

# The Ecosystem Approach: New Departures for Land and Water, Foreword

*Cymie Payne\**

The regulatory strategies of the past have failed to stop the loss of critical habitat, the collapse of commercial fisheries, and the steady diminishment of species. Despite these failures, some of the most visible and contentious conflicts over environmental protection have led to a potentially promising strategy that we are starting to call “ecosystem management,” and which Ecology Law Quarterly’s Symposium, *The Ecosystem Approach: New Departures for Land and Water* will explore.<sup>1</sup>

I would suggest to you that the hallmarks of an ecosystem approach are first, and most obviously, taking the ecosystem as the unit to be managed and regulated; second, using multiparty negotiations to involve a broader group of stakeholders than is typical of normal regulatory activities; third, integrating an adaptive management element, which addresses the dynamic biological and physical elements of natural systems; and fourth, creating an effort to create new regulatory tools better able to balance public and private rights, such as transferable development rights and “safe harbor” agreements. The pages that follow will provide examples of many of these tools and strate-

---

Copyright © 1997 by ECOLOGY LAW QUARTERLY

\* Solicitor’s Honors Program, Department of the Interior, Washington, D.C.; J.D. 1997 Boalt Hall School of Law, University of California at Berkeley. The views expressed here are those of the author and do not necessarily represent the views of the U.S. Department of the Interior or the Solicitor’s Office.

1. I would like to acknowledge some of the people who contributed to making this symposium a reality. The faculty, administration, and staff of Boalt Hall have been most supportive and helpful in innumerable ways. Professor Sax has been an inspiration to work with, and I speak for all of us in the environmental program in expressing our delight at having him back with us after his service in Washington. I would like to acknowledge the good advice and encouragement of Professor Dan Rodriguez. Dean Harry Scheiber’s early faith was an important element in getting this whole project off the ground.

One of the greatest pleasures of this job has been working with the students who tend the flame at Ecology Law Quarterly. Wendy Anderson, Stacey Simon, Harrison Pollak and Rebecca Fisher have all made particularly important contributions for which I thank them.

I have saved my last acknowledgement to thank Erin Noel, my assistant, who has contributed both her professional knowledge of forest issues, and her administrative skill to render service above and beyond the call of duty.

gies. For those of you not familiar with the work that has been done in ecosystem management, I think you will find that it is rich with promising experimentation.

"Ecosystem management" is a phrase that bears striking similarities to "sustainable development," one of the catch-phrases of the last decade. It is not an accident that we have adopted both of these phrases. They are rich with promise, evocative of wisdom, idealism, and practicality. They are very popular with policymakers, yet no one is quite sure what either of them truly means. On the one hand, we are trying to preserve our current high levels of consumption, while on the other, trying to preserve other species and protect natural systems that are threatened by both consumerism and human population expansion. As a result, we create labels such as ecosystem management and sustainable development that are vague enough to contain both the contradictions and complexities of environmental public policy.

One complexity that this Symposium addresses is the conflict between natural boundaries and legal boundaries. Ecosystems are not neatly defined, isolated spheres, rather, they are fluid, changing, overlapping, and interconnected complexes of plants, animals, bacteria, and geological features. Yet, in contrast, we manage our land, rivers, and oceans through a variety of rigid political subdivisions such as nations, states, national parks, wildlife refuges, and private land. For instance, the management of wild salmon habitat or coastal sage scrub ecosystems implicates all of these boundaries and others as well.

Fourteen years ago an article appeared in *Ecology Law Quarterly* that addressed this problem. In an apt reminder that the essential idea of ecosystems in conflict with political divisions is far from new, the author stated:

Legend has it that Merlin turned young Arthur into an owl so that while high in the air he might see that national boundaries are but creations of man. Today more prosaic and more damaging events point out that nature respects no boundary.<sup>2</sup>

The author of that article, David Caron, then Editor in Chief of *Ecology Law Quarterly*, posed the problem of how we work within our jurisdictional constraints to resolve ecosystem-based problems. Whether the problem is depletion of fish stocks on the high seas, state-wide land-use planning, or community-based planning for the future of national forests, human boundaries are simultaneously intrinsic to law and at odds with nature.

Equally important, ecosystem approaches must address the need to adapt legal arrangements to subject matter that changes unpredict-

---

2. David D. Caron, *Liability for Transnational Pollution Arising from Offshore Oil Development: A Methodological Approach*, 10 *ECOLOGY L.Q.* 641, 641 (1983).

ably. The operational approach to managing natural resources in a way that incorporates natural change is called "adaptive management." An example of the problem is the need to provide minimum instream flows in the Columbia River to protect breeding salmon migrations. This year, the winter storms were unprecedented and either scrubbed the salmon spawn out of its gravel nests or smothered it in sediment. Although managers and lawyers can draft agreements that provide for specific stream levels to ensure sufficient water during anticipated dry periods, and can even make projections for certain expected contingencies, legal agreements may fail to account for that kind of unanticipated event.

As you read the following pages, I suggest that you keep in mind these tensions between human political boundaries and natural boundaries; between the unpredictability of nature and the equitable demand for consistency and predictability in regulation; and pay attention to the authors' concerns that discretion and flexibility may fail to ensure adequate environmental safeguards.

We selected participants for this symposium who are distinguished by their first-hand experience with the law, science, and policy of ecosystem management. They have been involved with the forests and fish of the Northwest, the lobster fisheries of Maine, the marine mammals that travel the global commons of the high seas, the Sierra Nevada forests and waters, and the fragile, valuable coastal sage scrub of Southern California. We invited biologists, planners, land managers, and economists, as well as lawyers because the ecosystem approach is fundamentally interdisciplinary. We encourage you to challenge their ideas and think about how their experiences can be applied to resolve the environmental conflicts you encounter in your work.

