covered those criteria and the results of their application to six beaches of the Costa Brava (Catalan Coast). No single assessment measurement considers all selected criteria and some general weaknesses were revealed. Of the analyzed tools, the CEDEX index proved to be the best for monitoring beach processes. The characteristics of Environmental Management Systems applied for Beach Management processes (EMSBs) were also assessed. The way in which those managerial frameworks are established has not been extensively considered, but the results suggest a need for its further development. This new tool will allow a general management framework to be adopted. Current standards/rating systems can be partially adapted and included within EMSBs. *Abstract Courtesy of Coastal Management*

Boevers, Justin. "Assessing the Utility of Beach Ecolabels for Use by Local Management." 36 Coastal Management 524 - 531 (2008).

Ecolabels for beaches have been around since 1985 and have grown rapidly over the past decade. However, effects from ecolabels on beach ecology and local coastal cultures are unknown. This study reviews the literature on tourism ecolabels and environmental certification for beaches, analyzes the criteria of the most prominent beach ecolabel, and identifies considerations and proposes recommendations for local management that address sandy beach ecology and local cultures. The Blue Flag ecolabel is evaluated for how well the program criteria balance tourism, the processes of sandy beach ecology and fail to incorporate local community values in program design. The results of the study include three areas that beach managers need to consider for better understanding the utility of beach ecolabel programs: opportunity costs of participation and consequences of losing certification; evaluate investment in multiple certifications; and identify potential changes from the implementation of ecolabels.

Abstract Courtesy of Coastal Management

De Langen, Peter W. "Charging Systems for Waste Reception Facilities in Ports and the Level Playing Field: A Case from North-West Europe." 36 *Coastal Management* 109 - 124 (2008).

Effective coastal zone management requires regulations of various forms. Inevitably, some of these have an impact on seaports. Understandably, regulations that may weaken the competitive position of a seaport are difficult to implement. The stakeholders of ports are well aware of their local, regional, and national economic impact. These stakeholders

proclaim the need to ensure a level playing field between ports and oppose regulations that distort it and damage their competitive position. If possible, regulations should be developed in such a way that the playing field between ports remains level. For this to be arranged, an analysis of the effects of regulations on the playing field is needed. De Langen analyzes the effects of different charging systems for waste disposal on the playing field between three leading North West European ports. First, a framework to analyze the distortions of the playing field is described. Second, the framework is applied to charging systems for waste disposal. De Langen's analysis reveals substantial differences in charging systems and shows that these differences distort the playing field. The distortion puts pressure on ports not to introduce the most environmentally friendly charging system. In the concluding section, alternative policy options to align the need for protecting the marine environment with the need to ensure a level playing field are discussed.

Abstract Courtesy of Coastal Management

Dumas, Christopher F., and John C. Whitehead. "The Potential Economic Benefits of Coastal Ocean Observing Systems: The Southeast Atlantic Region." 36 Coastal Management 146 - 164 (2008).

The Southeast Atlantic Coastal Ocean Observing System (SEACOOS) collects, manages and disseminates coastal oceanic and atmospheric observation information along the Atlantic coast of the southeastern United States. Dumas and Whitehead estimate the benefits of SEACOOS information in eleven benefit categories. Following a methodology used in similar studies of other U.S. coastal regions, Dumas and Whitehead evaluated the impacts of conservative changes in economic activity in each benefit category. The annual economic benefit of SEACOOS information is \$170 million (2003 \$), an estimate that falls between annual benefits of \$33 million for the Gulf of Maine region and \$381 million for the Gulf of Mexico.

Abstract Courtesy of Coastal Management

Fletcher, Stephen. "The Role of Universities in Supporting Integrated Coastal Management in the United Kingdom." 36 Coastal Management 67 – 80 (2008).

Historically, the role of universities in supporting ICM in the United Kingdom has been perceived as limited to the provision of courses for new entrants to the discipline and of limited continuing professional development opportunities. This research presents a broader review of the role of universities in ICM in the United Kingdom, and includes contributions to management practice, continuing professional development, research, and course provision. Through a multi-stage methodology it has been found that the contribution of universities to ICM in the United Kingdom is under pressure. This was found to be partially attributable to changes within the university sector and partly to the prevailing infrastructure of ICM in the United Kingdom. It is concluded that without greater partnership working between universities, practitioners, and government, the role of universities in ICM may deteriorate over the short to medium term.

Abstract Courtesy of Coastal Management

Hsu, Tai-Wen, et al. "Review of Countermeasures against Beach Erosion on the Taiwanese Coast." 36 Coastal Management 274 - 293 (2008).

Beach erosion is one of the most significant coastal preservation problems in the world. Hsu first briefly addresses the influences of human activity on beach erosion. The seriousness of beach erosion in Taiwan has received considerable attention since the 1960s, following rapid population growth and economic development in the coastal areas. Hard solutions of stabilized structures against beach erosion in Taiwan at that time are reviewed based on their effectiveness in protecting property and their ability to produce a landscape that harmonizes with the adjacent coastal environment. Soft coastal defense solutions implemented recently in coastal regions in Taiwan are introduced and their benefits are discussed. Hsu concludes that various methods designed to prevent wave- and current-induced beach erosion should be based on analyses of nearshore hydrodynamics, sediment transport, coastal processes, and physiographic features of beaches.

Abstract Courtesy of Coastal Management

Jude, Simon. "Investigating the Potential Role of Visualization Techniques in Participatory Coastal Management." 36 Coastal Management 331 – 349 (2008).

The current shift toward "soft" forms of coastal defense as means of adapting to future sea level rise requires careful communication and consultation if they are to gain widespread public acceptance. For this to be achieved, coastal managers must improve the manner in which they communicate with stakeholders and members of the public. One possible solution may be through the application of landscape visualization techniques to illustrate how new policies or management interventions may shape the coast. Jude investigates the potential role of such methods in participatory coastal management. Using interviews with coastal managers, the potential application of visualization techniques in coastal management processes are explored in detail. The findings suggest that while a number of possible roles for visualization techniques exist, there is an urgent need for practical testing and evaluation of the technology in participatory decisionmaking processes.

Abstract Courtesy of Coastal Management

Rabionet, Ivan Caceres, et al. "Indicators for Evaluating the Impact of Artificial Islands on the Barcelona Coast." 36 Coastal Management 254 – 273.

Artificial islands have been constructed next to large cities due to the need for extra space in highly populated areas. These emerged structures have been used by many countries as platforms for developing infrastructure (airports, harbors, highways, etc.), rebuilding ecological areas, and creating new spaces for tourism or residential areas. In this study, two state-of-the-art numerical models for wave propagation and nearshore circulation are used to simulate the effects of an emerged artificial island on the Barcelona coast. Several sea indicators (wave height, intensity and direction of currents, and mean water level) are analyzed to assess the changes likely to be induced by an artificial island. Three different situations are studied and the indicators are compared across the different tests to obtain information that can be used in the planning process of these structures. In two-meter wave conditions, the tests show that wave height is generally reduced in the sheltered area, which leads to improved safety for beach users (bathing is prohibited when wave height exceeds the two-meter threshold). However, the numerical models also reveal that velocities in the sheltered area usually decrease, which must be controlled to prevent stagnation in the bathing area.

