

Part III: Interdisciplinary Problem Solving in Practice— Student Case Studies and Other Applications 1990-1998

Part III of the Bulletin includes five additional cases on species and ecosystem conservation. They illustrate the flexible use of the interdisciplinary problem-solving concept. The first paper examines “problem definition,” in fact multiple competing problem definitions, in conservation of biodiversity in Hawaii. The second paper examines the role of zoos in conservation and education, and it questions the policy content of contemporary zoo management. The third contribution focuses on the values at play in a county-level policy process seeking sustainability in Western Wyoming. The fourth analysis critiques the early conceptualization and organization of the Canadian and United States “Yellowstone to Yukon” initiative, a transnational conservation effort. The final paper examines the perspectives that tend to divide people into polarized groups, and the related problems this creates for conservation. All cases offer insights and practical recommendations to improve problem solving in species and ecosystem conservation and move it toward a more interdisciplinary, successful approach.

These five cases were selected from over 130 student cases prepared between 1990 and 1998 in the “Species and Ecosystem Conservation: An Interdisciplinary Approach” course. Table 1 lists, in so far as the record permits, all student names and projects during this period, and Figure 1 maps the locations of the studies.

Table 1 Authors and titles of student papers from the 1990-1998 "Species and Ecosystem Conservation: An Interdisciplinary Approach" course.

1. **Bhatt, Seema, Peyton Curlee, Peter Schuyler, and Mary Taylor.** 1990. Ecosystem conservation: Managing processes-predation and fires.
2. **Cymerys, Peggy, Yance de Fretes, and Rosalyn Johnson.** 1990. Conservation implementation.
3. **Donnay, Tim, Melissa Grigione, Gina Hirsch, Arnald Marcer-Battle, Rob Marshall, and Lilli Sheeline.** 1990. Tasmanian tiger: Applying a policy orientation to conservation biology.
4. **Kennedy, Ted, Vicki Nichols, and Rich Wallace.** 1990. Marine policy: Coordinating for improved performance.
5. **Leisure, Blair, and Tim Sullivan.** 1990. Conservation Biology Society awards: Model government conservation programs.
6. **Bennett, Nicholas G.** 1992. The Japanese-American whaling dispute: The importance of national values in biodiversity conservation.
7. **Collins, Charles H.** 1992. The North American Waterfowl Plan: The plan, the history and key actors.
8. **Ebbin, Syma A.** 1992. Conservation policy and the decline of the wild salmon: The stock concept: Biological or political tool?
9. **Eid, Andre-Thomas.** 1992. Biopolitics: Good solutions to wrong problems, Norway.
10. **Gibson, Dean.** 1992. The golden lion tamarin conservation program, Brazil.
11. **Goodyear, Molly.** 1992. The policy process and the decline of the Pacific salmon.
12. **Griffin, Jeffery.** 1992. Conservation policy and the decline of the wild salmon: Developing a policy perspective.
13. **Knoetter, Greg.** 1992. Science and politics in the Adirondack Park, New York.
14. **Lundal, Lisa.** 1992. Olympic National Park conservation.
15. **Musinsky, John N.** 1992. The North American Waterfowl Plan: Organizational structure.
16. **Rahr, Guido.** 1992. The wild salmon: Patterns of decline.
17. **Shemitz, Leigh.** 1992. California riparian restoration.
18. **Simonov, Eugene.** 1992. Greater Yellowstone Ecosystem.
19. **Tabor, Gary M.** 1992. The North American Waterfowl Plan: Problem definition.
20. **Van Breda, Anita.** 1992. Organizational management of biological invasions: St. John's feral donkeys and the National Park Service.
21. **Vernegaard, Lisa.** 1992. Introduction and obstacles to ecosystem management.
22. **Wohlgemant, Tim J.** 1992. The North American Waterfowl Plan: Related policies and programs.
23. **Cohen, Elana, Felton Jenkins, Mary Jensen, Allen Lebovitz, and Lisa Suatoni.** 1993. An evaluation of the Center for Marine Conservation's Global Marine Biological Diversity Strategy: "What's the problem with the problem definition?"
24. **Bertrand, Matt, and Naomi Echenal.** 1993. Endangered species legislation in the U.S. and Australia: An analysis of the listing processes and their effectiveness for species protection.
25. **Green, Dawn.** 1993. Strategies for sustainable ecotourism planning.
26. **Enzer, Maia J.** 1993. Social process in the Greater Yellowstone Ecosystem.
27. **Pitt, Jennifer.** 1993. Policy overture and the Vision: What we can learn from failure in the Greater Yellowstone Ecosystem.
28. **Martincich, Melissa.** 1993. Implementation: The employment of means to achieve a given end.
29. **Merbs, Heather.** 1993. Outcome: Termination in the USFWS and endangered species policy.
30. **Weintraub, Bern.** 1993. What's in a name? The missions of the New York Zoological Society.
31. **Brannon, Ed.** 1993. The interface between problem definition and organizational learning: The case of Loon Mountain Ski area expansions in the White Mountains National Forest.
32. **Vachuda, Thomas.** 1993. Organizations, accountability and action: The preservation of Yellowstone's hydrothermal resource.
33. **Doolittle, Amity.** 1993.
34. **Reid, Collen.** 1993.
35. **Mathison, Scott.** 1993.
36. **Filardi, Chris.** 1993.
37. **Heimsath, Arjun.** 1993.
38. **Anderson, Heidi, Tanya Rubenstein, and Eva Witten.** 1994. The Exxon Valdez oil spill: A policy analysis of the post-settlement restoration process.
39. **Balte, Geoffrey.** 1994.
40. **Barrett, Brooke.** 1994. Termination in the Tongass? Creating a new agenda.
41. **Bayindir, Berna.** 1994.
42. **Beckerman, Andrew, and Sarah Cole.** 1994. An analysis of the role of Green Innovations in Australian conservation: Complex issues and the policy process.

