THE EFFECTIVENESS OF BIODIVERSITY LAW

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I. INTRODUCTION

The Endangered Species Act (ESA) is broken, say its opponents. No, it is a spectacular success, respond its champions. Perhaps the law works well but is ill-advised, or conversely, perhaps it has not achieved its ends, but for reasons that are beyond its control. Such is the debate about the law that everyone agrees is one of the most powerful environmental laws ever enacted by Congress.[1]

Meanwhile, since the enactment of the ESA in 1973, biodiversity protection has received growing attention in the nations of Southeast Asia. Several biodiversity hotspots are located in the region; the panda is an international symbol of wildlife conservation, ecotourism has boomed along Malaysia's coral reefs, and BBC's "Planet Earth" portrayed exotic birds-of-paradise on Borneo. At the same time, Southeast Asia has experienced unprecedented economic growth, often rocky transitions to new political institutions, and ongoing struggles in simultaneously working to develop basic institutions to implement a rule of law. So far, biodiversity

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1. *See, e.g.*, Ike C. Sugg, *Caught in the Act: Evaluating the Endangered Species Act, Its Effects on Man and Prospects for Reform*, 24 CUMB. L. REV. 1, 2 (1994) ("The Endangered Species Act of 1973 (ESA) is widely considered to be the most powerful environmental law in the nation."). The debate concerning the ESA appears in countless sources, including an excellent series of articles that appeared in a symposium celebrating the thirtieth anniversary of the law. *See Symposium: The Endangered Species Act Turns 30*, 34 ENVTL. L. 287 (2004).

law has not been exceptionally effective in protecting Southeast Asian biodiversity from habitat loss, commercial exploitation, and other threats. The region's biodiversity is "in crisis," according to one recent study.[2] Even so, biodiversity law in Southeast Asia has not faced the heated debate that characterizes discussions of the ESA in the United States.

This Article considers the effectiveness of the ESA and of biodiversity laws in Southeast Asia. Whether or not a law is working seems like a basic question that a legal system should be able to answer. Even though recent scholarship offers a framework for considering the effectiveness of a law, surprisingly little attention has been paid to such questions.[3] Part I considers the debate regarding the success or failure of the ESA, focusing on the mixed record of the law in meeting its stated goals. Part II describes the efforts of four Southeast Asian nations—China, Vietnam, Malaysia, and Cambodia—to employ laws to protect their biodiversity. Part III analyzes the contrasting reactions to the achievements of the ESA and the biodiversity laws of those four Southeast Asian nations. Success, I conclude, is best judged based upon what one expects of the law.

II. JUDGING THE ENDANGERED SPECIES ACT

The ESA itself contains the most obvious way of evaluating its effectiveness. The text of the statute identifies three purposes, so the initial inquiry is to ascertain whether the law has achieved those purposes. The ESA first says that its purpose is "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved."[4] This is "[t]he central purpose of the ESA," according to J.B. Ruhl and other writers.[5] Judging by those criteria, the law has been rather unsuccessful. The ESA's provisions related to ecosystem preservation have been the target of complaints voiced by supporters and opponents of the law alike. The ESA's first step is to list those species that are endangered or threatened, based upon the threats to the species and existing protection of their habitat. Listing itself does not regulate habitat: instead, listing triggers the other regulatory provisions of the ESA. Until recently, the Fish and Wildlife Service

2. *See* NAVJOT S. SODHI & BARRY W. BROOK, SOUTHEAST ASIAN BIODIVERSITY IN CRISIS (2006).

3. *See infra* Part II.

4. 16 U.S.C. § 1531(b) (2006).

5. J.B. Ruhl, *Cities, Green Construction, and the Endangered Species Act*, 27 VA. ENVTL. L.J. (forthcoming fall 2009). *See also* Federico Cheever, *The Road to Recovery: A New Way of Thinking About the Endangered Species Act*, 23 ECOLOGY L.Q. 1, 14 (1996) (agreeing that such conservation is the "primary purpose" of the ESA).

(FWS) paid little attention to overall habitat conservation in making listing decisions, but the agency championed a 2008 proposal to list several Hawaiian species as a more calculated effort to employ the species listing provisions for ecosystem conservation.[6]

Of the ESA's provisions specifically addressing ecosystem conservation, the critical habitat requirement has been especially controversial. As illustrated by *Tennessee Valley Authority v. Hill*,[7] section 7 of the ESA provides that all federal agencies are prohibited from taking any action (in *Hill*, the completion of a dam) that would jeopardize the critical habitat of a species (in *Hill*, the snail darter).[8] But there have been relatively few instances in which significant areas of habitat have been conserved thanks to section 7. Nonetheless, the FWS has resisted the designation of critical habitat for listed species.

Section 4 of the ESA requires the FWS to designate the critical habitat of a species when the agency lists a species as endangered or threatened, unless it is not practicable or prudent to do so.[9] Whether it is imprudent to designate a critical habitat has been the subject of much litigation in recent years. The FWS blames this litigation for diverting scarce resources from more pressing priorities, but environmentalists insist that litigation is necessary to secure the protections afforded by the formal designation of a critical habitat. Both sides would agree that the current critical system has failed to yield an effective means whereby ecosystems are conserved.

The "take" prohibition of section 9 reaches a limited amount of habitat modification. Section 9 makes it illegal to "take" an endangered species,[10] which includes "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."[11] The FWS has further defined "harm" to mean "an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering."[12] The Supreme Court has upheld this definition as a permissible interpretation of the ESA.[13] The regulatory effects of the "take" pro-

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6. *See* Listing 48 Species on Kauai as Endangered and Designating Critical Habitat, 73 Fed. Reg. 62,592 (Oct. 21, 2008) (to be codified at 50 C.F.R. pt. 17).

7. 437 U.S. 153 (1978).

8. *Id.* at 173 (1978); 16 U.S.C. § 1536(a)(2).

9. 16 U.S.C. § 1533(a)(3)(A)(i).

10. *Id.* § 1538(a)(1)(B) ("take" prohibition).

11. *Id.* § 1532(19) (defining "take").

12. 50 C.F.R. § 17.3 (2008).

13. *See* Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or., 515 U.S. 687, 708 (1995).

hibition are loudly lamented by private property owners, but they are typically localized in effect. The threat of section 9 regulation prompted the development of habitat conservation plans (HCPs), which have played a significant role in preserving the habitat of listed species. The amount of actual habitat protected by HCPs remains modest as well, and the trade-off is that some land that is occupied by a listed species will not be protected at all.

Section 5 of the ESA authorizes the federal government to acquire land needed for the preservation of listed species.[14] The Congress that passed the ESA thought that this authority would play the primary role in conserving the ecosystems upon which endangered species depend.[15] Instead, section 5 has produced relatively modest accomplishments. "Land acquisition," explains Robert Fischman, "does quietly hum along at a respectable magnitude of tens of millions of dollars per year but is nowhere near the centerpiece of species recovery."[16] The Land and Water Conservation Fund has earned William Rodgers' praise as the most significant environmental statute ever enacted,[17] but the land acquisition authorized by that fund still falls far short of preserving the ecosystems upon which all listed species depend.

The combined effects of the ESA's habitat preservation provisions have been modest. In 2008, the West Virginia northern flying squirrel became the first species to be removed from the ESA's list of protected species based upon the restoration of the species' habitat.[18] Previous delistings resulted from the elimination of hunting,

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14. *See* 16 U.S.C. § 1534(a) ("The Secretary, and the Secretary of Agriculture with respect to the National Forest System, shall establish and implement a program to conserve fish, wildlife, and plants, including those which are listed as endangered species or threatened species pursuant to section 4 of this Act. To carry out such a program, the appropriate Secretary—(1) shall utilize the land acquisition and other authority under the Fish and Wildlife Act of 1956, as amended, the Fish and Wildlife Coordination Act, as amended, and the Migratory Bird Conservation Act, as appropriate; and (2) is authorized to acquire by purchase, donation, or otherwise, lands, waters, or interest therein, and such authority shall be in addition to any other land acquisition authority vested in him.").

15. *See Babbitt*, 515 U.S. at 727 (Scalia, J., dissenting) ("[T]he Senate and House floor managers of the bill explained it in terms which leave no doubt that the problem of habitat destruction on private lands was to be solved principally by the land acquisition program of § [5]."); s*ee also* Robert L. Fischman, *Predictions and Prescriptions for the Endangered Species Act*, 34 ENVTL. L. 451, 473 (2004) ("It seems quaint now that the Endangered Species Preservation Act of 1966 anticipated that we could recover endangered species solely by purchasing habitat for the national wildlife refuge system.").

16. Fischman, *supra* note 15, at 458-59.

17. William H. Rodgers, Jr., *The Seven Statutory Wonders of U.S. Environmental Law: Origins and Morphology*, 27 LOY. L.A. L. REV. 1009, 1010 (1994).

18. *See* Final Rule Removing the Virginia Northern Flying Squirrel (Glaucomys sabrinus fuscus) from the Federal List of Endangered and Threatened Wildlife, 73 Fed. Reg. 50,226, 50,241 (Aug. 26, 2008) (to be codified at 50 C.F.R. pt. 17) (delisting the squirrel because "the threat posed by past habitat loss has been largely abated across most of the [squirrel's] range").

commercial exploitation, pesticides, or other threats.[19] Much of the ecosystem preservation that has occurred since the enactment of the ESA in 1973 is the result of actions outside the scope of the ESA. Other federal laws (such as the National Forest Act, the National Park Service Organic Act, and even pollution control statutes such as the Clean Air Act and the Clean Water Act) have been responsible for significant ecosystem preservation. State laws have also protected many other ecosystems. Private organizations, such as the Nature Conservancy, account for a significant proportion of protected ecosystems.[20] Even so, the habitat of most listed species is shrinking. Thus it is difficult to conclude that the ESA has achieved its first purpose.

The ESA's second stated purpose is "to provide a program for the conservation of . . . endangered species and threatened species."[21] The law has created such a program, so in a strict sense, it has accomplished this purpose. Whether this program actually succeeds in conserving endangered and threatened species is a different question. The ESA defines "conservation" as "the point at which the measures provided pursuant to this chapter are no longer necessary."[22] Put differently, the ESA is intended to help species recover.[23] That has not happened, for the vast majority of the listed

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19. Holly Doremus & Joel E. Pagel, *Why Listing May Be Forever: Perspectives on Delisting under the U.S. Endangered Species Act*, 15 CONSERVATION BIOLOGY 1258, 1263-65 (2001) (explaining that all past and pending delistings were for reasons unrelated to habitat conservation).

20. *See* The Nature Conservancy, About Us, http://www.nature.org/aboutus/?src=t5 (last visited June 13, 2009).

21. 16 U.S.C. § 1531(b) (2006); *see also* Nat'l Ass'n of Home Builders v. Defenders of Wildlife, 127 S. Ct. 2518, 2526 (2007) ("The [ESA] . . . is intended to protect and conserve endangered and threatened species and their habitats."); Bennett v. Spear, 520 U.S. 154, 175 (1997) (describing "species preservation" as the "overarching purpose" of the ESA).

22. 16 U.S.C. § 1532(3).

23. *See Threatened And Endangered Species Recovery Act of 2005: Hearing on H.R. 3824 Before the House Comm. on Res.*, 109th Cong. 12 (2005) [hereinafter *2005 Hearing*] (statement of Craig Manson, Assistant Secretary of the Interior) ("A key purpose of the ESA is to provide a program for the conservation of endangered and threatened species so as to bring them to the point at which measures under the Act are no longer necessary."); *id.* at 29 (statement of M. Reed Hopper, Pacific Legal Foundation) (referring to the ESA's "primary goal of recovery of species"); Federico Cheever & Michael Balster, *The Take Prohibition in Section 9 of the Endangered Species Act: Contradictions, Ugly Ducklings, and Conservation of Species*, 34 ENVTL. L. 363, 367 (2004) ("[T]he ESA, as a whole, is about the conservation of species–in other words, the recovery of populations that interbreed and persist over time."); Zygmunt J.B. Plater, *Endangered Species Act Lessons Over 30 Years, and the Legacy of the Snail Darter, a Small Fish in a Pork Barrel*, 34 ENVTL. L. 289, 293 (1994) (describing "species recovery" as the "fundamental goal" of the ESA); J.B. Ruhl, *Is the Endangered Species Act Ecopragmatic?*, 87 MINN. L. REV. 885, 937 (2003) ("[T]he central goal of the ESA [is] that of recovering species."); U.S. Fish & Wildlife Serv., Endangered Species, http://www.fws.gov/Pacific/ecoservices/endangered/recovery/index.html (last visited June 13, 2009) ("[R]ecovery . . . is the cornerstone and ultimate purpose of the endangered species program."); *see generally* CHARLES C. MANN & MARK L. PLUMMER, NOAH'S CHOICE: THE FUTURE OF ENDANGERED SPECIES (1995). *But see* Ruhl, *supra* note 5 ("[P]romoting the recovery of species is nowhere required by the statute.").

species are still endangered or threatened with extinction.[24] Even delisting is not synonymous with recovery, for a 2008 study found that only five of the eight species delisted between 2000 and 2007 met their stated recovery criteria and that "some recovery criteria were outdated or otherwise not achievable" for the other three species.[25] Mary Christina Wood has thus concluded that the statute has a poor record of achieving the recovery of threatened species, which is its central purpose.[26]

But environmentalists contest this interpretation of the purpose of the law. Holly Doremus and Joel Pagel have argued that "[d]elistings are not an appropriate measure of the extent to which the ESA is fulfilling the goal of protecting species."[27] Another response is that while listed species have not recovered to the point where the protections of the ESA are no longer needed, the protections have nonetheless helped many species move toward recovery.[28] Kieran Suckling, head of the Center for Biological Diversity, agrees that "[a] more sensible measure of recovery would be to examine the number of actual recoveries in relationship to the number predicted by federal recovery plans."[29] Using that standard, Suckling found that seven of the eleven northeastern species that were expected to recover by 2005 had done so. The National Wildlife Federation cites the FWS as saying that the conditions of sixty-eight percent of listed species are stable or improving.[30] Two economists who studied the data concluded that "[t]he results show that listing does have a significant effect on species recovery."[31] Michael Bean provides a tangible example when he questions the Pombo committee report's listing of the bald eagle, Kirtland's

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24. *See 2005 Hearing*, *supra* note 23, at 9 (statement of Sen. Inhofe) (arguing that few listed species have recovered).

25. Robin M. Nazzaro, Dir. of Natural Res. & Env't, Testimony before the Committee on Natural Resources, House of Representatives 7 (2008).

26. Mary Christina Wood, *Protecting the Wildlife Trust: A Reinterpretation of Section 7 of the Endangered Species Act*, 34 ENVTL. L. 605, 606 (2004).

27. Doremus & Pagel, *supra* note 19, at 1260.

28. Daniel J. Rohlf, *Section 4 of the Endangered Species Act: Top Ten Issues for the Next Thirty Years*, 34 ENVTL. L. 483, 507 (2004) ("[T]he ESA's ultimate goal [is] actually improving the status of listed species.").

29. KIERAN SUCKLING, CENTER FOR BIOLOGICAL DIVERSITY, MEASURING THE SUCCESS OF THE ENDANGERED SPECIES ACT: RECOVERY TRENDS IN THE NORTHEASTERN UNITED STATES 6 (Feb. 2006); *see also* EDWARD HUMES, ECO BARONS: THE DREAMERS, SCHEMERS, AND MILLIONAIRES WHO ARE SAVING OUR PLANET 93-168 (2009) (profiling Suckling's work).

30. *See* Nat'l Wildlife Fed'n, Endangered Species Act By the Numbers, http://www.nwf.org/wildlife/pdfs/esabythenumbers.pdf (last visited June 13, 2009).

31. Christian Langpap & Joe Kerkvliet, Success or Failure? Ordered Probit Approaches to Measuring the Effectiveness of the Endangered Species Act 8 (2002) (unpublished manuscript), *available at* http://ageconsearch.umn.edu/bitstream/19713/1/sp02la02.pdf; *see also* Martin F.J. Taylor, Kieran F. Suckling & Jeffrey J. Rachlinski, *The Effectiveness of the Endangered Species Act: A Quantitative Analysis*, 55 BIOSCIENCE 360 (2005) (agreeing that listing and the implementation of the ESA's provisions enhances the recovery of a species).

warbler, and the whooping crane as evidence of the ESA's 99.99% failure rate. [32] "It is a peculiar notion of failure," says Bean, "given that all three are at their highest levels in more than half a century."[33] Bean adds that "[a]n approach that recognizes only two categories for each listed species—success or failure—doesn't address the complex reality of wildlife recovery."[34] Doremus and Pagel go even further, "expect[ing] that the majority of currently listed species . . . will need the protection of the ESA in perpetuity. Far from demonstrating the shortcomings of the ESA, we believe that this fact emphasizes the ESA's unique role in species conservation."[35]

The third statutory purpose of the ESA is "to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of [the] section."[36] The referenced treaties and conventions are as follows:

> (A) migratory bird treaties with Canada and Mexico; (B) the Migratory and Endangered Bird Treaty with Japan; (C) the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere; (D) the International Convention for the Northwest Atlantic Fisheries; (E) the International Convention for the High Seas Fisheries of the North Pacific Ocean; (F) the Convention on International Trade in Endangered Species of Wild Fauna and Flora; and (G) other international agreements.[37]

Each of these laws has a similar, yet distinct purpose. The purpose of the Migratory Bird Treaty with Canada is "to adopt some uniform system of protection which shall effectively accomplish" the "saving from indiscriminate slaughter and . . . insuring the preservation of such migratory birds as are either useful to man or are harmless."[38] Noticeably similar, the Migratory and Endangered Bird Treaty with Japan aims "to cooperate in taking measures for the management, protection, and prevention of the extinction of certain birds," noting that "many species of birds of the Pacific islands have been exterminated, and that some other species of birds

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32. MICHAEL J. BEAN, ENVIRONMENTAL DEFENSE CENTER FOR CONSERVATION INCENTIVES, THE ENDANGERED SPECIES ACT: SUCCESS OR FAILURE? 4 (2005).

33. *Id.*

34. *Id.* at 5.

35. Doremus & Pagel, *supra* note 19, at 1261; *see also* Holly Doremus, *Delisting Under the Endangered Species Act: An Aspirational Goal, Not a Realistic Expectation*, 30 ENVTL. L. REP. 10434, 10434-35 (2000) (describing delisting as "an aspirational goal, not a realistic expectation"); Rohlf, *supra* note 28, at 550 (agreeing with Doremus).

36. 16 U.S.C. § 1531(b) (2006).

37. *Id.* § 1531(a)(4).

38. Convention Between the United States and Great Britain (for Canada) for the Protection of Migratory Birds, U.S.–Gr.Brit., Aug. 16, 1916, 39 Stat. 1702.

are in danger of extinction."[39] The Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere intends

> to protect and preserve in their natural habitat representatives of all species and genera of their native flora and fauna, including migratory birds, in sufficient numbers and over areas extensive enough to assure them from becoming extinct through any agency within man's control; and . . . to protect and preserve scenery of extraordinary beauty, unusual and striking geologic formations, regions and natural objects of aesthetic, historic or scientific value, and areas characterized by primitive conditions . . .; and . . . to conclude a convention on the protection of nature and the preservation of flora and fauna to effectuate the foregoing purposes.[40]

The International Convention for the Northwest Atlantic Fisheries has resolved to promote "the investigation, protection and conservation of the fisheries of the Northwest Atlantic Ocean, in order to make possible the maintenance of a maximum sustained catch from those fisheries."[41] The International Convention for the High Seas Fisheries of the North Pacific Ocean aims "to ensure the maximum sustained productivity of the fishery resources of the North Pacific Ocean, and that each of the Parties should assume an obligation, on a free and equal footing, to encourage the conservation of such resources."[42] Finally, the Convention on International Trade in Endangered Species of Wild Life Fauna and Flora (CITES) intends to protect the "wild fauna and flora in their many beautiful and varied forms [that] are an irreplaceable part of the natural systems of the earth . . . for this and the generations to come."[43]

These purposes recite a variety of appeals for conservation, preservation, and protection of various species located in certain parts of the world. The most ambitious statement appears in the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, whose 1940 call "to protect and preserve in

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39. Convention Between the Government of the United States of America and the Government of Japan for the Protection of Migratory Birds and Birds in Danger of Extinction, and Their Environment, U.S.-Japan, Mar. 4, 1972, 25 U.S.T. 3329.

40. Convention on Nature Protection and Wild Life Preservation in the Western Hemisphere pmbl., Oct. 12, 1940, 56 Stat. 1354, 161 U.N.T.S. 193.

41. International Convention for the Northwest Atlantic Fisheries, Feb. 8, 1949, 1 U.S.T. 477, 157 U.N.T.S. 157.

42. International Convention for the High Seas Fisheries of the North Pacific Ocean, U.S.-Can.-Japan, May 9, 1952, 4 U.S.T. 380.

43. Convention on International Trade in Endangered Species of Wild Fauna and Flora, Mar. 3, 1973, 27 U.S.T. 1087, 993 U.N.T.S. 243.

their natural habitat representatives of all species and genera of their native flora and fauna, including migratory birds, in sufficient numbers and over areas extensive enough to assure them from becoming extinct through any agency within man's control" sounds long before its time.[44] In fact, the express reference to "sufficient number[ ] and over areas extensive enough to assure them from becoming extinct" is arguably more ambitious than the ESA itself.[45] Generally, though, the Convention appeals for habitat preservation and for the prevention of extinction, and those two purposes have already been discussed in the context of the more specific provisions of the ESA.

The fact that the ESA states only three purposes has not prevented others from attributing additional purposes to the law. The most common claim, as Holly Doremus and Joel Pagel put it, is that "[t]he primary intent of Congress in adopting the ESA was to prevent extinction."[46] Happily, only nine listed species have gone extinct.[47] Because ninety-nine percent of the species placed on the Endangered Species List have avoided extinction, some claim that "the Endangered Species Act has worked so well."[48] Moreover, several of the species listed initially may have already been extinct by the time they were listed under the law. We still do not know the status of one famous species, the ivory-billed woodpecker. It was listed as endangered in 1967, declared extinct around 2000, and then possibly rediscovered in 2004.[49] As the evidence is not conclusive, some scientists are skeptical, which illustrates the difficult task of monitoring each species. The remainder of the 1932 listed species remains alive. Moreover, one study suggested that 192 spe-

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44. Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, *supra* note 40, pmbl.

45. *Id.*

46. Doremus & Pagel, *supra* note 19, at 1261; *see also* Fischman, *supra* note 15, at 455 (writing that "[t]he aim of the ESA" is "to prevent extinction").

47. U.S. Fish & Wildlife Serv., TESS: Threatened & Endangered Species System, http://ecos.fws.gov/tess_public/DelistingReport.do (last visited June 13, 2009) [hereinafter TESS Delisting Report] (identifying nine species that were delisted because they went extinct).

48. *2005 Hearing*, *supra* note 23, at 23 (statement of Sen. Clinton); *see also id.* at 31 (statement of Jamie Rappaport Clark, Executive Vice President, Defenders of Wildlife) (noting the ninety-nine percent figure as well). Actually, comparing the nine extinct listed species to the 1,952 species that have either recovered or are still listed, the percentage of species avoiding extinction is 99.54%. *Compare* U.S. Fish & Wildlife Serv., TESS: Summary of Listed Populations and Recovery Plans, http://ecos.fws.gov/tess_public/TESSBoxscore (last visited June 13, 2009) [hereinafter TESS Summary] (stating that there are 1,952 species listed as endangered or threatened under the ESA), *with* TESS Delisting Report, *supra* note 47 (identifying nine species that were delisted because they are extinct).

49. *See* TIM GALLAGHER, THE GRAIL BIRD: THE REDISCOVERY OF THE IVORY-BILLED WOODPECKER (2006); PHILLIP HOUSE, THE RACE TO SAVE THE LORD GOD BIRD (2004); JEROME A. JACKSON, IN SEARCH OF THE IVORY-BILLED WOODPECKER (2006).

cies would have gone extinct between 1973 and 1998 but for the ESA.[50]

Yet ecologists say that species go extinct all the time, including many since the enactment of the ESA in 1973.[51] The ESA was never employed to try to save them, and in that sense, the program failed to achieve the goal of conserving endangered and threatened species. Judge Craig Manson claimed that "the ESA is not designed to save every single species that goes extinct everywhere in the world for any particular reason."[52] But the ESA does apply to species throughout the world. Thirty percent of species now listed as endangered live outside the United States.[53]

The ESA fares well under some of these interpretations of its purpose and not so well under others. Yet that is not the end of the debate. Many supporters of the law admit that it has not achieved its goals, but they blame other factors instead of the ESA itself. The failure to fund or enforce the ESA's requirements is a common complaint of those who defend the ESA against its perceived shortcomings.[54] For example, John Kostyack of the National Wildlife Federation insists that "[f]or reasons unrelated to the [ESA], it will take decades before the conditions are right for most of these species to be delisted."[55] He argues that better management, extra funding, and more time for the reparation of ecological processes are needed. Furthermore, the ESA should not be blamed for failing

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50. Mark W. Schwartz, *Choosing the Appropriate Scale of Reserves for Conservation*, 30 ANN. REV. OF ECOLOGY & SYSTEMATICS 83, 87 (1999).

51. *See* STATE OF THE WORLD'S BIRDS: INDICATORS FOR OUR CHANGING WORLD, BIRDLIFE INTERNATIONAL 4 (2008) (reporting that eighteen birds have gone extinct in the past quarter century and three more birds are thought to have gone extinct since 2000); Philip Shenon, *Agency's Flaws Linked to Extinction of Endangered Species*, N.Y. TIMES, Oct. 18, 1990, at A18, *available at* http://www.nytimes.com/1990/10/18/us/agency-s-flaws-linked-to-extinction-of-endangered-species.html (citing a report by the Inspector General of the Department of the Interior concluding that thirty-five species had gone extinct between 1980 and 1990); Press Release, Global Amphibian Assessment, Amphibians in Dramatic Decline; Up to 122 Extinct Since 1980 (Oct. 14, 2004) (observing that at least nine, and as many as 122, amphibians have gone extinct since 1980); *see also* BILL BRYSON, A SHORT HISTORY OF NEARLY EVERYTHING 573 (2004) (citing estimates ranging from 1,150 extinctions during the past 400 years to more than 1,000 extinctions each week); Cheever & Balster, *supra* note 23, at 364 nn.1-3 (reciting additional estimates of species extinction rates).

52. *2005 Hearing*, *supra* note 23, at 18 (statement of Craig Manson, Assistant Secretary of the Interior).

53. *See* TESS Summary, *supra* note 48 (indicating that 574 of the 1893 listed species live outside the United States).

54. *See* THE KEYSTONE CENTER, THE KEYSTONE WORKING GROUP ON ENDANGERED SPECIES ACT HABITAT ISSUES 14 (2006) ("Many participants identified inadequate funding as a central limiting factor for the ESA as currently written and implemented."); Fischman, *supra* note 15, at 472 (criticizing "[t]he squalid state of ESA funding").

55. *2005 Hearing*, *supra* note 23, at 27 (statement of John Kostyack, Senior Counsel, National Wildlife Federation); *accord* SUCKLING, *supra* note 29, at 1 (concluding that the recovery plans for species in eight northeastern states "expected recovery to take 42 years"); BEAN, *supra* note 32, at 1 ("Congress understood that recovering severely depleted species would require a sustained effort over a prolonged period.").

to prevent species from becoming endangered or threatened in the first place.[56] By contrast, many opponents of the law admit that it has achieved some of its goals, but they worry that it has done so at too great a cost. In 1998, one writer argued that "the ESA negatively affects the species it hopes to protect as well as the people who could best assist in their preservation," citing the Act's flawed approach to private land use regulation and lack of sound science.[57] The debate can be portrayed like this:

	Achieved Its Purposes	**Not Achieved Its Purposes**
Good Law	Many environmentalists	Environmentalists who object to inadequate funding and enforcement
Bad Law	Property rights advocates and federal budget hawks	Property rights advocates

Compare the success of the ESA in achieving its purposes to how other federal environmental statutes have achieved their purposes. The objective of the Clean Water Act (CWA) "is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[58] The CWA has done a good job of restoration and maintenance by most measures. The law has not, however, come close to eliminating the discharge of pollutants into navigable waters by 1985, which is its stated national goal.[59]

The difficulty in judging a law's effectiveness is also seen in the Emergency Economic Stabilization Act, which Congress enacted as the economy slipped in 2008. The Act seeks to "restore liquidity and stability to the financial system of the United States."[60] This is no small feat. Furthermore, it aims make certain that authority and facilities are used to "protect[ ] home values, college funds, re-

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56. *2005 Hearing*, *supra* note 23, at 32 (statement of John Kostyack, Senior Counsel, National Wildlife Federation); *see also id.* at 27 (statement of Sen. Lautenberg) (stating that the ESA is designed "to identify species as risk of extinction").

57. Alexander F. Annett, *Reforming the Endangered Species Act to Protect Species and Property Rights*, The Heritage Foundation Backgrounder Executive Summary (1998); *see also* THE KEYSTONE GROUP, *supra* note 54, at 14 ("Participants generally agreed that transactional inefficiencies can be a key pitfall for the ESA."). *But see* Michael C. Blumm, Erica J. Thorson & Joshua D. Smith, *Practiced at the Art of Deception: The Failure of Columbia Basin Salmon Recovery Under the Endangered Species Act*, 36 ENVTL. L. 709, 810 (2006) ("Anyone in Congress who thinks the ESA is a draconian measure favoring listed species over competing economic concerns has not studied the lessons of the ESA and Columbia Basin Salmon, where NOAA has discovered enormous ESA flexibility to accommodate economic concerns.").

58. 33 U.S.C. § 1251(a) (2006).

59. *Id.* § 1251(a)(1).

60. Emergency Economic Stabilization Act of 2008, Pub. L. No. 110-343, § 2(1), 122 Stat. 3765, 3766 (2008) (to be codified at 12 U.S.C. § 5201).

tirement accounts, and life savings."[61] It intends to "preserve[ ] homeownership and promote[ ] jobs and economic growth," and it is also designed to increase tax returns and provide public accountability.[62] I look forward to seeing whether my retirement account is protected and whether these other purposes are accomplished. The ongoing debate regarding the success of this law will illustrate the challenges in deciding whether or not a law should be judged a success by its accomplishments.

III. ASIAN BIODIVERSITY LAW

Unprecedented economic, political, scientific, and ecotourism growth has occurred in Southeast Asia over the past decades. Southeast Asia is home to astounding biodiversity and equally astounding economic growth. The combination of the two means that many of the most endangered species in the world are found in Southeast Asia.[63] The rapid population and economic growth has produced even greater habitat loss and pollution threats to biodiversity than those experienced in the United States. Furthermore, it is acceptable in many Southeast Asian cultures to directly exploit native biodiversity.[64] The relatively new governments of Southeast Asia have had to address this challenge while simultaneously developing their own legal systems. These legal systems have incorporated both the development of some new unique approaches, along with mimicking some of the steps taken by American biodiversity law.[65] I consider the biodiversity preservation efforts of four nations here: China, Vietnam, Malaysia, and Cambo-

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61. *Id.* § 2(2)(A).

62. *Id.* § 2(2)(B)-(D).

63. *See* Jolene Lin, *Tackling Southeast Asia's Illegal Wildlife Trade*, 9 SING. Y.B. INT'L L. 191, 195 (2005) ("Nine out of ten of the most endangered species on the [World Wildlife Fund's] 2004 list [of species that have suffered the most from commercial trade] are found in Asia . . . [including] the Asian tiger and elephant, the Great White Shark, the Irawaddy dolphin, the Pig-nosed turtle and the Asian Yew tree.").

64. *See* TRAFFIC, WHAT'S DRIVING THE WILDLIFE TRADE? A REVIEW OF EXPERT OPINION ON ECONOMIC AND SOCIAL DRIVERS OF THE WILDLIFE TRADE AND TRADE CONTROL EFFORTS IN CAMBODIA, INDONESIA, LAO PDR AND VIETNAM, at ix (2008) ("South-east Asia is both a centre for the consumption of wildlife products, and also a key supplier of wildlife products to the world.").

65. *See id.* at x ("A wide range of interventions has been employed to date in efforts to halt the illegal and unsustainable wildlife trade in south-east Asia. These range from more conventional 'command and control' measures (which tighten the laws, regulations, enforcement and penalties restricting wildlife harvesting and trade), through attempts to secure more sustainable sources of wildlife products (such as through the domestication of key species, or the introduction of more sustainable resource management and harvesting techniques), to more innovative mechanisms that aim to tackle the broader conditions that encourage people to participate in the wildlife trade (such as supporting development of alternative livelihood options).").

dia. I review them in order of their population and then summarize some of their common experiences.

A. China[66]

China offers the best and the worst of biodiversity protection. China is a vast, varied nation that hosts an incredible range of ecosystems and species. "China's biodiversity ranks eighth in the world and first in the northern hemisphere."[67] Over 100,000 species of animals and nearly 33,000 plant species exist in 460 different types of ecosystems. Those ecosystems include forests, grasslands, deserts, wetlands, seas and coastal areas, and agricultural ecosystems. China hosts 212 different types of bamboo forests alone. China also has an unusual number of ancient and relic species because of its protection from historic geologic events such as the movement of glaciers. Most famously, it is the only home of the giant panda, the symbol of many efforts to protect biodiversity throughout the world today. Such species and ecosystem diversity is complemented by an unsurpassed collection of genetic diversity. "The richness of China's cultivated plants and domestic animals are incomparable in the world. Not only did many plants and animals on which human survival depend originate in China, but it also retains large numbers of their wild prototypes and relatives."[68] A 2005 report estimated that China's biodiversity is valued at nearly five hundred billion dollars.[69]

China is also the home for more than 1.25 billion people. The rapid economic growth that China has experienced since 1980 strains the nation's ability to preserve ecosystems, species, and genetic resources. But the biodiversity of China has encountered countless threats for thousands of years, including the cultivation of more and more land for agriculture and the consequences of numerous wars. During the Great Leap Forward of 1958 to 1960,

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66. Much of this discussion of China's biodiversity is taken from JOHN COPELAND NAGLE & J.B. RUHL, THE LAW OF BIODIVERSITY AND ECOSYSTEM MANAGEMENT 1039-49 (2d ed. 2006). That excerpt, in turn, relies upon two publications that the Chinese government prepared with the help of the United Nations Environment Programme (UNEP). STATE ENVTL. PROTECTION ADMIN. P.R.C., CHINA: BIODIVERSITY CONSERVATION ACTION PLAN (Charlotte Maxey & Julia Lutz eds. 1994) [hereinafter CHINA: BIODIVERSITY CONSERVATION ACTION PLAN]; STATE ENVTL. PROTECTION ADMIN. P.R.C., CHINA'S BIODIVERSITY: A COUNTRY STUDY (1997), *available at* http://www.chinagate.cn/english/2036.htm; *see generally* GERALD A. MCBEATH & TSE-KANG LENG, GOVERNANCE OF BIODIVERSITY CONSERVATION IN CHINA AND TAIWAN (2006) (providing another helpful overview of China's biodiversity).

67. CHINA'S AGENDA 21: WHITE PAPER IN CHINA'S POPULATION, ENVIRONMENT, AND DEVELOPMENT IN THE 21ST CENTURY 171 (1994).

68. Development Gateway: The Richness and Uniqueness of China's Biodiversity, http://en.chinagate.cn/english/2029.htm (last visited June 13, 2009).

69. *See* CHINA: BIODIVERSITY CONSERVATION ACTION PLAN, *supra* note 66.

Mao Zedong targeted the "Four Pests": rats, sparrows, flies, and mosquitoes. The attack on sparrows enlisted schoolchildren to knock down nests and to beat gongs so that the sparrows could not find a place to rest. Only after sparrows were virtually eliminated throughout China did the country's leaders recognize the value of the birds in controlling insects. China faces many of the same threats as biodiversity in other countries, with the notable addition of the country's notorious air pollution. Habitat loss is the biggest threat to biodiversity in China. As in many other countries, rapid economic development and continued population growth exert relentless pressure on previously undeveloped areas that offered habitat to a diversity of wildlife and plants. The overgrazing of rangelands, erosion, and the adverse effects of tourism and mining further compromise the condition of ecosystems and species throughout China.

Forests have suffered an especially devastating toll throughout China. Mark Elvin describes "[t]he destruction of the old-growth forests that once covered the greater part of China" as "the longest story in China's environmental history."[70] The story unfolded because "the original core of classical Chinese culture was hostile to forests, and saw their removal as the precondition for the creation of a civilized world."[71] Trees were cut for fuel, to provide building materials, and as obstacles to farms and other human projects. But the disappearance of the forests caused other, albeit predictable, problems. Deforestation increased erosion, which resulted in huge amounts of sediment collecting along the coasts and the sides of lakes and rivers. Wood became scarce as early as 600 B.C. in some parts of the country. By the nineteenth century, a writer lamented that "[t]hese days, people have used their axes to deforest the mountains."[72] During the twentieth century, China encouraged the wholesale destruction of forests for their timber—which was the country's primary fuel until coal recently replaced it—or simply the removal of trees to facilitate agricultural crops. Trees were cut indiscriminately in a planned effort to generate revenue for local education, health and infrastructure needs. As one villager remembered:

> When I was a child, there were jackals and foxes in the woods, but after the big trees were cut to fuel furnaces during the [Great Leap Forward], there wasn't even a rabbit. New trees grew, but then it was time to 'learn from Dazhai.' In fact, we didn't need terraces in our area, because the

70. MARK ELVIN, THE RETREAT OF THE ELEPHANTS 23 (2004).
71. *Id.* at 12.
72. *Id.* at 78.

> population was sparse. But our per-*mu* production was considered low. So we had to cut the trees. Whoever cut the most got the most political points, and the most grain.[73]

Fires and pests further degraded forest ecosystems. The result was that forest cover in the lush provinces of southwest China declined from thirty percent of the land in 1950 to thirteen percent by 1999. The loss of forests, in turn, caused deadly flooding along the Yangtze River and devastated the natural ecosystems and the species within them. Tigers, for example, "stalk their prey from the cover and the shadows provided by forests. The relationship is pretty simple: no forests, no tigers."[74] Forests continue to disappear at an alarming rate, with the remaining forests often broken into smaller, fragmented areas.[75]

Other types of ecosystems confront similar threats. Overgrazing, farming, and plagues of rodents have caused the grassland steppes that account for one-third of China's total area to lose up to half of their grass yields in the past twenty years. Over seven million hectares of wetlands were reclaimed during the past thirty years. Once known as a "province of thousand lakes,"[76] Hubei Province now has only 326 lakes and rivers left. Lime mining and handicraft production by local residents have damaged eighty percent of the coral reefs along the coast of Hainan Island. The overall result is that "continued destruction and deterioration of ecosystems has now become one of the most serious environmental problems in China."[77] Furthermore, invasive species have begun to exact a heavy toll on China's biodiversity as well.[78]

China's notorious pollution affects many of the country's ecosystems. China routinely places multiple cities in the lists of the world's most polluted cities, and air pollution damages croplands, fisheries, and other ecosystems. China's fisheries suffered $130 mil-

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73. JUDITH SHAPIRO, MAO'S WAR AGAINST NATURE: POLITICS AND THE ENVIRONMENT IN REVOLUTIONARY CHINA 109 (2001).