Abstract Courtesy of Coastal Management

Richert, Evan. "Cost and User Profile of a Coastal Ocean Observing System." 36 Coastal Management 179 -192 (2008).

Fundamental to sustaining the financial support of a coastal ocean observing system is an intimate knowledge of users and their decision-making processes in order to maximize the worth of ocean observations to them. Richert explores the evolving mission of GoMOOS (the Gulf of Maine Ocean Observing System), its costs of providing near realtime observations and observing products, possible methods to assess the benefits of an ocean observing system, and a method for indexing the importance—and thus, potentially, the economic value—that users attach to these observations and products. *Abstract Courtesy of Coastal Management*

Seidemann, Ryan M., and James G. Wilkins. "Blanco v. Burton: What Did We Learn from Louisiana's Recent OCS Challenge?" 25 Pace Environmental Law Review 393 – 440 (2008).

Seidemann and Wilkins provide an in-depth overview of *Blanco v. Burton*, a challenge against the federal government regarding damage to Louisiana's coast line caused by oil and gas activity on the Outer Continental Shelf. Seiermann an Wilkins closely examine the state's use of the Coastal Zone Management Act (CZMA), the Outer Continental Shelf Lands Act (OCSLA), and National Environmental Policy Act (NEPA) in the lawsuit.

Slott, Jordan M. "Synergies between Adjacent Beach-Nourishing Communities in a Morpho-Economic Coupled Coastline Model." 36 Coastal Management 374 – 391 (2008).

Beach "nourishment" consists of placing sand on an eroding beach. The widened beach provides increased storm protection to adjacent structures and improved recreational benefits, but is most often transient, requiring on-going, repeated nourishment episodes. Numerical models of beach nourishment typically address such questions as how long a widened beach will last; economic models compare the benefits and costs of preserving a stretch of beach without regard to its geomorphic evolution. Neither have addressed the physical nor economic interactions between adjacent nourishing communities. Here, the study couples a numerical model of coastline evolution and a cost-benefit model of beach nourishment, allowing adjacent communities to make dynamic nourishment decisions. Beach nourishment benefits adjacent communities both "updrift" and "downdrift." The total amount of money spent on nourishment activities can decrease by as much as 25% when adjacent communities both conduct ongoing nourishment projects, as opposed to the case where each community nourishes in isolation.

Abstract Courtesy of Coastal Management

Van Kouwen, Frank, et al. "Applicability of Decision Support Systems for Integrated Coastal Zone Management." 36 Coastal Management 19 – 34 (2008).

The use of Decision Support Systems (DSSs) in Integrated Coastal Zone Management (ICZM) has declined since the 1990s. In this article the authors investigate the opportunities for enhancing the applicability of ICZM-DSSs by considering the following research questions: (1) "What DSS functionalities are important for ICZM decisionmaking?" and (2) "which of these functionalities are part of present-day ICZM-DSS tools?" The first question has been answered by a literature survey. Van Kouwen and coauthors identified knowledge- and process-related ICZM challenges and DSS functionalities that may help in meeting these challenges. For the second question, a selection of ICZM-DSS tools has been evaluated. The study shows none of the tools have all of the identified functionalities. The tools support either problem structuring/exploration or impact assessment while none of the tools manages to combine these functions. The implications for both DSS users (coastal managers) and DSS developers are discussed.

Abstract Courtesy of Coastal Management

Wieand, Kenneth. "A Bayesian Methodology for Estimating the Impacts of Improved Coastal Ocean Information on the Marine Recreational Fishing Industry." 36 Coastal Management 208 – 223 (2008).

Wieand develops a model of recreational fish catch probabilities, based on angler fishing strategies, that is conditional on uncertain information about the coastal ocean environment. Weiand calculates expected catch based on a hypothetical Baseline Data Set and hypothetical data from an Integrated Ocean Observation System (IOOS) to demonstrate potential benefits from IOOS. The role of Bayesian probabilities in Random Utility Models of recreational fishing is identified. The study discusses the types of information that will be required by recreational anglers in the Gulf of Mexico. Results have implications for the construction of ocean observation systems for recreational fishermen.

Abstract Courtesy of Coastal Management

Yao, Haoliang. "Lessons Learned from ICOM Initiatives in Canada and China." 36 Coastal Management 458 - 482 (2008).

Practical experience derived from current and developing integrated coastal and ocean management (ICOM) initiatives around the world demonstrates that these collaborative and integrated approaches to managing coastal and ocean resources are strongly influenced by various contextual factors including political, administrative, institutional, social, economic, and cultural. A comparative evaluation of two such ICOM initiatives—off the east coasts of Canada and China, respectively—provides valuable insights into how these factors play in the development, implementation, and success of these initiatives in two different settings. The evaluation framework developed and applied in this research focuses on evaluations of governance performance and management capacity, and applies both process- and progress-oriented indicators. Key findings include: (1) The Eastern Scotian Shelf Integrated Management (ESSIM) Initiative focuses on the participatory approach that emphasizes equity and consensus among

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stakeholders, whereas the Bohai Sea Sustainable Development and Environmental Management (BSSDEM) Program benefits greatly from a comprehensive approach that integrates different governments/departments and bridges among stakeholders; and (2) management approaches to ICOM strongly depend on the program objectives/priorities and local circumstances. Moreover, a total of thirteen recommendations are provided for the purposes of strengthening on-going programs and replicating success at a larger scale.

Abstract Courtesy of Coastal Management

CORAL REEFS

Dupont, Jennifer. "Artificial Reefs as Restoration Tools: A Case Study on the West Florida Shelf." 36 Coastal Management 495 - 507 (2008).

Artificial reefs are one of a number of tools that should be considered by scientists and managers when planning coastal zone restoration and/or mitigation projects. Dupont presents the details of one project from the West Florida Shelf. Two types of artificial reefs were used to mitigate pipeline construction impacts on natural hardbottom ledges in the eastern Gulf of Mexico. The project's primary objective was to avoid the paradigm of building artificial reefs as fish attraction devices, and to instead implement a design that would mimic, not augment, natural hardbottom conditions. Fish assemblage parameters (species richness and commercial fish abundances) were compared between the artificial habitats and natural hardbottom reference sites. Results indicate that species richness trends are similar among artificial and natural reefs, while certain commercial fish abundances are significantly higher on the artificial reefs. Recommendations for future restoration/mitigation projects using artificial reefs are discussed.

Abstract Courtesy of Coastal Management

Tapsuwan, Sorada. "Estimating the Economic Benefit of SCUBA Diving in the Similan Islands, Thailand." 36 Coastal Management 431 – 442 (2008).