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43. **Brownlow, Alec.** 1994.
44. **Cleveland, Elizabeth.** 1994.
45. **Conboy, Danielle.** 1994.
46. **Corbett, Miel.** 1994.
47. **Flack, Stephanie.** 1994.
48. **Girdler, Binney.** 1994.
49. **Meyerson, Fred.** 1994.
50. **Naro, Eugenia.** 1994.
51. **Noriega, Rodrigo.** 1994.
52. **Pelletier, Suzanne.** 1994.
53. **Stewart, Jamie.** 1994.
54. **Trtanj, Julie.** 1994.
55. **Acharya, Tanka, Achyut Gyawali, Wendy Brewer Lama, and Jai Mehta.** 1995. An analysis of the policy-orientation on Makalu-Barun Conservation Project, Nepal.
56. **Barry, Dwight.** 1995. An exploration of self-in-context: Teaching and organizational effectiveness on the San Juan Grizzly Project, Round River Conservation studies.
57. **Casagrande, David.** 1995. West River, New Haven: A study of problem definition.
58. **Cole, Andrew.** 1995. Bison, brucellosis, and the Greater Yellowstone Ecosystem: Applying a policy orientation to the problem.
59. **Cooper, Andrew.** 1995. Managing the managers: A case study of the Challis National Forest planning process.
60. **Dumas, Amy.** 1995. Koala management in Victoria, Australia.
61. **Formia, Angela, Joanna Grand, and Zoe Rappaport.** 1995. Sea turtle conservation: An evaluation and comparison of El Salvador and Mexico from a policy perspective.
62. **Foster, Bryan.** 1995. Babbitt's plan for grazing reform in the American West: A critique.
63. **Halberg, Derek.** 1995. Defining the problem of the endangered Hawaiian crow (*Corvus hawaiiensis*).
64. **Jacoby, Jennifer, Ilan Schoenfeld, and Susan Seyboldt.** 1995. The National Environmental Education Act of 1990: A policy analysis and case study.
65. **Lonergan, Kyle.** 1995. Applying a policy science perspective to the Colorado Nature Conservancy: The Upper Colorado River Basin strategic plan.
66. **Morton, Matt.** 1995. Cascades International Park, Washington and British Columbia.
67. **Nagel, John.** 1995. Qualitative analysis: Examining strategies for a policy theory for management of large carnivores, and challenges of implementation in Idaho.
68. **O'Brien, Kate.** 1995. A critique of the South-Central and North Pacific/Gulf of Alaska action plan (Why professionals should complete the process of explicit problem definition).
69. **Rutherford, Murray.** 1995. A policy sciences view of biodiversity loss: Connecting with base values.
70. **Scheuer, Jonathan.** 1995. The challenge of conserving biological diversity in Hawai'i: What is the policy problem?
71. **Wilshusen, Peter.** 1995. Lake Champlain Basin program.
72. **Ahearn, Laura.** 1996. The Chester Creek Marsh: A prototype for watershed management.
73. **Beard, Karen.** 1996. Bison management in the Greater Yellowstone Ecosystem: An analysis of the draft interim bison management plan environmental assessment.
74. **Beck, Jennifer.** 1996. Private property rights and the planning of the Silvio O. Conte National Fish and Wildlife Refuge.
75. **Davenport, Jane.** 1996. The future of the National Wildlife Refuge system: The need for comprehensive legislative reform (or, bring on the lawyers).
76. **Frohling, Nathan.** 1996. The Connecticut River Tidelands Bioserve: Case study in ecosystem management.
77. **Hinman, Curtis.** 1996. Central Sierra watershed analysis, California.
78. **Holmes McKenna, Erin.** 1996. Elk management in the Northern Range of Yellowstone.
79. **Huffman, Phil.** 1996. Property rights and river conservation: Using the Wild and Scenic Rivers Act to protect rivers flowing through private lands.
80. **Martin, Bill.** 1996. The Long Island Sound coastal zone: New approaches for coordinated open space management.