74. ROBERT B. MARKS, TIGERS, RICE, SILK, AND SILT: ENVIRONMENT AND ECONOMY IN LATE IMPERIAL SOUTH CHINA 323 (1998).

75. *See* ZHU CHUNQUAN, RODNEY TAYLOR & FENG GUOQIANG, CHINA'S WOOD MARKET, TRADE AND THE ENVIRONMENT 12-13 (2004); THE ROOT CAUSES OF BIODIVERSITY LOSS 153-82 (Alexander Wood, Pamela Stedman-Edwards & Johanna Mang eds., 2000) (describing the loss of biodiversity in the forested areas of Deqin County in northern Yunnan Province and Pingwu County in northern Sichuan Province); Sylvie Démurger, Martin Fournier & Guozhen Shen, Forest Conservation Policies and Rural Livelihood in North Sichuan Tibetan Areas, at 2 (2005) (unpublished manuscript), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=876870.

76. *See* China.org.cn, Province View, http://www.china.org.cn/english/features/ProvinceView/155792.htm (last visited June 13, 2009).

77. CHINA: BIODIVERSITY CONSERVATION ACTION PLAN, supra note 66, at 10.

78. *See* Yuhong Zhao, *The War Against Biotic Invasion—A New Challenge of Biodiversity Conservation for China*, 24 UCLA J. ENVTL. L. & POL'Y 459, 465 (2005-2006).

lion in losses from 941 water pollution incidents in 2004 that affected 211,000 hectacres of freshwater ecosystems. A November 2005 factory explosion that polluted the Songhua River required the temporary termination of water supplies in the northwestern city of Harbin and had untold consequences for the freshwater ecosystem. The quantity of water is often a problem for biodiversity as well. Efforts to move freshwater to places where it is scarce, such as Beijing, include such controversial projects as the Three Gorges Dam in central China, which many environmentalists believe will destroy many of the nearby ecosystems. Further south, the planned damming of the Mekong River could destroy a lot.[79]

Biodiversity is also threatened by the direct exploitation of many species. "Plants are cut for fuel, building materials, food and medicine. Birds, mammals, reptiles, fish and many invertebrates are hunted and fished virtually everywhere they are available."[80] Commercial trade in wildlife is another serious threat. China is the world's largest exporter and a leading user of endangered species. Enforcement becomes even more difficult because of the huge demand for products derived from endangered species. Traditional Chinese medicine uses tiger bones (for arthritis and rheumatism), rhino horns (for fevers), and bear gall bladders. Nearly every tiger part is used as a tonic, an aphrodisiac, gourmet delicacies or some other purpose. Chinese pharmaceutical factories use 1,400 pounds of rhino horns annually, the product of about 650 rhinos. Panda pelts sell for as much as $10,000, tiger bones are priced at $500 per pound, and a rhino horn can earn as much as $45,000. Villagers can earn ten years income from one tiger.[81]

These pressures are evidenced in the placement of three native Chinese species among the World Wildlife Fund's list of the top ten most endangered species in the world. The giant panda is the most famous of those three species. Only one thousand pandas are left in the wild, and their numbers are still declining, albeit at a reduced rate. The threats to their survival include the loss of bamboo and habitat, a relatively small number of young pandas, genetic inbreeding, inability to survive in captivity, and poaching, and the earthquake that devastated Sichuan Province in April 2008. The second species—the black rhinoceros—has suffered a ninety-five percent drop in population since 1970 so that only two thousand are alive today. The third species—the Indo-Chinese tiger—is the most

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79. *See* MILTON OSBORNE, RIVER AT RISK: THE MEKONG AND THE WATER POLITICS OF CHINA AND SOUTHEAST ASIA 40-45 (Lowry Inst. Paper 02, 2005), *available at* http://www.lowyinstitute.org/Publication.asp?pid=160.

80. *Id.* at 13.

81. *See generally* Charu Sharma, *Chinese Endangered Species at the Brink of Extinction: A Critical Look at the Current Law and Policy in China*, 11 ANIMAL L. 215 (2005).

endangered. Estimates of the number of Indo-Chinese tigers alive in the wild range from fifty to five hundred, and with two of the four native Chinese tiger species already extinct, many fear that this tiger could disappear by the end of the century. The disappearance of native species is obvious in other ways as well. The town of "Wild Yak Gully now has no wild yaks; Wild Horse Sands, no wild horses,"[82] and the Town of Moose and the Town of Gazelle have no moose or gazelles. Other notable Chinese species that are endangered include the Yangtze alligator, the crested ibis, and certain Mongolian horses.

China's primary response to the threat to its biodiversity has been the creation of nature reserves. The Dinghushan National Natural Reserve was the first such reserve, established in 1956 in Guangdong Province to protect the subtropical evergreen forests and accompanying rare plants and animals. By 2005, 2,200 reserves covered 14.8% of China's land. More than a dozen of those reserves were for pandas, and the population of pandas in the wild increased from 1,114 in 2000 to 1,596 in 2005. Another reserve covers 45,000 square kilometers and protects sixty endangered animals and 300 rare plants. The newest reserves include 100 square kilometers in northwestern China that contains an untouched Euphrates poplar forest. By contrast, efforts to establish a tiger reserve have failed to date because of the huge amount of land required by wild tigers, the lack of acceptable sites, and the ignorance about the precise needs of tigers. Forest ecosystems are well represented in the nature reserves. Wetland and coastal ecosystems have been included in reserves since the 1970's, while the creation of reserves for grassland and desert ecosystems is a new priority for the government.

Nature reserves, however, do not solve all of the problems faced by China's biodiversity. Consider the Zhalong Nature Reserve in northeastern China's Heilonjiang Province which is home to nine of the fifteen species of cranes in the world. In recent years it has suffered from a severe drought, extensive fires, and housing developments built within its borders, which now provides habitat for 60,000 people as well as for thousands of cranes.[83] The droughts

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82. CHINA: BIODIVERSITY CONSERVATION ACTION PLAN, *supra* note 66, at 15.

83. *See* NE China Reserve Sees Record Number of Migrating Cranes, People's Daily Online, Oct. 29, 2007, http://english.people.com.cn/90001/90782/6292613.html; Red-crested Crane Habitat Flame in NE China, People's Daily Online, Mar. 24, 2005, http://english.peopledaily.com.cn/200503/24/eng20050324_178001.html; Siberian Crane Wetland Project: Zhalong National Nature Reserve, http://www.scwp.info/china/zhalong.shtml (last visited June 13, 2009); Liu Quan, *Research on Spatial-Temporal Evolution of Wetland Water Resource in Zhalong Nature Reserve*, 7 IEEE INT'L 4686 (2004). *Cf.* Haigen Xu et al., *Design of Nature Reserve System for Red-Crowned Crane in China*, 14

have reduced the wetlands from 36,000 hectacres to less than 6,000 hectacres, and the government worries that the area could become a "sea of sand" if conditions are not reversed.[84] Another wetland reserve in northern China was seriously polluted by oil that leaked from a passenger airplane crash in 2004. Most reserves are simply no hunting zones, not affirmative wildlife management areas. For example, over 15,000 people live in ninety villages within Xishuangbanna Nature Reserve in southwestern Yunnan Province, where "they engage in agriculture, forestry, animal production, fisheries, and small-scale retailing and commercial activities."[85] More generally,

> [s]ome engineering projects go on even in the core areas of nature reserves. In other reserves or scenic spots, tourism is promoted to develop the local economy, and while tourism can assist conservation when it is carried out properly, the prospects for quick profits may lead to abuses of the natural systems and species which the reserves protect.[86]

Additionally, "illegal hunting and poaching of endangered animal and plant species occurs frequently" in reserves.[87] There is no general law regulating the operation of nature reserves. Management difficulties and inadequate funding also threaten many reserves. Reserve administrators and employees are often untrained to protect the species in their care. Most reserves do not even possess a list of species that live there.

The Chinese government is aware of these shortcomings, though, and it has charted an ambitious program to improve the effectiveness of nature reserves in protecting the country's biodiversity. Proposed actions include restrictions on free access to sensitive reserves, better pay and living conditions for reserve personnel (including allowances for families to live in nearby cities), efforts to "improve relations with local people and find ways for them to make a living without depleting the natural resources," and the establishment of new nature reserves "in regions with urgent need of biodiversity conservation," such as the coral reefs of Dongshan Island and seven proposed reserves to conserve wild rice, soybeans,

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BIODIVERSITY & CONSERVATION 2275 (2005) (noting that there are thirty-three nature reserves protecting 3.1 million ha of red-crowned crane habitat in China).

84. Xinhua New Agency, Draught Causes China's Wetland Nature Reserve to Shrink, Aug. 10, 2005, http://www.redorbit.com/news/science/203155/drought_causes_chinas_wetland_nature_reserve_to_shrink/index.html.

85. CLEM TISDELL, BIODIVERSITY, CONSERVATION AND SUSTAINABLE DEVELOPMENT: PRINCIPLES AND PRACTICES WITH ASIAN EXAMPLES 147-48 (1999).

86. CHINA: BIODIVERSITY CONSERVATION ACTION PLAN, supra note 66, at 21

87. *Id.*

and other agricultural crops.[88] Likewise, in 2005, Sichuan Province "closed 78 mines and polluting companies in the giant panda's habitat to provide a better home for the endangered species."[89]

The nature reserves are joined by zoos, botanical gardens, and scientific study institutes. China's twenty-eight zoological gardens and 143 zoological exhibition sites contain more than 600 species of animals. Over 13,000 species of plants are contained in more than 100 botanical gardens. Over 1,000 scientists work together through the Chinese Research Network of Ecosystems to study and monitor ecosystem diversity. Genetic diversity is protected by "the world's largest resource bank of different varieties of crops, a number of gene and cell banks and 25 germ-plasm nurseries, which hold a total of 350 thousand specimens of germ-plasm for various species of trees and crops."[90]

Educational campaigns serve as another primary feature of China's efforts to protect its biodiversity. China has traditionally relied on exhortational campaigns to change people's conduct. China's biodiversity conservation action plan begins with an emphasis on the need "[t]o enhance the nation's awareness of the critical importance of our biodiversity and its conservation is our urgent task of the highest priority."[91] Such an educational focus appears in China's Agenda 21 plan, which calls for media teaching about biodiversity, the promotion of public events such as Earth Day and Bird Loving Week, and the use of a traveling Panda Exhibition. China also held a National Program for Environmental Education and Publicity that drew upon the resources of such organizations as the government's environmental departments, the Ministry of Broadcasting and Television, and the Chinese Communist Youth League. One recent program to protect the 5,000 remaining *grus nigricollis*—a rare type of crane—is designed to "make the youth conscious of animal protection before they become poachers."[92] "Such efforts have helped convince 99% of the Chinese people that environmental pollution and ecological destruction are at least 'fairly serious' is-

88. *Id.* at 36-40. *See also* Zhang Ming-hai & Wang Shuang-ling, *Co-Management: Transformation of Community Affair Model in Chinese Nature Reserves*, 15 J. FORESTRY RESEARCH 313 (2004) (explaining how co-management "guarantees biodiversity conservation by coordinating nature reserve management with local social and economic activities").

89. Xinhua News Agency, Panda's Home Reducing Pollution, May 11, 2005, http://www.china.org.cn/english/2005/May/128551.htm

90. CHINA'S AGENDA 21: WHITE PAPER IN CHINA'S POPULATION, ENVIRONMENT, AND DEVELOPMENT IN THE 21ST CENTURY, *supra* note 67, at 173.

91. CHINA: BIODIVERSITY CONSERVATION ACTION PLAN, *supra* note 66, at ii.

92. John Copeland Nagle, *Why Chinese Wildlife Disappears as CITES Spreads*, 9 GEO. INT'L ENVTL. L. REV. 435, 444 (2007) (internal quotation marks omitted).

sues."[93] In particular, anyone who harms a panda must face "the censure of an angry public."[94]

Yet all agree that more environmental education needs to be done. The greatest problem exists in rural areas where people ask why wild animals can no longer survive on their own and where menus proclaiming "Rare Wild Animals Are Served" still appear in restaurants and hotels.[95] The demand for the products of endangered species remains high. Years of teaching traditional Chinese medicine and delicacies is hard to reverse. How do you convince a billion people to take aspirin instead of rhino horn pills? "Many Chinese still believe that wildlife species are endowed with magical powers capable of curing a myriad of ills, and are angered by pressure from countries such as the United States to ban the sale of endangered species."[96] Likewise, many still see tigers as pests, just as many ranchers fear the introduction of wolves and bears into the western United States. More generally, "[b]iodiversity conservation is a new technical term for many officials in the governments at all levels and for citizens who are lacking basic knowledge on biodiversity conservation."[97]

The biodiversity conservation action plan reveals a keen understanding of the importance of gaining public support for the task at hand:

> In general, people want government policies that do not require them to change their lifestyles, provide material benefits and development, and provide benefits today that will be paid for later. Politics to conserve biodiversity would be the opposite, requiring fundamental changes in people's relationship with the environment, restricting access to resources, foregoing material benefits, and paying today for abstract future benefits. Unless the public is convinced of the value of conserving biodiversity, and the government changes its policies accordingly, the chance of saving biodiversity is small.[98]

Thus the Chinese government seeks to help the media better publicize the importance of biodiversity conservation,[99] "[w]ork with

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93. *Id.*
94. *Id.* (internal quotation marks omitted).
95. *Id.* at 445.
96. Daniel C.K. Chow, *Recognizing the Environmental Costs of the Recognition Problem: The Advantages of Taiwan's Direct Participation in International Environmental Law Treaties*, 14 STAN. ENVTL. L.J. 256, 299 (1995).
97. CHINA: BIODIVERSITY CONSERVATION ACTION PLAN, *supra* note 66, at 33.
98. *Id. at* 60.
99. *Id. at* 60-61.

local theater groups to write and perform plays with a biodiversity message,"[100] and teach students of all ages about biodiversity in the nation's schools.[101]

Neither China's emphasis on nature reserves nor its use of educational campaigns actually regulates any conduct that threatens biodiversity. The development of Chinese wildlife law mirrors the development of Chinese environmental law (and indeed Chinese law) generally. Interest in the environment and interest in law both lagged until the 1970's, so not surprisingly, there was little Chinese environmental law. The People's Congress approved the Law on Environmental Protection—the first general Chinese environmental statute—in 1978. Article 15 of that law prohibits hunting and exploitation of rare wildlife. Then, in 1982, several provisions regarding environmental protection were added to China's constitution. Article 9 provides for state ownership of natural resources, ensures state protection of natural resources, and prohibits appropriation or damage of natural resources.[102] Article 26 provides that "the State protects and improves the living environment and the ecological environment, prevents and remedies pollution and other public hazards."[103] By 1994, China had enacted twelve national statutes, twenty national administrative regulations, over six hundred local laws and regulations, and three hundred other norms regulating the environment.

Chinese biodiversity law has developed in much the same fashion. To be sure, China's long history contains numerous examples of the law being used to protect the country's biodiversity. An edict issued in 336 A.D. stated that "[t]o take possession of the mountains, or to put the marshes under one's personal protection is tantamount to robbery with violence."[104] The *Respectfully Determined Laws and Precedents of the Great Qing* prescribed that anyone who "thievishly cuts down the trunks of trees, removes soil or stones, opens kilns for charcoal . . . or starts fires to burn the mountains for short-term farming, *he shall be beheaded* as if he had stolen imperial vessels used for sacrifices to the gods."[105] Today, the Forestry Law prohibits the hunting of animals in protected areas.[106] The Water Law provides that the government "shall protect water resources and adopt effective measures to pre-

100. *Id. at* 60.
101. *Id. at* 61-62.
102. XIAN FA art. 9 (1982) (P.R.C.)
103. *Id.* art. 26.
104. *See* ELVIN, *supra* note 70, at 55.
105. *See id.* at 294.
106. The Forest Law of the People's Republic of China (promulgated by the Standing Comm. Nat'l People's Cong., Sept. 20, 1984), art. 25, LAWINFOCHINA (last visited June 13, 2009) (P.R.C.).

serve natural flora, plant trees and grow grass, conserve water sources, prevent and control soil erosion and improve the ecological environment."[107] The Grassland Law directs the government to protect grassland ecosystems, vegetation, and rare plants, and it prohibits harmful reclamation and construction activities.[108]

One recent law seeks to abate the transformation of once fertile grassland ecosystems into lifeless deserts. Nomadic herders have lived in the grasslands of what is now Inner Mongolia for countless generations, but the 1950s brought a wave of Chinese immigrants adding more livestock and seeking to cultivate the naturally arid land bordering the Gobi Desert. Today, expanding desertification claims 2,500 square kilometers at a cost of $6.5 billion to China's economy each year. The effects of the dust have been seen as far away as Colorado, where particulate concentrations rose above permissible levels in April 2002 after the jet stream carried the dust all the way from China. In March 2002, another dust storm dumped 30,000 tons of dirt on Beijing, even as billboards around the city trumpeted the "Green Olympics" to be held there in 2008. The resulting international publicity prompted local television newscasters to affirm the government's resolve to "outwit" the dust storms. The first law to try to match wits with the dust was enacted by the National People's Congress (NPC) in August 2001. The law against desertification states that land occupants have a duty not only to prevent desertification but also to restore areas that have already become desert; promises unspecified preferential policies, tax breaks, subsidies and technical support to offset the cost of this unfunded mandate; creates a new class of protected areas off-limits to development and calls for farmers and herders to be removed from those areas; and authorizes local governments to grant land-use rights of up to seventy years to desertified areas if the landholder promises to undertake restoration efforts.[109] As Qu Geping, the chair of the NPC Environment and Resources Committee, explained, the anti-desertification law was designed to prevent the frequent dust storms that have sounded "a warning bell from nature."[110]

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107. Water Law of the People's Republic of China (promulgated by the Standing Comm. Nat'l People's Cong., Aug. 29, 2002, effective Oct. 1, 2002), art. 9, LAWINFOCHINA (last visited June 13, 2009) (P.R.C.).

108. *See generally* Wang Canfa, *Chinese Environmental Law Enforcement: Current Deficiencies and Suggested Reforms*, 8 VERMONT J. ENVTL. L. 159, 187-93 (2007) (summarizing China's legislation regarding natural resource protection, nature conservation, and biodiversity conservation).

109. *See* Law of the People's Republic of China on Desert Prevention and Transformation (promulgated by the Standing Comm. Nat'l People's Cong., Aug. 31, 2001, effective Jan. 1, 2002) LAWINFOCHINA (last visited June 13, 2009) (P.R.C.).

110. U.S. EMBASSY BEIJING, CHINA ADOPTS LAW TO CONTROL DESERTIFICATION (2001).

Endangered wildlife is also protected by Chinese law. The Ministry of Forestry established the first list of Rare and Precious Species of China in 1969. In 1988, the National People's Congress enacted the Wild Animal Conservation Act (WACA), which "charges the state to ensure the protection of wild animals and their habitats, organize regular field surveys of wildlife resources, and to improve ecological impact assessment for construction projects."[111] Regulations promulgated pursuant to the WACA prohibit hunting, fishing, and collecting of key wild species.

The existence of such laws is one thing; their actual implementation is another. To be sure, there are examples of very stringent enforcement of wildlife laws in China. The government has imposed the death penalty for killing endangered pandas.[112] In 1995, nineteen hotels and restaurants on Hainan Island were closed and fined $34,000 for serving bear's paw, monkey brains, and other wildlife. China has promised to step up such efforts to punish those who kill endangered species for financial gain.[113] China has also acted to prohibit patented medicines from containing ingredients taken from endangered species.[114] A fishing ban on the Xiaolangdi Reservoir in central China soon resulted in the rediscovery of the copper cyprinid, a species that had been thought to be extinct. Most recently, China's state forestry agency charged a multinational paper corporation with illegally logging tens of thousands of acres of timber in Yunnan Province, apparently aided by local officials. But the Chinese government admits its failure to adequately enforce the existing laws protecting biodiversity.

> While many laws and regulations intended to protect biodiversity exist, in practice they are often not enforced or enforced strictly, or when the violators are apprehended, the court system treats them very leniently. As a result, illegal hunting and collection of endangered animal and plant species is very widespread, and disputes arise continuously between management of nature reserves and local residents, hindering biodiversity conservation efforts.[115]

Alex Wang of the National Resources Defense Council (NRDC) has described the enforcement of China's environmental protection

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111. MCBEATH & LENG, supra 66, at 70; *see also* Sharma, *supra* note 81, at 226-28 (explaining the law).

112. *See* Sharma, *supra* note 81, at 240-41.

113. *See generally id.* at 239-43 (2005) (describing additional cases).

114. *See* Nagle, *supra* note 92, at 435.

115. CHINA: BIODIVERSITY CONSERVATION ACTION PLAN, *supra* note 66, at 32.

laws as "extremely weak."[116] Wang Canfa, the director of the Center for Legal Assistance to Pollution Victims (CLAPV), blames the failure to consider enforcement issues when legislation is drafted, the inability to promulgate regulations to implement statutes, the tendency of local governments to "pursue economic benefits while overlooking environmental protection," and the failure to consider public opinion.[117] Jerome Cohen, the dean of America's Chinese law scholars, adds that "even in China, the central government's writ does not run very far. It doesn't have the financial resources because of an inadequate tax system."[118] Corruption is another major impediment to the implementation of the rule of law in China.[119]

Non-governmental organizations (NGOs) have played a growing role in China's efforts to preserve biodiversity. The Nature Conservancy is active in Yunnan Province, which hosts abundant biodiversity along the border with Vietnam, Myanmar, and Tibet. One of the organization's projects supports ecotourism, operates a community conservation development fund, and established a comprehensive fisheries management plan in the Lashi Lake watershed that serves as habitat for the endangered black-necked crane. Other projects target ecosystems that are home to snow leopards, the Yunnan golden monkey, Asiatic black bears, red pandas, and thousands of acres of forests and alpine ecosystems. "In collaboration with the State Environmental Protection Agency (SEPA), the State Forestry Administration (SFA), and the Chinese Academy of Sciences," The Nature Conservancy has been active in supporting biodiversity protection in Yunnan Province, and it is advising and assisting the Chinese government as it revises its national biodiversity conservation action plan.[120] Even so, "China's leaders . . . have been careful to circumscribe both the number of NGOs and the scope of their activities, so the role that such groups will be able to play in preserving the country's biodiversity remains uncertain."[121]

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116. Alex Wang, *The Role of Law in Environmental Protection in China: Recent Developments*, 8 VT. J. ENVTL. L. 195, 203 (2007).

117. Wang Canfa, Keynote*, Special Functions of Promoting Public Participation in Environmental Protection in Aiding Pollution Victims*, 8 VT. J. ENVTL. L. 379, 386-87 (2007); *accord* Wang Canfa, *Chinese Environmental Law Enforcement: Current Deficiencies and Suggested Reforms*, 8 VT. J. ENVTL. L. 159 (2007) [hereinafter Canka, *Chinese Environmental Law Enforcement*].

118. Jerome Cohen, Keynote, *An Introduction to Law in China*, 8 VT. J. ENVTL. L. 379, 402 (2007).

119 *See* C. FRED BERGSTEN ET AL., CHINA'S RISE: CHALLENGES AND OPPORTUNITIES 91-104 (2008).

120. The Nature Conservancy, China: How We Work, *available at* http://www.nature.org/wherewework/asiapacific/china/strategies/.

121. ELIZABETH C. ECONOMY, THE RIVER RUNS BLACK: THE ENVIRONMENTAL CHALLENGE TO CHINA'S FUTURE 130 (2004).

A final part of China's biodiversity strategy is its active participation in international efforts to protect biodiversity. In 1980, China joined the Convention on International Trade in Endangered Species (CITES). In 1992, it signed the Ramsar Convention for the protection of wetlands. That year also saw China become one of the first nations to ratify the Convention on Biological Diversity that was negotiated in Rio de Janeiro. China then launched a "China Biodiversity Conservation Plan" in 1994, and it discussed the measures needed to protect biodiversity in its white paper documenting China's efforts to further its Agenda 21 environmental commitments. The Agenda 21 strategy states that "[t]he policy for biodiversity conservation in China is 'laying equal stress on both the development and utilization and the conservation and protection of natural resources' and 'he who develops, conserves; he who utilizes, compensates; he who destroys, restores.' "[122]

But critics question China's resolve to end its trade in endangered species. China resisted international calls for the destruction of existing rhino horn stocks. It declined to become a member of the Global Tiger Forum established by twelve Asian countries in 1994 to protect endangered tigers throughout Asia. It advanced a proposal that would create a farm to raise tigers in order to satisfy the demand for tiger parts, though that idea was withdrawn after environmentalists objected. China's limited efforts to stop that trade have subjected it to international criticism. For example, in 1993 the United States and other countries threatened to sanction China for failing to control the trade in tiger and rhino parts. That the United States decided not to penalize China was viewed as an exercise in diplomacy unrelated to China's actual progress in enforcing the treaty. China's efforts to protect its ecosystems suffer from similar limitations on resources and political will. As one observer writes, China's solid national biodiversity policy "has made very little difference to the peoples of southwest China, where many of the reserves lack staff, funds, infrastructure, or a management plan. The international conservation community has focused on the panda at the expense of other endangered species."[123]

The ultimate success of these measures remains uncertain. China's State Council admitted in 1995 that "[t]he environmental

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122. CHINA'S AGENDA 21: WHITE PAPER IN CHINA'S POPULATION, ENVIRONMENT, AND DEVELOPMENT IN THE 21ST CENTURY, *supra* note 67, at 171-72; *see also* Canka, *Chinese Environmental Law Enforcement*, *supra* note 117, at 163 (noting that "China has joined 48 international conventions on environmental protection").

123. John Studley, *Environmental Degradation in SW China*, P.R.C. REV., Spring 1999, at 28, 30.

situation remains extremely grim."[124] Many scholars agree.[125] Yet the attention that China receives, due both to its economic prowess and its remarkable biodiversity, ensures that China's natural heritage will not disappear quietly.

B. Vietnam

Vietnam hugs the eastern side of a peninsula that juts into the Eastern Sea, which is a bay of the Pacific Ocean. According to a recent book on the world's great wildlife reserves, "[n]ature's resilience is nowhere better seen than in this tiny war-ravaged country, pocked with 20 million bomb craters, sprayed with dioxin and chemical defoliants that denuded millions of forest acres—yet still home to spectacular wildlife."[126] Vietnam is enriched with a variety of ecosystems, including "tropical rainforests and monsoon savannah, marine life and mountainous sub-alpine scrubland."[127] The country stretches more than a thousand miles from north to south but is only thirty miles from east to west at its narrowest point.[128] Not surprisingly, the Vietnamese have long depended upon the abundant natural resources along the coast and in the sea. Those resources have been strained as Vietnam's economy and population have grown rapidly in recent years. Over eighty-five million people live in Vietnam, making it the thirteenth most populous country in the world.[129] Vietnam also boasts "one of the fastest growing economies in the world."[130]

Vietnam's biodiversity has suffered greatly amidst the country's economic growth. Vietnam's forests and "once vast wetlands" have decreased substantially as they have been harvested and

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124. Wang, *supra* note 116, at 201 (translating the *Decision on Implementation of Scientific Development and Strengthening on Environmental Protection* issued by China's leading executive body, the State Council, in December 2005).

125. *See* Edward H. Ziegler, *China's Cities, Globalization, and Sustainable Development: Comparative Thoughts on Urban Planning, Energy, and Environmental Policy*, 5 WASH. U. GLOBAL STUDIES L. REV. 295, 301 (2006) ("China's environmental record is one of the worst in the world."); *see also* Canfa, *supra* note 108, at 164 ("Although progress exists in the protection of ecosystems, the Chinese environment is deteriorating as a whole, even with localized areas of improvements.").

126. LAURA RILEY & WILLIAM RILEY, NATURE'S STRONGHOLDS: THE WORLD'S GREAT WILDLIFE RESERVES 307 (2005).

127. GOV'T OF THE SOCIALIST REPUBLIC OF VIETNAM, BIODIVERSITY ACTION PLAN FOR VIETNAM, at i (1994).

128. *Id.*

129. TRAFFIC, *supra* note 64, at 9.

130. THE WORLD CONSERVATION UNION IN VIET NAM, IUCN VIET NAM STRATEGIC FRAMEWORK 2007-2010: FINDING THE BALANCE IN A CHANGING WORLD 9 (2007) [hereinafter IUCN].

converted to other uses.[131] Other threats to Vietnam's biodiversity include infrastructure construction, urbanization, industrialization, and environment pollution.[132] Twenty-eight percent of Vietnam's mammals face extinction, including the tiger, the Javan rhinoceros, and the Asian elephant.[133] Furthermore, ten percent of the country's birds and twenty-one percent of its reptiles and amphibians are in peril as well.[134] At the same time, new species continue to be discovered. The saola (or Vu Quang ox) was known only to villagers living near the mountainous rainforests of northern Vietnam until 1992 when a British biologist made the largest, new mammal discovery identified by scientists in fifty years.[135]

Commercial exploitation continues to devastate rare wildlife. Jolene Lin reports that "[i]n the last forty years, Vietnam has lost some two hundred bird species and approximately one hundred and twenty species of other animals to the illicit trade."[136] Lin adds "that smugglers have turned to neighbouring Laos and Cambodia to supply animals which are usually captured by poor indigenous peoples to eke out a living."[137] Vietnam now plays a central role in the illegal wildlife trade as a conduit for animals caught elsewhere to be sent to satisfy China's demands, which is in direct conflict with the constitution of Vietnam.[138] Habitat destruction is now added to the devastation. The mangrove forests that once occupied 400,000 hectacres along the Vietnamese coast accounted for only 250,000 hectacres by 2001.[139] Pollution from Vietnam's new manufacturing industries is "a great threat to the life of sea creatures," especially because those industries rely upon outdated technologies.[140] Plus, Vietnam's coastal position makes it especially vulnerable to climate change.

"The role of law in Vietnam today is unclear: it is perhaps best described as in flux, with various contending views as to the role

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131. *Id.* at 25; *see also* GOV'T OF THE SOCIALIST REPUBLIC OF VIETNAM, *supra* note 127, at iii ("Between 1943 and the present, Vietnam's forest cover shrank from forty-four percent of the total land area to under twenty-five percent.").

132. IUCN, *supra* note 130, at 9.

133. CHINA: BIODIVERSITY CONSERVATION ACTION PLAN, *supra* note 66, at ii.

134. *Id.*

135. RILEY & RILEY, *supra* note 126, at 307. Besides the saola, the Vu Quang Nature Reserve has also seen the recent discovery "of at least two new fish species, a new rabbit, squirrel, and warbler, possibly another new kind of deer, and Vietnamese warty pigs, last recorded in 1892 and long considered extinct." *Id.* at 311.

136. Lin, *supra* note 63, at 203; *see also* TRAFFIC, *supra* note 64, at 5 (concluding that hunting and wildlife trade are primarily responsible for the extinction or near extinction of twelve large animals in Vietnam during the past forty years).

137. Lin, *supra* note 63, at 203.

138. Hiến pháp Cộng hòa Xã hội Chủ nghĩa Việt Nam [Constitution] art. 29 (Vietnam), *available at* http://home.vnn.vn/english/government/constitution/.

139. VŨ TRUNG TANG, THE EASTERN SEA: RESOURCES AND ENVIRONMENT 39 (2001).

140. *Id.* at 178.

law ought to have."[141] Imperial Chinese, colonial French, Cold War Soviets, and twenty-first century Americans and Europeans have all left their mark on the Vietnamese legal system. "Confucianism . . . and Marxist moral influences affect the place of law in contemporary Vietnam," and Communist "[p]arty policy continues to be as influential as law."[142] Perhaps the best description of Vietnam's legal transition is that it is about twenty years behind China's similar efforts to embrace the rule of law.

Vietnam's environmental law is based on its constitution, which provides that

> [a]ll state offices, armed forces units, economic establishments, social organizations and every citizen have to observe State regulations on the appropriate utilization of natural resources and on environmental protection. All acts resulting in depletion and destruction of the environment are strictly prohibited.[143]

Beginning with the Law on Environmental Protection in 1993, Vietnam has enacted a wide variety of laws and decrees on conservation issues. These include decrees regulating wastewater, controls on businesses creating environmental damage, the 2003 Land Law (which reforms land use by providing a central registration system regulated by the Ministry of Natural Resources and Environment (MNRE)), and the Decree on the Conservation and Development of Wetlands (which allows wetlands to be regulated by the MNRE).[144] Appendix III of the Decree on Protection of the Environment details rare and precious flora and fauna, and a related decree determines methods for regulating their protection and management.[145]

Forestry protection is essential to Vietnam's environmental scheme. The Law on Forestry Protection and Development establishes a ranger system, an administrative fine system for those violating regulations, and three forest classifications: protection, conservation, and production.[146] Other forestry strategies state

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141. Penelope (Pip) Nicholson & Nguyen Hung Quang, *The Vietnamese Judiciary: The Politics of Appointment and Promotion*, 14 PAC. RIM L. & POL'Y J. 1, 3 (2005).

142. *Id.* at 4-5; *see* The Australian Government's Overseas Aid Program, *Viet Nam: Legal and Judicial Development* (Working Paper No. 3, 2000) (reviewing another insightful discussion of Vietnamese law).

143. Hiến pháp Cộng hòa Xã hội Chủ nghĩa Việt Nam [Constitution] art. 29 (Vietnam).

144. *See* Alan Khee-Jin Tan, *Environmental Laws and Institutions in Southeast Asia: A Review of Recent Developments*, 8 SING. Y.B. INT. L. 177, 188 (2004).

145. *See* Tannetje Bryant & Keith Akers, *Environmental Controls in Vietnam*, 29 ENVTL. L. 133, 154 (1999).

146. *See id.*

that forest must cover forty-three percent of the land, and that natural reserves should be increased.[147] As a result of its efforts, Vietnam has increased its forest cover greatly in the past ten years.

Most recently, in 2008, Vietnam drafted a new Biodiversity Law. The drafted law asserts that "[i]ndividuals, organizations, and the whole society shall be responsible for conservation and sustainable development of biodiversity."[148] The law lists a sweeping number of prohibited acts:

> 1. Hunting and exploiting wild species, encroaching upon land, destroying landscape, deteriorating ecosystem in the conservation area, developing, cultivating the invasive alien species in the conservation.
>
> 2. Building houses, facilities in the very strict protective functional section of the conservation area, except the works servicing for the purposes of national defense and public security; Building houses, facilities illegally in the ecological restoration section belong to the conservation area.
>
> 3. Surveying, investigating, exploring, exploiting minerals, breeding cattle, poultry at concentrated scale, cultivating aquatic products at industrial scale, freeing to come in, settle and pollute environment in the very strict protective functional section and in the ecological restoration section belong to the conservation area.
>
> 4. Hunting, exploiting, killing the wild species belong to the List of Species for Exploitation enclosing conditions in the nature, also including species in the List of prior species for protection; exploiting illegally species belong to the List of species for exploitation enclosing conditions.
>
> 5. Reproducing species belonging to the List of prior species for protection to exploit the parts of their body, slaughter, consume; advertising, marketing, consuming the products having origin from species belong to the List of prior species for protection.
>
> 6. Importing, and freeing illegally into the environment the GMOs and GMO's genetic specimens without having the bio-safety license.
>
> 7. Importing and developing the invasive alien species to environment.[149]

147. *See* Khee-Jin Tan, *supra* note 144, at 189.
148. Biodiversity Law, No. QH12, art. 4(1) (draft Sept. 16, 2008) (Vietnam).
149. *Id.* art. 6.

The law further prescribes biodiversity conservation planning at the national and provincial levels, the listing and protection of endemic or "precious" species, and state ownership of genetic resources.[150]

Protected areas play a central role in Vietnam's biodiversity efforts. As of 2006, Vietnam had designated 128 forested protected areas, sixty-eight wetlands of national importance, and fifteen marine protected areas, which collectively encompassed seven percent of the nation's land.[151] A 2006 study involving national and international experts concluded that "[m]uch has been achieved over the past two decades" with respect to the protected areas, but the study identified numerous serious challenges.[152] Forty percent of the protected areas lack "active and efficient conservation management" simply because they "have no management boards."[153] Most areas "are chronically under-funded, and rely on a narrow and uncertain funding base," with more than half of their budgets devoted to infrastructure development instead of conservation.[154] "More than eighty percent of protected areas have people living inside them, and populations are increasing"; the people "living inside protected areas are involved in illegal activities such as logging and hunting for subsistence and commercial purposes, often promoted by third parties."[155] Roads, dams, and tourism threaten the biodiversity within the protected areas.[156] Much of Vietnam's most important biodiversity lives outside of protected areas because those protected areas are "small and isolated."[157]

The struggle to protect Vietnam's protected areas reflects the broader challenges regarding the enforcement of the country's biodiversity laws. For example, penalties for noncompliance in the environmental impact assessment (EIA) process are unclear, and the EIA structure is often inadequate. Province-approved plans are frequently subjected to standards that are less demanding than national standards.[158] Vietnam also lacks professional forestry personnel.[159] Corruption and nepotism further challenge conservation progress. Vietnam's 1995 Biodiversity Action Plan emphasizes the need for both better trained, disciplined, and paid law en-

150. *See id.* arts. 7-14, 37, 58.

151. *See* PARC, POLICY BRIEF: BUILDING VIET NAM'S PROTECTED AREAS SYSTEM—POLICY AND INSTITUTIONAL INNOVATIONS REQUIRED FOR PROGRESS 3, 5 (2006).

152. *Id.* at 3.

153. *Id.* at 5.

154. *Id.* at 14.

155. *Id.* at 10.

156. *See id.* at 12.

157. *Id.* at 7.

158. *See* Tan, *supra* note 144, at 189; IUCN, *supra* note 130, at 9 ("EIA . . . effectiveness remains low due to a lack of enforcement mechanisms and incentives for compliance.").

159. *See* Tan, *supra* note 144, at 189.

forcement officers, as well as "the people's direct participation in forest conservation and environmental protection at all levels."[160] Yet the plan recognizes that timber continues to be felled "even though there is now a strong limit on the forest areas which are legally exploitable," and more generally, "[t]he large-scale exploitation of energy is hard to control and poses the biggest threat to the biodiversity in many countries."[161] Vietnam established the MNRE in 2002, and since then it has sought to establish province-level offices to insure consistent enforcement of law and policy.[162] Even so, reconciling central government conservation goals with provincial government goals remains an issue.[163]

The most dramatic failure of enforcement surrounds the country's traffic in rare wildlife. A 2007 report prepared by TRAFFIC, the international wildlife trade monitoring network, found that the consumption of wildlife products was increasing in Hanoi despite the existing laws prohibiting the practice.[164] Some of the results were especially troubling. "Affluent and highly educated people are more likely to use wild animal products than those with less money and education."[165] Additionally, "[w]ild animal food and products are status symbols enjoyed especially by businesspeople and government officers."[166] One-third of Hanoi's government officials have actually used—and usually eaten—the very wildlife that the law charges them to protect.[167]

C. Malaysia

Malaysia is one of twelve "megadiversity" countries that collectively contain nearly sixty percent of the world's species,[168] though much of the nation's biodiversity remains unknown. The country is divided into two parts: Peninsular Malaysia, which occupies the Malay Peninsula down to the city-state of Singapore; and East Ma-

160. GOV'T OF THE SOCIALIST REPUBLIC OF VIETNAM, *supra* note 127, at v.

161. *Id.* at 8.

162. Tan, *supra* note 144, at 187.

163. *Id.* at 187-88.