Tapsuwn reports the results of the travel cost model using the standard and the truncated count data models to estimate the economic value of the Similan Islands, Thailand, from SCUBA diving. The estimated consumer surplus per visit to the Similan Islands using the truncated negative binomial model was US\$3,233 and the economic value of the Similan Islands from SCUBA diving was estimated to be up to US\$54.96 million. This study shows that, even without non-use values, coral reefs of the Similan Islands, if properly managed and maintained, will continue to have significant value to both Thai and overseas SCUBA divers, as one of the natural treasures of the world.

Abstract Courtesy of Coastal Management

White, Jennifer C. "Conserving the United States' Coral Reefs: National Monument Designation to Afford Greater Protection for Coral Reefs in Four National Marine Sanctuaries." 32 William and Mary Environmental Law and Policy Review 901 – 929 (2008).

White suggests that four National Marine Sanctuaries could improve the protection of coral reefs through national monument designation. She presents an overview of the fundamental characteristics comprising a coral reef ecosystem and explains how a National Marine Sanctuary is created. White then looks at the process of attaining national monument designation, noting issues that could arise in the re-designation of the National Marine Sanctuaries. She ultimately concludes that national monument redesignation would provide a more comprehensive conservation program.

VII. ECOSYSTEM MANAGEMENT

Boothe, Jason A. "Defending the Homeland: A Call to Action in the War against Aquatic Invasive Species." 21 *Tulane Environmental Law Journal* 407 – 426 (2008).

Booth discusses the response to the growing problem of aquatic invasive species (AIS). He presents information on AIS, including the means of introduction and examples of environmental and economic consequences. Boothe's article contains an explanation of the federal government's statutory and regulatory response to AIS, noting shortcomings of the federal response. Booth offers potential statutory and regulatory solutions at the state and federal level. He concludes with comments on the practicality of achieving a stronger federal response to AIS in light of existing obstacles.

Coleman, Kary. "Research Review of Collaborative Ecosystem-Based Management in the California Current Large Marine Ecosystem." 36 *Coastal Management* 484 – 494 (2008).

The welfare of the marine environment is threatened worldwide. In order to maintain ecosystem services, management must shift from single sector to ecosystem approaches. To support this transition in marine management, Coleman reviews collaborative ecosystem-based management in the California Current Large Marine Ecosystem (CCLME) through an overview and comparison of three collaborations on the U.S. West Coast (California, Oregon, and Washington). The achievements of these collaborations are demonstrated. Networking and extending collaboration throughout the entire region is shown to be essential for environmental conservation and sustainable development in the CCLME.

Abstract Courtesy of Coastal Management

Doremus, Holly. "Sniffing for Leaks along the Information Pipeline." 83 Indiana Law Journal 407 – 463 (2008).

Natural resource management decisions hinge on the supply of scientific information. Doremus describes the path this information takes on the "information pipeline," including exploration, extraction, refining, blending, distribution, and consumption. She notes that necessary information sometimes gets lost during these steps. To remedy the situation, Doremus provides several recommendations: decision makers must recognize the limits of scientific information; priorities should be more consciously set; creative exploratory research should be encouraged; the production of available information must keep up with theoretical advances; collaboration should cross traditional disciplinary, political, and institutional boundaries; and, finally, information should be archived in locations and formats that make it both accessible to and useful for future researchers and managers.

Finkelstein, Matthew S. "Mitigation Models Inch Toward a Full Review: Even When Effective, the Fish and Wildlife Coordination Act Remains Overshadowed by NEPA." 21 *Tulane Environmental Law Journal* 449 – 472 (2008).

Finkelstein discusses a recent decision by the D.C. district court and its impact on the Fish and Wildlife Coordination Act. He provides a history of the Act, the effect of certain legislation on judicial review of the Act, and U.S. Army Corps of Engineers activities under the Act.

Flournoy, Alyson C., et al. "Harnessing the Power of Information to Protect Our Public Natural Resource Legacy." 86 *Texas Law Review* 1575 - 1599 (2008).

Flournoy and her co-authors examine the principal critiques of the National Environmental Policy Act's approach to information collection, analysis, and dissemination. The authors identify the shortcomings of the Act and propose an alternative model for a new statute better tailored to define and protect public natural resources.

Kogan, Lawrence A. "One European 'Fashion' Export the United States Can Do Without." 17 Temple Political and Civil Rights Law Review 491 - 604 (2008).

The extra-World Trade Organization (WTO) Precautionary Principle calls for preemptive action if scientists spot a credible hazard, even before the level of risk can be measured. Legislation premised on the extra-WTO Precautionary Principle is being introduced throughout the United States within state and local legislatures and executive rule-making agencies. Kogan presents his belief that the United States should not follow Europe's lead in adhering to the extra-WTO Precautionary Principle.

Tschorke, Alisa. "Great Lakes Water Quality Agreement: Is Honesty Without Accountability or Enforcement Still Enough?" 15 *Missouri Environmental Law and Policy Review* 273 – 308 (2008).

The Great Lakes Water Quality Agreement (GLWQA) is an agreement between the United States and Canada aimed at maintaining the waters of the Great Lakes Basin Ecosystem. Tschorke reviews the history of the GLWQA, including the changes made to the GLWQA and the reasons behind those changes. She evaluates the challenges of the GLWQA and suggests that adding accountability and enforcement mechanisms to the agreement will help protect the Great Lakes Basin Ecosystem.

VIII. ENDANGERED SPECIES

Angelo, Mary Jane. "The Killing Fields: Reducing the Casualties in the Battle between U.S. Species Protection Law and U.S. Pesticide Law." 32 *Harvard Environmental Law Review* 95 - 148 (2008).

Angelo writes about the tension between the primary federal pesticide law, the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), and the primary wildlife protection statute, the Endangered Species Act (ESA). She provides an overview of current pesticide usage and its effects on wildlife. Angelo then explains the U.S. Environmental Protection Agency's response to these effects, noting that the result has been noncompliance with federal mandates. She concludes with legislative suggestions to remedy the conflicts between FIFRA and the ESA.

Dona, Amy J. "Crossing the Border: The Potential for Trans-Boundary Endangered Species Conservation Banking." 16 New York University Environmental Law Journal 655 – 708 (2008).

Dona examines the possibility of adapting a U.S. domestic market-based conservation program as a step toward developing a larger market-based program to preserve North American biodiversity. She looks at the role of the market in environmental protection and explains the current U.S. regulatory framework aimed at protecting biodiversity. Dona also examines trans-boundary conservation banking as a means to further international biodiversity preservation and presents two alternative methods for establishing a market in conservation credits beyond U.S. borders.

Fischman, Robert L. "The Divides of Environmental Law and the Problem of Harm in the Endangered Species Act." 83 Indiana Law Journal 661 - 693 (2008).

Fischman looks at different types of data gaps in conservation and chemical regulation. He focuses on the subject matters, regulatory approaches, and legislative attributes that distinguish different types of environmental law programs. He then demonstrates how courts have addressed the vast data gaps in resolving certain Endangered Species Act cases. Fischman concludes with general observations about the variation among environmental law programs and their relationship with information policy.