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81. **Nachiem, Lara.** 1996. Applying a policy orientation to the issue of salt marsh restoration on the West River.
82. **Palden, Jigme.** 1996. Control of wild pigs in the Buddhist kingdom of Bhutan: A policy process.
83. **Peck, Eugene.** 1996. Restoring Massachusetts wetlands: A value-institution process.
84. **Peters, Charles (John).** 1996. Federal government and agency posture in the upcoming cooperative agreement with the state of Idaho for bull trout conservation: A briefing for Forest Service officials.
85. **Portier-Smith, Alice.** 1996. Solid wastes, New England.
86. **Saltonstall, Kristin.** 1996. Education for conservation: The ultimate hope. What's new at the zoo? Lessons in implementation of effective conservation education programs.
87. **Shallcross, Kathryn.** 1996. Policy practices in history: 250 years of Mississippi River control.
88. **Tenissez, Carter.** 1996. Cowboys and critters: The showdown over shiner on the southern high plains.
89. **Valdez, Ryan.** 1996. International wildlife conservation: Case-North Luangwa conservation project.
90. **von der Pahlen, Constanza.** 1996. Greenways to people and people to greenways: A policy approach to conservation.
91. **Woelflein, Louise.** 1996. Beyond biology: Training conservation biologists to solve conservation problems.
92. **Wright, Nancy.** 1996. Endangered species. How to take the environmental bite out of international trade.
93. **Yu, Hsiao-Man.** 1996. Education as a conservation tool: Conservation education programs for protecting declining species.
94. **Eisenstadt, Keegan.** 1997. International conservation issues and strategies: Case study examples in Belize.
95. **Evans, Alexander.** 1997. Conservation in Belize: The leadership of Program for Belize in a policy analysis framework.
96. **Gaginski, Thomas.** 1997. A policy sciences analysis of the Nature Conservancy—Program for Belize Partnership under the Wings of Americas Program.
97. **Gaillard, David.** 1997. Addressing landscape fragmentation in the Northern Rockies.
98. **Garen, Eva.** 1997. Integrating conservation and development: A policy analysis of the Rio Bravo Conservation and Management Area.
99. **Gonzalez, Carlos.** 1997. The FAO's international code of conduct on the distribution and use of pesticides: A good policy or a "feel good" policy?
100. **Kass, Madeline.** 1997. The Grand Staircase-Escalante National Monument: A wilderness designation quandary.
101. **Lamoreux, John.** 1997. A review of the latest AFSEG action plan using the policy sciences.
102. **Landivar, Roger.** 1997. Applying the policy sciences to maximize long-term success of conservation work in Bolivia.
103. **Le Breton, Gus.** 1997. Zimbabwe and the international ivory ban.
104. **Miliken, Sally.** 1997. The upper Androskoggin River Valley: A policy sciences analysis of community-based ecosystem management in New England.
105. **Pinchot, Peter.** 1997. The Balcones Canyonlands Conservation Plan: The role of citizen attitudes in ecosystem management.
106. **Ramanathan, Shalini.** 1997. Swamp things: Marshes, mosquitoes and encephalitis in Connecticut.
107. **Reid, Josh.** 1997. Forest health and the salvage logging rider.
108. **Slosser, Nicholas.** 1997. Consumption and conservation of shark: Integration of science and policy for the future of large migratory elasmobranchs.
109. **Swantz, Shauna.** 1997. Contrasting viewpoints and recommendations on the role of science and scientific uncertainty in Endangered Species Act implementation.
110. **Tighe, Cristin.** 1997. Malaria as a policy problem: Improving problem orientation and policy-making.
111. **Ulgen, Huma.** 1997. An overview of ecosystem management through the policy sciences.
112. **Wojtalik, Amanda.** 1997. Analyzing the red wolf recovery program and determining a successful strategy for its implementation using a policy orientation.
113. **Block, Nadine.** 1998. Public land management: A case study of old-growth management on state lands in Minnesota.
114. **Bryant, Peter.** 1998. Atlantic salmon restoration on the Connecticut River.
115. **Burrows, John, and Christine Chui.** 1998. Policy analysis of the Florida Keys National Marine Sanctuary Final Management Plan/ Environmental Impact Statement.
116. **Bowes-Lyons, David.** Towards a "sustainable" land-management strategy in Hertfordshire, England.
117. **Cucchi, Anthony.** 1998. The Mexican wolf recovery process: Turning short-term success into long-term recovery. Current prospects for wolf recovery in Yellowstone National Park.
118. **Elwell, Chris.** 1998. Analysis of black bear repatriation to the Big South Fork region of Kentucky and Tennessee, USA.