164. *See* TRAFFIC, A MATTER OF ATTITUDE: THE CONSUMPTION OF WILD ANIMAL PRODUCTS IN HA NOI, VIETNAM 12 (2007) ("Residents of Ha Noi believe that the use of wild animal products is popular, fashionable, increasingly affordable, and on the rise in the nation's capital. The majority of Ha Noi residents are not aware of key legislation that protects endangered animal species and their habitats.").

165. *Id.*

166. *Id.*

167. *See id.* at 13; *see also id.* at 18 ("Government officials mainly buy ornamental products in supermarkets, followed by specialty wild animal shops.").

168. *See* M.T. Abdullah, Andrew Alek Tuen & Faisal Ali Anwarali Khan, *Universiti Malaysia Sarawak Contributions Towards Biodiversity and Protected Area Management*, *in* PROCEEDINGS OF THE SEVENTH HORNBILL WORKSHOP ON PROTECTED AREAS AND BIODIVERSITY CONSERVATION 273 (2005).

laysia, which consists of the states of Sabah and Sarawak on the northern side of the island of Borneo.[169] The nation gained its independence from Great Britain in 1957, and for two years, until it became an independent city-state, it included Singapore at the southern tip of the Malaysian peninsula. About twenty-three million people live in Malaysia, and approximately a third of those people reside in or near the capital city of Kuala Lampur in the middle of the Malaysian peninsula.[170]

Nearly twenty million acres of forests cover sixty percent of Malaysia's land.[171] Malaysia's mangrove forests support a broad variety of flora and fauna. There are 1.54 million hectacres of peat swamp forests, most of which are in Sarawak, that comprise seventy-five percent of Malaysia's wetlands and host such rare species as the orangutan, probiscus monkey, and Sumatran rhinoceros.[172] But this biodiversity faces several serious threats. Malaysia quickly evolved from a nation with no manufacturing industry at the time of its independence in 1957, to a leading provider of petroleum, palm oil, forest products, and rubber by the beginning of the twenty-first century.[173] Unsustainable timber extraction, along with the conversion of forests and other lands to agricultural and industrial uses, are probably the greatest threats. Hunting, forest fires as a land use tool, expanded tourism, marine pollution, destructive fishing techniques, and the lowering of groundwater tables affect biodiversity as well. Attitudes toward biodiversity are changing in light of these threats. Malaysia's mangrove forests were considered "a wasteland" as recently as the 1980s; now they are regarded as ecologically valuable.[174] The famed naturalist Alfred Russell Wallace shot seventeen orangutans in Sarawak in 1855; now the primates are the subject of determined protection.[175]

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169. *See* CHEN HIN KEONG, TRAFFIC, A MALAYSIAN ASSESSMENT OF THE WORLD LIST OF THREATENED TREES 1 (2004).

170. KEONG, *supra* 169 note, at 1.

171. *See* CHEN HIN KEONG, A MALAYSIAN ASSESSMENT OF THE WORLD LIST OF THREATENED TREES 2 (2004).

172. *See* U.N. DEV. PROGRAMME, MALAYSIA'S PEAT SWAMP FORESTS: CONSERVATION AND SUSTAINABLE USE 9-10 (2006); *see also* Alexander K. Sayok et al., *Management of Peat Swamp Forest: Case Study of Loagan Bunut National Park, Sarawak, Malaysia*, *in* PROCEEDINGS OF THE SEVENTH HORNBILL WORKSHOP ON PROTECTED AREAS AND BIODIVERSITY CONSERVATION 90 (2005) [hereinafter SEVENTH HORNBILL WORKSHOP]; Detailed studies of other species appear in PROCEEDINGS OF THE EIGHTH HORNBILL WORKSHOP ON PROTECTED AREAS AND BIODIVERSITY CONSERVATION 7-158 (2006) [hereinafter EIGHTH HORNBILL WORKSHOP].

173. *See* KEONG, *supra* note 169, at 1.

174. Paul Chai P.K., *Management of the Mangrove Forests of Sarawak*, *in* SEVENTH HORNBILL WORKSHOP, *supra* note 172, at 89.

175. *See* Paul Sing Tyan, *History of Orangutan Research in Sarawak*, *in* EIGHTH HORNBILL WORKSHOP, *supra* note 172, at 170-74.

Malaysia's goal is to become a world leader in conservation, research, and sustainable utilization of tropical biodiversity by 2020.[176] Toward that end, the country has enacted a spectrum of legislation aimed at protecting biodiversity, a trend that began when the country was still under British rule. The first administration to govern Malaysian environmental law was the British-enacted Federal Land Development Agency, which was replaced by the National Land Council when Malaysia became independent. Both agencies were initially concerned more with administration, rural development, and poverty alleviation than ecological conservation, but Malaysia's biodiversity and conservation laws have evolved from them.[177] The National Forestry Policy and the National Wildlife Act were passed in 1972.[178] The National Wildlife Act allows states to designate forests protected by the National Forest Policy as either wildlife reserves or wildlife sanctuaries.[179] Reserves offer more general environmental protection, while sanctuaries target biodiversity more specifically by defending individual species in addition to offering the general protections.[180] In 1980, the National Parks Act amended the National Wildlife Act to establish national parks for the protection of wildlife and areas of historical and cultural importance.[181] The Act has never been applied in West Malaysia, which has only one national park that was established by the British in 1939.[182] Adding to this wildlife protection, Malaysia passed the Wildlife Protection Ordinance in 1958, which banned the commercial sale of wildlife and wildlife products.[183] The law contains exceptions that allow aboriginals and rural communities to continue to rely on wildlife meat for their own sustenance. The law also fails to regulate the destruction of the habitat of endangered species.[184]

The National Forestry Policy regulates "replanting, enrichment planting, extraction methods, and proper planning schedules for concessions."[185] It also outlines plans for local communities to "obtain control of exploitation rights, and to restrict trade in non-

176. *See* MINISTRY OF SCI., ENV'T & TECH., MALAYSIA'S NATIONAL POLICY ON BIOLOGICAL DIVERSITY 1 (1998) [hereinafter MALAYSIAN NATIONAL POLICY].

177. *See* Robert M. Hardaway, Karen D. Dacres & Judy Swearingen, *Tropical Forest Conservation Legislation and Policy: A Global Perspective*, 15 WHITTIER L. REV. 919, 935 (1994).

178. *Id.*

179. *Id.*

180. *See id.*

181. *See* National Parks Act, 1980 (Malay.).

182. *See* Hardaway, Dacres & Swearingen, *supra* note 177, at 937.

183. *See* MALAYSIAN NATIONAL POLICY, *supra* note 176, at 15.

184. *See id.* at 14 ("[S]pecies endangered due to habitat destruction are not protected by way of a national law for endangered species.").

185. Hardaway, Dacres & Swearingen, *supra* note 177, at 935-36.

timber forest produce."[186] At the same time, the policy tries to regulate land use and its environmental impact by balancing the rights of aboriginal forest dwellers on the one hand and the need for stronger protection on the other. Stronger protection has come in the form of regulating urban expansion policy, establishing national parks, and greater conservation of water courses.[187] But many of the states oppose what they perceive as an encroachment on their territory, and as of 1994, Sarawak refused to be a signatory to the policy.[188]

The National Forestry Act was passed in 1984 to bolster the Forestry Policy, setting aside funds for the Forest Development Fund and classifying forests into major categories: production, protection, recreation, wildlife, research, and federal.[189] One of the problems with this system has been that Malaysia assumes unclassified forests to be in the "production" category, and thus open for timber exploitation.[190] Because the logging and timber industry is very profitable, the government has little incentive to re-classify production forests as protection forests when new endangered species or environmental threats appear.[191] At present, the law provides an excellent framework for ecological conservation, but because of the profit of the timber industry, the classification system lacks the power to effectively adapt to the forests' changing environmental needs.

Malaysia has also enacted several other laws and policies targeted toward protecting biodiversity. The Environmental Quality Act of 1974 provides an extensive framework for Malaysia's environmental law.[192] Other laws and policies include the Fisheries Act of 1985, a National Policy on Biological Diversity, and the Sarawak Biodiversity Ordinance of 1997.[193] The biodiversity policies outline goals for preserving various ecosystems, providing funding and research, and tying Malaysia's biodiversity to its unique culture and heritage.[194] The 1998 National Policy on Biological Diversity listed twenty-six federal and state laws that are relevant to the protection of Malaysia's biodiversity.[195] Yet that same policy lamented the lack of "single comprehensive legislation in Malaysia which

186. *Id.* at 936.
187. *Id.*
188. *Id.*
189. *Id.* at 937.
190. *Id.*
191. *Id.*
192. Azmi Sharom, *Ten Years After Rio: Implementing Sustainable Development*, 6 SING. J. INT'L & COMP. L. 855, 863 (2002).
193. *Id.* at 875.
194. MALAYSIAN NATIONAL POLICY, *supra* note 176, at 3.
195. *Id.* at 15.

relates to biological diversity conservation and management as a whole."[196]

Malaysia's unique federal system affects biodiversity protection too. The two states of Malaysian Borneo, Sabah and Sarawak, enjoy significant autonomy, including autonomy over natural resources. The Sarawak Biodiversity Regulations promulgated in 2004 focus on biodiversity in protected areas.[197] One regulation, for example, makes it illegal to "enter and collect or take away any biological resources from a State land forest, forest reserve, protected forest, national park, nature reserve, or Wild Life Sanctuary without a permit issued" to facilitate research.[198] Sarawak relies upon the Sarawak Forestry Corporation, created by the state legislature in 1995, to manage and conserve its forests. The idea of a separate corporation arose

> when the International Tropical Timber Organisation (ITTO) mission to Sarawak identified a number of weaknesses that must be identified if the State is to sustainably manage its forests. The ITTO recommended a new model, independent of the civil service be given this task, as the Department of Forests has many constraints and limits to effectively achieve sustainable forest management.[199]

The corporation is also responsible for managing Sarawak's eighteen national parks, four wildlife sanctuaries, and five nature reserves, totaling over 500,000 hectacres.[200]

One of those parks, Bako National Park was established in 1957 and is located just west of Sarawak's capital city of Kuching. Bako is small but "probably the best place in Sarawak for wildlife experience."[201] The park contains seven different ecosystems, ranging from mangrove forests, to grasslands, to a peat swamp forest. It also contains a number of remarkable species of animals and plants, such as the Borneo bearded pig, and six types carnivorous pitcher plants. Bako is most famous for its population of 150 probiscus monkeys, extremely odd-looking creatures that live only on

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196. *Id.* at 14.

197. *See* Sarawak Biodiversity Center Ordinance, 1997, LVIX SARAWAK GOV'T GAZ. 97 (2004), *available at* http://www.sbc.org.my/downloads/reg_2004.pdf.

198. *Id.* at 103.

199. Sarawak Forestry Corp., About Us: FAQ, http://www.sarawakforestry.com/htm/aboutus-faq.asp (last visited June 13, 2009).

200. Sarawak Forestry Corp., National Park, http://www.sarawakforestry.com/htm/snp.asp (last visited June 13, 2009).

201. *See* Bako National Park, http://www.forestry.sarawak.gov.my/forweb/np/np/bako.htm (last visited June 13, 2009) ("The park has been a protected area since 1957, so the animals are less wary of humans.").

Borneo.[202] A guide to the park boasts that "[t]otal and effective protection of these attractive animals in the park means that they no longer feel threatened by people and are readily visible along trails near the Park Headquarters."[203] Bako was Malaysia's first "totally protected area," which means that conservation is the primary management objective, while secondary objectives include recreation, research, education, and monitoring of visitor activities.[204] Yet park officials cite inadequate information, insufficiently trained personnel, dying mangrove stands, a lack of research funding, and even the possibility of poaching as threats to the management of the unknown number of probiscus monkeys living in Bako.[205] More ominously, in other parts of Sarawak, probiscus monkeys are vulnerable to habitat loss and illegal hunting; the state created a buffer zone of other protected areas to protect the monkeys in Bako since the park is too small to sustain a viable population.[206] Altogether, Malaysia has protected almost thirty-one percent of its land as national parks, nature reserves, or wilderness areas, far more than the world average of roughly eleven percent.[207]

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202. *See* HANS P. HAZEBROEK & ABANG KASHIM BIN ABANG MORSHIDI, A GUIDE TO BAKO NATIONAL PARK: SARAWAK, MALAYSIAN BORNEO 1 (2006) ("An encounter with long-nosed Prosbiscus monkeys in their natural habitat is for many people the highlight of their trip to Sarawak."); *id.* at 31-32 (describing the monkey as "one of the world's most wonderful primates" and "one of the most unusual animals in the world"); Bako National Park, *supra* note 201 ("A jungle encounter with a group of probiscus is likely to be the highlight of your trip to Bako."); *see also* Simon Elegant, *Sarawak: A Kingdom in the Jungle*, N.Y. TIMES, July 13, 1986, at p. 19. (reporting that "some of nature's most unusual and flamboyant creations" flourish in Bako).

203. HAZEBROEK & MORSHIDI, *supra* note 202, at 5. My visit to Bako confirmed this claim: I saw dozens of prosbiscus monkeys, silvered-leaf monkeys, long-tailed macaques, a cluster of *Nepenthes rafflesiana* pitcher plants, a venomous Wagler's pit viper, and a green vine snake during two days in March 2008.

204. *See* Desmond Dick Cotter, *Wetlands Management in Sarawak*, *in* SEVENTH HORNBILL WORKSHOP, *supra* note 172, at 73 (noting that Bako's status as the first Totally Protected Area); Jin anak Iman Nelson, *Protection of Totally Protected Areas in Sarawak*, *in* SEVENTH HORNBILL WORKSHOP, *supra* note 172, at 230; *see also* Charles Leh M.U., *Biodiversity of Mangrove Forests*, *in* SEVENTH HORNBILL WORKSHOP, *supra* note 172, at 168 (citing Bako as the best example in Sarawak of efforts to develop mangrove forests as a tourist attraction); A. Manap Ahmad, *The Bako National Park Customer Service Excellence Initiative*, *in* SEVENTH HORNBILL WORKSHOP, *supra* note 172, at 308; Cynthia L.M. Chin, Susan A. Moore & Tabatha J. Wallington, *Ecotourism in Bako National Park, Borneo: Visitors' Perspectives on Environmental Impacts and Their Management*, 8 J. SUSTAINABLE TOURISM 20, 22 (2000) (citing L. GOOD, BAKO NATIONAL PARK: A MANAGEMENT PLAN (1988)) (indicating that seventy-nine percent of the visitors to the park support more conservation education and sixty percent would limit the number of visitors).

205. *See* Mohammad Kasyfullah bin Zaini & Siali anak Aban, *Study on Proboscis Monkeys at Bako National Park (Past, Present and Future) and Its Implications for Park Management*, in SEVENTH HORNBILL WORKSHOP, *supra* note 172, at 225. The estimates of the proboscis monkey population in Bako range from 106 to 275. *See id.* at 223.

206. *See* HAZEBROEK & MORSHIDI, *supra* note 202, at 36-37.

207. *See* World Resources Institute, http://earthtrends.wri.org/text/biodiversity-protected/country-profile-114.html (last visited June 13, 2009).

Commercial exploitation is a key component of Malaysia's approach to biodiversity. According to one commentator, "[t]he genetic material contained in Malaysia's abundant tropical plant species is a potential source of commercially valuable pharmaceutical products, and the richness of Malaysia's forest and marine environments offers some of the finest nature-based tourism opportunities in the world."[208] Malaysia's National Policy on Biological Diversity adds that "[w]ith the right strategy, Malaysia could capture a large slice" of the lucrative floriculture industry, thanks to the "great potential for promoting indigenous flowers from our forests."[209] Ecotourism also features prominently in Malaysia's efforts to conserve its biodiversity.[210]

The enforcement of laws governing biodiversity remains a challenge. On the positive side, the designation of forest reserves has halted commercial logging in many protected areas.[211] The Deramakot Forest Reserve in Sabah has been especially successful, thanks to fifty-four field personnel responsible for implementing a management plan that combines sustainability and multiple-use principles.[212] A 2007 study of that reserve credited the forest's management for yielding denser population of endangered large animals, such as Asian elephants, while also emphasizing the importance of "political commitment from state leaders."[213] But enforcement lags in other contexts. The National Policy on Biological Diversity admitted that "most development plans relegate the notion of conservation to a low priority status."[214] Budgets for government enforcement of the laws are limited.[215] Marine parks suffer water pollution from unregulated activities that occur on the

208. Peter W. Kennedy, Managing Biodiversity: Policy Issues and Challenges 1 (Oct. 1999) (unpublished manuscript), *available at* http://web.uvic.ca/~pkennedy/Research/biodiversity.pdf.

209. MALAYSIAN NATIONAL POLICY, *supra* note 176, at 5.

210. See Victor Luna Amin, *Park Guiding: The Way Forward*, *in* SEVENTH HORNBILL WORKSHOP, *supra* note 172, at 254-65 (describing how park guides can interpret biodiversity for visitors); Oswald Braken Tisen, *Conservation and Tourism: A Case Study of Longhouses Communities In and Adjacent to Batang Ai National Park, Sarawak, Malaysia*, *in* SEVENTH HORNBILL WORKSHOP, *supra* note 172, at 296-307.

211. *See* U.N. DEV. PROGRAMME, *supra* note 172, at 22 ("No commercial logging has taken place within the Klias peat swamp boundaries since its designation as a forest reserve.").

212. *See* Peter Lagan, Sam Mannan & Hisashi Matsubayashi, *Sustainable Use of Tropical Forests by Reduced-impact Logging in Deramakot Forest Reserve, Sabah, Malaysia*, 22 ECOLOGICAL RES. 414, 415 (2007).

213. *Id.* at 420.

214. MALAYSIAN NATIONAL POLICY, *supra* note 176, at 10.

215. *See* Melvin Gumal, Keynote Address, *TPA Management and Communities: Conserving Totally Protected Areas With Rural Communities Living in and Around Those Areas*, *in* EIGHTH HORNBILL WORKSHOP, *supra* note 172, at 229 (noting that the number of Totally Protected Areas grew by ninety-two percent between 1992 and 2000, but the management budget increased by only fifty-nine percent); Wildred S. Landong & Oswald Braken Tisen, Keynote Address, *Biodiversity Conservation—The Way Forward*, in EIGHTH HORNBILL WORKSHOP, *supra* note 172, at 329 (citing funding constraints).

adjacent shore.[216] TRAFFIC complains that Malaysia's forest departments lack the legal authority and the training to combat the illegal timber trade.[217] Sarawak Forestry itself admits that it is incapable of arresting the "element of organized crime whereby local gangsters are employed to extract timber illegally from Park areas."[218] A 2006 report prepared by the Department of Wildlife and National Parks in Peninsular Malaysia identified "[a] worrying trend" involving the discovery of "vast quantities" of clouded monitors, "presumably for smuggling activities."[219] The same report noted that the number of wildlife cases prosecuted in court (as opposed to administratively) jumped from twenty-five to sixty in one year, though "there were no high penalties imposed on any of the offenders brought to the court."[220] Possession of 2,390 clouded monitors resulted in a fine of $429, while possession of six birds of paradise earned six months in prison.[221]

Malaysia struggles with the relationship between biodiversity and the needs of indigenous communities. Its National Policy on Biological Diversity proclaims that "[t]he role of local communities in the conservation, management and utilisation of biological diversity must be recognized and their rightful share of benefits should be ensured."[222] Nonetheless, one scholar has argued that government officials, both during colonial times and since independence, view local uses of natural resources as "unacceptable and in need of state intervention, while extra-local uses and abuses of natural resources have been protected."[223] For example, while local uses of the forest are strictly regulated, forestry department officials "plan to introduce rabbits into the [Similiu] forest reserve so that the forest officers [can] hunt while on retreat."[224] Even when the law protects them, indigenous communities and local biodiversity are harmed by unregulated develop-

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216. *See* Sharom, *supra* note 192, at 876.

217. CHEN HIN KEONG & BALU PERUMAL, IN HARMONY WITH CITES? AN ANALYSIS OF THE COMPATIBILITY BETWEEN CURRENT FORESTRY MANAGEMENT PROVISIONS AND THE EFFECTIVE IMPLEMENTATION OF CITES LISTING FOR TIMBER SPECIES IN MALAYSIA 1, 18 (2002).

218. Nelson, *supra* note 204, at 236.

219. DEPT. OF WILDLIFE AND NAT'L PARKS IN PENINSULAR MALAY., 2006 ANNUAL REPORT 55 (2006) [hereinafter 2006 ANNUAL REPORT].

220. *Id.* at 57.

221. *Id.* at 174-75.

222. MALAYSIAN NATIONAL POLICY, *supra* note 176, at 2.

223. Amity A. Doolittle, *Powerful Persuasions: The Language of Property and Politics in Sabah, Malaysia (North Borneo), 1881-1996*, 38 MODERN ASIAN STUDIES 821, 844 (2004); *accord* EDA GREEN, BORNEO: THE LAND OF RIVER AND PALM 43 (1909) ("Fruit, bamboo and other trees belong to individuals, but there are frequent disputes about fruit-tree rights, and fallen fruit is common property. It has been said that the Dyaks are so honest that they never think of gathering the fruit of a tree belonging to some one else.").

224. Doolittle, *supra* note 223, at 840.

ment. The law governing Loagan Bunut National Park in central Sarawak gives designated indigenous groups the right to fish, hunt, or gather only within the park.[225] But the combination of the pressure on the land caused by the increasing population in surrounding villages, and an absence of enforcement has "resulted in expansion of farming in the park and encroachment into additional high forest areas."[226] Perhaps it is not surprising that one-third of the residents near one important biodiversity area in Sarawak were not willing to surrender their customary land rights in exchange for conservation measures.[227] Malaysia is aware of the problem, and it is taking numerous actions to involve indigenous communities in biodiversity conservation. In Sarawak, for example, the government has appointed 4,500 community leaders as Honorary Wild Life Rangers "to act as 'ears and eyes' of the government" and "to report illegal activities to the wildlife authorities or police."[228]

The EIA process also complicates matters. Allowing states to have such a significant influence on forestry law is problematic, since focus has been "on administration [rather] than conservation."[229] There are frequent conflicts over whether the process is within the jurisdiction of the Malaysian national government or state governments.[230] Furthermore, when the EIA falls under state control, there are wide disparities among the standards used. In fact, several sites have already fallen victim to poor state EIA planning, and now the federal government has been left to clean up the environmental fallout.[231] On a brighter note, however, the federal government is attempting to remedy these issues by amending the 1960 Land Conservation Act and the 1965 National Land Code and by making states more accountable for their mismanagement.[232]

Malaysia is actively involved in international ecological efforts. Malaysia is a party to the Convention on Biological Diversity, CITES, the Association of Southeast Asian Nations, the International Timber Organization, and a signatory to the International Timber Agreement of 1994 and the Ramsar Wetlands Conven-

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225. See U.N. DEV. PROGRAMME, *supra* note 172, at 19-20; *see also* Sayok, *supra* note 172, at 95-99 (discussing the management of Logan Bunut National Park).

226. *Id.* at 20.

227. *See* Reuben Clements et al., *Limestone Karsts of Southeast Asia: Imperiled Arks of Biodiversity*, 56 BIOSCIENCE 733, 739 (2006).

228. Engkamat Lading, *Local Community Participation in the Management of Lanjak Entimau Wildlife Sanctuary*, in EIGHTH HORNBILL WORKSHOP, *supra* note 172, at 270.

229. See Hardaway, Dacres & Swearingen, *supra* note 177, at 935.

230. *See id.*

231. *See* Sharom, *supra* note 192, at 886-87.

232. MALAYSIAN NATIONAL POLICY, *supra* note 176, at 15.

tion.[233] Additionally, Malaysia relies upon partnerships with foreign governments and non-governmental organizations (NGOs) around the world. The United Nations Development Programme and the Danish government, for example, jointly donated more than $8.3 million to efforts designed to improve management of Malaysia's peat swamp forests.[234] At the same time, Malaysia has opposed the expansion of some international environmental protections, such as the listing of certain timber species under CITES.[235] More generally, some Malaysian officials resist pressure from developed countries to further protect the country's forests. A former prime minister once remarked that

> while the developed countries had destroyed their forests, it was 'not fair for them to ask us to earn less from our forests. Malaysians and local non-governmental organizations should not get carried away with the so-called environmental consciousness of the foreigners until we are forced to sacrifice our forests' economic importance for their comfort.'[236]

On a more local level, Borneo has established so-called "peace parks," most of which are contiguous to other protected areas.[237] Among them are "[t]he Lanjak-Entimau Wildlife Sanctuary in Sarawak[, which] is contiguous to Batang Ai National Park[,] and the Gunung Bentuang and Karimun reserves in Kalimantan."[238] Unfortunately, despite this extra layer of protection, the forests are still threatened by deforestation and subsequent loss of biodiversity.

D. Cambodia

Cambodia is the smallest of the four Southeast Asian nations described here, both in terms of land area and population. The country is perhaps best known for its ancient Khmer Empire based at Angkor, which thrived from the ninth to the thirteenth centuries. Cambodia was part of French Indochina from 1863 to 1953, when it became an independent constitutional monarchy. During the 1970s, the Khmer Rouge slaughtered between 1.7 and 3 mil-

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233. Malaysia Biodiversity Profiles, http://life.nthu.edu.tw/~d868210/jpg/hwk2/content.html (last visited June 13, 2009).

234. *See* U.N. DEV. PROGRAMME, *supra* note 172, at 16.

235. *See* KEONG & PERUMAL, *supra* note 217, at 12.

236. KEONG, *supra* note 169, at 4 (quoting Yang Amat Berbahagia Tun Dr Mahathir Mohamad's remarks at the launching of the Science, Technology and Environment Ministry's Silver Jubilee celebrations at Putra World Trade Center).

237. John Charles Kunich, *Fiddling Around While the Hotspots Burn Out*, 14 GEO. INT'L ENVTL. L. REV. 179, 228 (2001).

238. *Id.*

lion of their fellow Cambodians, as much as forty percent of the country's population. The current multiparty democracy under a constitutional monarchy has governed the nation since 1993. Cambodia borders Thailand, Laos, Vietnam, and the Gulf of Thailand. Its population is about 13.4 million. Its economy grew about ten percent per year between 2004 and 2007, thanks to the garment industry and tourism.[239]

Cambodia's tropical geography is dominated by the Mekong River, known as the Tonle Thom or "great river," and the Tonle Sap or "fresh water lake." The lake expands from about a thousand square miles during the dry season to over six thousand square miles during the wet season, or forty-four percent of the country's land.[240] The Mekong River basin is one of the most biodiverse regions in the world, second only to the Amazon River basin. It has many species of animals still unidentified, including 1245 identified fish species alone.[241] Cambodia is home to several endangered species, including the freshwater Irawaddy dolphin, the Siamese crocodile, giant catfish, and marine turtles. But many Cambodian species—including half of the country's one hundred mammal species—may be threatened.[242] More generally, Cambodia's biodiversity is threatened by "increased population pressure."[243] The biodiversity in many parts of Cambodia was undisturbed when civil unrest discouraged tourism, but the arrival of peace has opened those areas to settlement and visitation.

Cambodian law has struggled to develop since the end of the Khmer Rouge era.[244] Nonetheless, the country has worked to pro-

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239. *See generally* U.S. Dep't of State, Background Note: Cambodia, http://www.state.gov/r/pa/ei/bgn/2732.htm (last visited June 13, 2009) (providing general information about Cambodia).

240. See Ian J. Mensher, Note, *The Tonle Sap: Reconsideration of the Laws Governing Cambodia's Most Important Fishery*, 15 PAC. RIM L. & POL'Y J. 797, 800 (2006).

241. *See* ROYAL GOV'T OF CAMBODIA, MINISTRY OF ENV'T, NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN 13 (2002), *available at* http://www.cbd.int/doc/world/kh/kh-nbsap-01-en.pdf; L. Waldron Davis, *Reversing the Flow: International Law and Chinese Hydropower Development on the Headwaters of the Mekong River*, 19 N.Y. INT'L L. REV. 1, 15 (2006); Mensher, *supra* note 238, at 800-801; Tonle Sap Biosphere Reserve Environmental Information Database, Biodiversity, http://www.tsbr-ed.org/english/values_issues/biodiversity.asp (last visited June 13, 2009).

242. Davis, *supra* note 214, at 17.

243. *Id.* at 16. "Other threats include; ignorance, policies, global trading, inequity, lack of participation, natural disasters, man-made disasters, climate change, loss of habitat & overexploitation of biological resources, wildlife trade, pollution, modern agriculture, invasive alien species, and biotechnology." *Id.*

244. *See* Rebecca Povarchuk, Note, *Cambodia's WTO Accession: A Strenuous But Necessary Step for a Poor Nation Seeking Economic Prosperity*, 13 PAC. RIM L. & POL'Y 645, 650 (2004) ("Under the Khmer Rouge, law books were destroyed and judges, lawyers, prosecutors, and legislators were slaughtered. . . . After the U.N. intervention, the Cambodian bar formed with only thirty-eight members."); Jillian M. Young, Note, *Cambodia's Accession to the World Trade Organization and Its Impact on Agriculture*, 11 DRAKE J. AGRIC. L. 107, 121 (2006) ("One of the major problems facing Cambodia today is the lack of trained lawyers

tect its biodiversity. Cambodia's 2002 National Biodiversity Strategy and Action Plan asserts that "[n]ature protection in Cambodia has been a constant concern of both the King and Government always realizing the fragile nature of ecosystems owing to the socio-economic, physiogeographic and climatic conditions of the country."[245] Cambodia's constitution provides that "[t]he State shall protect the environment and balance of abundant natural resources and establish a precise plan of management of land, water, air, wind, geology, ecological systems, mines, energy, petrol and gas, rocks and sand, gems, forests and forestrial products, wildlife, fish and aquatic resources."[246] Cambodia created an Environmental Secretariat in 1993 and enacted the framework for the Law on Environmental Protection and Natural Resources Management in 1996.[247] Subsequently, the Ministry of Environment was created in 1998, which manages natural resources along with the Ministry of Water Resources and Meteorology and the Ministry of Land Use Management, Urbanization and Construction.[248] Cambodia has continued to enact more environmental and conservation laws, including the Water Resources Law, Forestry Law, Fisheries Law, Wildlife Law, Law on Protected Area Management, the 2001 Land Law, and the 2002 Forestry Law. The Community Forestry Sub-Decree of 2003, which followed the Statement of the Royal Government on National Forest Policy of 2002 that "designated Cambodia's remaining forest resources as Permanent Forest Estates to be maintained in perpetuity."[249] Additionally, in 1993, Cambodia implemented the National Protected Areas System, which established "seven national parks, ten wildlife sanctuaries, three protected landscapes, and three multiple-use areas" that together comprise 17.6% of the country's land.[250]

Enforcement of these laws is problematic. Cambodia's Biodiversity Plan names "a lack of planning and law enforcement in natural resources management" as one of "[t]he main threats to biodiversity."[251] It adds that "[d]espite its illegality, hunting is widely spread."[252] Cambodia still struggles with illegal logging issues even in protected areas.[253] Despite the Forestry Law's man-

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and judges and the concentration of these professionals in Phnom Penh, the capital of Cambodia, far from the majority of the population.").

245. ROYAL GOV'T OF CAMBODIA, *supra* note 241, at 3.

246. The Constitution of the Kingdom of Cambodia art. LIX, http://www.embassy.org/cambodia/cambodia/constitu.htm (last visited June 13, 2009).

247. *See* ROYAL GOV'T OF CAMBODIA, *supra* note 241, at 3.

248. *See id.*

249. Tan, *supra* note 144, at 186.

250. Kunich, *supra* note 237, at 250-51.

251. ROYAL GOV'T OF CAMBODIA, *supra* note 241, at 16.

252. *See id.* at 31.

253. Tan, *supra* note 144, at 186-87.

dates that EIAs and Strategic Forest Management Plans be produced, the government has undermined these protections by tolerating illegal logging and accepting environmental reports of extremely low quality.[254] Further, logging companies often subvert the Forestry Law by claiming they are merely reforesting planted forests when they are really destroying natural forests and replacing them with "fast-growing (but often alien) trees."[255] In fact, from the 1990s to 2006, Cambodia "lost ten percent of its forest cover, representing a reduction from 13 million hectares to 11.2 million hectares."[256] Also, although the Forestry Law protects certain wildlife, it fails to protect fish and aquatic life.[257] The Department of Fisheries has achieved limited success in preventing illegal fishing because of a "lack of technical capacity, inadequate equipment and budget constraints."[258] A shortage of financial and technical resources only adds to the ineffectiveness of Cambodia's efforts, and a legacy of internal strife has resulted in agencies staffed by feuding political factions, making progress toward conversation goals difficult. Thus, the Ministry of the Environment has minimal influence over the sustainability of Cambodian forests, and it will fail to achieve environmental sustainability unless illegal logging is curtailed.[259]

The Mekong River and Tonle Sap basin have been especially affected by the failure of the law. The 2001 Land Law sets few boundaries on development even in the Tonle Sap basin, so pollution and run-off threaten the biodiversity of the area.[260] The 1987 Fisheries Law narrowly regulates "subsistence and mid-scale fishing operations" without checking operations by large, industrial fisheries, which exploit the Tonle Sap and Mekong River without regulation.[261] China's plan to build several hydropower dams along the upstream reaches of the Mekong River is causing a biodiversity crisis.[262] Normally, the annual flooding of the Tonle Sap basin by the Mekong River sustains the area with fish, provides water for

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254. *Id.* at 186.
255. *Id.* at 187.
256. Mensher, *supra* note 208, at 810.
257. *Id.*
258. ROYAL GOV'T OF CAMBODIA, *supra* note 241, at 37.
259. Tan, *supra* note 124, at 187.
260. Mensher, *supra* note 241, at 809.
261. *Id.* at 811.
262. The Cambodian government itself has proposed the construction of three hydroelectric dams within Virachey National Park, which is located within Cambodia's mountainous forests. The park is "one of Cambodia's most biologically diverse protected areas" and is an area in which no people live. RAPID ASSESSMENT PROGRAM & CONSERVATION INTERNATIONAL – CAMBODIA, PRELIMINARY REPORT: VIRACHEY NATIONAL PARK RAP 2007, at 3 (2007), *available at* http://www.conservation.org/Documents/Virachey_NP_Preliminary_report_hirez2.pdf.

rice paddies, and supports a complex ecosystem.[263] In addition to creating water temperature fluctuations that result in severe declines in commercial fish supplies (the fish catch dropped by almost fifty percent in 2004), changes to the Mekong River and Tonle Sap have caused a "critically endangered megafauna" epidemic, including the Mekong giant catfish (thought to be the largest freshwater species in the world), the freshwater Irrawaddy dolphin, and the Siamese crocodile.[264]

A TRAFFIC study of Stung Treng Province along the Laotian border in northeastern Cambodia offers another illustration.[265] Stung Treng is a very rural area covered by forests, rice paddies, and rivers, and it is home to about 77,000 people. The TRAFFIC study indicates that fish are the most important natural resource to the people in Stung Treng, so when trading fish became more valuable, and thus more popular, the people of the region were concerned about the declining fish populations.[266] There are numerous laws regulating the fishery, which seem to have little effect; villagers suggest that some of the illegal fishing methods were continued by those with access to the necessary equipment.[267] The wildlife trade continues even though it "is widely recognised as illegal."[268] A village chief explained that people sold wildlife in Laos once it became illegal to consume it in Cambodia, which the TRAFFIC report observes "was the opposite effect of the law."[269] Prominent wildlife traders are known to be friends of local government officials, and "the ability of the police and army to carry guns means that villagers often associate them with wildlife hunting, whether or not this is the case."[270]

There are other obstacles to enforcement, too. Corruption in Cambodia reduces the effectiveness of laws protecting biodiversity.[271] Rural residents who live in areas of abundant biodiversity,

263. Mensher, *supra* note 241, at 800.

264. *Id.* at 801.

265. *See* SARINDA SINGH ET AL., TRAFFIC, TRADE IN NATURAL RESOURCES IN STUNG TRENG PROVINCE, CAMBODIA: AN ASSESSMENT OF THE WILDLIFE TRADE (2006).

266. *See id.* at 8-9.

267. *Id.* at 21.

268. *Id.* at 27.

269. *Id.* at 28.

270. *Id.*

271. *See* ROYAL GOV'T OF CAMBODIA, *supra* note 241, at 70 ("[T]he enforcement of existing legislation is somehow deficient in the country because of unacceptable behavior and lack of accountability by some government representatives."); Povarchuk, *supra* note 244, at 651 (referring to "[w]idespread judicial corruption"); Young, *supra* note 244, at 122 ("The newly developed legal and judicial professions are plagued with corruption."); Conservation International, Cambodia, http://www.conservation.org/explore/asia-pacific/cambodia/Pages/issues.aspx (last visited June 13, 2009) ("[T]he Cambodian government lacks the manpower and will to enforce the rules. Bribery of officials is rampant, and corruption chokes the legal and justice systems. Judges know little about wildlife laws, and in most instances, cases are tossed out and poachers escape prosecution."); Transparency International, Corruptions Per-

and who rely upon that biodiversity to sustain them, are often unaware of the laws protecting biodiversity.[272] Furthermore, the pressure on Cambodia's biodiversity increases as traders begin to turn to Cambodia more and more once they eliminate the resources in neighboring countries such as Vietnam.[273]

E. Summary of Southeast Asian Biodiversity Law

Overall, the biodiversity laws of China, Vietnam, Malaysia, and Cambodia have achieved some impressive results in recent years. The very enactment of laws protecting biodiversity is a significant step forward for countries that are still struggling to develop their legal systems. Each nation has established important wildlife refuges. The region has also experienced some success in regulating trade in wildlife.

But there are obvious failures to match each success. Enforcement remains the largest problem, whether it is in China's nature reserves, Hanoi's wildlife shops, or Cambodia's logging. "Laws and regulations stand little chance of success unless they are effectively implemented and enforced, and wider issues of governance are also tackled . . . ."[274] An October 2008 study conducted by TRAFFIC indicates that ninety percent of the local experts who were surveyed believe that wildlife products continue to be harvested from protected areas, and half of respondents believe that applicable wildlife quotas are being exceeded.[275] TRAFFIC concluded "that current enforcement levels remain woefully inadequate."[276] Moreover, each nation complains that it lacks the funds to protect the biodiversity within its borders; biodiversity preservation is overwhelmed by the rapid economic development that has occurred in Southeast Asia during the past thirty years. Even in Malaysia, there seems to be a trend toward viewing the environment in terms of an asset to be exploited, rather than focusing on what needs to be protected.[277] Perhaps the most dramatic illustration of the failure of biodiversity protection in Southeast Asia occurred in China's famed Yangtze River, where the freshwater

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ceptions Index 2008, http://www.transparency.org/policy_research/surveys_indices/cpi/2008 (last visited June 13, 2009) (ranking Cambodia 166 out of 180 nations in perceptions of corruption).

272. *See* ROYAL GOV'T OF CAMBODIA, *supra* note 241, at 70.

273. *See* SINGH ET AL., *supra* note 265, at 2; Lin, *supra* note 63, at 203.

274. TRAFFIC, *supra* note 64, at xiv.

275. *See id.* at 32.

276. *Id.* at 33 ("Less than forty percent of respondents believed that the likelihood of detection, prosecution, sentencing and penalties had been effective in controlling trade."); *see also id.* at 64 (describing inadequate enforcement as "an overriding problem," though acknowledging that it has been improving).

277. *See* Tan, *supra* note 144, at 182.