Navarro, Laura. "What about the Polar Bears? The Future of the Polar Bears as Predicted by a Survey of Success under the Endangered Species Act." 19 Villanova Environmental Law Journal 169 - 192 (2008).

Navarro examines the proposed listing of polar bears as an endangered species under the Endangered Species Act (ESA). She first provides an overview of the ESA, including the requirements for listing a species and the interaction of the Act with non-governmental organizations. Next, she looks at specific examples in which species have been delisted due to population restoration. Navarro then turns to the polar bear population, examining the effect of climate change on the species and potential conservation options available in the United States.

ENVIRONMENTAL LAW

KIX.

Adelman, David E., and Kirsten H. Engel. "Adaptive Federalism: The Case against Reallocating Environmental Regulatory Authority." 92 *Minnesota Law Review* 1796 - 1850 (2008).

Adelman and Engel review the existing literature on environmental federalism. They explain how "classical" and "dynamic" federalism operate and review the debate over which model is more effective. The authors illustrate that the dynamic, or adaptive, federalism model is gaining ground on the classical model. The article also explores a hybrid of the two models, cooperative federalism.

Adler, Robert W. "Revisiting the Colorado River Compact: Time for a Change?" 28 Journal of Land, Resources, and Environmental Law 19 – 47 (2008).

Adler notes that the population, economy, culture, and environment of the Colorado River Basin have changed in the 85 years since the enactment of the Colorado River Compact. He questions whether the Compact should be amended to reflect those changes. Adler presents arguments in favor of and against making changes to the compact.

Brisman, Avi. "Crime-Environment Relationships and Environmental Justice." 6 Seattle Journal for Social Justice 727 – 768 (2008).

Brisman presents the view that environmental justice should encompass not only concerns with the distribution of environmental hazards across diverse classes and races but also social transformation to enhance quality of life through the use of sustainable resources. He provides expansive examples of interactions between crime and the environment.

Doremus, Holly. "Scientific and Political Integrity in Environmental Policy." 86 Texas Law Review 1601 - 1653 (2008).

Doremus explores the scope and nature of the problems of scientific and political integrity in environmental policy. She discusses several recent controversies that have been described as failures of scientific integrity. Doremus also describes the natures and functions of scientific and political integrity, explains how the two are linked, and shows how some failures in scientific integrity may be more readily attributed to failures in political integrity. She concludes with suggestions for correcting failures of political and scientific integrity.

Duncombe, Thomas, et al. "Environmental Crimes." 45 American Criminal Law Review 381 - 464 (2008).

Duncombe and coauthors discuss environmental crimes. The authors first give an overview of elements of environmental crime violation. They then discuss the ability of nine environmental statutes, including the Clean Water Act, the Rivers and Harbors Act, and the Endangered Species Act, to regulate crimes against the environment.

Eubanks, William S., II. "Environmental Justice for All? The Navy's Recent Failure to Protect North Carolina's Citizens." 30 North Carolina Central Law Review 206 – 223 (2008).

The U.S. Navy has selected two sites in North Carolina for its training operations. Eubanks questions whether the Navy followed the appropriate protocol in selecting the sites. He notes that the projects will burden an area of the state composed of minority citizens with substantially low socioeconomic status. Eubanks concludes with suggestions for future project site selection by the Navy.

Farber, Daniel A. "A Place-Based Theory of Standing." 55 UCLA Law Review 1505 – 1558 (2008).

Farber proposes a new approach to the standing doctrine in environmental cases. The place-based standing Farber suggests would give a plaintiff standing to contest environmental violations if the plaintiff has an appropriate personal connection to the area. He shows how the approach has been used in two recent U.S. Supreme Court decisions, *Laidlaw* and *Massachusetts v. EPA*.

Frischmann, Brett M. "Environmental Infrastructure." 35 Ecology Law Quarterly 151 - 178 (2008).

Frischmann applies his theoretical account of infrastructure resources to the natural environment. Frischmann's economically-based theory focuses on demand-side issues and examines the importance of infrastructure resources for society. In the article, he describes his theory and gives examples of its potential use in the environment. He also notes some of the obstacles that may impede the application of the theory.

Harris, A.W. "Derogating the Precautionary Principle." 19 Villanova Environmental Law Journal 1 – 93 (2008).

Harris establishes why mitigation is the optimal response to climate change and argues that the United States should develop a more effective precautionary policy for climate change. He outlines the policy shifts that would need to occur before the United States could adopt such a policy. Harris also provides a look at the Kyoto Protocol and discusses the United States' rejection of the Protocol.

Huffman, James L. "Background Principles and the Rule of Law: Fifteen Years after Lucas." 35 Ecology Law Quarterly 1 – 29 (2008).

Fifteen years after *Lucas v. South Carolina Coastal Council*, a landmark U.S. Supreme Court takings decision, Huffman discusses the effects of the decision on modern jurisprudence. Huffman suggests that the view that *Lucas* can protect governments from takings claims is incorrect.

Koons, Judith E. "Earth Jurisprudence: The Moral Value of Nature." 25 Pace Environmental Law Review 263 - 339 (2008).

Koons examines the moral value of nature. She asks four questions: what is good?; what is fitting?; what is true?; and what is right? In discussing these questions, she also looks at the effect of science on legal and moral thought.

Laitos, Jan G., and Rachael B. Gamble. "The Problem with Wilderness." 32 Harvard Environmental Law Review 503 – 569 (2008).

Focusing on federally designated wilderness areas, Laitos and Gamble discuss the competing uses for wilderness land and the resulting problems, which they group as 1) large-group negative externalities, 2) a "true" tragedy of the commons, and 3) resource popularity conflicts. Laitos and Gamble provide an overview of governmental response to these problems. They offer solutions, including a theory suggesting how an individual transferable quota program could create a better system of property rights.

Libecap, Gary D. "Open-Access Losses and Delay in the Assignment of Property Rights." 50 Arizona Law Review 379 - 408 (2008).

Libecap discusses the assignment of property rights with natural and environmental resources. He notes that the delay in assigning property rights results in greater than necessary open-access losses. He uses the examples of overfishing, over extraction from oil and gas reservoirs, and too much air pollution.

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Naidu, S., Jr. "Claiming the Last Global Frontier: Overlapping Geographical Claims of Antarctic Territory." 17 *Transnational Law and Contemporary Problems* 529 - 552 (2008).

Argentina, Chile, and the United Kingdom each have territorial claims on Antarctica. Naidu addresses the disputed territory, suggesting a new regime to administer the region. He provides a history of the region and emphasizes why Antarctica has contemporary importance.

Wiseman, Hannah Jacobs. "Notice and Expectation under Bounded Uncertainty: Defining Evolving Property Rights Boundaries through Public Trust and Takings." 21 *Tulane Environmental Law Journal* 233 – 293 (2008).

Wiseman suggests a method to improve the public trust and takings doctrines' definitions of private and public uses of property. She discusses the philosophical differences between two positions on the roots of property rights. She demonstrates the modern application of both the public trust doctrine and takings. Wiseman concludes that the doctrines, once they are more well-defined, will result in a more manageable structure of property rights.