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119. **Finkral, Alex.** 1998. Old growth in the White Mountain National Forest: A policy sciences approach to resolving resource management problems.
120. **Gardner, Benjamin.** 1998. Panama Canal watershed management. Mutual incomprehension or selective inattention? Creating capacity for public participation in natural resource management in Panama.
121. **Gillseberg, Anne-Marie.** 1998. Species reintroductions: Improving the process.
122. **Kahn, Brad.** 1998. Integration in natural resources management and policy in the Panama Canal watershed.
123. **Lawrence, Jessica, Evan Preisser, and Jennifer Yelin.** 1998. Vernal pool conservation in Connecticut.
124. **Lieberknecht, Katherine.** 1998. Wildlife conservation, a delicate balance: An analysis of the habitat conservation planning process in Texas.
125. **McQuay, Andrea.** 1998. Conserving mountain lions in a changing environment in the American West.
126. **Paiz, Marie-Clair.** 1998. Forest planning. Public participation in the management planning for Pisgah and Nantahala National Forests, North Carolina.
127. **Papazian, Jennifer.** 1998. In search of reason: Bison management in the Greater Yellowstone Ecosystem.
128. **Plavsic, Mila and Jason Sumiye.** 1998. Integrated conservation and development projects: A policy analysis.
129. **Rod, Brian.** 1998. Conservation and development: Finding a balance. Developing an open space conservation strategy for the Adirondack Land Trust: A policy analysis.
130. **Weinstein, Sasha.** 1998. Sustainable land management and design. Regional urban growth planning in metropolitan Portland, Oregon.
131. **Westerfield, Elizabeth.** 1998. Guiding principles of sustainable design.
132. **Whitney, Sarah.** 1998. Will the goals be met? An examination of ARI's general and regional plan with respect to protected areas within the Inter-oceanic Region, Panama.
133. **Williams, Chris.** 1998. National Park management in the Panama Canal watershed.

Figure 1 Location of study site or region of students' case analyses from 1990-1998 "Species and Ecosystem Conservation: An Interdisciplinary Approach" course (see Table 1 for key to paper titles and authors).