Yangtze River dolphin appears to have gone extinct early in the twenty-first century thanks to the combined effects of water pollution, overharvesting, dam construction, and rapid economic development—despite an intensive international effort to save the species.[278]

III. COMPARING THE EFFECTIVENESS OF THE ENDANGERED SPECIES ACT AND ASIAN BIODIVERSITY LAW

The Southeast Asian experience of employing the law to preserve biodiversity has suffered from many more failures than has the American ESA. In fact, the FWS has formally determined that the laws of Cambodia, China, and Vietnam are not adequate to preserve the countries' rare wildlife. The adequacy of existing regulatory mechanisms is one of the ESA's criteria for determining whether a species is endangered or threatened. Consider the giant ibis, which the FWS listed as endangered in 2008.[279] The giant ibis is native to Cambodia and Vietnam,[280] so the efficacy of Cambodian and Vietnamese law helped to decide whether the species should be listed under the American ESA. The FWS found that while several Cambodian laws protect the giant ibis from habitat destruction and hunting, those laws "are ineffective at reducing those threats."[281] At the Tonle Sap Great Lake protected area, the FWS praised Cambodian efforts that "have begun to improve the conservation situation there," but the FWS also noted that "several management challenges remain, including overexploitation of flooded forests and fisheries; negative impacts from invasive species; lack of monitoring and enforcement; low level of public awareness of biodiversity values; and uncoordinated research, monitoring, and evaluation of species' populations."[282] The FWS found evidence that "great strides have been made in training rangers and combating poaching."[283] The FWS also found, though, that the country's wildlife protection office

278. *See* SAMUEL TURVEY, WITNESS TO EXTINCTION: HOW WE FAILED TO SAVE THE YANGTZE RIVER DOLPHIN (2008).

279. *See* Final Rule To List Six Foreign Birds as Endangered, 73 Fed. Reg. 3146 (Jan. 16, 2008) (to be codified at 50 C.F.R. pt. 17).

280. *See id.* at 3158 ("The giant ibis' current range is the mix of dry forest and freshwater swamp forest ecosystems of Cambodia, Lao PDR, and Vietnam; it is considered extirpated from Thailand."); *see also id*. at 3160 ("In 2005, the giant ibis was declared the national symbolic bird in Cambodia.").

281. *Id.* at 3163 ("[R]eports of severe hunting pressure within the giant ibis' habitat and illegal poaching of wildlife in Cambodia continue . . . [for example,] '[h]unters and dealers freely display[ ] the illegal materials and readily provide[ ] any details requested,' indicating a lack of wildlife laws awareness or inadequate law enforcement.").

282. *Id.* at 3164.

283. *Id.*

> lacks the staff, technical ability and monetary support to conduct systematic surveys on the giant ibis. This, in turn, leads to ineffective monitoring and enforcement, and, consequently, resource use goes largely unregulated. Thus, the protected areas system in Cambodia is ineffective in removing or reducing the threats of habitat modification . . . and hunting . . . faced by the giant ibis.[284]

Likewise, the FWS found that the giant ibis is on Vietnam's list of endangered species and that "Vietnam's wildlife, including birds, continues to be susceptible to domestic consumption" despite a ban on hunting.[285] Moreover, the FWS concluded that while Yok Don National Park provides habitat for the giant ibis, the park "apparently lacks specific regulations governing activities within the Park, and it is unclear what tangible protections, if any, are afforded the species in this area."[286] "Furthermore, there are continued external threats to the biological resources in the park (*e.g.*, the proposed Ea Tung dam) . . . and hunting," which has been reported to be "a problem for wildlife within the Yok Don National Park."[287] "Thus, the measures in place are ineffective at reducing the threats to this species."[288]

The FWS had the occasion to consider the efficacy of China's biodiversity laws when it listed the Tibetan antelope in 2006.[289] The Tibetan antelope lives in China's Tibetan Plain, as well as small parts of India, and perhaps Nepal. "In China, the Tibetan antelope is a Class 1 protected species under the Law of the People's Republic of China on the Protection of Wildlife (1989), which prohibits all killing except by special permit from the central government."[290] The FWS concluded that "[a]lthough China has expended considerable effort and resources in an attempt to control poaching, it has been unable to do so because of the magnitude of the poaching, the extensive geographic areas involved, and the high value of shahtoosh, which gives poachers great incentive to continue their illegal activities."[291]

The FWS's recent ESA listings of the giant ibis and the Tibetan antelope demonstrate the inadequacy of biodiversity protection in

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284. *Id.*
285. *Id.*
286. *Id.* at 3165.
287. *Id.*
288. *Id.*
289. *See* Final Rule To List the Tibetan Antelope as Endangered Throughout Its Range, 71 Fed. Reg. 15,620 (Mar. 29, 2006) (to be codified at 50 C.F.R. pt. 17).
290. *Id.* at 15,626.
291. *Id.*

Cambodia, China, and Vietnam.[292] The listings do not, however, prove that the ESA is more effective than the parallel Asian laws. But criticisms about funding, enforcement, corruption, and regulatory scope all point toward the conclusion that the ESA is a greater success than the laws in these four Southeast Asian nations.

The shortcomings of the ESA pale in comparison to the struggles of Asian nations to achieve the goals of their biodiversity laws. Inadequate funding is a chronic complaint about the administration of the ESA. The ESA is an unusual law whose scope depends upon funding. There are a number of cases regarding the effects of funding limits on listing species and critical habitat. The amount allotted may be inadequate to achieve the purposes of the ESA, but it is far greater than the money spent by China, Vietnam, Malaysia, and Cambodia.

Complaints that the ESA has failed to achieve habitat protection seem misplaced when compared to Asian biodiversity law. The effects of snowmobiling on endangered wildlife in Yellowstone National Park has elicited outrage and endless legal disputes.[293] But the effects of snowmobiles are trivial compared to the housing developments that were built at the center of the Zhalong Nature Reserve, one of China's most important wetlands and the home to numerous species of rare cranes. Furthermore, the ESA's modest success in protecting biodiversity on privately-owned lands is far more impressive when compared to Asian nations, which do not provide any legal protection against activities that threaten ecosystems and habitats outside of the modest number of specifically protected areas. Malaysia's biodiversity policy, for example, expressly admits "that species endangered due to habitat destruction are not protected by way of a national law for endangered species."[294] Americans worry that sprawl will eliminate biodiversity in Southern California, Florida, and a few other locations, but land is being developed far more rapidly in many parts of China, Malaysia, and Vietnam.

A similar pattern emerges in the respective allegations of corruption involving biodiversity law. Consider Julie McDonald, the Deputy Assistant Secretary of the Interior who was responsible for the administration of the ESA, who allegedly "bullied, insulted, and harassed" FWS employees whose scientific judgments sup-

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292. *See* Final Rule to List 10 Foreign Mammals as Endangered Species**,** and Withdrawal of 1 Species, 49 Fed. Reg. 2779 (Jan. 23, 1984) (codified at 50 C.F.R. pt. 17) (showing that no Malaysian species has been listed under the ESA since the Singapore roundleaf horseshoe bat in 1984).

293. *See generally* Greater Yellowstone Coal. v. Kempthorne, 577 F. Supp. 2d 183 (D.D.C. 2008) (summarizing the Yellowstone National Park snowmobile dispute).

294. MALAYSIAN NATIONAL POLICY, *supra* note 176, at 14.

ported more aggressive listing and protection of species.[295] McDonald's actions are troublesome, but they are trivial in comparison to the actions of Vietnamese local officials who not only refuse to enforce their country's laws, but actually *eat* the rare wildlife that those laws try to protect.

In each instance, the ESA is far more successful in preserving biodiversity than its Asian counterparts. But we *expect* our laws to be far more successful. Numerous scholars have explored the expectations that people have of the law. This research into "legal consciousness" posits that different people have different understandings and expectations of the law in different contexts. Scholars have concluded that "the law's power depends on the values, beliefs, and behavior of individuals."[296] They have also found that "the law defines and constrains our choices and actions, but rarely does it directly determine them."[297] Turning to specific instances, Frank Munger's study of legal consciousness in Thailand found that environmental law has developed there both because of increased exposure to environmental harms and because of a greatly expanded middle-class.[298] In China, Mary Gallagher identified an "informed disenchantment" resulting from "raised legal consciousness in terms of knowledge about the law and feelings of greater efficacy and understanding of legal strategy with a concomitant sense of disappointment and frustration about inequities and dysfunctional aspects of China's developing legal system."[299] But in the United States, anthropologist Sally Engle Merry sees much higher expectations of the law:

> The consciousness of legal entitlement and the consequent turning to the law are profoundly democratic, radically egalitarian, and fundamentally American. This legal entitlement is an outgrowth of faith in the law, a faith observed early by Tocqueville and other commentators on the

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295. OFFICE OF INSPECTOR GEN., DEP'T OF THE INTERIOR, INVESTIGATIVE REPORT ALLEGATIONS AGAINST JULIE MCDONALD, DEPUTY ASSISTANT SECRETARY FISH, WILDLIFE AND PARKS 2 (2007); *see also* W. Watersheds Project v. U.S. Forest Serv., 535 F. Supp. 2d 1173, 1188 (D. Idaho 2007) (overturning the FWS's refusal to list a species because "MacDonald had extensive involvement in the sage-grouse listing decision, used her intimidation tactics in this case, and altered the 'best science' to fit a not-warranted decision"); J.B. Ruhl, *Reconstructing the Wall of Virtue: Maxims for the Co-Evolution of Environmental Law and Environmental Science*, 37 ENVTL. L. 1063, 1078 (2007) (offering a perceptive analysis of the charges against McDonald).

296. Anna-Maria Marshall & Scott Barclay, *In Their Own Words: How Ordinary People Construct the Legal World*, 28 LAW & SOC. INQUIRY 617, 622 (2003).

297. *Id.* at 623.

298. *See* Frank Munger, *Constitutional Reform, Legal Consciousness, and Citizen Participation in Thailand*, 40 CORNELL INT'L L.J. 455, 470-72 (2007).

299. Mary E. Gallagher, *Mobilizing the Law in China: "Informed Disenchantment" and the Development of Legal Consciousness*, 40 LAW & SOC'Y REV. 783, 785-86 (2006).

> American scene. Cultural values of autonomy, self-reliance, individualism, and tolerance have led local courthouses to become the nearest moral authority for dealing with family and neighborhood problems. The roots of this legal consciousness lie, I believe, in the historical American demand for tolerance and pluralism, which pressed toward a public life governed by codes of law and science rather than by religion or local morality.[300]

So the real question is not whether our laws have succeeded, but whether our expectations of the law are appropriate. What are the values of biodiversity? How does the importance of biodiversity compare to economic development, health care, and education? What trust do we place in the law to preserve biodiversity? What is the role of government enforcement of the law, as opposed to the symbolic importance of the law? What role do private actions, such as habitat acquisition and education, play in biodiversity preservation?

Americans are likely to answer many of these questions differently than the residents of Southeast Asia. Americans turn to the law to address most societal problems. Chinese, Vietnamese, Malaysians, and Cambodians have less of a legal tradition to rely upon, and they have a historical tradition of employing educational campaigns and social norms to achieve desired changes. The United States also enjoys more financial, technical, and professional resources than the developing countries of Southeast Asia, as well as less acute poverty that competes for limited resources. One could not expect a Chinese court, for example, to block a dam project because biodiversity must be protected "whatever the cost."[301] And biodiversity is less likely to be perceived as a resource to be exploited itself in the United States than in Southeast Asia. Such factors influence what different peoples expect of the laws governing biodiversity.

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300. SALLY ENGLE MERRY, GETTING JUSTICE AND GETTING EVEN: LEGAL CONSCIOUSNESS AMONG WORKING-CLASS AMERICANS 181 (1990).

301. Tenn. Valley Auth. v. Hill, 437 U.S. 153 (1978).

IMPROVING THE ODDS OF GOVERNMENT ACCOUNTABILITY IN THE DISASTER-PRONE ERA: USING THE 9/11 FUND FACTORS TO REMEDY THE PROBLEM OF TOXIC KATRINA TRAILERS

OLYMPIA DUHART*

> When the flood waters recede, the poor folk along the river start from scratch.
>
> — Richard Wright[1]

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1. RICHARD WRIGHT, *The Man Who Saw the Flood, in* EIGHT MEN 102, 110 (Thunder Mouth's Press 1987).

I. INTRODUCTION

It is called hurricane roulette.[2] And for many, participation in the game is a badge of honor signaling a willingness to "ride out the storm" in a designated hurricane zone, rather than seek refuge by moving to safer ground.[3] That is risky, indeed. But even such grave risks are minimal compared with the high stakes facing hurricane survivors that are counting on government assistance to help them rebuild after the storm.

Three years after the flood waters of Hurricane Katrina have receded, the rebuilding efforts for many of those displaced by the storm continue to paralyze the region and prevent meaningful relief. Not only has public housing been "cleaned up" in New Orleans, it has been virtually eliminated.[4] The rental housing market is marked by staggering rent increases,[5] rampant discrimination,[6] and biased restrictions.[7] Even the temporary shelters available for displaced people—trailers issued by the Federal Emergency Man-

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2. SELECT BIPARTISAN COMM. TO INVESTIGATE THE PREPARATION FOR AND RESPONSE TO HURRICANE KATRINA, 109TH CONG., A FAILURE OF INITIATIVE: FINAL REPORT OF THE SELECT BIPARTISAN COMMITTEE TO INVESTIGATE THE PREPARATION FOR AND RESPONSE TO HURRICANE KATRINA 114 (2006) [hereinafter A FAILURE OF INITIATIVE], *available at* http://www.gpoaccess.gov/Katrinareport/mainreport.pdf. According to government officials, ten to twenty-five percent of people who live in a hurricane evacuation zone will not evacuate; they stay and take the chance that the hurricane will either hit somewhere else or that they will be lucky and relatively unaffected by the storm. *Id.* at 114. This statistic does not apply to the poor, sick, or elderly who are unable to evacuate because of immobility or to those who are not properly informed as to the risks presented by the storm.

3. During Hurricane Katrina, some of the informed, healthy, and capable people who made the personal decision that they did not want to leave "were gamblers, long ago courting risk like a lover." DOUGLAS BRINKLEY, THE GREAT DELUGE 62 (2006). Brinkley points out that Good Samaritans, adrenaline junkies, squatters, and faith-followers convinced by parochial pride stay put. *Id.* As a life-long Floridian, I confess to having elected to "ride out" several hurricanes myself. After Katrina, of course, I am more reluctant than ever to adopt this approach for serious storms.

4. *See generally* James C. Smith, Disaster Planning and Public Housing: Lessons Learned from Katrina (2009) (unpublished manuscript, on file with author) (providing background information on the condition of public housing in New Orleans).

5. Susan Saulny & Gary Rivlin, *Renewal Money Bypasses Renters in New Orleans*, N.Y. TIMES, Sept. 17, 2006, at 14; BUREAU OF GOVERNMENTAL RESEARCH, THE ROAD HOME RENTAL HOUSING PROGRAM: CONSEQUENCES FOR NEW ORLEANS 2 (2006) [hereinafter THE ROAD HOME], *available at* http://www.bgr.org/pdf/reports/Consequences_for_N.O_._091506_.pdf ("Average rents have risen by 25% to 30% across the metropolitan area, creating problems for moderate as well as low income families.").

6. One study revealed that "[b]lack residents encountered discrimination nearly six times out of ten when apartment hunting in the New Orleans area post-Katrina." Gwen Filosa, *Bias is Found in Rental Market*, THE TIMES-PICAYUNE, Apr. 25, 2007, at 1, *available at* http://www.nola.com/news/t-p/frontpage/index.ssf?/base/news-8/1177482229124760.xml&coll=1&thispage=1.

7. *See* Billy Sothern, A Question of Blood, The Nation, Mar. 27, 2007, http://www.thenation.com/doc/20070409/sothern; *see generally* Olympia Duhart & Eloisa C. Rodriguez-Dod, *Legislation and Criminalization Impacting Renters Displaced by Katrina*, *in* LAW AND RECOVERY FROM DISASTER: HURRICANE KATRINA 141 (Robin Paul Malloy ed., 2009) (discussing consanguinity ordinance in St. Bernard Parish enacted following Katrina).

agement Agency (FEMA)—have been saddled with their own set of dangers.[8] The systemic administrative and legislative failures following the storm literally changed the face of New Orleans.[9] More importantly, the city remains in ruins, standing as proof of the government's breach of America's social contract.[10]

This Article uses the difficulties and dangers surrounding the FEMA trailers to examine whether disasters such as Katrina should compel us to re-imagine the proper role of government intervention in response to harms. The Article examines the responsibilities of the government to the survivors of a hurricane and how those responsibilities should be reconfigured in the disaster-prone.[11] Though Hurricane Katrina is a distant memory for some, the constant threat of hurricanes in the southeast region (such as Hurricane Gustav in August 2008) confirms that these issues re-

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8. *See* Spencer S. Hsu, *FEMA Knew of Toxic Gas in Trailers; Hurricane Victims Reported Illnesses*, WASH. POST, July 20, 2007, at A01.

9. The city is now whiter and wealthier, quite removed from the community that once defined "The Big Easy." Rick Lyman, *Reports Reveal Hurricanes' Impact on Human Landscape*, N.Y. TIMES, June 7, 2006, at A16. The Census Bureau's first study of Gulf Coast areas hit by Hurricanes Katrina and Rita, released in June, 2006, showed that New Orleans emerged sixty-four percent smaller. *Id.* The report found that "[t]hose who remained in the city were significantly more likely to be white, slightly older, and a bit more well off . . . ." *Id.* The bureau reports were the first to measure the demographic, social, and financial impact of the Gulf Coast hurricanes. *Id.; see*, *e.g.*, WILLIAM H. FREY, AUDREY SINGER & DAVID PARK, THE BROOKINGS INSTITUTION, RESETTLING NEW ORLEANS: THE FIRST FULL PICTURE FROM THE CENSUS (2007), *available at* http://www.brookings.edu/~/media/Files/rc/reports/2007/07katrinafreysinger/20070912_katrinafreysinger.pdf.

10. *See* Michael Ignatieff, *The Broken Contract*, N.Y. TIMES, Sept. 25, 2005, at 15; *see also* MICHAEL ERIC DYSON, COME HELL OR HIGH WATER, HURRICANE KATRINA AND THE COLOR OF DISASTERS 13 (2006) (discussing Ignatieff's argument); David Dante Troutt, Remarks at the Black History Month Observances at the Community Church of New York City (Feb. 10, 2008), *available at* http://daviddantetroutt.com/speech1d.html ("Political partisanship in the form of a Republican president responsible for the rescue of black residents of a Democratic city joined with structural racism and economic marginalization to reveal the erosion of the American social contract.").

11. The Intergovernmental Panel on Climate Change (IPCC) scientists, charged by the World Meteorological Organization and the United Nations Environment Programme with developing an authoritative statement on climate change, found in its 2007 report that several ecological systems were being affected by climate change springing from human activities. *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY, SUMMARY FOR POLICYMAKERS 12-14 (2007), *available at* http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf. Further, many experts have agreed that climatological changes have made the threat of natural disasters more likely in today's world. *See generally* High-Level Conference on Food Security: The Challenges of Climate Change & Bioenergy, Rome, Italy, June 3-5, 2008, *Climate Change Bioengery and Food Security: Civil Society and Private Sector Perspectives*, 1-2, Doc. HLC/08/INF/6 (addressing concerns that the warming of the climate has increased hydrometeorological hazards); *see also* Joel Mintz, *Climate Change and Presidential Leadership*, 39 ENVTL. LAW REP. 10045, 10045-47 (2009) (asserting global climate disruption and the objective case for concern). *But see* Peter Ferrara, Baby, Baby It's a Cold World: Explaining Global Warming to Congress, National Review Online, June 2, 2008, http://article.nationalreview.com/?q=ZGQ3N2NlNmJjOGFlNDNiNTEzOGY5MjVhY2ZiNGYwNjk=%20%20 (arguing that the global warming "hysteria" is a political construct that is more related to class struggle than climate or science).

main a day-to-day struggle for many.[12] In fact, the proliferation of natural disasters in the current era makes the safety measures and remedies available for government-issued temporary housing even more relevant.[13] But has the housing assistance available for hurricane survivors improved much?[14] Presently, it is nearly impossible for government inaction in this arena to trigger any protected recognized rights. The few Katrina survivors who received aid are entirely dependent on the government's conferral of discretionary benefits.[15] They are subject to the whims and monumental failures of bureaucracy.[16] Part II of this Article briefly summarizes the housing challenges that persist in New Orleans because of Hurricane Katrina and contextualizes the needs for safe shelter. Part III traces failures of government accountability through an examination of the administrative failures surrounding the so-called "toxic trailers." This part details the dangers surrounding the toxicity levels in the trailers issued to Katrina survivors by FEMA and identifies the problems presented by the distribution of the trailers. Part IV reviews the inefficacy of the remedial response to the disaster relief and tracks litigation challenges. Part V pro-

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12. On September 1, 2008, Hurricane Gustav struck the New Orleans region as a Category 2 storm. Editorial, *Hurricane Warnings*, N.Y. TIMES, Sept. 2, 2008, at A22.

13. *See* Duhart & Rodriguez-Dod, *supra* note 7; *see also* NAOMI KLEIN, THE SHOCK DOCTRINE 410 (2007) (noting that climate scientists have directly linked increase hurricane intensity and frequency to rises in ocean temperature).

14. In sharp contrast to evacuation failures with Hurricane Katrina, it was evident from the start that the evacuation measures in place for residents in need during Hurricane Gustav were a huge improvement from those failures connected to Hurricane Katrina in 2005. *See* Jeff Hecht, New Orleans Passes Easy Hurricane Test, NewScientist, Sept. 2, 2008, http://environment.newscientist.com/channel/earth/hurricane-season/dn14649-why-gustav-was-no-katrina.html. Before Gustav, contra-flow measures were in place and evacuation plans for almost two million people were being faithfully carried out. Paulo Prada, Alex Roth & Jeff D. Opdyke, *Weakened Hurricane Hits Louisiana, Grazes Oil Patch*, WALL ST. J., Sept. 2, 2008, at A1. In sharp contrast, both local and federal failures complicated and delayed effective evacuations during Hurricane Katrina. *See* Olympia Duhart, *Blowing the Lid Off: Expanding the Due Process Clause to Defend the Defenseless Against Hurricane Katrina*, 13 TEX. WESLEYAN L. REV. 411, 427-30, 433-37 (2007).

15. The September 11th ("9/11") Victim Compensation Fund has no corollary in the Gulf Coast. *See* DANIEL FARBER & JIM CHEN, DISASTERS AND THE LAW: KATRINA AND BEYOND 317-19 (2006). Professor Farber argues in support of a fund to support Katrina victims in light of the federal government's role in the flooding and the disadvantaged status of most victims. *Id.; see also* Mitchell F. Crusto, *The Katrina Fund: Repairing Breaches in Gulf Coast Insurance* Levees, 43 HARV. J. ON LEGIS. 329, 329 (2006) (advocating the creation of a Katrina Fund modeled after the September 11th Victim Compensation Fund to give financial relief to Katrina-affected residential homeowners to help close the gap between damages and insurable residential property losses). Professor Crusto asserts that the creation of the Katrina Fund would not only provide an opportunity for federal and state government to "redeem themselves" but would also stave off "Katrina's second coming[—a flood of] bankruptcies, foreclosures and homelessness." *Id.* at 372-73.

16. *See* David Dante Troutt, *Many Thousands Gone, Again, in* AFTER THE STORM 3, 20 (David Dante Troutt ed., 2006). ("Without their own city and state to protect them, they have become pinballs in a FEMA game of rotating hotel evictions."). Professor Troutt notes that survivors were given multiple conflicting reports about the end of housing vouchers. *Id.*

poses a remedy to address the gap in relief offered for trailer residents; specifically, applying the factors that led to the creation of the 9/11 Victim Compensation Fund.[17] This Article proposes the establishment of a Toxic Trailer Fund to assist Katrina survivors who weathered first a storm, then a slew of government failures. Finally, this Article raises and refutes potential counterarguments to the establishment of a fund to assist this discrete class of storm survivors.

II. THE STORM AND ITS AFTERMATH—PERSISTENT HOUSING CHALLENGES

In the early summer of 2005, before "Katrina" meant anything to the National Hurricane Center,[18] New Orleans grappled with more than its fair share of problems. The city was besieged with crime, poverty, and an inadequate public education system.[19] Despite these shortcomings, New Orleans continued to maintain an appeal and culture uniquely its own. One writer observed that, despite its troubles, New Orleans "had a lot more civic life than most of the United States."[20] It was a unique American city with a rich tradition and a bevy of life-long residents with strong roots in the community.[21]

Then the storm came. By all accounts a seminal event in American history, Hurricane Katrina took more than 1,550 lives[22] and displaced up to 250,000 people.[23] The storm struck areas through-

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17. The full name for the 9/11 Victim Compensation Fund is the Air Transportation Safety and System Stabilization Act. Air Transportation Safety and Stabilization Act, Pub. L. No. 107-42, § 1, 115 Stat. 230, 230 (2001) (codified as amended at 49 U.S.C. §§ 40101-40129 (2006)).

18. "Unlike New Orleans's hurricane evacuation strategy, tracking hurricanes *was* the responsibility of the federal government." BRINKLEY, *supra* note 3, at 62 (emphasis in original).

19. *See* DYSON, *supra* note 10, 1-12. Before the storm, New Orleans had a poverty rate of twenty-three percent, a figure seventy-six percent higher than the national average. *Id.* at 5-6. New Orleans has a forty percent illiteracy rate. *Id.* at 8.

20. Rebecca Solnit, *The Lower Ninth Battles Back*, THE NATION, Sept. 10, 2007, at 13. Solnit cites the sense of community fostered by social clubs, churches, crawfish boils, and extended families. *Id.*

21. Writer Mike Tidwell offers his analysis of the strong appeal of the region: "In my estimation, the Cajun Bayou region of Louisiana, at least before Katrina, was the most distinctive and culturally rich region in America." Eric Kancler, Bayou Farwell, Mother Jones, Oct. 3, 2005, http://www.motherjones.com/environment/2005/10/bayou-farewell.

22. Prada, Roth & Opdyke, *supra* note 14; *see also* Editorial, *Deaths of Out-of-State Evacuees Raise Katrina Toll*, WASH. POST, May 20, 2006, at A2. The death toll includes deaths that are related to the storm or its aftermath. *See* Editorial, *Evacuee Deaths Increase Katrina's Louisiana Toll*, ORLANDO SENT., May 20, 2006, at A14.

23. ALEX GRAUMANN ET AL., NAT'L OCEANIC & ATMOSPHERIC ADMIN., HURRICANE KATRINA: A CLIMATOLOGICAL PERSPECTIVE 1 (2005), *available at* http://www.ncdc.noaa.gov/oa/reports/tech-report-200501z.pdf. The storm ultimately impacted 1.5 million people. *FEMA's Manufactured Housing Program: Haste Makes Waste: Hearing Before the Comm. on Homeland Security & Governmental Affairs*, 109th Cong. 59 (2006) (statement of Richard L.

out Mississippi, Alabama, and Louisiana,[24] with Louisiana suffering the hardest blows.[25] Following Katrina, poor people and people of color have been priced out of the area's redevelopment.[26] This dramatic shift in demographics signals both the demise of a distinct black American subculture[27] and an absolute crisis in an already troubled affordable housing market.[28] "The scope of physical destruction of homes caused by Katrina has not been experienced in the United States since the Civil War. Nearly a million homes were damaged; a third of them were destroyed or damaged severely."[29]

According to the National Low Income Housing Coalition, the residents of more than seventy percent of the most severely damaged homes were low income families.[30] Hurricanes Katrina and Rita, and the related levee breaks of 2005, destroyed—or nearly destroyed—82,000 rental units in Southeast Louisiana.[31] About sixty-three percent of these units were located in New Orleans.[32] Moreover, the post-Katrina affordable housing crisis is emblematic of the urban inequality that pervades America.[33] Human rights lawyer William Quigley notes that New Orleans is but one sign of changes throughout the country:

> What is happening in New Orleans is just a more concentrated, more graphic version of what is going on all over our country. Every city in our country has some serious similarities to New Orleans. Every city has some abandoned neighborhoods. Every city in our country has abandoned

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Skinner, Inspector General, U.S. Department of Homeland Security) [hereinafter *FEMA's Manufactured Housing Program*].

24. A FAILURE OF INITIATIVE, *supra* note 2, at 103.

25. *See FEMA's Manufactured Housing Program*, *supra* note 23, at 59. More than one thousand people perished in Louisiana alone. *Id.*

26. Lyman, *supra* note 9; *see also* FREY, SINGER & PARK, *supra* note 9, at 1.

27. Editorial, New Orleans Fights for Its Character, Reuters, Jan. 14, 2007, http://www.msnbc.msn.com/id/16624152/.

28. *See* National Low Income Housing Coalition, Testimony of President of NLIHC to Ad Hoc Subcommittee, Apr. 24, 2007, http://www.nlihc.org/detail/article.cfm?article_id=4132 [hereinafter Crowley testimony]; *see also* Marcia Johnson, *Addressing Housing Needs in the Post Katrina Gulf Coast*, 31 T. MARSHALL L. REV. 327, 328 (2005-06) ("[T]he regions hardest hit by Katrina were already suffering significant housing shortages coupled with limited capital to sustain a good quality of life.").

29 . Crowley testimony, *supra* note 28.

30. *Id.*; *see also* Associated Press, Katrina's Victims Poorer than U.S. Average, Fox News, Sept. 5, 2005, http://www.foxnews.com/story/0,2933,168500,00.html. For example, prior to Katrina, housing expenditures for almost half of the renters in New Orleans exceeded thirty percent of the household income—"the federal benchmark for determining if a renter's housing expenditures are burdensome." THE ROAD HOME, *supra* note 5, at 2.

31. THE ROAD HOME, *supra* note 5, at 1.

32. *Id.*

33. *See generally* David Dante Troutt, *Ghettoes Made Easy: The Metamarket/Antimarket Dichotomy and the Legal Challenges of Inner-City Economic Development*, 35 HARV. C.R.-C.L. L. REV. 427 (2000).

> some public education, public housing, public healthcare, and criminal justice. Those who do not support public education, healthcare, and housing will continue to turn all of our country into the Lower Ninth Ward unless we stop them.[34]

Since Katrina is representative of government failures, its value as a model should not be overlooked as we seek to set higher standards for government response.

III. GOVERNMENT FAILURES AND TOXIC TRAILERS

The scope of government neglect in post-Katrina New Orleans, particularly the abysmal federal response, may be measured by the systemic administrative shortcomings of FEMA.[35] FEMA was established through a 1979 Executive Order, which created what was a cabinet-level agency that reported directly to the President.[36] Even in its nascent period, FEMA showed signs of fragmentation and limitation. One person involved in the reorganization of the agency said it was like making a cake "by mixing the milk still in the bottle, with the flour still in the sack, with the eggs still in their carton."[37]

Administrative fragmentation and a lack of priority for natural hazard—including floods, hurricanes, and earthquakes—troubled FEMA throughout the 1980s and 1990s.[38] Furthermore, the advent of terror shifted FEMA priorities away from natural disasters.[39] Once President Bush signed the Homeland Security Act in 2002, the federal reorganization placed FEMA squarely under the um-

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34. KLEIN, *supra* note 13, at 421; *see also* William P. Quigley, *What Katrina Revealed*, 2 HARV. L. & POL'Y REV. 361 (2008) (using narratives of Katrina survivors to advance seven key lessons for social justice).

35. FEMA has since become synonymous for the epic recovery failures of Hurricane Katrina. The agency has been subjected to scathing Congressional reports, public censures and media lashings. *See* Editorial, *Stonewalling the Katrina Victims*, N.Y. TIMES, Nov. 14, 2005, at A20 ("The recovery effort has been subject to blistering criticism from conservative, nonpartisan and liberal groups alike.").

36. FEMA History, http://www.fema.gov/about/history) (last visited June 13, 2009).

37. MITCHELL L. MOSS & CHARLES SHELHAMER, THE CTR. FOR CATASTROPHE PREPAREDNESS AND RESPONSE, THE STAFFORD ACT: PRIORITIES FOR REFORM 11 (2007), *available at* http://www.nyu.edu/ccpr/pubs/Report_StaffordActReform_MitchellMoss_10.03.07.pdf. The cake metaphor refers to the efforts under President Jimmy Carter to streamline the federal agencies with whom local and state officials had to work during disaster response periods. *Id.* "President Carter's authority to create FEMA was limited, forcing him to transfer staff and procedures from existing agencies—and not creating a new, more centralized response system." *Id.; see also* KLEIN, *supra* note 13, at 408-09 (referring to FEMA's contemporary efforts as a "laboratory for the Bush administration's vision of government run by corporations").

38. DYSON, *supra* note 10, at 44-45.

39. *See* Iris Young, *Katrina: Too Much Blame, Not Enough Responsibility*, DISSENT, Winter 2006, at 44.

brella of Homeland Security.[40] After being "politicized and packed with patronage appointments" the agency was entirely unprepared to deal with the trouble ahead.[41]

Perhaps the most tangible and enduring example of FEMA's shortcomings is the distribution of relief homes by FEMA—the trailer homes issued to hurricane survivors. Emergency housing needs fall to FEMA, which has assisted in rebuilding efforts through camp sites filled with mobile homes. Rather than being places of refuge, the camps have emerged as sites filled with strain and squalor. "[F]or tens of thousands of families, the Katrina crisis never ended . . . ."[42]

As writer Michelle Chen has noted, "[m]any New Orleanians see trailers as the fastest means of reestablishing themselves in their communities."[43] More than three years after the storm, thousands of survivors are still living in "temporary" trailers. In February 2007, approximately 275,000 people were living in the travel trailers and mobile homes that FEMA purchased after Katrina.[44] FEMA reported these shelters cost more than $2.6 billion.[45] At the peak, almost 119,000 trailers were used to house hurricane survivors.[46] At the start of the 2008 hurricane season, Katrina survivors still occupied more than 15,000 trailers in the Gulf Coast region.[47]

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40. DYSON, *supra* note 10, at 49; *see also* Chris Strohm, Collins, Lieberman Suggest FEMA Remain as Part of DHS, CongressDaily, Mar. 8, 2006 (reviewing calls post-Katrina to remove FEMA from the Homeland Security Department and make it an independent agency).

41. DYSON, *supra* note 10, at 51. At one point, FEMA had ten times the number of appointees as other agencies. MOSS & SHELLHAMER, *supra* note 37, at 11; *see also* John K. Pierre & Gail S. Stephenson, *After Katrina: A Critical Look at FEMA's Failure to Provide Housing for Victims of Natural Disasters*, 68 LA. L. REV. 443 (2008) (criticizing FEMA's inability to respond to its charge to meet emergency housing needs).

42. Chris Kromm, Coordinator, Gulf Coast Reconstruction Watch, Remarks at the Congressional Briefing "Addressing Remaining Low Income Housing Needs for Hurricane Evacuees and for the Gulf Coast," *available at* http://www.southernstudies.org/2007/09/institutes-capitol-hill-testimony-on-27.html.

43. Michelle Chen, New Orleans' Displaced Struggle for Housing, Jobs, Neighborhoods, NowPublic, Oct. 23, 2005, http://www.nowpublic.com/new_orleans_displaced_struggle_for_housing_jobs_neighborhoods.

44. Amanda Spake, *Dying for a Home: Toxic Trailers Are Making Katrina Refugees Ill*, THE NATION, Feb. 26, 2007, at 3, *available at* http://www.alternet.org/story/48004/.

45. *Id.* FEMA awarded Gulf Stream Coach, Inc. contracts worth more than $500 million for the production of 50,000 trailers within weeks of Hurricane Katrina. The CDC found that Gulf Stream, Forest River, Keystone and Pilgrim (all manufacturers of travel trailers) had manufactured significant percentages of trailers with formaldehyde levels above one-hundred parts per billion, "the level at which . . . acute adverse health effects can be experienced." COMM. ON OVERSIGHT & GOV'T REFORM, U.S. HOUSE OF REPRESENTATIVES, REPORT ON TRAILER MANUFACTURERS AND ELEVATED FORMALDEHYDE LEVELS 1-2 (2008), *available at* http://oversight.house.gov/documents/20080709103125.pdf.

46. Leslie Eaton, *Agency Is Under Pressure to Develop Disaster Housing*, N.Y. TIMES, Apr. 13, 2008, at 18, *available at* http://www.nytimes.com/2008/04/13/us/13trailers.html?_r=1&oref=.

47. Rhoda Amon, *A Look Inside FEMA Housing*, NEWSDAY, July 10, 2008, at A28 ("Estimates range[d] from 15,000 to 37,000."); s*ee also* Maria Recio, *House Blasts FEMA, HUD, Lawmakers Furious About Storm Victims' Housing*, SUN HERALD, June 5, 2008, at

These camper-like units, which cost about $15,000 each, "are fabricated from composite wood, particle board and other materials that emit formaldehyde."[48] The amounts emitted are dangerous. Notably, more than 0.1 parts per million of formaldehyde in air can cause eye, lung and nose irritation,[49] and the National Toxicology Program has determined that formaldehyde may be "reasonably anticipated to be a carcinogen."[50]

The Sierra Club conducted air quality tests on forty-four FEMA trailers between April and July, 2006 finding "formaldehyde concentrations as high as 0.34 parts per million."[51] According to one study of the chemical's workplace effects, that formaldehyde level is almost equal to what a professional embalmer would be exposed to on the job.[52] Among the Katrina evacuees who have called the trailers home for the past three years, there are increased reports

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A2, (estimating that as many as 22,000 Katrina victims were still living in trailers at the time).

48. Spake, *supra* note 44. Emitted from pressed wood and particle board products, formaldehyde has a long half life, remaining in indoor air in significant concentrations long after a structure is considered "new." *See* COMING ALONGSIDE, FEMA TRAILER LIVING AND GOOD HEALTH: RECIPES FOR SUCCESS IN THE POST-KATRINA WORLD 2 (2007). "Formaldehyde is used in hundreds of products, but particularly in the resins used to bond laminated wood products and to bind wood chips in particleboard." *FEMA's Toxic Trailers: Hearing Before the H. Comm. on Oversight & Government Reform*, 110th Cong. 112-13 (2007) [hereinafter *FEMA's Toxic Trailers Hearing*] (remarks of Scott Needle, M.D., on behalf of American Academy of Pediatrics). The American Academy of Pediatrics, concerned about the special vulnerability of children to formaldehyde exposure, urged FEMA to study the children's exposure levels and steps needed to improve the health of exposed children. *Id.* at 4-5. The Academy also urged FEMA to set standards for formaldehyde levels in trailers purchased by the agency that exceed the current scientific standards to take into account the special exposure of children. *Id.*

49. *See* Healthy Child, Healthy World, Chemical Encyclopedia, http://healthychild.org/issues/chemical-pop/formaldehyde (last visited June 13, 2009). ("Formaldehyde is a strong smelling, volatile organic compound (VOC) and common indoor air pollutant. . . . [It] is normally present in air at low levels, usually less than 0.03 parts per million."). A survey of eighty-four funeral directors and apprentices with occupational exposure to formaldehyde had the following results: embalmers reported with more frequency than control subjects symptoms of irritation of the eyes, upper respiratory tract, and skin. U.S. DEP'T OF HEALTH & HUMAN SERVS., AN UPDATE & REVISION OF AGENCY FOR TOXIC SUBSTANCES & DISEASE REGISTRY'S FEBRUARY 2007 HEALTH CONSULTATION: FORMALDEHYDE SAMPLING OF FEMA TEMPORARY-HOUSING TRAILERS 12 (2007) [hereinafter FORMALDEHYDE SAMPLING], *available at* http://www.atsdr.cdc.gov/substances/formaldehyde/pdfs/revised_formaldehyde_report_1007.pdf. Chronic bronchitis, shortness of breath and nasal irritation were also reported at a higher level. *Id.*

50. FORMALDEHYDE SAMPLING, *supra* note 49, at 13. "While the U.S. Environmental Protection Agency has ranked formaldehyde a 'probable' human carcinogen, the World Health Organization recently upgraded its classification to 'known' concluding that formaldehyde is 'carcinogenic to humans.' " Healthy Child, Healthy World, *supra* note 49.