FISHERIES MANAGEMENT

Kuperan, K., et al. "Measuring Transaction Costs of Fisheries Co-Management." 36 Coastal Management 225 - 240 (2008).

Fisheries co-management as an alternative to centralized command and control fisheries management is often suggested as a solution to the problems of fisheries resource use conflicts and overexploitation. Various researchers have talked of the importance of studying the role of transaction costs between different institutional arrangements for managing fisheries resources. Kuperan and co-authors provide an analysis of measurements of the transaction costs under a fisheries co-management system in San Salvador Island, Philippines. The results obtained for the period 1988-1996 indicate that the difference in the total costs of fisheries management between centralized government management and co-management is not that significant. However, the downstream or implementation costs are lower for a co-managed approach. This is because the cost of monitoring and enforcement are lower, and there is higher compliance with rules and regulations. This is important from a policy perspective as the implementation are implemented. This could result in an overall lower cost of managing the fisheries resources for the society.

Abstract Courtesy of Coastal Management

Murray, Grant. "Lessons from a Multi-Scale Historical Reconstruction of Newfoundland and Labrador Fisheries." 36 Coastal Management 81 - 108 (2008).

Murray uses a multi-scale, multi-method historical reconstruction of post-World War II social-ecological interactions within fisheries in Newfoundland and Labrador to explore the dynamics of intensification, expansion, and resource degradation in managed fisheries. The case study draws on landings statistics, other archival information,

and the Local Ecological Knowledge of fish harvesters to explore these linked dynamics at the macro, meso, and micro levels. There are large scale trends toward intensification of effort leading to over-harvesting at macro (province-wide) levels. At the same time, at the local level (micro-scale) and across sectors and regions (the meso-scale), there are highly fluid fishing practices and a complex suite of stated motivations for change. As a basis for effective governance, an understanding of the dynamics of interactive restructuring in social ecological systems will require multi-scale analyses that are sensitive to this complexity.

Abstract Courtesy of Coastal Management

Stephens, Tim. "Fisheries-Led Development in the South Pacific: Charting a 'Pacific Way' to a Sustainable Future." 39 Ocean Development and International Law 257 – 286 (2008).

Considerable debate surrounds the appropriate mix of policies to drive fishing-led development among the developing nations in the South Pacific. Since the 1970s, South Pacific small island states have committed themselves to policies of tuna industry domestication, but serious doubts have emerged as to whether these can deliver improvements to the well-being of Pacific peoples. An alternative policy approach has been suggested by development economists that would see Pacific Island nations largely abandon direct involvement in the industry and return to collective efforts to secure reasonable access fees from distant water fishing nations that take the majority of the region's tuna catches. Stephens argues that one reason that this policy shift has not been taken is that tuna industry domestication policies remain bound up within the influential discourse of "resource nationalism." It is contended that any movement toward a more environmentally and developmentally sustainable ocean fisheries policy will require close engagement and transformation of this sovereignty-focused narrative.

Abstract Courtesy of Ocean Development and International Law

Wellman, Katharine F. "Potential Benefits of Coastal Ocean Observing Systems to Alaskan Commercial Fisheries." 36 Coastal Management 193 – 207 (2008).

Wellman attempts to illustrate the potential benefits to Alaskan commercial fisheries expected from enhancements to the Alaska Ocean Observing System (AOOS) through changes in fishery management strategies. The study shows how the use of improved AOOS data in research, stock assessment, and ultimately fisheries management has the potential to result in significant benefits in the Bering Sea and Gulf of Alaska groundfish and Kodiak king crab fisheries. A case study approach shows that information such as might be provided by an enhanced AOOS could conceivably contribute over \$600 million in additional annual revenue in Alaska's groundfish fishery. It is estimated that had the information from such a system been available in the 1970s and 1980s the Kodiak king crab stock collapse could have been avoided and \$60 million in annual revenues generated. Benefit estimates (as measured by revenue increases) are based on the assumptions that when better data is delivered those data will be integrated into stock assessment models; when better data are integrated into the models the new data will actually improve the reliability of the models; and when the reliability of the models XI.

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is improved predictions will be accepted by managers or industry members. *Abstract Courtesy of Coastal Management*

Wyman, Katrina M. "The Property Rights Challenge in Marine Fisheries." 50 Arizona Law Review 511 - 543 (2008).

With wild fish stocks declining and a growing aquaculture industry, fisheries policymakers currently face a complicated challenge of identifying and applying the best possible property rights regime for marine fisheries. Wyman performs an economic analysis of property rights in marine fisheries. While noting the objective to devise property rights in fisheries that will produce the greatest net benefits, she concedes that there is no single property agreement that is best for fisheries in general. Wyman concludes that that the most advantageous arrangements will likely be context-specific combinations of different kinds of property rights.

LAW OF THE SEA

Blakely, Laurence. "The End of the Viarsa Saga and the Legality of Australia's Vessel Forfeiture Penalty for Illegal Fishing in its Exclusive Economic Zone." 17 Association Pacific Rim Law and Policy Journal 677 – 705 (2008).

With many of the world's fish stocks suffering from overfishing, nations have begun to enforce their rights in their exclusive economic zones established under the 1982 United Nations Convention on the Law of the Sea (UNCLOS). Specifically, Blakely examines Australia's Fisheries Management Act that provides for the automatic forfeiture of any foreign vessel caught fishing illegally in its exclusive economic zone. She concludes that Australia should interpret the provision to comply with UNCLOS.

Del Vecchio Capotosti, Angela. "In Maiore Stat Minus: A Note on the EEZ and the Zones of Ecological Protection in the Mediterranean Sea." 39 Ocean Development and International Law 287 – 297 (2008).

Del Vecchio Capotosti examines the different attitudes taken by Mediterranean states in implementing their 200-nautical-mile exclusive economic zone (EEZ). After the United Nations Convention on the Law of the Sea was signed in 1982, some Mediterranean coastal states unilaterally extended their jurisdiction over sea areas establishing a "virtual" EEZ adjacent to the territorial sea. Recently, other states have been extending their jurisdiction by establishing fisheries zones, Special Protected Areas, or both. These zones represent a partial implementation of the EEZ, as the Mediterranean states are only exercising certain powers provided by the LOS Convention regarding the environment. *Abstract Courtesy of Ocean Development and International Law*

MARINE MAMMALS

Adam, Rachelle. "The Japanese Dolphin Hunts: In Quest of International Legal Protection for Small Cetaceans." 14 Animal Law 133 – 178 (2008).

It is estimated that over 2,500 small cetaceans—dolphins, porpoises, and small whales—are killed annually in Japan during drive hunts. Adam examines the international legal status

of those dolphins targeted by these hunts. She argues that there should be an international legal duty to stop the drive hunts and to protect the species targeted by these hunts.

Anton, Donald K. "False Sanctuary: The Australian Antarctic Whale Sanctuary and Long-Term Stability in Antarctica." 8 *Sustainable Development Law and Policy* 17 – 21 (2008).