51. Mike Brunker, Are FEMA Trailers 'Toxic Tin Cans'? Private Testing Finds High Levels of Formaldehyde; Residents Report Illnesses, MSNBC, July 25, 2006, http://www.msnbc.com/id/14011193; *see also* SIERRA CLUB, TOXIC TRAILERS: TESTS REVEAL HIGH FORMALDEHYDE LEVELS IN FEMA TRAILERS (2008), http://www.sierraclub.org/gulfcoast/downloads/formaldehyde_test.pdf.

52. Brunker, *supra* note 51. OSHA limits the formaldehyde to which workers can be exposed over an eight hour day to 0.75 parts per million. 29 C.F.R. § 1910.1048 (c)(1) (2005).

of wheezing, coughing, headaches, lethargy, sinus infections, and asthma attacks.[53]

According to the U.S. Department of Health and Human Services Agency for Toxic Substances and Disease Registry, an air quality analysis of ninety-six unoccupied trailers, similar to those distributed by FEMA to house people displaced by Hurricane Katrina, revealed that formaldehyde levels in those trailers averaged 1.04 parts per million.[54] Those levels ranged between 0.01 parts per million and 3.66 parts per million.[55] The report also indicated a positive correlation between room temperature and formaldehyde levels.[56] This is especially problematic for the warm, humid Gulf Coast.[57]

Currently, no federal standards are in place to limit formaldehyde in building materials used in travel trailers and recreational vehicles.[58] However, the Department of Housing and Urban Development (HUD) has set standards to limit the formaldehyde in manufactured housing and mobile homes.[59] The limit for plywood formaldehyde emission is 0.2 parts per million.[60] The HUD limit for particleboard materials is 0.3 parts per million.[61] Surprisingly, these standards still do not apply to travel trailers used as so-called "temporary" homes for emergency relief.[62] FEMA has since set its own standard limiting formaldehyde emission to sixteen parts per billion, but Congress has not yet taken a stance on what the appropriate standards for materials in travel trailers should be.[63] Rather than imposing minimum production standards on tra-

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53. *See* Spake, *supra* note 44.

54. FORMALDEHYDE SAMPLING, *supra* note 49, at 13-15. A health consultation represents a response to a "specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous materials." *Id.* at 2. In July 2006, FEMA asked the Agency for Toxic Substances and Disease Registry (ATSDR) to evaluate air sampling data collected in the trailers by the EPA. *Id.* at 4. Though the findings are damning, the ATSDR relayed from the onset that the results should not be "generalized to all FEMA trailers" or "used to predict the health consequences of living in those trailers." *Id.* at 5.

55. *Id.* at 15. The second part of the report examined whether ventilation in the trailers—either with open windows or air conditioning—was effective in lowering the levels of formaldehyde; the Agency found that both interventions lowered formaldehyde levels. *Id.* at 15-16.

56. *Id.* at 16.

57. City Rating.com, Average Temperature, http://www.cityrating.com/cityweather.asp?city=New+Orleans (last visited June 13, 2009) (reporting the average temperature for New Orleans as 61.8 degrees Fahrenheit and noting humidity reaches over ninety percent in the summer months).

58. Spake, *supra* note 44.

59. 24 C.F.R. § 3280.

60. 24 C.F.R. § 3280.308(a)(1) (2005).

61. *Id.* § 3280.308(a)(2).

62. Spake, *supra* note 44.

63. Mike Brunker, Congress Names Names in FEMA Trailer Probe: House Democrats Say Manufacturers Knew of High Formaldehyde Levels, MSNBC, July 9, 2008,

vel trailer manufacturers who stood to make billions of dollars on the sale of these homes, FEMA provided virtually no oversight to the process.[64] The agency relied upon the goodwill and fortune of the trailer home manufacturers, who were expected to self-regulate or respond to safety mandates that no one in the federal government had bothered to mention.[65] Worse, FEMA continued to defend its use of the trailers despite findings by the Sierra Club and the Occupational Safety and Health Administration in November 2005.[66]

In July 2007, the Committee on Oversight and Government Reform for the U.S. House of Representatives held an oversight hearing on FEMA's failure to respond adequately to reports of dangerous formaldehyde in the trailers.[67] Paul Stewart, a Hurricane Katrina survivor, gave the following testimony as part of his prepared statement at the hearings:

> The first night we stayed in the camper my wife woke several times with difficulty breathing and a runny nose. She got up once and turned on the lights to discover that her runny nose was in fact, a bloody nose. This scared the hell out of us; we didn't know what was causing her bloody nose, or breathing issues and I was beginning to show symptoms of my own, which included, burring[sic] eyes, scratchy throat, coughing, and runny nose.
>
> The symptoms continued for weeks and then months and finally we thought about just leaving, but at that point we were stuck because we were still wrestling with insurance issues, the Army Corps of Engineers, FEMA, our lot was still strewn with debris, money was in short supply, and I was trying to hold on to my job. We just couldn't afford to move.[68]

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http://www.msnbc.msn.com/id/25607578/from/ET.

64. *FEMA's Toxic Trailers Hearing*, *supra* note 48, at 206 (remarks of R. David Paulison, Administrator, Federal Emergency Management Agency) ("Given decades of successful history of using mobile homes and smaller travel trailers to provide temporary housing, we had no reason to anticipate problems with the habitability of travel trailer units.").

65. Gulf Stream Coach, which collected more than $500 million and received the bulk of FEMA trailer contracts after Katrina, maintains it should not be responsible for formaldehyde levels in the trailers because no standards existed when the trailers were made and distributed. Brunker, *supra* note 63.

66. Paul Stewart, Remarks Before the Government Reform and Oversight Committee, U.S. House of Representatives (July 19, 2007), *available at* http://www.toxic-trailer.com/govinvdocs/20070719_6.pdf.

67. *FEMA's Toxic Trailers Hearing*, *supra* note 48, at 123-29 (including testimony from, among others, three displaced Gulf Coast hurricane victims and an industrial hygienist who testified that the limited testing performed by the Sierra Club revealed unacceptably high levels of formaldehyde).

68. *Id.* at 134-35 (prepared remarks of Paul Stewart).

The testimony offered at the hearing was shocking, but consistent with the theme of governmental neglect pervasive in the Katrina narrative. The testimony revealed that monitored levels of formaldehyde were seventy-five times higher than the recommended limit set by the National Institute of Occupational Safety and Health.[69] In the face of this information, FEMA released a public statement discounting any risk associated with formaldehyde exposure.[70] In its early stages, the agency tested only one occupied trailer to determine its formaldehyde levels.[71] Furthermore, FEMA's Office of General Counsel denied repeated requests made by some FEMA staff members to conduct testing.[72] A House Science subcommittee accused FEMA in January 2008 of manipulating scientific research on the formaldehyde issue to minimize the potential danger faced by the tens of thousands of survivors.[73] Rather than respond quickly to a probable cancer risk, however, FEMA officials planned to conceal information with hopes of avoiding any possible liability.

If the toxins in the FEMA-issued trailers create profound physiological risks for hurricane survivors, the social and psychological ills that plague those same people are even more pronounced. The FEMA-ville communities—the enclaves of trailers set apart to provide housing to Katrina survivors—fuel the alienation that serves as the bedrock for a host of other problems.

"[H]omelessness has doubled in New Orleans, and . . . suicide attempts among residents of Mississippi FEMA camps have [increased] seventy-nine times over pre-disaster levels."[74] Women are especially vulnerable to sexual assault and domestic violence at FEMA camp sites.[75] Additionally, children face special social and psychological hurdles and are more vulnerable to physical health risks presented by chronic exposure to formaldehyde.[76] Marked

69. *Id.* at 155 (statement by Chairman and Rep. Henry A. Waxman).

70. *Id.*

71. *Id.* at 2.

72. *Id.* at 108, 239 (revealing FEMA's Office of General Counsel shunned testing because it would compel FEMA to take curative measures, noting that testing should be avoided because "should [the results] indicate some problem, the clock is running on our duty to respond to them"); *see also* Elizabeth Schulte, Still Left Behind: Katrina's Forgotten Refugees, Counterpunch, Sept. 5, 2007, http://www.counterpunch.org/schulte09052007.html. (describing the conduct of FEMA officials who "did their best to sweep their complaints under the rug").

73. *Lawmakers Fault FEMA on Trailers*, WASH. POST, Jan. 29, 2008, at A3.

74. Kromm, *supra* note 42.

75. Peggy Simpson, Women's Media Center Katrina Campaign: New Study Explores the Aftermath for Women, July 10, 2007, http://www.ms.foundation.org/wmspage.cfm?parm1=475 (mentioning a report by the Institute for Women's Policy Research indicating that women were more "vulnerable to sexual assault and domestic violence" following the storm).

76. Agency for Toxic Substances & Disease Registry, Dep't of Health & Human Servs., Medical Management Guidelines for Formaldehyde, http://www.atsdr.cdc.gov/MHMI/mmg111.html#bookmark02 (last visited June 13, 2009) (noting one of the reasons for child-

increases in psychological displacement and serious mental health issues are also prevalent among FEMA trailer residents.[77] Furthermore, the physical displacement of Hurricane Katrina survivors no doubt fuels their sense of psychological displacement. Already set apart by race and poverty, many survivors have their "otherness" confirmed through government-sponsored exile.[78] The pervasive lack of open space and green space—for residents to talk and play—has contributed to the psycho-social ills that besiege Katrina survivors.[79]

As bad as life in the FEMA trailers has been, things may get worse as FEMA implements plans to force thousands of families in New Orleans, and across Louisiana, to leave their trailers.[80] Since November 2007, FEMA has been working toward closing all of the trailer camps it runs for Hurricane Katrina survivors. [81] However, the push for relocation did not affect people living in FEMA-issued trailers in private trailers parks and those living in trailers in front of their hurricane-damaged homes.[82] Although FEMA failed to meet the original May 2008 deadline for trailer closure, the federal government recently confirmed that many of the FEMA trailers were contaminated by formaldehyde and renewed its efforts to

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ren's heightened risk of repeated formaldehyde exposure is the longer latency period of the chemical in children).

77. Interview by Dr. Lynn Lawry with Madeline Brand, National Public Radio (NPR), on NPR (Aug. 23, 2006), *available at* http://nl.newsbank.com/nl-search/we/Archives?p_action=doc&p_doc. The broadcast notes a study that found people living in FEMA trailers had depression rates of seven times the national average and suicide rates of fifteen times the state's norms. *Id.*

78. *See* Lolita Buckner Inniss, *A Domestic Right of Return?: Race, Rights, and Residency in New Orleans in the Aftermath of Hurricane Katrina*, 27 B.C. THIRD WORLD L.J. 325, 351 (2007) (discussing exile and assimilation as the primary means of addressing "otherness" in the context of Katrina survivors).

79. There is also something to be said for the series of events that led to the reliance on the FEMA trailers in the first place. The quagmire that envelops the Katrina survivors who live in FEMA trailers demonstrates too well the domino effect of compounded harms. Displacement can be traced to a host of social ills including public housing policies, environmental threats, and poverty.

80. Leslie Eaton, *FEMA Sets Date for Closing Katrina Trailer Camps*, N.Y. TIMES, Nov. 29, 2007, at A1, *available at* http://www.nytimes.com/2007/11/29/us/29trailer.htm.

81. *Id.* Most of the people living in FEMA trailers at that time—many of which were elderly, disable, or living alone—were jammed on playgrounds, church property, and parking lots around Louisiana. *Id.* Notably, a large of these people were renters before the storm. *Id.* In May 2009, FEMA renewed its call to take away trailers from residents in need of temporary housing. *See* Shaila Dewan, *Ready or Not, Katrina Victims Are Losing Temporary Housing.* N.Y. TIMES, May 8, 2009, at A1.

82. *Id.* Housing advocates for Katrina survivors say that the FEMA solution to the trailer eviction—providing listings of available rentals and rental assistance—is unable to meet the housing needs in the market crisis. Associated Press, FEMA to Close 13 Post-Katrina Trailer Parks, USA Today, Nov. 29, 2007, http://www.usatoday.com/news/nation/2007-11-29-fema-trailers_N.htm [hereinafter FEMA to Close]. In response, FEMA officials defended the move as a step in obtaining a permanent housing shortage for survivors. *Id.* "I'm not sure that anyone really thought of these trailers as being their permanent home; I hope not," said Ronnie Simpson, a FEMA spokesman. *Id.*

move Gulf Coast hurricane victims out of the trailers.[83] However, even as Hurricane Gustav pressed toward New Orleans in August 2008, survivors in FEMA trailers scrambled to find shelter.[84]

Moreover, the hurricane survivors who have been plagued with physical illness because of the now-documented formaldehyde emissions are not entitled to health benefits to cover their medical costs. Emergency room treatments, new medical expenses, and chronic complications from the exposure are not covered by the government.[85] For already survivors cash-strapped, additional medical fees can be catastrophic.[86]

As one activist noted, "This is not what the citizens of the Gulf Coast and our country envisioned when, in September, 2005, President Bush pledged from Jackson Square in New Orleans that our country would 'do what it takes, and stay as long as it takes' to rebuild the Gulf Coast."[87]

The regulatory gaps noted above demonstrate the inability of the federal government to respond effectively to emergency housing needs. Furthermore, efforts by FEMA to block a prompt and effective investigation of the reports evince its willful abandonment of responsibilities. Even the "Centers for Disease Control and Prevention—generally considered a repository of nonpartisan scientific expertise—was 'complicit in giving FEMA precisely what they wanted' to suppress the adverse health effects."[88] What are the chances for meaningful relief for disaster victims when the

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83. Leslie Eaton, *FEMA Vows New Effort on Trailers Posing Risk,* N.Y. TIMES, Feb. 15, 2008, at A12.

84. As Hurricane Gustav approached, New Orleans Mayor Ray Nagin expressed concern that the FEMA trailers would be swept up and tossed around in the storm. Mike Carney, Nagin Concerned FEMA Trailers 'Will Become Projectiles,' USA Today, Aug. 31, 2008, http://blogs.usatoday.com/ondeadline/2008/08/nagin-concerned.html. The push to relocate people from toxic trailers is, unfortunately, at odds with the harsh reality that affordable, alternative housing is not being offered to displaced people. *See* Eaton, *supra* note 83 (citing advocates for families who were worried that the sufficient appropriate housing was not established for displaced trailer residents).

85. Even after finally confirming in February 2008 that many trailers were contaminated with high levels of formaldehyde, FEMA did not offer any financial assistance to trailer residents to cover related medical expenses. Eaton, *supra* note 82.

86. *See* William P. Quigley, *Thirteen Ways of Looking at Katrina*: *Human and Civil Rights Left Behind Again*, 81 TUL. L. REV. 955, 960 (2007) (noting that a survey of Katrina survivors in a Houston shelter determined that seventy-two percent of them were not insured).

87. Kromm, *supra* note 42; *see also* George W. Bush, President of the United States, Address to the Nation at Jackson Square in New Orleans, Louisiana (Sept. 15, 2005), *available at* http://www.usa-patriotism.com/speeches/gwb_katrina915.htm). In his speech to the nation, the President also invoked the images of Jamestown winters, Chicago after the great fire, and the San Francisco earthquake to demonstrate the will of the people to bounce back from nature's wrath. *Id.* ("Americans have never left our destiny to the whims of nature—and we will not start now."). Ironically, the unnatural disasters associated with the storm have proven more difficult to overcome.

88. *Lawmakers Fault FEMA on Trailers*, *supra* note 73.

agencies are politicized?[89] Clearly, a more predictable, objective solution is needed to address some of the difficulties that continue to haunt Katrina survivors.

IV. LITIGATION FAILURES: THE INEFFICACIES OF THE REMEDIAL RESPONSE

Since Hurricane Katrina, one constant that has emerged is the inability of remedial efforts to respond effectively to the challenges presented. As more recent litigation efforts make clear, the judiciary is not equipped to remedy the problem of response. To date, attempts to address the disaster relief problem through the courts have proven time consuming, exhausting, and ultimately unsuccessful. Litigation regarding public housing in New Orleans demonstrates the inability of the courts to respond to the government harms.[90] Finally, the recent failure of litigation connected to the levees failures proves how intractable government immunity can be.[91] The litigation problems connected to the toxicity levels in trailers seems to be just as riddled with difficulties in obtaining meaningful results.

Plaintiffs affected by formaldehyde levels in FEMA trailers filed a class-action lawsuit in Louisiana naming the federal government and trailer manufacturers as defendants.[92] The suit also

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89. The other obvious issue—but beyond the scope of this article—is how the recovery efforts went so wrong in the first place. Some commentators place the blame on the failure of the government to anticipate and meet the needs for adequate emergency housing. *See* Eaton, *supra* note 46 (noting that almost three years after Hurricane Katrina, FEMA still had not responded to Congress's call to develop shelter for victims of natural disasters). Many, however, point to plain old capitalism as the driving force behind the move. "In New Orleans . . . no opportunity for profit was left untapped." KLEIN, *supra* note 13, at 411. Another theory asserts that the biopolitics of disposability may play a role in the government's neglect that borders on abuse. *See* Henry Giroux, *Reading Hurricane Katrina: Race, Class, and the Biopolitics of Disposability*, C. LITERATURE, Summer 2006, at 171, 172-196 (arguing that because Hurricane Katrina disproportionately impacted the poor and people of color, the systemic hostilities to such groups played themselves out in the willful neglect and mistreatment of the survivors); *see also* David D. Troutt, *Katrina's Window: Localism Resegregation, and Equitable Regionalism*, 55 BUFF. L. REV. 1109, 1159-66 (2008) (identifying localism as the source of the persistent racial and economic fragmentation that cripples New Orleans).

90. The issue of public housing in New Orleans has been particularly volatile, triggering lawsuits, intense charges, and disappointment. Adam Nossiter, *In New Orleans, Some Hope of Taking Back the Projects,* N.Y. TIMES, Dec. 26, 2006, at A22. The fight over the future of public housing has drawn some heavy-hitters into the ring as shelter for twenty thousand people was at stake, luring bureaucrats, politicians, developers, lawyers, and accidental activists eager to return home. *Id.*; *see also* William P. Quigley, *Obstacle to Opportunity: Housing that Working and Poor People Can Afford in New Orleans Since Katrina*, 42 WAKE FOREST L. REV. 393, 399-408 (2007) (addressing the issue of affordable housing post-Katrina).

91. Cain Burdeau & Michael Kunzelman, *Louisiana: Katrina Flooding Lawsuit Dismissed*, TULSA WORLD, Jan. 31, 2008, at A6 (discussing a recently dismissed lawsuit over the levee breaches following Katrina in which a federal court cited the Flood Control Act of 1928, which shields the government from lawsuits when flood control projects such as levees break).

92. Complaint, Hillard v. United States, 2007 WL 647292 (E.D. La. Feb. 28, 2007)

names several travel trailer vendors[93] and alleges violation of the Stafford Act,[94] negligence, strict liability in tort, and breaches of implied and express warranties.[95] The plaintiffs are seeking to enjoin the defendants from providing FEMA housing, which purportedly violates federal regulations.[96] They also seek payments for alternative housing pending completion of mandatory testing for suitability; remediation of any defects in housing to bring the formaldehyde emissions to acceptable levels; actual, consequential, and punitive damages; medical testing and monitoring; and attorney's fees.[97] Based on the barriers confronting plaintiffs in past storm-related litigation, the plaintiffs' chances for success in this case appear remote. FEMA has already requested immunity from the lawsuits, moving to be dismissed from the cases.[98] Moreover, even if the court ultimately awards damages, litigation will take years to wind its way through the system. An immediate, dependable alternative is needed now.

V. IMPROVING THE ODDS: ESTABLISHING A TOXIC TRAILER FUND

To date, courts have not been able to meet the needs of Katrina survivors. Furthermore, legislation has also been entirely unable to meet the challenges presented by Katrina.[99] However, the critical review of the September 11th Victim Compensation Fund ("9/11 Fund") serves as a compelling guide for crafting a solution for the trailer survivors. Specifically, the factors that led to the creation of a 9/11 Fund militate in favor of a compensation fund to

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(No. 06-2576), 2006 WL 1746461.

93. *Id.* ¶ 5 (stating that the federal government was "flummoxed" when hundreds of thousands of its taxpayers were left with uninhabitable homes following Hurricanes Katrina and Rita).

94. The Robert T. Stafford Disaster Relief and Emergency Assistance Act, also known as the Disaster Relief Act of 1974, provides federal assistance to victims of disasters. 42 U.S.C. §§ 5121-5207 (2006). The Act makes FEMA the agency responsible for directing the coordination of disaster relief assistance. *See* 14 A.L.R. Fed. 2d 173 (2006).

95. Complaint, *supra* note 92.

96. *Id.* ¶ 64.

97. *Id.*

98. Associated Press, *FEMA Seeks Immunity from Suits over Trailer Fumes*, USA Today, July 22, 2008, http://www.usatoday.com/news/washington/2008-07-22-fema-immunity_n.htm?loc=interstitialskip (describing FEMA's arguments that the government should only be liable if it supervised day-to-day activities of its contractors and that a review of legislative history demonstrated that Congress intended to bar claims arising from disaster relief).

99. *See*, *e.g.*, Hurricane Katrina Recovery, Reclamation, Restoration, Reconstruction and Reunion Act of 2005, H.R. 41977, 109th Congress (2005). In fact, some legislation has erected roadblocks, rather than reparative measures to address housing needs following Katrina. *See* Eloisa C. Rodriguez-Dod & Olympia Duhart, *Evaluating Katrina: A Snapshot of Renters' Rights Following Disasters*, 31 NOVA L. REV. 467, 469-74 (discussing the consanguinity statute passed by St. Bernard Parish following the storm and limiting those eligible to move into rental housing in the community).

assist a special class of Katrina survivors—those facing long-term medical complications caused by government-issued toxic trailers.

The lessons learned from the horrific terror attacks of September 11th[100] should not only inform our response to terrorism but should also inform our view of government's role in intervention. Just eleven days after the terrorists' attacks on commercial airlines that led to deaths at the World Trade Center, the Pentagon, and a crash at Shanksville, Pennsylvania, President Bush signed legislation aimed at preserving the viability of the air transportation industry.[101] Since the creation of the 9/11 Fund, scholars and politicians have questioned whether the legislation signaled a revolution in tort-type compensation schemes or the advent of welfare-relief measures.[102] On all accounts, the relief provided by the fund was both compassionate and compelling. The fund provided money on a no-fault basis to people who would forego tort remedies against airlines and other would-be defendants—all payable from the U.S. Treasury.[103] Though there are obvious differences between the circumstances that led to the tragedies of 9/11 and those that led to Hurricane Katrina, the relief offered by the 9/11 Fund provides a workable framework for rethinking and reconfiguring the proper role of government intervention following catastrophes.

According to the Final Report of The Special Master for the September 11th Victim Compensation Fund of 2001, ninety-seven percent of the deceased victims' families, who might otherwise have pursued lawsuits, received compensation through the fund.[104] More than $7.049 billion was distributed to survivors of the September 11th attacks.[105] The average award for families of victims exceeded $2 million, and the average award for injured victims was nearly $400,000.[106]

In defense of the creation of the fund, the Special Master overseeing the fund distribution advanced the countervailing public policies served by the fund. The following factors were implicitly considered in the distribution of the 9/11 Fund: (1) the national perspective to a unique tragedy; (2) the uniqueness of the circumstances; (3) the need to meet the physical and psychological need for

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100. On September 11, 2001, the United States was victim to terrorist attacks that killed almost three thousand people. Joseph P. Fried, *The Grim Accounting of Sept. 11 Continues,* N.Y. TIMES, Jan. 16, 2005, at 29.

101. KENNETH R. FEINBERG ET AL., DEP'T OF JUSTICE, FINAL REPORT OF THE SPECIAL MASTER FOR THE SEPTEMBER 11TH VICTIM COMPENSATION FUND OF 2001, at 3 (2004), *available at* http://www.usdoj/gov/final_report.pdf.

102. Robert M. Ackerman, *The September 11th Victim Compensation Fund: An Effective Administrative Response to National Tragedy*, 10 HARV. NEGOT. L. REV. 135, 148 (2005).

103. *Id.* at 137.

104. FEINBERG ET AL., *supra* note 101, at 80.

105. *Id.*

106. *Id.* at 1.

closure; and (4) the benefit of a prompt and predictable alternative to litigation.[107] These same factors should control as we determine that a FEMA fund is needed to help storm survivors sickened by government-issued toxic trailers.

A. National Perspective to a Historic Tragedy

Framing the entire policy argument is the perspective of the nation to a historic tragedy. Citing the profound and universal response to the day's events, the Special Master's report depicted the September 11 tragedy as a "unique historical event, similar in kind to the American Civil war, Pearl Harbor and the assassination of President Kennedy."[108]

Hurricane Katrina, the levee breach, and the ensuing flood in New Orleans and surrounding regions also constitutes a grave and historic national tragedy. Media coverage of Katrina demonstrates the extent to which the storm and its aftermath dominated the national spotlight. Indeed, a Pew Research Center's News Interest Index rated Katrina as one of the most watched news events of the past quarter century.[109] The high media exposure most likely explains the recalibration of public opinions regarding federal disaster relief.[110] Not surprisingly, Americans surveyed following the storm reported "low confidence in government responsiveness."[111] Almost seven in ten of those surveyed said that the federal government did not consider preparedness a top priority.[112] Approximately eight in ten of those surveyed blamed federal government

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107. *See* FEINBERG ET AL., *supra* note 101. In his report, Special Master Kenneth R. Feinberg expressly rejected the establishment of a similar act modeled after the Sept. 11 Fund. *Id.* at 83 (arguing that absent an attack like September 11th, no program should be established to deal with another terrorist attack).

108. *Id.* at 80.

109. PAUL C. LIGHT, CTR. FOR CATASTROPHE PREPAREDNESS AND RESPONSE, THE KATRINA EFFECT ON AMERICAN PREPAREDNESS 1 (2008), *available at* https://www.riskinstitute.org/peri/images/file/postkatrina_preparedness.pdf. According to the Center, seventy percent of Americans were closely following Katrina, placing it closely behind the Challenger accident and the September 11th attacks. *Id.* Notwithstanding the significant media coverage dedicated to Hurricane Katrina and its aftermath, some community activists are working to counter the relatively low media attention given to the toxic trailers. Derrick Evans, a school teacher and Mississippi native who heads the Gulf Coast Peoples' Movement for Full and Fair Recovery, has been driving his thirty-two foot FEMA trailer—dubbed the KatrinaRitaVille Express—around the country to raise awareness about the toxic trailers and failed recovery efforts in the Gulf. Amon, *supra* note 47.

110. A survey of Americans pre- and post-Katrina makes the point. The Robert F. Wagner School of Public Service and the University's Center for Catastrophe Preparedness and Response (CCPR) surveyed 1,506 Americans four weeks before Katrina hit and 1,004 Americans five weeks after the storm. LIGHT, *supra* note 109, at 2.

111. *Id.* at 4. ("The federal government was rated as largely unprepared for three specific scenarios: terrorist bombings, hurricanes and floods, and a flu epidemic.")

112. *Id.* at 5.

failures on disorganization and mismanagement.[113] The national perception of government failures is not only warranted but cemented by the federal government's refusal to implement curative measures to protect the people it put in harm's way.

B. Uniqueness of the Circumstances

A major terrorist attack on American soil stunned people around the globe.[114] One autumn morning, more than 3,000 people died as terrorists left an indelible mark on Americans everywhere.[115] The events of 9/11 were tragic, but not unprecedented. Terrorist attacks also occurred on American soil in the twentieth century.[116] However, the enormity of the loss of life suffered in a single incident and the unimaginable circumstances surrounding the attack convinced the 9/11 fund representatives that the circumstances of September 11, 2001 were different.[117]

Similarly, the uniqueness of the Hurricane Katrina storm and its aftermath created special circumstances for toxic trailer residents. While hurricanes are commonplace in New Orleans,[118] the gravity of the storm, combined with the ensuing flooding caused by the levee breach, was most unusual.[119] The key element in the drowning of New Orleans was not a natural disaster; rather it was the levee failures bred from bad engineering and misplaced priorities that sank the city.[120]

Moreover, as was true of the 9/11 Fund, a relatively small class of people would benefit from the proposed Toxic Trailer fund, as long as that beneficiary group is narrowly defined to include those individuals who were (1) affected by Hurricane Katrina,[121] (2)

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113. *Id.*

114. *See* DANIEL GARDNER, THE SCIENCE OF FEAR 246-47 (2008).

115. Fried, *supra* note 100.

116. The Oklahoma City Bombing took place in 1995. GARDNER, *supra* note 114, at 260.

117. "What happened in September 11, 2001 was—for most of us—as startling and incomprehensible as the appearance of a second moon in the sky." GARDNER, *supra* note 114, at 246.

118. Several storms routinely move through the Southeast region of the United States during the Atlantic "hurricane season," which is June 1 through November 30. Tropical Cyclone Climatology, National Weather Service, http://www.nhc.noaa.gov/pastprofile.shtml (last visited June 13, 2009).

119. In addition to the loss of human life, the level of physical destruction in Hurricane Katrina was unprecedented. It was easily the most costly natural disaster in U.S. history as direct damage is estimated to be around $80 billion. GARDNER, *supra* note 114, at 260. Insured losses are cited at $41.1 billion. Prada, *supra* note 14.

120. Michael Grunwald, *The Threatening Storm*, TIME, Aug. 13, 2007, at 28.

121. Survivors of Hurricane Rita, who also received FEMA trailers after surviving a hurricane, would be similarly situated and subject to the same relief. *See* FEMA Accused of Twisting Science in Report on Trailer Danger, CNN, Jan. 29, 2008, http://www.cnn.com/2008/POLITICS/01/29/fema.trailers/index.html (noting the 150,000 households who have lived in FEMA trailers at some point since Hurricane Katrina and Hurricane Rita). While

moved into temporary housing by FEMA, (3) exposed to formaldehyde in their trailers, and (4) suffered injury or death.[122] Since one of the 9/11 factors is limiting relief to a discrete class of people who are uniquely situated,[123] the Toxic Trailer Fund would satisfy that criterion. Fairness demands that innocent victims of natural disaster compounded by government mistreatment be offered financial support to help pay for the inevitable medical complications ahead.[124]

C. The Physical and Psychological Needs for Closure

The need for closure and a chance to move toward renewal play a central role in the consideration of relief.[125] The physical and psychological wounds of both 9/11 and Katrina will be extremely difficult to mend. First, the scope of the terrorist attacks of 9/11 made the horror almost insurmountable.[126] Additionally, the televised attacks were so horrific "it was as if we had watched everything through the living-room window."[127] In addition to the physical and psychological tests facing people near the explosions, the vivid (and sometimes live) images of the disaster on television had the ability to psychologically affect people far removed from the scene.[128]

The same traits apply to the Katrina victims. As observed by pundits, politicians, and public intellectuals, Katrina and its aftermath created a nearly endless source of tension and abandonment in the public eye.[129] For those personally impacted by Katri-

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Katrina survivors are the topic of this paper, the proposed Toxic Trailer Fund would be available to anyone who qualifies under the enumerated factors and has suffered medical complications due to tainted trailers distributed by the government. This would obviously apply to Hurricane Rita survivors struggling with the same toxic trailer troubles. *See* Editorial, Our view on Disaster Relief: Toxic Trailers for Hurricane Victims? Heckuva job, FEMA, USA Today, Aug. 2, 2007, http://blogs.usatoday.com/oped/2007/08/post-2.html.

122. As an analogue, the 9/11 Victim Compensation Fund is limited to individuals who were present at the crash site and suffered physical injury or death. Air Transportation Safety and System Stabilization Act, Pub. L. No. 107-42, §§ 402(5), 402(7), 115 Stat. 230, 237 (2001) (codified as amended at 49 U.S.C. §§ 40101-40129 (2006)).

123. FEINBERG ET AL., *supra* note 101, at 79 (defending the Fund's exclusion of victims of other terrorist attacks in Oklahoma City and Kenya).

124. In his defense of the establishment of a Katrina Fund, Professor Mitch Crusto points out that "[i]t would be unconscionable and plainly inequitable to treat Katrina victims with less sympathy and financial support than the September 11 victims." Crusto, *supra* note 15, at 362.

125. FEINBERG ET AL., *supra* note 101, at 1.

126. The attacks of September 11, which saw terrorist takeovers of American commercial airplanes almost simultaneously in three locations, were the country's worst terrorist event.

127. GARDNER, *supra* note 114, at 247.

128. *Id.*

129. *See generally*, Troutt, *supra* note 16 (a provocative collection of essays about Hurricane Katrina written by black intellectuals); WHEN THE LEVEES BROKE (HBO Films 2006) (a documentary detailing the travails of Katrina survivors by preeminent black movie director Spike Lee).

na, the displacement was profound.[130] The storm physically displaced and dispersed survivors throughout the nation.[131] More than three years after the storm, Katrina survivors still suffer daily from its effects. With the long-term health side-effects caused by toxicity levels in their trailers, survivors will no doubt continue to deal with the physical difficulties left behind in the storm's wake.

For other people who were safe from the storm's physical reach, ubiquitous media coverage had another effect. Compelling television images of an American city under siege made the tragedy very real for people far removed geographically from the storm. The Congressional hearings held over the toxic trailers shocked even the most practiced cynics. Representative Henry Waxman, a California Democratic and Chairman of the House Oversight and Government Reform Committee, said the nearly five thousand pages of documents reviewed in connection with the toxic FEMA trailers exposed "an official policy of premeditated ignorance."[132]

It is no surprise, then, that the abandonment felt by many storm survivors following the hurricane is pervasive.[133] Even FEMA's efforts to accelerate trailers relocations have left survivors stranded and confused. Faced with a choice between a poisonous trailer and homelessness, many survivors do not know what to do.[134] Congress has exposed the distribution of the toxic trailers[135] and must now fashion an appropriate remedy to address the problem.[136] FEMA's delay in addressing the toxic trailers "spawned

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130. *See* Troutt, *supra* note 16, at 3-27.

131. *See* FREY, SINGER & PARK, *supra* note 9, at 22.

132. Gilbert Cruz, Grilling FEMA Over Its Toxic Trailers, TIME, July 19, 2007, http://www.time.com/time/nation/article/0,8599,1645312,00.html. Representative Waxman said FEMA's attitude was "sickening." *Id.* FEMA waited almost a year and a half after the first complaint and on the eve of a congressional hearing to act. *Id.* A federal toxicologist also testified at a House Science and Technology subcommittee hearing in April that the CDC, the Agency for Toxic Substances and Disease Registry, and FEMA manipulated scientific research to minimize the health risks facing residents of the trailers. Associated Press, Did CDC Stifle Toxic FEMA Trailer Alerts?, CBS News, Apr. 1, 2008, http://www.cbsnews.com/stories/2008/04/01/health/main3987944.shtml.

133. Before the last relocation push over the toxic trailers, FEMA's earlier mishandling of the relocation of Katrina survivors was likened to something out of a Kafka novel. Editorial, *Kafka and Katrina*, N.Y. TIMES, Dec. 2, 2006, at A14 (citing a federal judge's assessment of FEMA's aid application process as being so convoluted and confusing that it was unconstitutional).

134. Shaila Dewan, *Holdouts Test Aid's Limitations as FEMA Shuts a Trailer Park*, N.Y. TIMES, June 7, 2008, at A1 (detailing the official closing day of the Renaissance Village trailer park, which once housed about six hundred families displaced by Katrina). The transitional housing—rent vouchers—is sometimes out of reach for survivors because of technical ineligibilities. *Id.*

135. The revelation came after congressional hearings and reports by whistle-blowers that FEMA had suppressed evidence of the toxic trailers. Rick Jervis & Andrea Stone, *FEMA to Step up Trailer Relocations*, USA TODAY, Feb. 15, 2008, at 3A, *available at* http://www.usatoday.com/news/nation/2008-02-14-toxic-trailers_N.htm.

136. Like the paradigm adopted for the 9/11 Victim Fund, a special master should be appointed to craft appropriate distribution amounts for eligible recipients. *See* FARBER &

fresh outrage" over the government's completely failed response to Katrina.[137] After so many years, the survivors—as well as the public—deserve closure.

D. Prompt and Predictable Alternative to Litigation

The last feature of the 9/11 Fund that supports the creation of an analogous Toxic Trailer Fund is the absolute necessity of creating a prompt and predictable alternative to litigation. Although 9/11 victims had the option of pursuing tort damages against the airline industry, more than ninety-seven percent of the families voluntarily sought relief through the 9/11 Fund.[138] Special Master Kenneth Feinberg cites the extraordinary, proactive steps taken by the fund to keep claimants informed regarding their options.[139] For many victims, the transparency and predictability of the 9/11 Fund outweighed the risks, uncertainty, and delays connected to litigation.

The same calculus is likely to appeal to Katrina survivors moving out of toxic trailers but still facing long-term medical fees. To date, efforts to achieve justice for Katrina survivors in the courts have not been successful. Court challenges have presented substantial hurdles for litigants. First, sovereign immunity generally protects government agencies from liability.[140] Second, a stalled and fragmented court system has made it practically impossible for litigants to succeed in the courts.[141] And finally, litigants are likely to face serious difficulty in showing the nexus between formaldehyde-laced trailers and subsequent medical problems. For many of the Katrina survivors, the expense and expertise required to pursue such a claim in court is simply beyond reach.[142] Fur-

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CHEN, *supra* note 15, at 317-19. The U.S. Attorney General appointed Kenneth R. Feinberg as the Special Master for the 9/11 Victim Compensation Fund on Nov. 26, 2001. FEINBERG ET AL., *supra* note 101, at 4. The Special Master promulgated any necessary procedural and substantive rules and determined eligibility from the fund. *Id.* at 3.

137. Catharine Skipp, Toxic Trailers: Hurricane Katrina's Victims Cope with Yet Another Ordeal—Unhealthy Residences Provided by Uncle Sam, Newsweek, Feb. 16, 2008, http://www.newsweek.com/id/112828/output/print.

138. FEINBERG ET AL., *supra* note 101, at 1.

139. *Id.* For example, walk-in offices were opened in New York and Washington, D.C. just fourteen weeks after the tragedy, a toll-free information telephone line was established to answer questions, thirty-three separate mass mailings were made to potential claimants, a website was updated more than 830 times, and a non-adversarial hearing process was established. *Id.* at 5-15.

140. *See* Tarak Anada, *The Perfect Storm, an Imperfect Response, and a Sovereign Shield: Can Hurricane Katrina Victims Bring Negligence Claims Against the Government?* 35 PEPP. L. REV. 279, 305-10 (2008) (analyzing the difficulties Katrina claimants face in bringing negligence claims against the government).

141. *See* Douglas L. Colbert, *Professional Responsibility in Crisis*, 51 HOW. L.J. 677, 681 (2008).

142. Professor Crusto notes that "Katrina [survivors] . . . are not in a financial position to wait for possible assistance following protracted litigation." Crusto, *supra* note 15, at 362.

thermore, meeting the immediate physical needs of the recipients would likely mitigate the health risks that the formaldehyde exposure creates.

Like the 9/11 Fund recipients who were compensated for both economic and noneconomic harms,[143] the trailer fund recipients should be offered compensation for both economic and non-economic losses. The 9/11 Fund statutory definition of noneconomic losses included, but was not limited to, losses for physical and emotional pain, suffering, inconvenience, and loss of enjoyment of life.[144] Such an expansive definition of non-pecuniary losses will allow potential claimants under the Toxic Trailer Fund to receive full compensation for the massive scope of their losses.

The creation of a Toxic Trailer Fund is the best alternative to help compensate survivors for the losses caused by their exposure to toxic trailers.[145] It would also serve communitarian needs by offering relief for noneconomic harms that impact recipients of toxic trailers.[146]

VI. CRITICISMS AND RESPONSES

The opponents of a Toxic Trailer Fund are likely to raise several potential arguments. However, each of these concerns can be adequately addressed through a commitment to government accountability.[147]

The first counter-argument will most likely be premised on the notion that the government has no affirmative duty to provide for its citizens. Challengers will likely assert that since the federal Constitution creates no positive rights, there is no mandate for a government-sponsored recovery fund. Nevertheless, scholars and advocates have long challenged the presumption that American

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143. FEINBERG ET AL., *supra* note 101, at 4.

144. Air Transportation Safety and System Stabilization Act, Pub. L. No. 107-42, § 402(5), 115 Stat. 230, 237 (2001) (codified as amended at 49 U.S.C. §§ 40101-40129 (2006)). The statute prohibited the award of punitive damages. *Id.* § 405(b)(5).

145. One of the most common side effects of exposure to formaldehyde is worsened respiratory health. *See* Spake, *supra* note 44. The majority of 9/11 survivors who received payouts from the 9/11 Victim Compensation Fund were for asthma and other respiratory problems. FEINBERG ET AL., *supra* note 101, at 56. Almost fifty-two percent of the claims were these illnesses. *Id.* at 56.

146. Ackerman, *supra* note 102, at 142 (arguing that the September 11th Fund represents one way "the legal response to tragedy can reflect our compassion" by developing "a sense of shared history and construct community").

147. The existence of criticisms, even legitimate challenges to a trailer fund, should not foreclose the possibility of all government relief. Even the September 11th Victim Compensation Fund was not above criticism. *See*, *e.g.*, Elizabeth Berkowitz, *The Problematic Role of the Special Master: Undermining the Legitimacy of the September 11th Victim Compensation Fund,* 24 YALE L. & POL'Y REV. 1, 2 (2006) (criticizing the September 11th victim Compensation Fund of 2001).

citizens are not entitled to positive protection by its government.[148] Furthermore, an argument against affirmative duties also fails to recognize the special needs created by compounded harms.

One way to reconsider government responsibility in disaster relief is to strengthen legislation that imposes clear, affirmative duties on the federal government to respond. Absent a disturbance in the swell of constitutional jurisprudence that refuses to acknowledge any positive rights in the Fourteenth Amendment,[149] there must be a reconfiguration through legislative channels to honor the social contract.[150]

Toxic Trailer Fund opponents may also contend that the financial burden is too high on an already-strained government and that the floodgates will be open for a list of assistance funds to cover long-term medical fees associated with natural disasters. However, adherence to the 9/11 Fund factors in the analysis described above will restrict, rather than expand, the class of people to whom a relief fund would be available. A commitment to the factors that guided the 9/11 Fund will meet the needs of those uniquely situated while guarding against an open door for people with less egregious injuries.

Critics of the establishment of a Toxic Trailer Fund may also argue that people should be responsible for their own well-being. A quick survey following initial reports of the toxic trailers suggests that at least some people are tired of what they perceive as an endless litany of "government handouts." Yet good government contemplates a responsibility for others, especially those who are unable to protect themselves.[151] This value is a sentiment gaining momentum among both politicians[152] and the public,[153] especially

148. *See, e.g.*, Robin West, *Unenumerated Duties*, 9 U. PA. J. CONST. L. 221, 224 (2006) (challenging the Rehnquist's Court's limiting view of the 14th Amendment as ahistorical).

149. In *Deshaney v. Winnebago County Department of Social Services*, the United States Supreme Court held that the Due Process Clause of the Fourteenth Amendment creates no positive rights in the constitution. Deshaney v. Winnebago Dep't of Soc. Servs., 489 U.S. 189, 195 (1989). Such a limitation relieves the government of any affirmative duties to prevent due process violations and concomitantly limits the relief available to citizens harmed by government inaction. *See* Duhart, *supra* note 14, at 422. Ideally, in a post-Katrina, post-*Deshaney* world, the Supreme Court would reconfigure the limit on affirmative duties and act accordingly.

150. *See* Robin West, *Katrina, the Constitution, and the Legal Question Doctrine*, 81 CHI. KENT L. REV. 1127, 1170 (2006).

151. "We are more compassionate than a government that . . . sits on its hands while a major American city drowns before our eyes." President Barack Obama, Acceptance Speech at the Democratic National Convention (Aug. 28, 2008), *available at* http://www.nytimes.com/2008/08/28/us/politics/28text-obama.html?.

152. *See generally* Representative Keith Ellison, Address at the Midwestern People of Color Legal Scholarship Conference (May 30, 2008) (calling for a turn to the politics of generosity).

153. "Not only did our government fail to answer the call of its most vulnerable citizens during that fateful period; it still fails each and every day to rebuild, redeem and rescue those who are ignored because of their poverty, their race, their passage into old age." Walter Mosley, *Shouting Under Water*, THE NATION, Aug. 23, 2007, at 18; *see also* Editorial, *Tough Choices Ahead: Paying for Katrina Relief*, MIAMI HERALD, Sept. 25, 2005, at L4 (not-

in the wake of various government bailout programs during the current economic hardships.[154] Unlike other bailout programs sponsored by the government to rescue corporate collapse, the Toxic Trailer Fund recipients can show a direct correlation to government activity: the distribution of formaldehyde-laced trailers.

Finally, the most effective response to opponents of a special fund is rooted in the principles of American government. The creation of a medical fund to assist hurricane survivors who lived in toxic trailers will bolster the central democratic value of government accountability in two important ways. First, establishing such a fund incentivizes the implementation of more stringent safety regulations. Second, it demonstrates a commitment to redress for government harms. The contract of citizenship is constitutionally and statutorily defined, but "much of it is a tacit understanding that citizens have about what to expect from their government."[155]

VII. CONCLUSION

The events surrounding Hurricane Katrina require governmental response. The challenge is to reach consensus on framing the relief. This relief requires the creation of a Toxic Trailer Fund under the paradigm adopted to formulate a proper remedy for the victims of 9/11.

Toxic trailers create immediate physical and psychological risks. They also create long-term medical problems that are not now covered by the government. As Hurricane Katrina survivors from New Orleans and elsewhere struggle to make their return home after years of neglect and mistreatment, the government must strive to meet basic accountability standards.[156] It is particu-

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ing that a poll following the storm showed that recovery on the Gulf Coast was a top priority for the country).

154. Nelson D. Schwartz, *A History of Public Aid During Crisis*, N.Y. Times, Sept. 7, 2008, at A27. The recent efforts to provide financial assistance to big business are not new. *Id.* For several decades, Washington has bailed out several corporations, including military contractor Lockheed Aircraft Corporation, the Penn Central Railroad, Chrysler, and Bear Stearns. *Id.*

155. Ignatieff, *supra* note 10, at 15. James Perry, Executive Director of the Greater New Orleans Fair Housing Action Center, renewed the call for government aid at the Democratic National Convention in Denver, Colorado in August 2008. Press Release, Greater New Orleans Fair Hous. Action Ctr., Fair Housing Director to Address Democratic Convention at Denver Roundtable (Aug. 25, 2008) (on file with author) ("We've made great progress but are far from recovery. As Gulf Coast advocates and citizens we call on America to honor President Bush's commitment to rebuild New Orleans and the American Gulf Coast in a manner that is 'even better and stronger than before the storms.' ").

156. Editorial, *Katrina One Year After*, THE NATION, Sept. 18, 2006, *available at* http://www.thenation.com/doc/20060918/editorshttp://www.thenation.com/doc/2006918/editors/print?rel=nofollow ("This is the United States, a country that has . . . abandoned the Gulf Coast to the social Darwinism of the corporate *banditi*. It isn't because we've lost the ability

larly important to meet these needs in this disaster-prone era.[157] Considering the same factors that emerged from the 9/11 Fund—the national perspective, the uniqueness of the circumstances, the need for physical and psychological closure, and the prompt and predictable alternative to litigation—the federal government should establish a relief fund for toxic trailer residents.

The people who survived Katrina have already tested their luck against hurricane winds, torrential rains, and flood waters. Rather than assist them in their time of need, the government has complicated and exacerbated their harms.[158] People who have lost nearly everything—homes, personal belongings, and those invaluable intangibles such as community and familiarity—should not be denied government assistance. Unless the law imposes a duty to recalibrate its recognition of harm, survivors who have weathered a storm and toxic trailers will continue to face a high-stakes gamble in their search for relief. We must improve their odds.

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to care. It's because we've left behind something larger than New Orleans: our notion of collective social responsibility.").

157. The rise in natural disasters also raises the bar for the law to meet new challenges in crafting effective responses. *See generally* FARBER & CHEN, *supra* note 15, at 317-19. In addition, the recent increase in infrastructure failures also challenge the government to develop better safety standards to prevent such harms and to develop creative response to remedy victims harmed by such tragedies. Kevin Diaz, I-35W Bridge Tragedy May Yield New Rules, StarTribune.com, Nov. 14, 2008, http://www.startribune.com/politics/state/34454549.html?elr=KArksi8D3PE7_8yc+D#aiU (discussing the oversight and design failures of the I-35W bridge collapse in Minnesota in August 2007 that killed thirteen people and injured another 145).

158. *See* NOAM CHOMSKY, *The Bush Administration During Hurricane Season*, *in* INTERVENTIONS 147, 149 (2007) ("Lost in the flood is a concern for the needs of cities and for human services.").

NRDC v. WINTER[*]: IS NEPA IMPEDING NATIONAL SECURITY INTERESTS?

CC VASSAR[**]

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* This Article was composed prior to the United States Supreme Court's decision on the case, but it was published subsequent to the issuance of the Court's decision. Winter v. NRDC, 129 S. Ct. 365 (2008). In the majority opinion, Chief Justice Roberts held that environmental interests are outweighed by the Navy's need to conduct training to ensure our nation's safety. *Id.* at 382. The Court agreed with the Navy that delaying training to prepare an Environmental Impact Statement (EIS) would jeopardize national security. *Id.* at 381. Thus, the Court vacated the lower court's preliminary injunctions but did not address the underlying merits of the case. *Id.* at 381-82. The Court had little to say about the Council on Environmental Quality (CEQ) and its emergency circumstances regulation, the focal point of this Article. However, the dissenting Justices Ginsburg and Souter strongly spoke out against CEQ's actions in regard to the case. *Id.* at 391. The justices called the Navy's appeal to CEQ an "extraordinary course" of action which undermined the National Environmental Protection Act (NEPA). *Id.* at 389. The dissent went on to say "CEQ lacks authority to absolve an agency of its statutory duty to prepare an EIS," and while the Court recognized that "CEQ may play an important consultative role in emergency circumstances, [the Court] never suggested that CEQ could eliminate the statute's command." *Id.* at 391. The dissent found that an EIS is NEPA's "core requirement," and the Navy's failure to publish an EIS defeated NEPA's purpose. *Id.* at 387. Considering the balance of the equities, the dissent found that the district court did not abuse its discretion in issuing the injunction. *Id.* at 389.

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I. INTRODUCTION

The U.S. Navy fulfills its mission to have "combat-ready Naval forces capable of winning wars, deterring aggression, and maintaining freedom of the seas" through ongoing combat training.[1] Naval fleets must be ready for deployment to high-risk areas at all times.[2] Training is most effective under circumstances that closely resemble those that might be found in actual combat situations.[3] For submarine warfare, the waters off the California coast are "uniquely suited" for naval training exercises.[4] These exercises have included the use of mid-frequency active (MFA) sonar for over forty years.[5]

In 1998, MFA sonar was strongly linked to a strange phenomena happening on beaches around the world—the mass beaching of whales.[6] Since that time, evidence has poured in that sonar has a

1. The US Navy Organization, Mission of the Navy, http://www.navy.mil/navydata/organization/org-top.asp (last visited June 13, 2009).

2. *See infra* note 50 and accompanying text (describing the Navy's responsibilities under U.S. Code).

3. NRDC v. Winter (*Winter V*), 518 F.3d 658, 698 n.59 (9th Cir. 2008).

4. *Id*. at 702 n.69.

5. Gidget Fuentes, Sonar Ruling Lifts Key Training Restrictions, Marine Corps Times, Nov. 16, 2008, http://www.marinecorpstimes.com/news/2008/11/navy_sonar_111408w/. "Sonar is an acronym for 'Sound Navigation and Ranging.' " Ocean Stewardship, Understanding Sonar, http://www.navy.mil/oceans/sonar.html (last visited June 13, 2009) [hereinafter Understanding Sonar].

6. Stephanie Siegel, Low-Frequency Sonar Raises Whale Advocates Hackles, CNN,

detrimental effect on marine life.[7] The noise can rupture the ears of mammals and disorient them, leading to a variety of undesirable consequences including death of marine mammals such as blue whales, dolphins, and beaked Curvier's whales.[8]

Finding middle ground between naval and environmental needs and interests has been tricky.[9] The Natural Resource Defense Council (NRDC) has led a fight against active sonar use since 2003.[10] But in a world that has nearly silent submarines, which threaten the safety of sailors, soldiers, and the United States, MFA sonar is a powerful and necessary tool.[11] With this tension between naval and environmental needs well known, the Navy proposed training exercises off the California coast from February 2007 to January 2009.[12]

The proposed training set off a flurry of litigation, markedly accentuated by a mid-litigation administrative agency decision exempting the Navy from the procedural requirements under the National Environmental Protection Act (NEPA).[13] The Council on Environmental Quality (CEQ), an administrative agency, characterized the Navy's training needs as an "emergency" which allowed the Navy to proceed with its training and sonar use under "alternatives arrangements."[14] While *NRDC v. Winter*[15] is noteworthy

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June 30, 1999, http://www.cnn.com/NATURE/9906/30/sea.noise.part1/. The study, published in *Nature*, established a causal link between MFA sonar usage and whales beaching themselves and was able to determine that a specific instance of mass beaching had a more than ninety-nine percent likelihood of being caused by MFA use. *See id.*

7. *Winter V*, 518 F.3d at 665-70.

8. *Id.*

9. Finding middle ground may not have to be as difficult as it is often made out to be, as "[d]efending our national security and protecting our environment are closely linked and share the goals of ensuring our well being and preserving our rich national heritage." Paul C. Kiamos, *National Security and Wildlife Protection: Maintaining an Effective Balance*, 8 ENVTL. LAW. 457, 461 (2002).

10. *See* NRDC, Protecting Whales from Dangerous Sonar, http://www.nrdc.org/wildlife/marine/protectingwhales.asp (last visited June 13, 2009) [hereinafter Protecting Whales].

11. Modern submarines are diesel powered making them incredibly silent and thus a menacing threat. *See* Senior Navy Officer, Remarks at the Press Roundtable: Navy Sonar Training Off California Coast (Jan. 16, 2008) [hereinafter Press Roundtable], *available at* www.navy.mil/navco/Sonar/Transcript%20%20Media%20Roundtable%2016%20Jan%2008.doc.

12. NRDC v. Winter (*Winter I*), No. 8:07-cv-00335-FMC-FMOx, 2007 WL 2481037, at *1 (C.D. Cal. Aug. 7, 2007). The fourteen scheduled exercises consisted of seven Composite Training Unit Exercises (COMPTUEXs) that last three to four weeks each and seven Joint Tactical Force Exercises (JTFEXs) that last about ten days each. *Winter V*, 518 F.3d at 663. The exercises involved the use of surface ships, aircraft, and submarines as an integrated training phase "in which individual naval units-ships, submarines and aviation squadrons-learn and demonstrate skills as members of a strike group." *Id.*

13. *See infra* Part III.A-F (detailing the circuitous course of the case).

14. Decision Memorandum Accepting Alternative Arrangements for the Southern California Composite Training Unit Exercises (COMPTUEXs) and Joint Task Force Exercises (JTFEXs) Scheduled To Occur Between Today and January 2009, 73 Fed. Reg. 4189, 4189-91 (Jan. 24, 2008) [hereinafter Decision Memorandum].

15. *Winter I*, 2007 WL 2481037; *see also infra* Part V.A.1-3. One reason the case is noteworthy is because it was a great victory for environmental groups. ACOEL, NRDC v.

for many reasons, this Article seeks only to understand whether planned military training constitutes an emergency under the emergency circumstances regulation. This Article also explores whether the regulation adequately considers important national security needs that do not rise to the level of an emergency and whether NEPA should be amended to exempt certain national security related activities.[16]

This Article argues that the Ninth Circuit Court of Appeals correctly determined that an emergency cannot refer to preplanned, long-term training exercises as part of a military policy that has no foreseeable end.[17] The intent behind the adoption of the emergency circumstances regulation and prior case law demonstrate that the regulation only contemplates unexpected, unplanned circumstances that arise independent of agency action.[18] This Article then argues that NEPA should be amended to add a national security exception.[19] A national security exception would not be contrary to NEPA's purpose and would reflect a more appropriate balance between national security and environmental interests in a time when both are of national importance.[20] Lastly, this Article presents *Winter* as an example of why NEPA should have a national security exception.[21]

II. STATEMENT OF THE PROBLEM

The National Environmental Policy Act established a national policy requiring all federal agencies to fully consider the effects its actions may have on the environment *before* the action is taken.[22] The NEPA requirements can be time consuming, and in situations where action cannot be harmlessly delayed, it can frustrate other important national policies.[23] It has the potential to be a particularly onerous impediment in meeting and furthering national security objectives.[24] The *Winter* litigation over MFA sonar usage in

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Winter—Green Trumps the Blue and Gold—National Security Takes a Back Seat to National Resources, Jan. 22, 2008, http://www.acoel.org/2008/01/articles/nepa/nrdc-v-winter-green-trumps-the-blue-and-gold-national-security-takes-a-back-seat-to-natural-resources. Additionally, the case raised, but did not resolve, constitutional and separation of powers issues. *Winter V*, 518 F.3d 658, 686 n.47 (9th Cir. 2008).

16. *See infra* Part V.B.1-3 (arguing that NEPA should have a national security exception).

17. *See infra* Part V.A.1-3 (discussing *Winter V*, 518 F.3d 658).

18. *See infra* Part V.A.1 (discussing the intent behind the regulation).

19. *See infra* Part V.B.1-3.

20. *See infra* Part V.B.1 (discussing the proposed exception and NEPA's purpose).

21. *See infra* Part V.B.3. (discussing *Winter V*, 518 F.3d 658).

22. FREDERICK R. ANDERSON, ENVTL. LAW INST., NEPA IN THE COURTS: A LEGAL ANALYSIS OF THE NATIONAL ENVIRONMENTAL POLICY ACT, at vii (Ruth B. Haas ed., 1973).

23. *See infra* note 36 and accompanying text (noting the time for an EIS completion).

24. *See infra* Part V.B.1. (discussing how NEPA procedural requirements may jeopardize national security).

training is offered as a case illustration of the need to amend NEPA to allow exceptions to its time consuming procedural requirements when a compelling national security issue must be addressed without delay.[25] First, however, this Article will discuss the basics of NEPA, including an overview of the agency responsible for issuing NEPA regulations.[26] This Article will then discuss what is primarily at stake in *Winter* by discussing the military necessity of MFA sonar and the effects it has on marine life.[27]

A. National Environmental Protection Act

On New Year's Day 1970, President Nixon signed the National Environmental Policy Act.[28] The Act provides a procedural framework that federal agencies must work within to ensure the policies of the Act are implemented, but the Act does not mandate any particular substantive outcome.[29] Agencies must use all practical means and measures to fulfill NEPA requirements.[30] It has a broad scope, touching upon federal agency actions of all types, which is in accordance with the purpose of NEPA: "to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations."[31] Despite its lofty purpose and broad scope, NEPA's reach is limited to "major Federal actions significantly affecting the quality of the human environment."[32]

If an agency's proposed act is found to have a substantial effect that cannot be completely mitigated, the agency must prepare an environmental impact statement (EIS).[33] The statement is the heart of NEPA's procedural requirements, and there is no exception to the requirement within the statutory framework.[34] Essen-

25. *See infra* Part V.B.3.

26. *See infra* Part II.A-B (explaining NEPA and CEQ).

27. *See infra* Part II.C-D (explaining sonar usage and how it affects whales and other marine animals).

28. *See generally* National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852 (1970) (codified as amended at 42 U.S.C. §§ 4321-4370).

29. *See id.*; *see also* Andrus v. Sierra Club, 442 U.S. 347, 350 (1979) (describing NEPA). The Act is one of *policy*, not of regulation. ANDERSON, *supra* note 22, at 4.

30. 42 U.S.C. § 4331(b) (2000).

31. *Id.* § 4331(a).

32. *Id.* § 4332(c).

33. DANIEL R. MANDELKER, NEPA LAW AND LITIGATION: THE NATIONAL ENVIRONMENTAL POLICY ACT §§ 8:01, 8:55 (Supp. 1991).

34. *Id.* § 5:06. While NEPA does not have any express exceptions, Congress can pass legislation to specifically exempt an agency project from NEPA. *See id.* § 5:07. For example, Congress has exempted the Environmental Protection Agency's (EPA) actions under the Clean Air Act from NEPA compliance and has enacted legislation to exempt other specific agency projects or programs. *Id.* § 5:06. Additionally, if there is "clear conflict" of statutory authority, action may be exempt from the EIS requirement. *Id.*

tially, NEPA requires agencies to take a "hard look" at proposed actions to consider the environmental impact (the adverse environmental effects) and to provide the public with information about such action and to allow public comment.[35] It is a multi-step process that can take anywhere from months to years to complete depending on the agency, complexity of the project, and experience of the personnel preparing the EIS.[36] Once the EIS is completed, there is a record of decision that is enforceable by agencies and private parties.[37] If an EIS is not completed before agency action substantially affecting the environment is taken or if the EIS is inadequate, injured parties may sue for injunctive relief.[38]

B. Council on Environmental Quality

NEPA created the Council on Environmental Quality (CEQ) to serve in an advisory capacity to the executive branch of government.[39] CEQ provides guidance and advice on environmental policy.[40] In this role, CEQ mainly exerts influence through "informal discussion and criticism."[41] CEQ interprets NEPA and "has played an aggressive role in promulgating guidelines for agency implemen-

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35. *See* 42 U.S.C. § 4331(a)-(b); *see also* Sierra Club v. Eubanks, 335 F. Supp. 2d 1070, 1076 (E.D. Cal. 2004) (describing NEPA and EIS requirements).

36. The EIS process is initiated when a federal agency publishes a notice of intent to prepare an EIS in the Federal Register. VALERIE M. FOGLEMAN, GUIDE TO THE NATIONAL ENVIRONMENTAL POLICY ACT: INTERPRETATIONS, APPLICATIONS, AND COMPLIANCE 118 (1990). The agency then engages in "scoping" to identify important issues for consideration during the EIS study. *Id.* Scoping is a public process where public, state, and federal agency participation is invited. *Id.* After scoping, the agency refines its proposed action and prepares a draft EIS. Nat'l Oceanic & Atmospheric Association, U.S. Dep't of Commerce, NEPA/EIS Factsheet, www.nmfs.noaa.gov/pr/pdfs/permits/nepa.pdf (last visited June 13, 2009). A notice of the draft's availability is then published, and there is a time period allowed for public information meetings and comments. *Id.* A final draft is then prepared, and a notice of the final draft is published. *Id.* After either a thirty or ninety day waiting period, depending on the notice published, there is a record of the EIS decision, and the agency can then move forward with its proposed action. FOGLEMAN, *supra*, 35 at 117. The waiting periods "allow interested persons, organizations, and agencies to comment on the agency's compliance with NEPA and give the agency time to consider the comments." *Id.* The necessary time to complete all these steps can vary greatly, but the United States Supreme Court has noted in a case involving the Department of the Interior that "[i]t is inconceivable that an environmental impact statement could, in 30 days, be drafted, circulated, commented upon, and then reviewed and revised in light of the comments." Flint Ridge Dev. Co. v. Scenic Rivers Ass'n of Okla., 426 U.S. 776, 788-89 (1976). Instead, the court suggests that the proper time for EIS preparation varies between three and eighteen months depending on project complexity and the preparers' experience. *Id.* at 789 n.10.

37. FOGLEMAN, *supra* note 36, at 122.

38. *Id.* at 185-89.

39. 42 U.S.C. § 4342.

40. James E. Landis, *The Domestic Implications of Environmental Stewardship at Overseas Installations: A Look at Domestic Questions Raised by the United States' Overseas Environmental Policies*, 49 NAVAL L. REV. 99, 103 (2002).

41. ANDERSON, *supra* note 22, at 3.

tation of NEPA."[42] The regulations are binding on federal agencies and they must comply.[43] The only exception is one which allows an agency to act without preparing an EIS due to an "emergency."[44]

Under the emergency circumstances regulation, CEQ may approve "alternative arrangements" to NEPA compliance.[45] An agency may only obtain such approval where an emergency "make[s] it necessary to take an action with significant environmental impact without observing the provisions of [NEPA]."[46] Any alternative arrangements approved must be limited to "control the immediate impacts of the emergency."[47] Since the emergency circumstances regulation took effect in 1978, CEQ has only received forty-one requests for an alternative arrangement.[48] Of the forty-one requests, only three have led to published decisions.[49]

C. Submarine Warfare and Sonar

The U.S. Navy has a responsibility under the U.S. Code to be readily prepared for combat at sea.[50] Real life combat at sea re-

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42. *Id.*

43. *Id.* at 2-3.

44. Council on Environmental Quality, 40 C.F.R. § 1506.11 (2008). The author feels compelled to point out that the legality of CEQ and its promulgated regulations, particularly the emergency circumstances regulation, is a contested issue. *See* Robert Orsi, *Emergency Exceptions from NEPA: Who Should Decide?*, 14 B.C. ENVTL. AFF. L. REV. 481, 499-507 (1987) (discussing an argument that CEQ acted outside of its statutorily given authority by enacting the emergency exception); *see also* NRDC v. Winter (*Winter IV*), 527 F. Supp. 2d 1216, 1232 (C.D. Cal. 2008) ("[T]here is a serious question as to whether CEQ, an executive body, is sitting in review of a decision of the judicial branch . . . . [A]ctivity of this nature raises serious constitutional concerns under the Separation of Powers doctrine."). While it is not a particularly pertinent point for purposes of this Article, it is an important issue when discussing NEPA and one that has yet to be decided in the courts.

45. 40 C.F.R. § 1506.11.

46. *Id.* This regulation reflects that due to the length of time some NEPA requirements take to prepare, there will be some instances where there simply is not enough time to complete the requirement before agency action must be taken. *See* KRISTINA ALEXANDER, CONGRESSIONAL RESEARCH SERVICE, CRS REPORT FOR CONGRESS, WHALES AND SONAR: EXEMPTIONS FOR THE NAVY'S MID-FREQUENCY ACTIVE SONAR TRAINING 5 (2008).

47. ALEXANDER, *supra* note 46, at 5.

48. *Id.* (citing information received via written communication with CEQ from January 22, 2008). For example, CEQ has invoked its emergency authority under circumstances in which it was necessary to (1) stop an outbreak of encephalitis in Arizona; (2) prevent the collapse of a historic building and remove hazardous asbestos; (3) stop the spread of an incurable disease among steelhead trout in a fishery; (4) remove unexploded ordnance exposed by natural wave process in a beach community; and (5) accept delivery of spent nuclear fuel rods which, if sent elsewhere, could be used to make nuclear weapons. Letter from Henry A. Waxman, Chairman, Comm. on Oversight and Gov't Reform, to James L. Connaughton, Chairman, Council on Envtl. Quality (Jan. 25, 2008), *available at* http://oversight.house.gov/documents/20080125104813.pdf.

49. ALEXANDER, *supra* note 46, at 10.

50. Marine Mammals and Sound, Understanding Sonar, http://www.navy.mil/oceans/sound.html (last visited June 13, 2009). Part of the Navy's responsibility is to "have the capacity to act in . . . a fluid and unpredictable environment." DONALD C. WINTER, THE SECRETARY OF THE NAVY'S FY 2009 POSTURE STATEMENT 2 (2008), *available at* www.navy.mil/

quires the use of sonar for both offensive and defensive tactics.[51] Sonar is a tool primarily used underwater and utilizes sound to help ships and submarines navigate and communicate. It also helps to determine water depths, presence of vessels, and the location of mines.[52] There are two kinds of sonar: passive and active.[53] Passive sonar simply receives transmissions of sound and is primarily used to detect the presence of submarines and other objects.[54] Active sonar both receives and transmits sound.[55]

Active sonar sends out "pulses of sound" that bounce off an object.[56] The sonar operator listens for the echo of the sound, and the information from the echo allows the operator to measure the size of the object from which the sound bounced and to measure the distance between the operator and the object.[57] The intensity of the pulse of sound, or the "ping," and the distance the ping travels varies depending on the frequency of sonar.[58] MFA sonar can generally travel up to ten nautical miles.[59] The exact decibel (dB) range is disputed, with the high end topping 215 dBs—the sound equivalent to that of a twin-engine fighter jet at takeoff.[60]

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navydata/people/secnav/winter/2008_posture_statement2.pdf. Additionally, fundamental elements of the Navy and Marine Corps strategic posture is to have a worldwide presence, maintain credible deterrence and dissuasion, project power from naval platforms anywhere on the globe, and have the ability to prevail at sea. *Id.* at 3. For at least one naval strike group, "war-fighting'" is a top priority. *Winter V*, 518 F.3d 658, 664 (9th Cir. 2008) (internal quotation marks omitted).

51. An important part of naval warfare is submarine and anti-submarine warfare. Submarines are essential in sea combat because their underwater concealment gives them the serious advantage of stealth. J. WARREN HORTON, FUNDAMENTALS OF SONAR 3 (2d ed. 1959). Submarines can be offensively used to attack enemy submarines and ships and can be used to launch torpedoes and missiles to land targets. Understanding Sonar, *supra* note 5. Submarines can also be used defensively in reconnaissance activities and in underwater surveillance. *Id.* Without sonar, submarines could travel underwater unnoticed posing a serious threat to ships and military fleets. *Id.* Thus, sonar operators, both on ships and in submarines, are constantly listening with passive sonar for the presence of hostile submarines. *Id.* Submarines are operated by navies worldwide, including potential U.S. adversaries in the Asia-Pacific and Middle East areas. Decision Memorandum, *supra* note 14, at 4189-4201. They are also an important part of the naval forces that support ground troops in Iraq as part of "OPERATION ENDURING FREEDOM (OEF) and OPERATION IRAQI FREEDOM (OEI)". WINTER, *supra* note 50, at 5.

52. Understanding Sonar, *supra* note 5.

53. *Id.*

54. *Id.*

55. HORTON, *supra* note 51, at 325. Active sonar is used to more accurately locate a submarine, measure the proximity of a detected submarine, and track a submarine. Understanding Sonar, *supra* note 5.

56. Understanding Sonar, *supra* note 5.

57. HORTON, *supra* note 51, at 325-38.

58. *See id.* at 325-338 (discussing pulses and reverberations).

59. ALEXANDER, *supra* note 46, at 1.

60. *See* Protecting Whales, *supra* note 10. It is generally agreed that MFA sonar is at least eight to ten times the decibel level at which hearing protection for humans is advised. ALEXANDER, *supra* note 46, at 2; *see also Winter I*, No. 8:07-cv-00335-FMC-FMOx, 2007 WL 2481037, at *1 n.2 (C.D. Cal. Aug. 7, 2007).

Sonar and human made noises from ships and submarines are not the only sounds in the ocean. The ocean is filled with natural sounds, often making it difficult for sonar operators to distinguish between natural and unnatural noises and between pings off harmless and harmful objects.[61] A sonar operator must be able to properly distinguish between these and determine what constitutes a threat. This takes "considerable skill."[62] Additionally, because it is so complex, and therefore difficult to do, sonar operators must be highly trained and very competent, making it a perishable skill.[63] In order to maintain a navy with the requisite skills, the Navy plans training exercises to ensure combat ready Strike Groups.[64]

D. Sonar Effect on Marine Life

MFA sonar emits a range of sound that can be excruciating to marine mammals. Although the decibel level of sonar is disputed, it has been shown that whales will change migration routes to avoid sonar's piercing noise when decibel levels reach 120dB.[65] While such extreme noise can be damaging to nearly any animal, marine mammals are particularly sensitive to the noise because it interferes with their own biological sonar.

Echolocation is used by marine mammals to navigate, communicate, and identify food sources and possible threats.[66] Mammals exposed to MFA sonar can become confused and surface too quickly trying to avoid the sound which results in decompression sickness, commonly known as "the bends."[67] When mammals such as whales and dolphins surface too quickly, gas bubbles are created in the blood stream which can lead to fatal hemorrhaging and lesions

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61. The deep of the sea is not silent as is popularly believed. HORTON, *supra* note 51, at 57. It has the noise level similar to that of a "quiet garden." *Id.* Sea life, such as snapping shrimp, can also greatly contribute to noise level of the ocean. *Id.* at 63-64.

62. Understanding Sonar, *supra* note 5.

63. *Spotlight on Rear Admiral James A. Symonds: New Director of Environmental Readiness Division Shares His Perspectives on the State of the Navy's Environmental Program*, CURRENTS, Spring 2006, at 12, 15, *available at* www.enviro-navair.navy.mil/currents/spring2006/spr06_Spotlight.pdf. The perishable nature of sonar operation skills is due to both the tendency for competency of learned skills to diminish over periods of non-use and the turnover rate within the Navy.

64. Strike groups must be proficient in MFA sonar to be combat ready; it allows strike groups to detect and defend themselves against any submarine that may come within range of U.S. military ship in group. Decision Memorandum, *supra* note 14, at 4190.

65. Seigel, *supra* note 6.

66. Understanding Sonar, *supra* note 5. Echolocation is a complex system of sonar that is extremely sensitive. *See* DOROTHY HINSHAW PATENT, DOLPHINS AND PORPOISES 12-13 (1987). For example, a dolphin can use echolocation to find objects as small as BBs and can distinguish between a piece of copper and a piece of aluminum of the same size and thickness. *Id.*

67. ALEXANDER, *supra* note 46, at 2; s*ee also Winter V*, 518 F.3d 658, 664-66 (9th Cir. 2008) (discussing sonar's effect on marine mammals).

in the organs.[68] Disorientation or panicked sonar evasion attempts can also cause marine mammals to stray off their usual navigation course which then leads to starvation, beaching, mating and birthing disruptions and has even been suggested as a cause of the odd occurrence of marine life in inland freshwater.[69]

III. STATEMENT OF THE CASE

On March 22, 2007, the Natural Resources Defense Council (NRDC) filed suit against the U.S. Navy over scheduled training exercises in the waters off the Southern California Coast ("SOCAL training").[70] This suit, *NRDC v. Winter*, would mark the beginning of a litigation journey that ended, at least for now, with "Green Trump[ing] the Blue and Gold."[71] At the center of the litigation was the Navy's use of MFA sonar and the potential harm it has on marine life. *Winter*'s foray up and down the court is cumbersome, packed with factual issues, legal issues, and legal maneuvers.[72] For purposes of this Article, only issues related to NEPA and CEQ's emergency circumstance regulation will be discussed in detail.

Important to understanding the implications of *Winter* is an understanding of how the case evolved. The case ping-ponged back and forth between the California District Court and the Ninth Circuit Court of Appeals. [73] This Article summarizes the court decisions most relevant for this paper, as well as a critical CEQ determination directly relevant to the case.[75]

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68. *Winter V*, 518 F.3d at 665; *see also* John Roach, Military Sonar May Given Whales the Bends, Study Says, Nat'l Geographic News, Oct 8, 2003, http://news.nationalgeographic.com/news/2003/10/1008_031008_whalebends.html. In one instance involving a mass beaching of Curvier's beaked whales, researchers concluded that after the whales were exposed to sonar, they experienced hemorrhages in vital organs which led to the whales stranding themselves on the beach in a disorientated state. *Id.* "After beaching, their situation was worse due to the well-known stress stranding syndrome that did more severity to the lesions, resulting in cardiovascular collapse and death." *Id.* (internal quotation marks omitted).

69. *See* Geoffrey Lean, Cole Moreton & Jonathan Owen, *Sonar Threat to World's Whales*, INDEPENDENT, Jan. 22, 2006, *available at* http://www.independent.co.uk/environment/sonar-threat-to-worlds-whales-524093.html.

70. *Winter I*, No. 8:07-cv-00335-FMC-FMOx, 2007 WL 2481037, at *2 (C.D. Cal. Aug. 7, 2007); *see also* Press Release, NRDC, Navy Hit with Lawsuits After Rejecting Coastal Commission Safeguards for Massive High-Intensity Sonar Exercises Off Southern California Coast (Mar. 22, 2007), http://www.nrdc.org/media/2007/070322a.asp.

71. ACOEL, *supra* note 15. The headline is a reference to the official colors of the U.S. Navy. Navy Traditions and Customs, http://www.history.navy.mil/trivia/trivia01.htm (last visited June 13, 2009). It also refers to the Naval Academy's alma mater, "Navy Blue and Gold." U.S. Naval Academy Band, FAQ, http://www.usna.edu/USNABand/FAQ/Lyrics.htm (last visited June 13, 2009).

72. *See infra* Part III.A-F (describing some of the procedural background behind *NRDC v. Winter*).

73. *See infra* Part III.A-F.

75. *See infra* Part III.A-F.

A. District Court Opinion[74]

NRDC sought injunctive relief, arguing that the Navy violated NEPA by failing to prepare an EIS prior to using MFA sonar as part of naval training.[75] The Navy responded that it did not have to prepare an EIS because the training exercises would not have a *significant* impact on the environment.[76] The district court found this contrary to the Navy's own findings that the exercises would disturb or injure nearly thirty species of marine life.[77] The court concluded that the NRDC was able to meet its burden and granted an absolute injunction against the use of MFA sonar for nearly two years.[78] The Navy then sought and was granted an emergency stay of the injunction pending its appeal to the Ninth Circuit.[79]

B. Ninth Circuit Court of Appeals[80]

The Ninth Circuit reversed the absolute injunction against naval use of MFA sonar for being overbroad. "[T]he district court did not explain why a broad, absolute injunction against the use of the medium frequency active sonar in these complex training exercises for two years was necessary to avoid irreparable harm to the environment."[81] The Navy had previously used mitigation measures to reduce the harmful effects of sonar, and the court found that mitigation measures were similarly appropriate for the training exercises at hand.[82] The Ninth Circuit remanded the case to the district court for appropriate tailoring of the injunction.[83]

C. District Court Opinion Upon Remand[84]

Faced with an injunction tailored with mitigation measures, the Navy proposed its own measures to the district court.[85] The

74. *Winter I*, 2007 WL 2481037, at *1.