Anton examines the effect of a recent court case on the Antarctic Treaty System, a compilation of international legal agreements governing Antarctica. The case, *Humane Society International, Inc. v. Kyodo Senpaku Kaisha Ltd.*, involved the assertion of maritime jurisdiction by Australian courts over acts in the south Antarctic Ocean.

XIII. MARINE PROTECTED AREAS

Ding, Hui. "An Overview of Spatial Management and Marine Protected Areas in the East China Sea." 36 Coastal Management 443 – 457 (2008).

Marine ecosystems of the East China Sea are rich in biodiversity, with 12,933 species of which approximately 47.7% are endemic. As anthropogenic impacts are intensifying, fishery resources and biodiversity in the East China Sea are under threat from overfishing, habitat loss, pollution, and biological invasions. Marine protected areas (MPAs) and other spatial management measures are believed to be useful tools to protect and restore biological resources. Seventeen nature reserves, seven special marine reserves, and three fishery resource conservation zones covering a combined area of 102,156 km² have so far been established in the Chinese East China Sea in order to protect fishery resources, biodiversity, and marine landscapes. Ding provides a review and inventory of MPAs in the Chinese East China Sea as implemented by the People's Republic of China. *Abstract Courtesy of Coastal Management*

Weible, Christopher M. "Caught in a Maelstrom: Implementing California Marine Protected Areas." 36 Coastal Management 350 - 373 (2008).

The first attempt to implement the 1999 California Marine Life Protection Act (MLPA) to establish marine protected areas (MPAs) ended contentiously in 2002. The initial MLPA process is examined by a statutory analysis and an analysis of stakeholder network relationships and beliefs. The failure of the initial MLPA process can be understood by a combination of factors: (i) insufficient financial support from the California State government; (ii) unclear, unranked and inconsistent statutory objectives; (iii) the application of a science-based process that excluded affected stakeholders; (iv) implementing officials who lacked expertise in designing and managing political processes; and (v) a community of stakeholders who were polarized into coalitions of proponents and opponents of MPAs. Weible concludes by discussing limitations of its methods and analysis and by offering strategies for learning from policy failures. *Abstract Courtesy of Coastal Management*

MARINE SECURITY

XIV.

Burke, Marcilynn A. "Green Peace? Protecting Our National Treasures While Providing for Our National Security." 32 William and Mary Environmental Law and XV.

Policy Review 803 – 874 (2008).

Burke discusses how the United States may protect its natural resources while providing national security. She reviews legislative proposals to amend natural resources statutes post 9/11 in the name of national security and notes the reactions to those proposals from various groups. Next, she presents the amendments that Congress enacted and evaluates how they have functioned. She also discusses the role of the Department of Defense in the decisionmaking process. Burke emphasizes the importance of continuing the dialogue regarding the appropriate balance between protecting our natural resources and providing for national security.

Reynolds, Joel R. "Submarines, Sonar, and the Death of Whales: Enforcing the Delicate Balance of Environmental Compliance and National Security in Military Training." 32 *William and Mary Environmental Law and Policy Review* 759 – 802 (2008).

Reynolds explores the delicate balance of environmental protection and national security in the Navy's use of sonar in its testing and training activities. The article gives an overview of the range of impacts on marine life exposed to high-intensity ocean noise. Reynolds explains efforts to identify and reduce those impacts, specifically on the federal courts' response to litigation filed by conservation groups endeavoring to protect the marine environment.

MARITIME BOUNDARIES

Bork, Katharina, et al. "The Legal Regulation of Floats and Gliders-In Quest of a New Regime?" 39 Ocean Development and International Law 298 - 328 (2008).

Bork and co-authors analyze the legal status of unmanned instruments (particularly, floats and gliders) for observation purposes in the ocean environment. These new kinds of instruments are being deployed by the thousands into the oceans, not the least as part of the Argo Project of the International Oceanographic Commission. Their uncontrolled drifting has raised legal questions, especially when such instruments enter waters subject to the jurisdiction of foreign states. The authors argue that the current international legal framework is insufficient to address the pertinent issues, and that a new legal regime is needed.

Abstract Courtesy of Ocean Development and International Law

Eagle, Josh. "The Practical Effects of Delegation: Agencies and the Zoning of Public Lands and Seas." 35 *Pepperdine Law Review* 835 – 894 (2008).

Eagle examines public property zoning, arguing that the delegated zoning model is not likely to produce the beneficial effects that public property zoning is intended to create. He describes the purposes of zoning and how its mechanisms relate to those purposes. Noting the incentives of agencies and agency officials in zoning decisions, Eagle predicts how agencies will respond when faced with zoning public lands and seas. He also includes case studies of delegated zoning, including the National Marine Sanctuaries Act and California's Marine Life Protection Act. Eagle also provides an indepth analysis of the role of Congress and state legislatures in drafting future ocean zoning statutes.

XVI. OCEAN GOVERNANCE

Morrison, Kate Killerlain. "Toward More Integrated Ocean Governance in Massachusetts: A Progress Report." 36 Coastal Management 421 – 430 (2008).

Since 2000, recent proposals for new offshore uses such as wind and wave energy projects and liquefied natural gas (LNG) terminals have highlighted areas where the Commonwealth of Massachusetts' ocean management process could be improved in order to move away from the first come, first served approach the state has historically taken to a more coordinated ocean governance regime. Massachusetts proposes to convert the largely reactive case-by-case permitting system to a more proactive governance regime. Morrison reviews past efforts under two main regulatory frameworks, the Public Waterfront Act and the Ocean Sanctuaries Act, proposes six key components of a planning approach, discusses recent legislative history, and reflects on Massachusetts' experience to date through Cicin-Sain's (1990) "Factors Conducive to Ocean Management Initiatives." Initially proposed over fifteen years ago, in a review of California's Ocean Management efforts, Cicin-Sain (1990) described "four major variables that influence the likelihood that ocean management initiatives will emerge and be sustained in particular states." They include: (1) degree of severity of ocean and coastal governance problems and the role of focusing events, (2) political readiness, (3) governmental readiness, and (4) state ocean heritage and popular opinion variables. Abstract Courtesy of Coastal Management

XVII. POLLUTION

Hansen, Robin F. "Multinational Enterprise Pursuit of Minimized Liability: Law, International Business Theory and the Prestige Oil Spill." 26 Berkeley Journal of International Law 410 - 451 (2008).

The *Prestige* oil spill off the Spanish coast contaminated 3,000 kilometers of the coastline and devastated marine life in the area. The Spanish government was left to pay for the majority of the clean-up. Hansen discusses the liability exposure of the multinational enterprises involved in the oil spill. The article emphasizes the importance of holding multinational enterprise parent companies liable for actions such as devastated marine life in the area.

Hartman, Richard, et al. "The Spread of Fertilizer Ordinances in Florida." 1 Sea Grant Law and Policy Digest 98 - 114 (2008).