75. *Id.* at *2. The lawsuit also alleged the Navy had violated the Endangered Species Act, the Administrative Procedures Act, and the Coastal Zone Management Act. *Id.* While the Navy failed to complete an EIS, the Navy did start the EIS process around January 2007. *See* Press Roundtable, *supra* note 11, at 2. The Navy continued to work on the EIS through at least January 2008. *Id.*

76. *Winter I*, 2007 WL 2481037, at *4.

77. *Id.* at *5.

78. *Id.* at *1.

79. NRDC v. Winter, 502 F.3d 859, 859 (9th Cir. 2007).

80. NRDC v. Winter (*Winter II*), 508 F.3d 885 (9th Cir. 2007).

81. *Id.* at 886.

82. *Id.* at 887.

83. *Id.*

84. NRDC v. Winter (*Winter III*), 530 F. Supp. 2d 1110 (C.D. Cal. 2008).

85. *Id.* at 1115. These measures were largely mitigation measures the Navy was already taking on its own accord. *Id.*

Navy suggested that the National Defense Exemption mitigation measures it adopted in a prior litigation would sufficiently mitigate the harms of MFA sonar in the instant litigation.[86] The court agreed that the Navy should continue to employ the prior mitigation measures, but found the Navy's proposal insufficient and therefore imposed mitigation measures to properly address both parties' needs.[87] The court issued an injunction allowing the Navy to continue training, but only if the Navy (1) maintained a twelve nautical mile exclusion zone from the California coastline at all times; (2) ceased MFA sonar use when marine mammals are spotted within 2200 yards; (3) monitored for the presence of marine mammals for sixty minutes before employing MFA sonar; (4) utilized trained lookouts, including aerial lookout, when MFA sonar is used; (5) powered down sonar when conditions permit; (6) refrained from MDA sonar use in the Catalina basin; and (7) continued the mitigation measures listed in the 2007 National Defense Exemption.[88]

The court found that the injunction provided for a proper balance of the harms. The naval training could not be prohibited, but "the harm to the environment, Plaintiffs, and public interest outweighs the harm that [the Navy] would incur (or the public interest would suffer) if [the Navy] were prevented from using MFA sonar, absent the use of effective mitigation measures."[89]

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86. *Id.* at 1118 n.6. In addition to the National Defense Exemption measures, the Navy did propose a few additional, minor mitigation measures:

> [The Navy], by contrast, proposed to continue employing the mitigation measures outlined in the 2007 National Defense Exemption ("NDE II") as well as several additional measures, including: (1) powering down MFA sonar by 6 dB at 1,000 meters; powering down an additional 4 dB at 500 meters; and shutting off ("securing") MFA sonar at 200 meters; (2) employing two dedicated, and 3 non-dedicated, marine mammal lookouts at all times when MFA sonar is being used, and providing such lookouts with binoculars, night vision goggles, and infrared sensors; (3) staying outside the Channel Islands National Marine Sanctuary, and remaining 5 nautical miles from San Clemente Island's western shore, and 3 nm from its other shores; (4) aerial monitoring for at least 60 minutes before MFA sonar exercises along the Tanner and Cortez Banks during blue whale migration (July to September 2008); and (5) pre-exercise monitoring of gray whale off-shore migration patterns during March 7-21, 2008 and April 15-May 15, 2008.

Id. at 1118-19 n.6.

87. *Id.* at 1115-16.

88. *Id.* at 1119-21.

89. *Id.* at 1118.

D. CEQ Ruling[90]

Following the district court's order for tailored injunctive relief, the Navy sought CEQ's exemption from the EIS requirement pursuant to the emergency circumstances regulation.[91]

CEQ noted that the Navy's request was based on its need for realistic and effective military training.[92] The SOCAL training was critical to military preparedness, and an inability to conduct the training would have significant consequences to the national security of the United States.[93] CEQ found that the location of the SOCAL training was particularly important because "it contains all of the land, air, and at-sea bases necessary for conducting the exercises, and the shallow coastal areas . . . realistically simulate areas where the Navy is likely to encounter hostile submarines."[94] CEQ noted the particular training exercises at issue in *NRDC v. Winter* were the only opportunities for a particular fleet of Strike Groups, constituting thousands of individuals, to achieve required combat training.[95]

Based on the necessity of constant training for combat preparedness and the risk that ill-trained Strike Groups pose to thousands of soldiers and sailors, CEQ concluded that an emergency existed.[96] CEQ approved alternative arrangements in accordance with the emergency circumstances regulation which would allow the Navy to continue training with MFA sonar.[97]

This new development in the *Winter* litigation prompted the Navy to file an emergency motion to vacate the district court injunction, which was granted based on what the Navy contended was now a moot issue of a NEPA violation.[98] The Ninth Circuit remanded the case back to the district court to determine the effect of CEQ's action on the preliminary injunction order.[99]

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90. Decision Memorandum, *supra* note 14.

91. *Id.* at 4189.

92. *Id.*

93. *Id.* at 4190.

94. *Id.*

95. *Id.* The SOCAL training was to prepare two strike groups for deployment. *See* WINTER, supra note 50, at 11.

96. Decision Memorandum, *supra* note 14 at 4191.

97. *Id.* at 4191-92. Accordingly, the Navy would just have to comply with the alternative arrangements. Most importantly, the Navy would have to abide by the National Defense Exemption mitigation measures, providing notice to the public regarding ongoing EIS preparation and continuing to research the effects of MFA sonar on marine mammals. *Id.*; *see also* 40 C.F.R. § 1506.11 (2008); *Winter IV*, 527 F. Supp. 2d 1216, 1224 (C.D. Cal 2008).

98. NRDC v. Winter, 513 F.3d 920, 921 (9th Cir. 2008).

99. *Id.* at 922.

E. District Court Opinion on Second Remand[100]

The district court addressed whether CEQ's ruling mandated a reversal of the court's injunction.[101] Courts typically afford deference to an agency's interpretation of its own regulations, but if the interpretation is contrary to the plain language of the regulation or if it is contrary to the agency's intent at the time of the regulation's promulgation, then a court will not defer to the agency.[102]

The court noted that NEPA does not have a national security or defense exemption.[103] Thus the Navy would only be exempted from the EIS requirement if Congress specifically exempted the SOCAL training through legislation or if training needs rose to the level of an "emergency."[104] The fact that NEPA statutorily does not provide *any* exemption to its requirements strongly informed the court that the emergency regulation must be read narrowly.[105]

The court distinguished prior cases where CEQ ruled that an emergency existed.[106] In *Valley Citizens for a Safe Environment v. Vest*, there was a change in Air Force needs due to increased hostilities in a specific area of the world.[107] In contrast, the Navy had no change in military needs in its SOCAL training.[108] Additionally, the court noted that the Navy had plenty of notice of the need of an EIS, unlike the Air Force in *Valley Citizen*. The *Winter* litigation had been lengthy which provided ample time for the Navy to prepare an EIS.[109] The court found that "[t]he Navy's current 'emergency' [was] simply a creature of its own making, *i.e.*, its failure to prepare adequate environmental documentation in a timely fashion, via the traditional EIS process or otherwise."[110] Two other cases the court summarily addressed had "legitimate crises [that] [stood] in stark contrast to the Navy's routine training exercises

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100. Winter IV, 527 F. Supp. 2d 1216 (C.D. Cal 2008).

101. *Id.* at 1225. The court both considered whether training was an emergency and whether the injunction was an emergency. *Id.* at 1216-33. The Navy considered the injunction to create an emergency because it kept the Navy from implementing the EIS procedures. *See* Press Roundtable, *supra* note 11, at 2, 15.

102. *Winter IV*, 527 F. Supp. 2d at 1230 n.13.

103. *Id.* at 1230.

104. *Id.*

105. *Id.* The court discussed a basic principle of statutory construction: a presumption that there are not exemptions to a statute unless such exemption is specifically authorized. *Id.* "The Navy, just like any federal agency, must carry out its NEPA mandate to the fullest extent possible and this mandate includes weighing the environmental costs of the [project] even though the project has serious security implications." *Id.* (quoting San Luis Obispo Mothers for Peace v. Nuclear Regulatory Comm'n, 449 F.3d 1016, 1035 (9th Cir. 2006)) (internal quotation marks omitted).

106. *Id.* at 1227-28.

107. *Id.*

108. *Id.* at 1228.

109. *Id.*

110. *Id.*

and [were] consistent with an ordinary understanding of what constitutes an 'emergency.' "[111]

The court then turned its focus to the agency's intent in drafting and adopting the regulation.[112] Although the regulatory history is limited, the court found support for a narrow interpretation in defining an emergency.[113] In adopting the final regulation, the drafters took care to eliminate any inference that an agency must consult with CEQ before acting because "such a requirement might be impractical in emergency circumstances."[114] The court reasoned that the drafters did not intend emergency circumstances to refer to events that are "the unfavorable consequences of protracted litigation."[115]

Finally, the court found if CEQ could define an emergency, as it did in *Winter*, such action would be in direct conflict with NEPA's directive that agencies comply with NEPA "to the fullest extent possible."[116] Statutory principles of construction do not allow for interpretations which create an absurd result.[117] Thus the court concluded it would be contrary to NEPA's intent to allow agencies to avoid NEPA simply by characterizing an ordinary, planned activity as an emergency.[118] Accordingly, the court held that CEQ's action was invalid, and therefore the Navy was not exempted from the EIS requirement or the preliminary injunction.[119] The Navy appealed.[120]

F. Ninth Circuit Court of Appeals Opinion[121]

The Ninth Circuit Court of Appeals affirmed the district court's decision that the Navy was not exempt from NEPA's EIS requirement.

The Navy argued the SOCAL training was properly an emergency, and therefore the district court erred in not deferring to CEQ's ruling.[122] The Navy cited to declarations, including one by the Chief of Naval Operations, that said the inability to train Strike Groups for deployment impacts national security at a time

111. *Id.*
112. *Id.*
113. *Id.* at 1229.
114. *Id.* (emphasis omitted) (quoting Implementation of Procedural Provisions, Final Regulations, 43 Fed. Reg. 55988 (Nov. 29, 1978)) (internal quotation marks omitted).
115. *Id.*
116. *Id.* at 1231 (quoting 42 U.S.C. § 4332) (internal quotation marks omitted).
117. *Id.*
118. *Id.* at 1232.
119. *Id.* at 1219.
120. *See generally Winter V*, 518 F. 3d 658 (9th. Cir. 2008).
121. *See generally id.*
122. *Id.* at 678.

when the country is engaged in war in two countries.[123] Thus the Navy argued that risks to national security at such a time constitute an emergency within the scope of the regulation.[124]

The court found the Navy's argument untenable. It noted that the Navy was on notice of the EIS requirement from the moment it first planned the training exercises. Further, the Navy had been on notice since the August 7, 2007 district court decision that it would likely lose on the merits of NRDC's claim. Yet, "the Navy waited until January 10, 2008, to raise a cry of 'emergency.' "[125] The court found no error in the finding that the *Winter* litigation was not an unforeseeable event requiring immediate action, and it further concluded that the Navy had sufficient time to follow the NEPA procedures but chose instead not to prepare an EIS.[126] The court affirmed the district court's decision and upheld the preliminary injunction.[127]

IV. BACKGROUND

A. Invocation of "Emergency Circumstances" Regulation

1. *Crosby v. Young*[128]

In an apparent plan to revitalize the economy of Detroit, the Detroit City Council approved the condemnation of property to allow the building of a new automobile plant.[129] Under the mandate of NEPA, the City of Detroit ("Detroit") was required to complete an EIS before going forward with the condemnation and prior to being granted federal loan approval for the project.[130] However, before Detroit completed an EIS, Detroit realized it needed an advance on the loan in order to keep the project afloat and sought alternative arrangements under the emergency circumstances regulation.[131] CEQ applied the regulation because it determined that if loan approval was delayed, the project could not be completed which would be detrimental to the city and its citizens.[132] Without

123. *Id.* at 681. Presumably, this statement was referring to Operation Enduring Freedom, Afghanistan, and Operation Iraqi Freedom.

124. *See id.* at 680-81.

125. *Id.* at 681-82.

126. *Id.* at 682.

127. *Id.* at 703.

128. Crosby v. Young, 512 F. Supp. 1363 (E.D. Mich. 1981).

129. *Id.* at 1365.

130. *Id.* at 1384.

131. *Id.* at 1380. Detroit's situation changed, and it needed an advance on loan money, which it requested on August 29, 1980. *Id.* If Detroit did not receive this federal financial assistance by October 1, 1980, the project could not go forward. *Id.* Accordingly, the preparation of an EIS was all that stood between Detroit and the federal loan approval.

132. *Id.* at 1386.

immediate federal funding there would be problems with the relocation of residents during the winter months, a particular concern for the elderly.[133] Additionally, a cancellation of the project meant Detroit would face increased unemployment and crime problems, a decreasing tax base, and a decrease in bond rating to below investment grade.[134] CEQ found the deadline crisis to be imminent and granted Detroit's alternative arrangements as allowed under the emergency regulation.[135]

2. *National Audubon Society v. Hester*[136]

CEQ certified an emergency existed relating to California condors that exempted the U.S. Fish and Wildlife Service ("Service") from the NEPA EIS requirement.[137] The Service had implemented a plan to maintain a wild flock of condors. As part of the plan, the Service prepared an environmental assessment (EA) that embraced the policy of a wild flock but noted a possibility that wild condors might be recaptured if the population continued to decrease.[138] After several events further jeopardized the wild condors, the Service announced it would bring all remaining wild condors into captivity.[139] CEQ found the change of circumstances constituted an emergency and exempted the Service from the EIS requirement.[140]

The District of Columbia Court of Appeals agreed with CEQ and refused to make a finding of a nonemergency.[141] The court noted that given the urgent nature of the Service's concern with the condors' mortality, CEQ was within its discretion to find an emergency.[142]

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133. *Id.*

134. *Id.*

135. *Id.*

136. Nat'l Audubon Soc. v. Hester, 801 F.2d 405 (D.C. Cir. 1986).

137. *Id.* at 406. The California condor is the largest winged inhabitant of North America. *Id.* at 405. At the time of the *Hester* decision, only twenty-six members of the species remained in existence, and all but six birds were kept in zoos as part of a program to avert extinction of the remaining condors. *Id.* at 405-06. As of this writing, there are 326 condors in existence, both in captivity and in the wild. Arizona Game & Fish Dep't, California Condor Recovery, http://www.azgfd.gov/w_c/california_condor.shtml (last visited June 13, 2009).

138. *Hester*, 801 F.2d at 406.

139. *Id.* Endangerments to the condors included the courting of two birds—one of which was slated for capture and the other slated for remaining in the wild; the taming of birds scheduled for release into the wild; and lead poisoning of one bird. *Id.*

140. *Id.*

141. *Id.* at 408-09.

142. *Id.* at 408.

3. *Valley Citizens for a Safe Environment v. Vest*[143]

In accordance with NEPA's EIS requirement, the U.S. Air Force prepared an EIS prior to the commencement of transport plane operations at Westover Air Force Base ("Westover").[144] In the terms of the EIS, the Air Force provided that "[n]o military activity would be routinely scheduled between the hours of 10:00 pm and 7:00 am."[145] Three years after the EIS was prepared and one year after the First Circuit Court of Appeals found the operation of transport planes were in accordance with the EIS and did not violate NEPA, the Air Force began operating planes during those particular nighttime hours.[146]

A nonprofit citizen association, Valley Citizens, complained to the Air Force, but the Air Force refused to re-evaluate the impact its actions had on the environment.[147] Instead, the Air Force received approval for "alternative arrangements" from CEQ under the NEPA "emergency circumstances" regulation.[148] Valley Citizens filed suit seeking injunctive and declaratory relief, arguing that CEQ acted arbitrarily and capriciously in its finding that an emergency existed.[149]

The Air Force argued that an emergency did exist due to the developing situation in the Middle East.[150] Affidavits submitted by various Air Force officials demonstrated a "complex, global flight schedule" that relied on Westover as a crucial element in schedule maintenance.[151] The operations "furnish fuel, tools, spare parts, and other critical supplies to American and international troops in the troubled Middle East . . . [and] bring back to the United States . . . equipment and personnel essential to the maintenance of military readiness at home and abroad."[152]

The court found that the Middle East situation properly constituted an "emergency" under NEPA.[153] Noting that the Air Force was able to point to specific military concerns, rather than speak "vaguely of national security or world peace," the court concluded

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143. Valley Citizens for a Safe Env't v. Vest, No. 91-30077-F, 1991 WL 330963 *1 (D. Mass. May 30, 1991).

144. *Id.*

145. *Id.*

146. *Id.* at *2.

147. *Id.* at *1.

148. *Id.* at *2, *6.

149. *Id.* at *2.

150. *See id.* at *2. This was during the Persian Gulf War after Iraq invaded Kuwait. Naval Historical Ctr., Desert Storm: The War With Iraq, http://www.history.navy.mil/wars/dstorm/ds5.htm. (last visited June 13, 2009).

151. *Vest*, 1991 WL 330963. at *5.

152. *Id.*

153. *Id.*

that "given the military's operational and scheduling difficulties and the hostile and unpredictable nature of the Persian Gulf Region" it could not find CEQ acted arbitrarily and capriciously.[154] The court denied Valley Citizens' request for a preliminary injunction.[155]

B. ESA's National Security Exception

The Endangered Species Act of 1973 was enacted after years of efforts to create meaningful protection for endangered species.[156] As enacted, it offered sweeping substantive protection for listed species.[157] Five years later, Congress amended the Act to limit its broad scope.[158] One 1978 amendment created a national security exception to the Act.[159]

The exception requires the Endangered Species Committee to relieve an agency from ESA requirements when the Secretary of Defense requests such relief for national security reasons.[160] The language of the exception is broad and seemingly unequivocal: "[T]he Committee shall grant an exemption for any agency action if the Secretary of Defense finds that such exemption is necessary for reasons of national security."[161] The exception's enactment created alarm and heated controversy due to the unmitigated mandate to exempt agencies for national security reasons.[162]

However, the alarm over the exception has turned out to be unwarranted, at least to date. The Secretary of Defense has never asked for a national security exemption under ESA.[163] This, however, has not eliminated the controversy. In fact, its non-use has only added to the debate. Without any legislative, judicial, or pub-

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154. *Id.*

155. *Id.* at *6. The court did warn, however, that if the Air Force continued its nighttime flight schedule longer than the few months it predicted it would last, the court would "not hesitate to invoke, where necessary, all of the equitable powers at its disposal to protect Valley Citizens." *Id.*

156. Jason C. Wells, *National Security and the Endangered Species Act: A Fresh Look at the Exemption Process and the Evolution of Army Environmental Policy*, 31 WM. & MARY ENVTL. L. & POL'Y REV. 255, 255 (2006).

157. *Id.* at 255.

158. *Id.*

159. *Id.*

160. *Id.* at 263. The Endangered Species Committee was also created in the 1978 amendments. *Id.* It is a seven-member, cabinet-level committee that is given the authority to hold hearings and to promulgate rules, regulations, and procedures related to the ESA. 16 U.S.C. § 1536(e) (2000); *see also* Lawrence R. Liebesman & Rafe Peterson, *Federal Agency Consultation and Recovery Planning Under the Endangered Species Act – A Significant Factor in the CWA Section 404 Program*, SM 094 ALI-ABA *295 (2007) (Westlaw). The Committee has apparent authority to decide the fate of a species through its statutorily given authority, giving rise to the Committee commonly being called "The God Squad." Liebesman & Peterson, *supra*, at *329 (internal quotation marks omitted).

161. 16 U.S.C. § 1536(j).

162. Wells, *supra* note 156, at 255.

163. *Id.*

lic scrutiny, commentators can only speculate on what the Secretary's authority is to ask for the exemption.[164] Further, ESA is the only major substantive environmental act with a national security exemption.[165]

Instead of relying on the national security exemption, the Secretary of Defense has sought other avenues to get out from under ESA requirements.[166] The reasons the Secretary of Defense has not utilized an ESA exception that is favorable to the Department of Defense in times of national security are unclear. One commentator has noted that the Army understands the exception to apply only during "wartime," and as such, "the exemption process has simply not been necessary for the military to achieve its training and operational objectives."[167] In contrast, another commentator has argued that the mere fact that environmental exemptions have rarely been used by the Secretary of Defense does not mean the exemptions should be reserved for only wartime and emergency situations.[168] That commentator argues that "the bottom line is that [the military] must be able to train the way [it] fight[s], and [the military] must be able to operate to defend the country and its interests."[169] Hence, military training is an invaluable piece of national security and cannot be defeated by exemptions that make training for indispensable readiness activities unlawful.[170]

V. ANALYSIS

The broad scope of NEPA leaves very little room to deviate from the lengthy EIS process. The Navy requested flexibility under the very narrow emergency circumstances exception, but unless a situation is unplanned, imminent, and requires immediate action, the exception does not apply.[171] Thus, the Ninth Circuit Court of Appeals was correct in *Winter* to deny deference to CEQ's ruling.[172]

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164. *Id.* at 255.

165. *Id.* at 265 (citing E.G. Willard, Tom Zimmerman & Eric Bee, *Environmental Law and National Security: Can Existing Exemptions in Environmental Laws Preserve DOD Training and Operational Prerogatives Without New Legislation?*, 54 A.F. L. REV. 65, 65-68 (2004)).

166. *Id.* at 272-73.

167. *Id.* at 272.

168. *See* Willard, Zimmerman & Bee, *supra* note 165, at 87-88.

169. *Id.* at 87. The commentator elaborates that the emergency circumstances regulation cannot be the basis for the nation's everyday readiness training. *Id*. The regulation is not broad enough, and its limited scope renders most training unlawful. *Id.* The commentator argues that military training is an ongoing need separate from an emergency under NEPA or a national security exception under ESA. *See id.* It is a thing of its own which should be exempted from environmental laws. *See id.*

170. *See id.* at 87-88.

171. *See infra* Part V.A.1-3 (explaining when emergency circumstances apply).

172. *See infra* Part V.A.1-3.

The case, however, brings attention to the suffocating nature of NEPA on important national security activities that do not rise to the level of an emergency but which require action as a preventative measure. In a time when national security is a top priority, this Article calls for a statutory change to NEPA to give the military flexibility in achieving and maintaining national security objectives.[173]

A. Emergency Circumstances Regulation

The Ninth Circuit Court of Appeals correctly determined that CEQ improperly excused the Navy from the EIS requirement under the emergency circumstances regulation.[174] The policy behind NEPA and CEQ's intent in establishing the regulation does not support the finding of an emergency unless a situation arises unexpectedly and requires immediate attention to either forestall or mitigate imminent, grave harm.[175] Additionally, prior case law establishes that the regulation contemplates only the rare situation where there has been an unexpected change in circumstance that arose due to no fault of the agency.[176] Thus, the SOCAL training was not an emergency under the regulation because the training was expected and planned.[177] Similarly, the court injunction was not an emergency because the Navy had notice that an EIS would be required.[178]

1. Policy and Intent Behind the Emergency Circumstances Regulation

At the time the regulation was drafted and adopted, CEQ did not intend the emergency circumstances regulation to extend to pre-planned and ongoing activities. "Emergency," as originally contemplated, only included situations which emerged suddenly and without notice.[179] If CEQ believed that the regulation could reach planned activities, it would not have changed the initial version to eliminate the inference that an agency *must* consult with CEQ prior to taking agency action where consultation would be impracticable or impossible.[180]

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173. *See infra* Part V.B.1-2 (arguing the case for a national security exception to NEPA).
174. *See infra* Part V.A.3.
175. *See infra* Part V.A.1-2.
176. *See infra* Part V.A.2 (discussing past case history).
177. *See supra* notes 175-76; *infra* notes 178-81 and accompanying text.
178. *See infra* notes 190-94 and accompanying text.
179. *See supra* Part III.E (discussing the district court's interpretation of CEQ's intent in enacting the emergency circumstances regulation).
180. *See supra* Part III.E (explaining the district court's interpretation of a CEQ draft-

2. Prior Case Law

Prior case law establishes that an emergency under the emergency circumstances regulation must be an unexpected circumstance that arises independent of any agency action and which requires immediate action.[181] Agencies seldom ask for alternative arrangements under the regulation, but there have been three cases that have led to published decisions which shed light on what constitutes an emergency.[182] Notably, the limited requests are telling of how exigent a situation must be before agencies will even contemplate it as an emergency.

The City of Detroit in *Crosby v. Young* faced a serious economic and social crisis if a city project were to be delayed until the completion of an EIS.[183] The situation was held to be an emergency because there was imminent harm due to a looming deadline for loan approval.[184] The situation required immediate action because without it the project could not move forward, resulting in a devastating loss to the city and its citizens.[185] Importantly, the harms were articulable and specific.[186] Additionally, there was no time to complete an EIS before the deadline.[187] Arguably, the city could have avoided the crisis of the loan deadline had the city realized sooner that it would need a loan advance.[188] However, the deadline was a federal requirement beyond the agency's control.[189] The court opinion does not indicate why the loan advance was necessary, but it was evidently a change in circumstances that the city could not anticipate.

The Navy underwent no change of circumstances with respect to its SOCAL training. Unlike in *Crosby*—where the city was attempting to complete a single, if rather large, project—training is an ongoing naval and military necessity as part of the bigger policies of national security and military preparedness.[190] The Navy

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ing change to the emergency circumstances regulation).

181. *See supra* Part IV.A.1-3 (detailing past case law).

182. *See supra* notes 48-49 and accompanying text; *supra* Part IV.A.1-3 (noting the infrequency of alternative arrangement requests).

183. *See supra* Part IV.A.1 (describing the crisis the city faced).

184. *See supra* Part IV.A.1 (noting the CEQ decision and the reasons CEQ granted alternative arrangements).

185. *See supra* Part IV.A.1 (describing the harms of delaying federal funds).

186. *See supra* Part IV.A.1 (describing the specific harms).

187. *See supra* note 36 and accompanying text (noting the time necessary to prepare an EIS and the steps involved in the preparation); *supra* Part IV.A.1 (discussing the city's loan approval deadline).

188. *See supra* Part IV.A.1 (explaining that the city needed a loan advance due to the city's changed needs).

189. *See supra* Part IV.A.1 (discussing the loan approval deadline).

190. *See supra* note 50 and accompanying text (discussing policies of national security and military preparedness).

could have avoided the injunction by completing the EIS. While the Navy and Detroit both had deadlines, the Navy's indeterminate deadline for certifying the Strike Groups before there was turnover or competency loss was not unexpected or outside of the Navy's control. The Navy should have been able to project that this training would need to occur well before that Strike Group was ever formed. The most distinguishing difference between the situations under *Crosby* and *Winter* is that the City of Detroit in *Crosby* was able to point to very specific harms it would suffer if it was not granted alternative arrangements, while the Navy was only able to speak about vague harms it might suffer to its military preparedness.[191]

The Service in *Hester* had a legitimate emergency under the emergency regulations because it was faced with a grave situation that arose independent of the agency.[192] The Service could not fully predict the calamities that befell its wild flock of condors, unlike the Navy which routinely predicts training needs. While the Service did speculate in its EA that it may be necessary to bring the wild flock in, it was only noted as a possibility. The Service did not *plan* to bring the flock in.[193] Moreover, the fact the Service had noted that there was a possibility of recapture helped show that there was a crisis in need of imminent attention.[194] The notation established the Service's reluctance to recapture the wild flock and showed that it only did so due to an unexpected change of circumstances that had the consequence of changing the Service's position on the issue.

A third situation where CEQ took action under the emergency circumstances regulation further established the extent to which a situation must be unplanned and outside of the agency's control in order to be an emergency.[195] The Air Force in *Valley Citizens* had prepared an EIS, but three years later the climate of world politics had changed.[196] The Air Force could not predict that the United States would become involved in a war in the Middle East after Iraq invaded Kuwait.[197] This was clearly beyond the Air Force's control, was not planned, and was not part of a larger policy initiative. It

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191. *Compare supra* Part IV.A.1 (describing the specific harms the city pointed to) *with* notes 123-25 and accompanying text (describing the harms the Navy cited it would suffer by placing impediments on its sonar training).

192. *See supra* Part IV.A.2.

193. *See supra* Part IV.A.2.

194. *See supra* Part IV.A.2.

195. *See supra* Part IV.A.3 (discussing Valley Citizens for a Safe Env't v. Vest, No. 91-30077-F, 1991 WL 330963 *1 (D. Mass. May 30, 1991)).

196. *See supra* Part IV.A.3 (explaining the circumstances that changed the military's needs relating to transport plane operations).

197. *See supra* note 150 (noting the Iraqi invasion of Kuwait).

was truly an unexpected change of circumstance that gave rise to the need for immediate action.

In contrast, the Navy's training needs in *Winter* did not change but were planned and part of a larger policy of military preparedness.[198] The need for training was not unexpected, and the Navy's failure to prepare to follow the mandates of the law should not be rewarded by giving it an exception for which it does not qualify.

3. The Injunction Was Not an Emergency

The Navy argued it was not the training that was the emergency, but rather it was the district court's injunction that was the emergency. But the Navy's argument still fails because the injunction was foreseeable and occurred due to the Navy's own inaction.[199] The situation does not fit the requirements of an emergency.

First, it is not an emergency because the Navy was put on notice nearly ten months prior to the injunction that it may not be able to escape NEPA's requirement.[200] Even if the filing of the suit by the NRDC was not sufficient to put the Navy on notice, then surely the August preliminary injunction was sufficient.[201] Second, the Navy itself created the situation by not completing the EIS.[202] Despite the Navy's contention that it was working on the EIS and had been since before NRDC filed suit, the situation was not an emergency due to the Navy's knowledge that sonar training must be ongoing, as it is a perishable skill.[203]

B. NEPA Should Be Amended to Add a National Security Exception

NEPA, as currently enacted and administrated, does not adequately consider national security interests. Effective national security entails a military that has the capability to act swiftly and to respond decisively to matters of national importance anywhere in the world whenever the need arises.[204] The military must be prepared to respond to unexpected and sudden changes in the se-

198. *See supra* note 50 and accompanying text (discussing policies of national security and military preparedness).

199. *See supra* Part III.E. (discussing the district court's finding that the Navy's "emergency" was of its own making).

200. *See supra* note 70 and accompanying text (noting the date NRDC filed suit).

201. *See supra* Part III.A (detailing the district court opinion).

202. *See supra* Part III.F (providing the Ninth Circuit Court of Appeal's recitation of the lengthy time the Navy had to prepare an EIS).

203. *See supra* Part II.C; *supra* notes 62-64 and accompanying text.

204. *See supra* note 50 (describing military protocol).

curity environment.[205] Past security changes, such as the invasion of Kuwait in 1990 and the September 11, 2001 terrorist attacks, demonstrate the need for highly trained and combat ready military forces. NEPA's lengthy EIS requirement can impair and delay military training and activities and does not provide an adequate balance between national security and environmental interests.

Environmental interests are closely linked to national security objectives.[206] However, if the two interests compete, a practical balancing approach must be taken. Currently, the military may only seek relief from NEPA's requirements under two limited courses of actions: it may either seek an exception from Congress through legislation or seek alternative arrangements from CEQ under the emergency circumstances regulation.[207] The former is a lengthy process and not a real alternative when time is of the essence, while the latter is too limited to properly address pressing military needs that are not unexpected or sudden.[208] The choice between these courses of action is neither appropriate nor practical when confronted with a situation where military action is needed and cannot be delayed by the legislative process but is not so unexpected or imminent so as to be labeled an emergency.

To seek CEQ relief, the military must try to force critical nonemergencies into the narrow emergency circumstances exception. It is reminiscent of putting a square peg in a round hole. It does not work, and if it did, it would be damaging to the structure in which it is contained. Notwithstanding how compelling or important a nonemergency may be, it cannot be made to fit into the narrow emergency circumstances regulation. As a result of the impossible fit, essential military activities are frustrated thereby destabilizing national security. Even if a nonemergency could be characterized as meeting the exception, it would damage the integrity of NEPA. Statutory sidesteps undermine the Act as a whole and open a Pandora's box where the emergency circumstances exception is extended to situations that are neither emergencies nor matters of national security.

A national security exception would properly address national security needs and would provide clearer guidelines for which types of circumstances should be relieved from NEPA's procedural requirements. Unlike the emergency circumstances regulation, it would be limited to only one type of circumstance—national securi-

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205. *See supra* note 50 (explaining the Navy's responsibility to act in changing security environments).

206. *See supra* note 9.

207. Mandelker, *supra* note 33, §§ 5:06-07*; see also supra* Part II.B (describing the emergency circumstances regulation).

208. *See supra* note 36 (describing the lengthy EIS process).

ty.[209] Agency action that is necessary to further any other policy objective would still be constrained under NEPA's current requirements.[210] Admittedly, national security is a broad category and does not provide much limitation within that category. However, the broadness of a national security exception is important to allow the military the flexibility it needs to protect this nation.

1. A National Security Exception Is Consistent With the Policy Behind NEPA

NEPA's purpose is to promote harmony between humans and nature.[211] It seeks to fulfill "the social, economic, and other requirements of present and future generations."[212] While NEPA has a broad scope, its purpose is not to promote environmental interests to the detriment of other important interests.[213] Rather, its purpose is to balance interests. At the time NEPA was enacted, the events of September 11, 2001 could not have been imagined.[214] Terrorism has changed the way the United States thinks about national security and is a major issue facing today's generation. NEPA should be amended to reflect this growing concern and to further its purpose of promoting harmony between humans and nature.

2. ESA's National Security Exception Is a Starting Point but Not an Answer

The Endangered Species Act has a rarely used national security exception.[215] ESA, like NEPA, was overly broad as originally enacted and consequently Congress amended ESA within a few years to better account for the realities of national security interests.[216] The national security exception mitigated concerns that security objectives would be defeated by environmental interests under ESA.[217]

A NEPA national security exemption must properly account for the realities of military preparedness. A response to a national se-

209. *See supra* Part II.B (describing the emergency circumstances regulation).

210. *See supra* Part II.A (describing NEPA requirements and the EIS process).

211. *See supra* Part II.A (noting NEPA's purpose).

212. *See supra* Part II.A.

213. *See supra* Part II.A (explaining that NEPA should foster environments where humans and nature can have a productive coexistence).

214. *See supra* Part II.A (providing brief history of NEPA and when it was enacted).

215. *See supra* Part IV.B (discussing the ESA and its national security exception).

216. *See supra* Part IV.B (discussing ESA's original scope and scope after the national security amendment).

217. *See supra* Part IV.B (explaining the exception limited ESA's sweeping protections for endangered species).

curity threat cannot be delayed simply because soldiers and sailors need to be properly trained.[218] The military has a responsibility to be combat-ready at all times.[219] One event or sequence of events can change military needs, and there must be an ever-ready military that is capable of swiftly responding. NEPA currently has the capacity to frustrate military activities which impairs our nation's security.

Congress amended ESA to balance environmental interests and national security objectives, and NEPA should similarly be amended.[220] The amendment should be carefully drafted in order to obtain a workable balance that is harmonious with the purpose of NEPA.[221] The drafters of the proposed amendment should look to the ESA exception as a starting point. However, while the ESA exception may serve as a guide, such reliance should likely be limited; as at least one commentator has suggested, if the NEPA exception only applies in wartime—similar to the ESA exception—it will not properly accommodate important military activities.[222] Military activities, such as critical training, that are neither engaged in during wartime nor unplanned and urgent, so as to be characterized as an emergency, would continue to be frustrated.[223] Thus, a NEPA national security exception would need to contemplate compelling activities that are vital to the United States's security for reasons of military preparedness.

Military preparedness is a national security interest. Although one commentator argues that this preparedness is a need separate from national security, such an approach might trample environmental interests.[224] Instead, it should be seen as part of national security, and a NEPA amendment should clarify that military training may be included in a national security exception. To provide some limitation on the exception, the proposed amendment should require any requested NEPA national security exemption to meet certain requirements, such as an approval from a review committee.[225]

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218. *See supra* notes 1-3 and accompanying text and Part II.C (discussing some of the reasons submarine warfare and sonar training is particularly important).

219. *See supra* note 50 and accompanying text (discussing naval responsibilities and strategic posture).

220. *See supra* Part IV.B (discussing the ESA amendment).

221. *See supra* Part II.A (providing the purpose of NEPA).

222. *See supra* Part IV.B (noting commentators' ideas of when the ESA national security exception applies).

223. *See supra* Part II.F (providing an example of a frustrated military need).

224. *See supra* Part IV.B.

225. *See supra* Part IV.B (illustrating a review committee that could be the model for the proposed committee).

3. Case Illustration: *NRDC v. Winter*

The *NRDC v. Winter* litigation showcases just how difficult it can be to find a balance between environmental and national security interests. If this case is any indication, courts trying to find that balance will often find parties involved in protracted litigation where neither party will be fully satisfied by the case's resolution.[226] In *Winter*, the SOCAL training was a vital component of a fully combat-ready Navy and hence a fully combat-ready military.[227] MFA sonar usage during the training, however, has harmful effects on marine mammals.[228] The environmental and national security interests collided, litigation ensued, and after many twists and turns in the legal system, both interests were compromised: the Navy could use sonar to the environment's detriment but not to the level necessary for it to fully and effectively train.

The court restriction on the SOCAL training affects an entire Strike Group and imposes conditions that can make training difficult or can shut it down completely.[229] The training cannot be delayed without jeopardizing national security.[230] The threat of submarine warfare is not a dim or unlikely prospect.[231] Submarines are nearly silent and just the uncertainty of knowing whether or not a hostile submarine may be lurking in the waters can be enough to destabilize military forces and undermine U.S. national security policy and international relations.[232]

This is a situation where an application of a national security exception in NEPA would not only be appropriate but would be necessary for the safety of the U.S. military and its citizens. Environmental interests would not have to be abandoned. In *Winter*, the Navy was already taking measures to mitigate the harmful effects of MFA sonar prior to the court injunction.[233] Ideally, parties with competing environmental and national security interests should try to find a way to accommodate both needs. With that said, military training is critical and should not be unnecessarily hampered by the procedural requirements of NEPA.

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226. *See supra* Part III.A-F (discussing the litigation in *NRDC v. Winter*).

227. *See supra* notes 1-3 and accompanying text.

228. *See supra* Part II.D (discussing the harmful effects of MFA sonar on marine mammals).

229. *See supra* Part III.F. (noting the Navy's arguments against the court injunction).

230. *See supra* Part II.C.

231. *See supra* note 50 (discussing submarine and sonar use and its relation to warfare).

232. *See supra* note 11 and accompanying text.

233. *See supra* Part III.C (noting the Navy's proposal to continue using mitigation measures it was already taking).

VI. CONCLUSION

The emergency circumstances regulation does not encompass on-going, planned activities. Thus, the *Winter* court had no choice but to find that CEQ improperly applied the regulation. To better address compelling national interests that are planned but cannot be delayed, such as the case in *Winter*, NEPA should be amended to include a national security exception.

This is not to say the military should have a "free pass," but there must be some sort of exception for military training that cannot be delayed, especially after the military makes reasonable attempts to comply with NEPA. In *Winter*, the Navy attempted to comply with NEPA, but due to the lengthy and complex EIS process, it was not able to complete an EIS after over a year of efforts.[234] The Navy could not delay training until the EIS was completed without jeopardizing the security of the nation and should not have had such a demand placed on them by a procedural environmental law.