Local governments have enacted ordinances to deal with harmful algal blooms caused by increased nutrient loading resulting from fertilizer use. Hartman and coauthors discuss the role of Florida fertilizer ordinances in coastal resiliency. The authors review several local fertilizer ordinances, noting the trends and the successes and failures of each. The authors also examine the role of homeowners associations in fertilizer use.

Kirk, Elizabeth A. "Noncompliance and the Development of Regimes Addressing Marine Pollution from Land-Based Activities." 39 Ocean Development and International Law 235 - 256 (2008).

The primarily action-oriented nature of obligations in regimes designed to address marine pollution from land-based activities makes establishing whether or not states are complying with their obligations difficult. At the same time, a lack of knowledge about and understanding of the marine environment and effectiveness of responses to pollution make noncompliance likely. These threats might undermine the legitimacy of any regime. However, they do not appear to do so here. Instead, they prompt action to improve on all counts. This effect appears to be largely a result of the tacit recognition of the distinction between willful, norm-generating and operational noncompliance by those party to the regimes, with each type of noncompliance generating a different response. *Abstract Courtesy of Ocean Development and International Law*

Parker, Geoffrey Y., et al. "Pebble Mine: Fish, Minerals, and Testing the Limits of Alaska's 'Large Mine Permitting Process." 25 Alaska Law Review 1 - 50 (2008).

In the face of two foreign mining companies' plan to develop one of the world's largest copper and gold mines on mining claims on state land in Alaska, Parker and coauthors examine the potential impact of the mines on the area's fisheries. The article looks at the state's large mine permitting process and finds it insufficient to deal with large metallic sulfide mines. Next, the authors examine current legislative responses to the proposed project and discuss their strengths and weaknesses. Finally, the authors conclude that these legislative solutions would not rise to the level of an unconstitutional taking of the mining claims.

Pendleton, Linwood. "The Economics of Using Ocean Observing Systems to Improve Beach Closure Policy." 36 Coastal Management 165 - 178 (2008).

Beach closure policies in the United States suffers from two shortcomings. Type I errors, in which clean beaches are closed, results when managers resort to extensive beach closures because they are unsure of the spatial extent of water contamination. Type II errors, in which contaminated beaches remain open, occur because the time from sampling to public notification can be between two and nine days. Coastal Ocean Observing Systems (COOS) could reduce the impact of both Type I and II errors. The COOS could reduce the spatial extent of beach closures by better predicting the fate of contaminants in coastal waters. An improved COOS also could reduce the time from sampling to public notification of contamination events. Pendleton estimates the lost recreational value associated with Type I errors (unnecessary closures) and the public health costs associated with Type II errors (unnecessary exposure to waterborne illnesses) for beaches in Southern California.

Abstract Courtesy of Coastal Management

Riley, Timothy. "Piercing the Regulatory Veil: The Need to Expand Federal Clean Water Act NPDES Permit Coverage to Include Municipal 'Satellite' Sewer Collection Systems." 26 Virginia Environmental Law Journal 615 – 654 (2008).

Riley suggests that the National Pollutant Discharge Elimination System (NPDES) program should include municipal satellite sewer systems. First, he identifies how inadequate satellite systems may threaten public capital infrastructure, human health, and the environment. He also describes the purpose of the Clean Water Act and the background of the NPDES program. Riley outlines the development of the EPA's 2001 proposed rule governing satellite systems and describes state and local-level activities

regulating satellite systems. The article provides a thorough description of how the EPA could implement regulations for satellite systems under the NPDES program.

XVIII. SHIPPING

Muir, Magdalena A. K. "Hydrocarbon Development and Maritime Shipping for the Circumpolar Arctic in the Context of the Arctic Council and Climate Change." 8 Sustainable Development Law and Policy 38 – 39 (2008).

Muir notes that future changes in the Arctic sea ice cover will impact shipping practices in the Arctic region. She predicts that the reduction in sea ice will result in a lengthened navigation season and increased access to the Arctic's natural resources. Muir provides an overview of the challenges the region will face due to the increased shipping activity.

Pietri, Diana. "The Arctic Shipping and Environmental Management Agreement: A Regime for Marine Pollution." 36 Coastal Management 508 – 523 (2008).

Climate change is predicted to have particularly challenging impacts throughout the Arctic. For instance, there is a great probability of sea ice melting, leading to increased vessel traffic and oil pollution. Eight major nation-states have vested concerns in the potential opening of Arctic sea routes. They each have pledged to take protective action through the Arctic Council. However, there is still a need to develop an international institution to simultaneously address Arctic marine pollution and protect the needs of these states. Pietri seeks to design a legally binding regime for oil pollution control in the Arctic. The design uses several shared design elements of historically effective international regimes and takes advantage of the legal innovations of these agreements. The new regime, entitled the Arctic Shipping and Environmental Management Agreement (ASEMA), will take into account both the economic and environmental interests of the parties involved.

Abstract Courtesy of Coastal Management

Remsberg, Loren. "Too Many Cooks in the Galley: Overlapping Agency Jurisdiction of Ballast Water Regulation." 76 George Washington Law Review 1412 - 1428 (2008).

Remsberg discusses the Northwest Environmental Advocates v. Environmental Protection Agency opinion regarding the EPA's regulation of the release of ballast water from ships in U.S. ports. The author explains the Coast Guard's regulation of ballast water and the source of the Coast Guard's authority to regulate. Remsberg concludes that Congress, not the courts, should resolve questions about overlapping agency authority.

TRIBAL AFFAIRS

XIX.

O'Neill, Catherine A. "Environmental Justice in the Tribal Context: A Madness to EPA's Method." 38 *Environmental Law* 495 - 536 (2008).

O'Neill discusses the problem of mercury contamination in many fish species that serve as a food source for tribal members on the Bad River Reservation. She specifically examines the effects of the Environmental Protection Agency's regulation of mercury

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emissions from coal-fired utilities. She concludes that the EPA should have considered the tribe's fishing rights in its assessment and decisions.

Sanders, Marren. "Ecosystem Co-Management Agreements: A Study of Nation Building or a Lesson on Erosion of Tribal Sovereignty?" 15 *Buffalo Environmental Law Journal* 97 – 176 (2008).

Sanders explores ecosystem management and species co-management agreements between tribes and federal and state agencies. She uses case studies to discuss tribal sovereignty and tribal approaches to ecosystem management. Sanders concludes that comanagement agreements can result in challenges, as well as opportunities.

Wood, Mary Christina, and Zachary Welcker. "Tribes as Trustees Again (Part I): The Emerging Tribal Role in the Conservation Trust Movement." 32 Harvard Environmental Law Review 373 - 432 (2008).

Wood and Welcker explore the tribal role in the conservation trust movement. The authors argue that a tribal trust movement could both strengthen the movement and advance the Native environmental sovereignty effort. The authors set forth four broad templates of the tribal role in the conservation trust movement.

Wood, Mary Christina, and Matthew O'Brien. "Tribes as Trustees Again (Part II): Evaluating Four Models of Tribal Participation in the Conservation Trust Movement." 27 Stanford Environmental Law Journal 477 – 544 (2008).

This article is the second in a series by Wood and O'Brien discussing the tribal use of conservation trust mechanisms. In this article, the authors examine four models of Native American engagement in the conservation trust movement, each with a different holder of conservation title, including the tribal holder, the Native land trust holder, the public agency holder, and the non-Native land trust holder.

WATER LAW

XX.

Baker-Branstetter, Shannon. "The Last Stand of the Wild West: Twenty-First Century Water Wars in Southern California." 38 *Environmental Law Reporter* 10726 – 10762 (2008).

Baker-Branstetter discusses the Imperial Irrigation District's (IID) agreement to transfer water to urban southern California cities. Baker-Branstetter argues that because the water was held in trust for the residents of Imperial Valley, the IID breached its trust to those residents when it sold the rights to the water.

Burleson, Elizabeth. "Water Is Security." 31 Environs Environmental Law and Policy Journal 197 – 214 (2008).

Burleson discusses various water quality and quantity policies. She presents suggestions on good water governance that will lower transaction costs and strive for optimal use. Burleson concludes that the just use of water resources will help sustain international security. Colangelo, Sara. "Transforming Water Transfers: The Evolution of Water Transfer Case Law and the NPDES Water Transfers Proposed Rule." 35 Ecology Law Quarterly 107 - 142 (2008).

Colangelo looks at water transfer case law preceding the NPDES Water Transfers Proposed Rule. She explores the evolution of the rule, evaluates the proposed rule in view of the *Miccosukee* case, and assesses its feasibility based on the plain meaning of related CWA provisions, statutory construction, and Congressional intent.

Doremus, Holly, and Michael Hanemann. "The Challenges of Dynamic Water Management in the American West." 26 UCLA Journal of Environmental Law and Policy 55 – 75 (2008).

Doremus and Hanemann discuss water management in the American West, in light of the impacts of climate change. The authors consider the implications of an adaptation response to western water projects. They predict that adaptation will be difficult for the West, due to infrastructure and institutional constraints.

Hosking, S.G. "An Economic Approach to Allocating River Water to Estuaries in South Africa." 36 Coastal Management 35 - 46 (2008).

Estuaries are last in line as a recipient of river water and for this reason they are particularly vulnerable to negative environmental impacts due to water scarcity and pollution. They only receive the runoff that has not been abstracted or prevented from reaching rivers. When this runoff is substantially reduced their functionality is undermined and they often become less attractive for recreational use. Hosking explores some aspects entailed in efficiently managing the allocation of water to estuaries problem and some associated problems. It is shown that efficient management requires the marginal social costs of the inflows to be brought into equivalence with the marginal social values of the inflows, and these values may be estimated, but that there are the challenges in this estimation and in linking these estimates to the welfare of the people in whom the managers of river systems are (presumed to be) interested. *Abstract Courtesy of Coastal Management*

Rose, Carol M. "From H₂O to CO₂: Lessons of Water Rights for Carbon Trading." 50 Arizona Law Review 91 - 110 (2008).

Rose proposes that water rights' regimes may serve as examples for cap-and-trade programs to control greenhouse gases. The article explains cap-and-trade regimes used in water rights law, including how the rights are defined and traded. She also explains the obstacles that have faced the water rights regimes and how programs to control greenhouse gases may face those same obstacles.

Singarella, Paul N., and Kelly E. Richardson. "When Water Becomes Waste: A Call for a Practical Approach to Regulating Stormwater Discharges." 31 *Environs: Environmental Law and Policy Journal* 123 – 154 (2008).

Stormwater management is a daunting issue facing municipalities and other dischargers in the United States. Singarella and Richardson look at California's State Water Resources Control Board's role in regulating discharges of runoff into Areas of Special Biological Significance (ASBS). The authors explore the legal basis for an effects-based approach to stormwater regulation and propose potential solutions that would lead to a comprehensive regulatory program that is protective of ASBS.

Walston, Roderick E. "California Water Law: Historical Origins to the Present." 29 Whittier Law Review 765 - 826 (2008).

Walston gives a comprehensive overview of California water law from its historical origins to the present. He discusses both the state and federal water regulation laws and current state and federal projects that involve California water supply. Walston also examines the relationship between water supply planning and land use planning in the state and the effects of California's laws on the planning efforts.

XXI. WETLANDS

Axtell, Matthew A. "Last Lake Standing: Clean Water Act Jurisdiction in the Alaskan Frontier after *Rapanos v. United States.*" 38 *Environmental Law Reporter* 10473 – 10488 (2008).

Axtell discusses the impact of the U.S. Supreme Court's decisions in *Rapanos* and *SWANCC* on Clean Water Act (CWA) authority in Alaska. Using Justice William Q. Douglas' description of Alaska's Last Lake, he hypothesizes whether the lake would be considered a water of the United States subject to the CWA.

Craig, Robin Kundis. "Justice Kennedy and Ecosystem Services: A Functional Approach to Clean Water Act Jurisdiction after *Rapanos*." 38 *Environmental Law* 635 - 667 (2008).

Reviewing *Rapanos v. United States*, Craig looks at the impact the case may have on Clean Water Act (CWA) jurisprudence. She examines how the CWA protects aquatic ecosystems. She also describes CWA jurisdiction and looks at how Justice Kennedy's opinion has shaped jurisdictional analysis, including an in-depth examination of a recent case regarding wetlands jurisdiction, *United States v. Cundiff*.

Flournoy, Alyson C. "The Impact of Information Flow on Individual Permitting Decisions under Section 404 of the Clean Water Act." 83 *Indiana Law Journal* 537 – 582 (2008).

Flournoy gives an overview of § 404 of the Clean Water Act and its related provisions, identifying the goals § 404 was enacted to advance. Using the example of wetlands loss, she suggests that the section may not be achieving its goals. Finally, Flournoy examines the permitting process in more detail, focusing on information flow and noting how well the demand/supply/consequences scheme fits with the goals of § 404.

Redder, Adam. "Protecting America's Wetlands under *Rapanos*: Defining "The Waters of the United States." 23 St. John's Journal of Legal Commentary 293 - 353 (2008).

Redder presents the history of federal regulation of the nation's waters and evaluates the United States Supreme Court's decision in *Rapanos*. Next, he explains his belief that the plurality incorrectly interpreted the CWA and explains why Justice Kennedy's standard has received widespread support by both commentators and courts. Wilson, Augusta. "Of Ponds and Pot: How *Rapanos* Ignored *Raich* and the Potential Role for Cooperative Federalism." 17 *Cornell Journal of Law and Public Policy* 453 - 479 (2008).

Wilson examines the Supreme Court's decision in *Rapanos* in light of both the purposes of the Clean Water Act and the Court's own recent Commerce Clause jurisprudence in *Gonzales v. Raich*. In the article, Wilson explains the functions and importance of wetlands, traces the history of federal wetlands regulation, and discusses the Court's interpretation of the Army Corps of Engineers jurisdiction over wetlands. Wilson suggests that Congress should regulate wetlands using cooperative federalism and state-based approaches to preserve wetlands.