A national security exception to NEPA is necessary to achieve important national security objectives. As NEPA stands currently, the scope is so broad that it is not practical in an era of terrorism. A well-tailored amendment could address the needs of today's security environment while still embracing NEPA's purpose. The result would be a better balance between environmental and national security needs.

234. *See supra* note 75 (noting that the Navy was unable to complete an EIS).

A FAILED LAND USE LEGAL AND POLICY FRAMEWORK FOR THE AFRICAN COMMONS?: REVIEWING RANGELAND GOVERNANCE IN KENYA

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I. INTRODUCTION

The governance of natural resources remains a complicated task globally. The most perplexing element of this task is the reality that natural resources are finite and that there is increasing competition between resource uses and users. Government missteps regarding natural resources can thus create inequity, discrimination, poverty, and unsustainable consumptive patterns, especially when said resource is land in an area where people's livelihoods are solely dependent upon it. When regulating land use, government authorities employ public law and policy instruments, but it is where those instruments are ill devised and unsuited for a particular ecosystem that a plethora of problems emerge. Such is the case with the African commons, also know as the rangelands, where the pursuit of private property rights has dismantled systems that have managed the communal interests in these lands for generations. In Kenya's case, this Article argues that the government either failed to understand or just ignored how common property works, and as a result, Kenya's current rangeland governance system—group ranches—is a mess as many group ranches have subdivided, want to subdivide, are stuck in the subdivision process, or are trying to reconsolidate because subdivision left them worse off.

The group ranch concept was introduced in order to save rangelands from the "tragedy of the commons" metaphor, but ironically, it created one. This Article seeks to review Kenya's group ranch governance policy from Kenya's colonial days to the present and proposes a new methodology for sustainability. Part II analyzes the key concepts: property, common property, and the African commons. Part III provides an overview of rangeland governance, specifically the origins of group ranches and the rationale for their introduction. Part IV is a legal and factual deconstruction of group

ranches to examine where they stand vis-à-vis the "tragedy of the commons," and Part V proposes reform measures to ensure sustainability in rangeland governance. The Article's last section provides a brief conclusion.

II. CONCEPTUALIZING THE AFRICAN COMMONS

Various terms have been used to describe the commons, and these numerous terms have often created more confusion than clarity. Fortunately, the African commons has a unique foundation that has influenced its governance over the last century or so. There are also many international environmental law instruments and principles that offer guidance on appropriate governance systems.

A. Property and Property Rights

The key concept here, property, is conceptualized as a benefit, or income, stream.[1] "Property *is not* an object but rather a social relation that defines the property holder with respect to something of value (the benefit stream) against all others."[2] This relation is exercised as a property right, and this right "may be defined as the *de jure* or *de facto* rights of individuals or groups of individuals, to a flow of benefits from assets, with at least a partial right to exclude others."[3] Another dimension is the right, as a claim, to a benefit stream that some higher body—usually the state—agrees to protect through the assignment of a duty to others who may covet or somehow interfere with the benefit stream.[4] "The essence of property rights is [thus] a structure of duties that will give any particular benefit stream protection against adverse claims."[5] Although there are many types of property rights, this Article focuses only on common property.

B. Common Property

Common property is a rather "common" term. Economists use it in situations where no property rights exist, whereas historians

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1. Daniel W. Bromley, *The Commons, Common Property, and Environmental Policy*, 2 ENVTL. & RES. ECON. 1, 2 (1992).

2. *Id.*

3. R. Quentin Grafton, *Governance of the Commons: A Role for the State?*, 76 LAND ECON. 504, 504 (2000) (emphasis in original).

4. Bromley, *supra* note 1, at 2. Economists present parallel arguments, for instance, that a primary function of property rights includes guiding incentives to achieve a greater internalization of externalities. *See* Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. 347, 348 (1967).

5. Bromley, *supra* note 1, at 3.

and anthropologists use it to refer to a collective property rights system.[6] It is also confused with public property vested in the State and held in trust for the citizens[7] or when the State owns property as a private landowner to the exclusion of its citizens.[8]

"[C]ommon property represents private property for the group (since all others are excluded from use and decision making)."[9] It represents jointly-owned private property without unilaterally tradable shares. Simultaneous sale by all co-owners is only permissible by vote and subject to strict internal rules.[10] Although rare and difficult to acquire, private-group property rights are hailed as the best option, especially for long-term occupants of an area, for protecting community-based property rights; it may require legally recognizing private-group rights for communities over the property in question.[11] Nevertheless, "[t]he essence of any property regime is an authority system that can assure that the expectations of rights holders are met."[12] "The fundamental characteristic of . . . community-based property rights is that their primary legitimacy is drawn from the community in which they exist, and not from the nation-state in which they are located."[13] Thus, if the authority and legitimacy system ever breaks down, common property degenerates into open access.

Research into common property was heavily influenced by Garrett Hardin's controversial and now discredited "tragedy of the commons" metaphor in which common property came to embody "the [expected] degradation of the environment . . . whenever many

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6. John Quiggin, *Common Property, Equality and Development*, 21 WORLD DEV. 1123, 1123 (1993). Economist Harold Demsetz talks of communal property as where the community denies to the state or to individual citizens the right to interfere with any person's exercise of communally-owned rights. Demsetz, *supra* note 4, at 354.

7. *See* Margaret A. McKean, *Success on the Commons: A Comparative Examination of Institutions for Common Property Resource Management,* 4 J. THEORETICAL POL. 247, 251-52 (1992). As an unowned resource, public property is subject to overuse because ownership is vested in the abstract "public." *Id.* at 252. Its manager (the government) is far removed from the resource itself and thus unable to police its use. *Id.* They also have no personal stake in the resource, so they are not motivated to protect it. *Id.* In Kenya, public property is designated as "Trust Lands." *See generally* Trust Land Act, (1939) Cap. 288 (Kenya).

8. In Kenya, the state has the exclusive right to dispose of land. *See*, *e.g*, Government Lands Act, (1993) Cap. 280 § 3 (Kenya). It is currently being debated over whether to convert most of these lands into public trusts in order to curtail the state's exclusive disposition powers.

9. Bromley, *supra* note 1, at 11. Individuals also have rights and duties in this regime.

10. McKean, *supra* note 7, at 11.

11. Owen J. Lynch, Promoting Legal Recognition of Community-Based Property Rights, Including the Commons: Some Theoretical Considerations 3 (June 7, 1999) (unpublished paper, presented at the Symposium of the International Association for the Study of Common Property and the Workshop in Political Theory and Policy Analysis, Indiana University, Bloomington, Indiana), http://www.ciel.org/Publications/promotinglegalrecog.pdf.

12. Bromley, *supra* note 1, at 12.

13. Lynch, *supra* note 11, at 2.

individuals use a scarce resource in common."[14] According to Hardin, any rational herdsman sharing a commons will realize that the only sensible course is to add more animals to his herd.[15] "Each man is [then] locked into a system that compels him to increase his herd without limit," and as a result, a commons is therefore a tragedy because it will inevitably decay and rot away.[16] Hardin, though, mistakenly assumed that community managed areas equate to areas free from management control, but ever since his thesis was presented, private/individual property rights have been fronted as a panacea to the problem of unsustainable resource use.[17]

C. The African Commons

Conceptually, the African commons is a variant of common property where land and associated resources are exclusively available to specific communities, lineages, or families operating as corporate entities.[18] Such commons are supposed to be managed and protected by a social hierarchy in the form of an inverted pyramid: the tip representing the family; the middle, the clan and lineage; and base, the community.[19] Individuals and groups have access to resources based on social criteria.[20] The commons classically were the primary socio-economic asset for individual and community development, and they were not susceptible to inter vivos transfers outside of one's social organization level.[21] Transmission of access rights to land and associated resources was done by way of intestacy to predetermined heirs based on communal rules.[22]

Otherwise known as rangelands, African commons are "semi-arid regions of the world that are too dry for reliable crop cultivation and hence used for livestock production of one form or another."[23] "The rangelands developed over many thousands of years under climates marked by strong seasonality and high interannual

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14. ELINOR OSTROM, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION 2 (1990).

15 Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243, 1244 (1968), *available at* http://www.sciencemag.org/cgi/content/full/162/3859/1243.

16. *Id.*

17. *See, e.g.,* Patricia Kameri-Mbote, *Land Tenure, Land Use, and Sustainability in Kenya: Towards Innovative Use of Property Rights in Wildlife Management*, in LAND USE LAW FOR SUSTAINABLE DEVELOPMENT 132, 132 (Nathalie J. Chalifour et al. eds., 2007).

18. H.W.O. Okoth-Ogendo, *The Tragic African Commons: A Century of Expropriation, Suppression and Subversion*, 1 UNIV. NAIROBI L.J. 107, 107 (2003).

19. *Id.* at 108.

20. *Id.*

21. *Id.*

22. *Id*. at 108-09.

23. Brian H. Walker & Marco A. Janssen, *Rangelands, Pastoralists and Governments: Interlinked Systems of People and Nature*, PHIL. TRANSACTION ROYAL SOC'Y B: BIOLOGICAL SCI. 719, 719 (2002).

variation in rainfall."[24] They maintain about fourteen percent of the world's cattle and twenty-one percent of the world's sheep and goats on a land base that comprises twenty-five percent of the world's total area of rangelands.[25] The number of people producing livestock in Africa is higher than anywhere else in the world; more than half of the world's total pastoralists reside in Africa.[26] The Kenyan rangelands thus fittingly encompass about eight-two percent of the country's total land mass as well as support six million people and more than fifty percent of the country's livestock population.[27] Historically, a livestock-based economy has supported a large and diverse pastoral population. While this population has a growth rate only slightly below the national average of 3.8%, cattle numbers have fluctuated.[28] Disease and drought have checked any long term increase in cattle numbers, and the present population is close to the 1969 level of 2.8 million.[29] Accordingly, per capita livestock holdings have decreased, and many groups, particularly the Turkana, Samburu Somali, and Pokot pastoralists, "are no longer able to maintain a purely livestock-based economy."[30]

The Kenyan rangelands have been occupied by pastoral communities for decades. Policymakers, though, have sought to protect these arid environments without concomitant attention to the socio-economic repercussions to, and capacities of, residents who use them.[31] Rangelands were thus seen as "wastes of space," and policies were enacted to "fix" and/or pre-empt the degradation problems they supposedly experience.[32] These policy measures altered the land tenure system and re-ordered the rangelands. Policymakers, however, overlooked the fact that many social groups, including herders, have successfully countered resource degradation threats by developing and maintaining self-governing institutions.[33] This oversight resulted from the fundamental flaw of Har-

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24. *Id.*

25. Brent M. Swallow & Daniel W. Bromley, *Institutions, Governance and Incentives in Common Property Regimes for African Rangelands*, 6 ENVTL. & RES. ECON. 99, 99 (1995).

26. *Id.*

27. Bondi Ogolla & John Mugabe, *Land Tenure Systems and Natural Resource Management*, *in* IN LAND WE TRUST: ENVIRONMENTAL, PRIVATE PROPERTY AND CONSTITUTIONAL CHANGE 1996, at 85, 88 (Calestous Juma & J.B. Ojwang eds., ACTS, Environmental Policy Series No. 7, 1996).

28. Chris Southgate & David Hulme, *Environmental Management in Kenya's Arid and Semi-Arid Lands: An Overview* 2 (Inst. for Dev. Policy and Mgmt., Rural Resources Rural/Livelihoods Working Paper Series, Paper No. 2, 1996).

29. *Id.*

30. *Id.*

31. AFRICAN CONSERVATION CENTRE, DIVERSIFYING RURAL LIVELIHOODS: PASTORALISM AND RANGELAND MANAGEMENT 5 (on file with the African Conservation Centre Library, Nairobi, Kenya) (2007).

32. *Id.*

33. *See* Thomas Dietz, Elinor Ostrom & Paul C. Stern, *The Struggle to Govern the Commons*, 302 SCIENCE 1907, 1908 (2003), *available at* http://www.sciencemag.org/cgi/

din's thesis in that it really describes the "tragedy of open access" and not the "tragedy of the commons."[34] There is a critical difference between *open access resources* and *common property resources,* which turns on the very concept of property. Property is a future benefit stream, and in an open access scheme, there is no property, only "the opportunity to use something."[35]

Government efforts to re-order Kenya's rangelands led to the introduction of the group ranch concept as the formal land holding and use structure for pastoral communities. However, this concept's governing structure, discussed below, has significantly contributed to environmental and resource mismanagement of the rangelands, and thus it has paradoxically created the "tragedy of the commons" it was meant to prevent.

D. International Environmental Principles and Instruments

Due to international state sovereignty principles, natural resource management is generally left to the nation-state in which the resource(s) is/are located.[36] However, as the principal actors of international law, states have developed environmental law principles and have entered binding agreements on the issue that limits their discretion. One major development in the effort to establish environment law principles is the 1992 Rio Declaration, which urges states to take steps to ensure sustainable natural resource and environmental management. It enjoins states to consider intergenerational equity as they develop;[37] recognize poverty eradication as an indispensable requirement for sustainable development;[38] and foster citizen participation at the local government level in environmental decisionmaking.[39] The Declaration shrewdly recognizes that indigenous people and local communities have a vital role in environmental management due to their knowledge and traditional practices.[40]

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content/abstract/302/5652/1907?ck=nck.

34. Lynch, *supra* note 11, at 1-2.

35. Bromley, *supra* note 1, at 13.

36. Article 3 of the Convention on Biological Diversity provides that "[s]tates have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies." Convention on Biological Diversity, art. 3, *opened for signature* June 5, 1992, S. TREATY DOC. NO. 130-20 (1993), 1760 U.N.T.S. 79, *available at* http://www.cbd.int/convention/articles.shtml?a=cbd-03; *see also* U.N. Conference on Environment and Development, Rio de Janeiro, Braz., June 3-14, 1992, *Rio Declaration on Environment and Development*, princ. 2, U.N. Doc. A/CONF.151/26 (Aug. 12, 1992) [hereinafter *Rio Declaration*].

37. *Id.* princ. 3.

38. *Id.* princ. 5.

39. *Id.* princ. 10.

40. *Id.* princ. 22.

Like the Rio Declaration, Agenda 21 also resulted from the concerted effort to develop guidelines for natural resource management. When managing fragile ecosystems, governments are required to "[i]ntegrate indigenous knowledge about forests, forest lands, rangeland and natural vegetation into research activities on desertification and drought."[41] They must also facilitate land allocation to uses that provide the greatest sustainable benefits and promote the transition to a sustainable and integrated management of land resources.[42] These principles are particularly important when the government's legal-policy instruments managing a fragile ecosystem, like rangelands, are at odds with the area's very character and traditional property rights regime.

In the realm of binding instruments, the 2003 African Convention for the Conservation of Nature and Natural Resources[43] is pertinent when examining the African commons. Parties to the Convention are required to prevent land degradation and "develop long-term integrated strategies for the conservation and sustainably management of land resources, including soil, vegetation and related hydrological processes."[44] Most pertinent to the African commons is the provision that requires Convention members to develop and implement land tenure policies able to facilitate the above measures by taking into account the rights of local communities.[45] This provision thus recognizes that proper land tenure policies are ones that consider the interests and rights of local communities.

III. HISTORICAL BACKGROUND TO RANGELAND GOVERNANCE

Although the Kenyan government has continually intervened in rangeland governance, one must first distinguish the actions of Kenya's colonial and post-independence governments.

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41. U.N. Conference on Environment and Development, Rio de Janeiro, Braz., June 3-14, 1992, *Agenda 21*, ¶ 12.23, U.N. Doc. A/CONF.151/26 (Aug. 12, 1992) [hereinafter *Agenda 21*], *available at* http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21toc.htm.

42. *Id.* ¶ 10.5.

43. This Convention was adopted at the 2003 African Union's Heads of States and Governments Summit in Maputo, Mozambique to replace a Convention adopted in 1968. *See generally* African Convention on the Conservation of Nature and Natural Resources, Sept. 15, 1968, 1001 U.N.T.S. 4.

44. African Convention on the Conservation of Nature and Natural Resources (Revised) art. VI.1, July 11, 2003, http://www.ecolex.org/server2.php/libcat/docs/Volltext/TRE001395E.pdf (entering into force once it is ratified by fifteen states.).

45. *Id.* art. VI.4.

A. Colonial Government Rangeland Governance

The colonial government established the African Land Development Organisation (ALDEV) in 1945.[46] The ALDEV identified a number of problems relating to tenure in different parts of Kenya. Among the pastoralist communities that owned the land they occupied, two of these identified problems were overgrazing and stock disease.[47] In response, the colonial administration established a private enclosure land system, where land ownership was firmly based on family holdings.[48] The ALDEV's two principal policy aims were to develop sound ranching techniques to replace nomadic pastoralism and encourage settled agriculture in suitable areas by all wishing to adopt it.[49] The ALDEV then resolved to continue the existing grazing schemes but create large ranches, up to 20,000 acres, for extended families.[50] Of these family ranches, the Konza and Il Kisongo grazing schemes provide both insight into the origins of group ranches and the rationale for their development.

1. The Konza Grazing Demonstration Scheme

Consisting of 22,000 fenced in acres that were divided into paddocks with water supplies, the Konza grazing scheme was created in 1946.[51] Its primary objectives were to illustrate the results of grazing management, demonstrate improvement of stock by breeding and selection, and examine ways to introduce the Masai to stable agriculture.[52] To fill the ranch, elders selected ten families, about ninety people in total, from amongst the least wealthy and required a verbal assurance that these families would manage their herds according the site's rules.[53] However, the families found the idea of selling their surplus appalling; their subsequent refusal to sell surplus caused the government to lose interest in the project despite its success in multiplying herd size.[54] In 1954, families began escalating their protest to livestock sales by quickly abandoning Konza, and by 1961, all families had abandoned it due to insufficient pasture, high stock levels, or the

46. Republic of Kenya, Sessional Paper No. 8 (1945) (on file with author).
47. NAIROBI, KENYA: MINISTRY OF AGRIC., ANIMAL HUSBANDRY, AND WATER RES., AFRICAN LAND DEVELOPMENT IN KENYA: 1946-1962, at 7 (1962).
48. *Id.*
49. *Id.* at 69.
50. *Id.* at 69-70.
51. *Id*, at 71.
52. *Id.*
53. *Id.* at 71.
54. *Id.* at 72-73.

drought of 1960-1961 that wiped out all the surpluses.[55] Despite its failings, Konza represents an early effort to reform the management of the Kenyan rangelands.

2. The Il Kisongo Grazing Scheme

Unlike Konza, the Il Kisongo scheme only covered about 2,030 square miles, but its boundaries fluctuated between the wet and dry seasons.[56] It also adopted each clans' traditional water and grazing divisions and proposed to enforce them without resorting to grazing fees.[57] Additionally, it had a partial stock limitation system that was enforced through land usage bylaws.[58] This grazing system had the support of the chief and community leaders until the 1959-1961 drought led to relaxation of the scheme's rules and eventual abandonment by the end of 1961.[59] Of the two schemes, Konza was the more radical because it aimed to totally replace Masai pastoralism with sedentary ranching systems, or with agriculture.

The failure of these two schemes, however, did not cause the government to abandon the group ranch concept. As seen in the report of the East African Royal Commission of 1953-1955, the government not only wanted to continue individualizing land ownership but wanted to extend it to groups such as companies, cooperatives, and customary associations for Africans.[60]

B. Independent Kenya Moves to Group Ranches

In 1965, the government commissioned an inquiry into "Land Consolidation and Registration in Kenya."[61] The Inquiry report, otherwise known as the Lawrence Report, concluded that group, rather than individual, registration of land has greater relevance to range areas.[62] It argued that land rights in Masailand range areas are communal and that these traditional land use systems are pervaded by overstocking and its naturally consequent land deterioration.[63] The report also demonstrated that nomadic existence imposed by the traditional Masai system had many social

55. *Id.* at 73.
56. *Id*, at 75.
57. *Id.*
58. *Id.*
59. *Id.*
60. *See* E. AFRICA ROYAL COMM'N, EAST AFRICA ROYAL COMMISSION 1953-1955 REPORT 350-51 (1955).
61. *See* REPUBLIC OF KENYA, REPORT OF THE MISSION ON LAND CONSOLIDATION AND REGISTRATION IN KENYA 1965-1966 (1966).
62. *Id.* at 30.
63. *Id.*

disadvantages, which the Masai were beginning to realize.[64] Additionally the report included findings from the previous year's development committees, which proclaimed, as their first principle, that "[t]he Masai now wish to progressively give up their nomadic way of life and to settle down to a static existence."[65]

While the government was pursuing strict and pure tenure individualization in the rest of Kenya, this approach was seen as improper for range areas because if Masai rangeland was divided among the total adult male population, it would yield an unsustainable parcel size average of two hundred acres per adult male.[66] The State argued that group ranches would better manage this difficulty and ensure the best possible use of rangelands.[67] For example, group ranch registration would provide greater access to external loans due to the overt security of tenure.[68] The report also proposed appointing group representatives to deal with the land and to enable direct adjudication of ownership rights to groups.[69] The government then passed the Land Adjudication Act and the Land (Group Representatives) Act in order to set up a legislative framework to define and govern the group ranches.

The Land Adjudication Act was designed to enable the ascertainment and recording of rights and interests in trust land to ensure that not only were individuals and families recorded and registered as landowners, but groups as well.[70] It also addressed the special needs of some parts of the country that the Land Consolidation Act[71] was not suitable for.[72] Likewise, the Land (Group Representatives) Act was designed to enable the recording of individual rights in trust land, but when consolidating holdings, it proved an inappropriate method of assigning landownership.[73] The law was meant to allow a few people to act on the group's behalf regarding property succession matters so that the need for express transfer of property whenever a new group of representatives was elected and registered could be avoided.[74]

While the memorandum of objects and reasons for these two statutes clearly captures their principal objectives, only in each statute's preamble is there some vague semblance to these objec-

64. *Id.*
65. *Id.* (internal quotation marks omitted).
66. *Id.* at 31.
67. *Id.*
68. *Id.*
69. *Id.* at 32.
70. Land Adjudication Act (1968), KENYA GAZETTE SUPPLEMENT No. 24 [hereinafter SUPPLEMENT No. 24] (on file with author) (Memorandum of Objects and Reasons).
71. Land Consolidation Act, (1959) Cap. 283 (Kenya).
72. SUPPLEMENT No. 24, *supra* note 70.
73. *Id.*
74. *Id.*

tives.[75] It appears the Acts' drafters assumed the memoranda would always be available to the people, who would later be implementing these laws. This omission could have undermined their implementation because the law's objective, especially beyond group ranch incorporation, is not always clear.

IV. DECONSTRUCTING THE NATURE OF GROUP RANCHES: A TRAGEDY OF THE COMMONS?

Because group ranches were introduced in order to eliminate rangeland decay, the government classified all prior rangeland governance as outmoded open access pastoralism that had to be replaced with commercial ranching and sedentary agriculture. This policy and the State's subsequent actions have been questioned and criticized as to whether the group ranch concept has become the very "tragedy of the commons" it was meant to prevent. To answer this question, it is imperative to analyze certain aspects of the governing framework vis-à-vis the factual situation.

A. Basic Nature of a Group Ranch

The term "group ranch" is a generic term. The principal law, the Land (Group Representatives) Act, instead uses the term "group representatives" to refer to the people that are elected by a group adjudicated to have communal interests over certain land. The land is registered in the representative's name as trustee, and the group also elects a committee, which governs the group's daily affairs.[76] Additionally, the law establishes a registrar of group representatives chiefly to supervise group ranch administration.[77] In practice, this officer is represented in every district where there are group ranches.

B. Conflicting Objectives in Legal Form of a Group Ranch

Group ranch registration was "viewed as a compromise between individual ownership and the need for [collective] access to

75. For instance, the Land Adjudication Act's preamble provides that it is "[a]n Act of Parliament to provide for the ascertainment and recording of rights and interests in Trust land, and for purposes connected therewith and purposes incidental thereto." Land Adjudication Act, (1968) Cap. 284 pmbl. (Kenya). The Land (Group Representatives) Act's preamble provides that it is "[a]n Act of Parliament to provide for the incorporation of representatives of groups who have been recorded as [landowners] under the Land Adjudication Act, and for the purposes connected therewith and purposes incidental thereto." Land (Group Representatives) Act, (1968) Cap. 287 pmbl. (Kenya).

76. *See* Land (Group Representatives) Act § 8.

77. *Id.* § 4.

wider resources in drylands."[78] It is individual tenure because land is registered to a distinctive group of people, who constitute the membership of the group ranch.[79] The goals of individual tenure were extolled by a 1955 Colonial Government plan to intensify African agriculture.[80] Similarly, the Lawrence report states:

> [I]ndividualization of tenure strikes at the very root of tribal society. It marks the final passing of the concept so eloquently expressed in the often quoted saying of the Nigerian Chief[:] 'Land belongs to a vast family of which many are dead, few are living and countless members are still unborn.'[81]

Thus, land is registered to a group as the private owner, who has the power to subdivide it and deal with and sell it to a willing buyer. Ideally, the private landowner is free from tribal controls and customs over land use and disposition because the land is his alone. This same land, however, is claimed and recognized under customary law as communally belonging to the group members.[82] Therefore, it and other property is actually vested in the group representatives who are required to act on the members' behalf and fully and effectively consult them on group matters.[83]

Because the law is silent on customary law's role in land management, it has failed to reconcile the different private and communal ownership objectives. Nevertheless, it is difficult to fuse communal interests of present and future generations with the power of disposition held by the group as a private landowner. Additionally, the legal ability of members to dissolve and sub-divide group ranches remains a major challenge to pastoralism as way of life.

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78. Ogolla & Mugabe, *supra* note 27, at 99.

79. Land Adjudication Act § 23(2).

80. It was partly intended to provide the African farmer with tenure "security through an indefeasible title as will encourage him to invest his labour and profits into the development of his farm and . . . enable him to offer it as financial collateral for loans." *See* COLONY AND PROTECTORATE OF KENYA, A PLAN TO INTENSIFY THE DEVELOPMENT OF AFRICAN AGRICULTURE IN KENYA 9 (2d ed. 1955). This report is also known as the Swynnerton Plan. *See* EMERY ROE, NARRATIVE POLICY ANALYSIS: THEORY AND PRACTICE 173 n.28 (1994).

81. REPUBLIC OF KENYA, *supra* note 61, at 6.

82. The law defines "group" to mean "a tribe, clan section, family or other group of persons, whose land under recognized customary law belongs communally to the persons who are for the time being the members of the group, together with any person of whose land the group is determined to be the owner." Land Adjudication Act § 2.

83. Land (Group Representatives) Act, (1959) Cap. 287 § 8(2) (Kenya).

C. Leadership Structure of the Group Ranch

The law establishes two levels of group ranch leadership: group representatives and the committee.

1. Group Representatives

Pursuant to the Land Adjudication Act, group representatives, upon application, are incorporated by a group advised by an adjudication officer.[84] The registrar must then convene a meeting at a specified time and venue for members to address three principal agenda items: (1) adoption of a constitution; (2) oversight of the election of three to ten people as the group's group representatives; and (3) supervision of the election of the group's officers in accordance with the constitution.[85] Once elected, group representatives should apply for a certificate of incorporation as group representatives.[86] This certificate confers upon them perpetual succession powers as well as the right to sue and be sued, to acquire and dispose of property, and to take loans.[87] Officially, group representatives hear and determine appeals from the aggrieved party from committee decisions.[88] They may also "issue instructions to the committee or to any other member [whenever they consider] such instructions are in the [group's] best interests."[89]

2. The Committee

Section 5(1)(c) of the Land (Group Representatives) Act provides for the election of group ranch officers, who constitute the management committee.[90] The committee is comprised of a chairperson, vice-chairperson, secretary, treasurer, and three other members, at least two of whom must be group representatives; only group ranch members may be nominated to fill these positions unless the registrar approves otherwise.[91] In order to ensure that group members receive the maximum social and economic benefits

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84. Land Adjudication Act § 23(5)(a)-(c).

85. Land (Group Representatives) Act § 5(1)(a)-(c).

86. *Id*. § 7.

87. *Id.* § 8(1). Perpetual succession is important because it eliminates the need for express transfer of property whenever a new group of representatives is elected and registered.

88. Land (Group Representatives) (Prescribed Provisions) Order, (1970) Cap. 287 Third Schedule (Kenya) (noting that provisions are deemed to be contained in the Constitution of every Group unless specifically excluded or modified).

89. *Id.*

90. However, people convicted of a crime involving fraud or dishonesty to the office of treasurer, group representative, or any other position of trust are legally barred from holding office. Land (Group Representatives) Act § 6.

91. *See* Land (Group Representatives) (Prescribed Provisions) Order, Second Schedule.

from their land, the committee is required to "assist and encourage members to manage the land or graze their stock in accordance with sound principles of land use, range management, animal husbandry and commercial practice," as well as prepare and implement a land development plan.[92] It may also issue instructions to members, establish the group ranch's rules of operation, raise credit, and hold and/or use moneys for the members' benefit.[93]

Because the management committee and the group representatives have designated powers and functions, the law has created two centers of power: the group representatives, who may issue instructions to the committee and hear appeals from committee decisions;[94] and the committee, which, while subordinated to the group representatives, is directly in charge of group affairs[95] and is most directly accountable to group members. Even though this governing scheme may have been intended as a check and balance system, it is nonetheless a potential conflict area. Thus, for practical reasons, some group ranches have crafted local solutions that incorporate committee members as group representatives.[96]

D. Decision Making and Legitimacy of Group Ranch Leaders

There are three ways in which a group ranch meeting may occur: the group holds an annual general meeting as prescribed by their constitution; a significant number of group representatives or the District Agricultural Committee petitions the committee chairman to convene a meeting; or at any given time, the registrar convenes a meeting.[97] All members can attend and vote at a group ranch meeting, but at least sixty percent of all registered members must attend to have a quorum.[98] Similarly, any resolution adopted at a meeting must be supported by sixty percent of the meeting's voting attendees to be valid.[99]

Participation in group ranch meetings is the only way members can influence policy matters affecting their group, but this system is fraught with challenges that undermine its utility. For example, the group ranch law does expressly provide for women to serve on the committee or as group representatives. Due to conservatism

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92. *Id.* Third Schedule.
93. *Id.*
94. *Id.*
95. *Id.*
96. *See, e.g.*, CONSTITUTION, Art. 21(c) (2005) (Tiemamut Group Ranch, Kenya) (on file with author); CONSTITUTION, Art. 21(c) (2006) (Nkiroriti Group Ranch, Kenya) (on file with author); CONSTITUTION, Art. 21(c) (2006) (Kijabe Group Ranch, Kenya) (on file with author).
97. Land (Group Representatives) Act, (1968) Cap. 287 § 15(1)-(3) (Kenya).
98. *Id.* § 15(5)-(6).
99. *Id.* § 15(7).

and patriarchal traditions, women, with the exception of widows, are not even registered as members in many group ranches.[100] While women can now hold leadership positions in a few group ranches, the trend of male dominance continues unabated.[101] A survey of the Shompole Group Ranch showed that male elders dominate discussions as women and the youth only contribute when asked.[102] Similarly, a survey of the Olderkesi Group Ranch captured the minimal role of women in decisionmaking through the fact that most women, fearing they would be "answering men's issues," refused to even answer the survey questions.[103]

Another problem confronting the meeting system is general apathy about attending them. For example, Imbirikani Group Ranch members have argued their attendance makes no difference because the committee was indifferent to their previous contributions.[104] They have also accused the committee of patronizing members, misusing group ranch funds, lacking solidarity due to divergent political and individual clan interests, being unresponsive to the needs of members, and being biased in the membership registration process.[105] The Kuri Kuri group members have expressed similar apathy about meetings due to having no confidence in fraudulent chairperson(s), too many incomplete projects, contempt for the committee, unnecessary meetings, no information flow at all, and no input in the decision making process.[106] At the Shompole Group Ranch, meeting apathy is so strong—for reasons similar to those mentioned above—that the group's own constitutional requirements for regular meetings is regularly ignored.[107]

The legitimacy of group representative and committee membership elections has also proven to be problematic. As required by

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100. Interview with John Ole Kamanga, Coordinator, South Rift Landowners Ass'n, in Nairobi, Kenya (Sept. 19, 2006) [hereinafter Kamanga Interview]. This is the case amongst the Maasai. *Id.*

101. *See, e.g.*, CONSTITUTION, Art. 22 (20060 (Kijabe Group Ranch, Kenya) (on file with author); CONSTITUTION, Art. 22 (2006) (Nkiroriti Group Ranch, Kenya) (on file with author); CONSTITUTION, Art. 22 (2005) (Tiemamut Group Ranch, Kenya) (on file with author). *But see* CONSTITUTION, Art. 22 (2005) (Imbirikani Group Ranch, Kenya) (on file with author) (ignoring women and their role in the group ranch).

102. JOHN NDUNG'U & ISAAC WARUGI, REPORT ON COMMUNITY COMMUNICATION, NETWORKING, DECISION-MAKING MECHANISM AND ASSET BUILDING TOOLS AT SHOMPOLE GROUP RANCH, KAJIADO DISTRICT 6-7 (2002) (on file with the African Conservation Centre Library, Nairobi, Kenya).

103. *Id.*

104. Proceedings of the Imbirikani Group Ranch Community Workshop at Kindu Hotel, Emali, Kenya 8 (1999) (transcript available at the African Conservation Centre Library, Nairobi, Kenya) [hereinafter Proceedings of the Imbirikani Group Ranch Community Workshop].

105. *Id.*

106. Pact Kenya, *Report on Governance and Leadership Training for Kuri Kuri Group Ranch Community* 7 (Dec. 2001) (on file with the African Conservation Centre Library, Nairobi, Kenya).

107. NDUNG'U & WARUGI, *supra* note 102, at 14-16.

law, elections are conducted at meetings and supervised by the group representatives' registrar.[108] However, given the aforementioned attendance requirements and general apathy about meetings, elections are often delayed by years at a time due to the major quorum issues that frequently arise. At the Shompole Group Ranch for example, a survey showed that office holders sometimes stay in office beyond their constitutionally pronounced electoral term.[109] In quieter group ranches, like those in the Laikipia District, no elections were held between 1972 and 2004.[110] Similarly, the Musul Group Ranch's first committee elections were held in 1975; the next election was not held until 2005, and meanwhile, this group is still trying to adopt a constitution.[111] The Tiemamut group ranch also held no elections between 1972 and 2005.[112]

Politics also affects group ranch governance because elections are heavily influenced by money, clanism, and political clout. For instance, in 1996 at the Olgulului/Olorashi Group Ranch, there was a protracted tussle between the group ranch secretary and the area Member of Parliament (MP) over the secretary's opposition to the MP's parliamentary candidate nominations for the then-ruling KANU party.[113] The MP felt threatened by this opposition, and consequently, ranch operations were paralyzed.[114]

Confronted with such challenges, the group ranch leadership structure faces a legitimacy crisis. This crisis has directly impacted the group's actual operations and the sustainable management of available resources. It also negates any general goodwill members have towards group ranches and thus is likely a reason for the increasing popularity of subdivision.

E. Ecological Governance

Most rangeland communities are pastoral livestock keepers, and thus group ranches are not only heavily dependent on natural resources, but also upon the proper and sustainable management of these resources. Ideally, a group ranch's ecological governance balances the needs of an individual member with the interests of

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108. Land (Group Representatives) Act, (1968) Cap. 287, § 5 (Kenya).

109. Proceedings of the Imbirikani Group Ranch Community Workshop, *supra* note 105.

110. This information came from a survey, which was undertaken by the author while acting as the consultant lawyer negotiating and drafting of the group's ranch constitution for the African Wildlife Foundation.

111. *Id.*

112. Interview with Tiemamut Group Ranch community in Laikipia District, Kenya (Nov. 5, 2005) (discussing the contents of the new constitution).

113. Chris Southgate & David Hulme, *Land, Water and Local Governance in a Kenyan Wetland in Dryland: The Kimana Group Ranch and Its Environs* 17 (Inst. for Dev. Policy and Mgmt., Rural Resources Rural/Livelihoods Working Paper Series, Paper No. 4, 1996).

114. *Id* at 36.

the whole group. However, the substantive provisions of the Land (Group Representatives) Act, sections 5 and 12, do not refer to natural resource governance and management.[115] Respectively, they only provide for the adoption of a constitution and empower individual groups to regulate matters left out of the model constitution.[116] Nevertheless, they are important to the administration of the groups' affairs. These provisions are therefore the only way for groups to regulate natural resource use and ecological development. The Act's Third Schedule also requires the committee to assist and encourage members to manage land or graze their stock in accordance with sound land use, range management, animal husbandry, and commercial practice principles.[117] These provisions, however, are not binding and can be expressly excluded from or modified by a group ranch's constitution.[118] Additionally, the language of these provisions is vague thus providing no substantive guidance to eco-friendly group ranch officials to help them shape official policy.[119] The development of a group ranch natural resources governance system therefore depends on each group's internal rules, and consequently many group ranches have collapsed from the inherent inadequacies of this governing structure, particularly the lack of any coercive measures to determine stock control.

Given the centrality of the above-mentioned issue to one's basic livelihood, members have tried to resolve it through various types of amendments to their respective group ranch constitutions. One common method involved zoning the ranch into several sectors, such as conservation, grazing, and settlement zones.[120] While this approach can be lauded as a step towards prescribing binding and acceptable natural resource management rules, uncontrolled stock levels have undermined its success. The stock control issue is enormously difficult to address; the author could not even broach the subject with the Tiemamut, Kijabe, Musul, and Nkiroriti group ranches, as they simply refused to discuss even the idea of rules limiting the amount of livestock they could own.

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115. Land (Group Representatives) Act, (1968) Cap. 287 §§ 5, 12 (Kenya).

116. *See id.*

117. *See id.* Third Schedule.

118. *Id.* These provisions are contained in the third part of the Third Schedule which comprises optional model regulations that each group ranch is free not to adopt for internal use, instead developing its own rules.

119. *Id.* Third Schedule.

120. CONSTITUTION, Arts. 17, 19 (2005) (Tiemamut Group Ranch, Kenya) (copy on file with author). This constitution provides for the zoning of the ranch into three sectors, establishes a committee to consult with the general membership in general meetings regarding the nature of zoning and acceptable land uses, and binds all members to act in accordance with zoning arrangements without exception. *Id.* It also prescribes penalties for the violation of the zoning arrangement, the minimum being a warning to a maximum of five thousand shillings. *Id.*

F. Subdivision

The subdivision of Kenya's group ranches is probably the greatest tragedy of all because it basically entails dividing a group's land parcel—ideally on an equal basis—among its members. However, the law is silent on how group ranches should be subdivided; the law only describes group ranch dissolution with token guidance as to what should happen afterwards.[121] Without a legislative foundation or a clear government implementation policy, the subdivision process has been left to members, with the supervision of the group representatives' registrar. Consequently, it is a very controversial process.

The current fervor surrounding subdivision is somewhat surprising because it is unclear what initially sparked it. Issues such as those mentioned above as well as poor management, lack of accountability at group and government levels, increasing group ranch populations, discord between age-sets, unregulated livestock quotas, financial misappropriation, and an ambivalent state bureaucracy have been cited as causes.[122] However, it was former President Daniel Toroitich Arap Moi who blew the final whistle for large-scale subdivision in 1989 when he ordered a survey team to the Kajiado District to demarcate land so that the group ranches there could be subdivided and each member given a title deed.[123] Accompanying Moi's order was his proclamation that "the issue of having group ranches will create problems in the future."[124] This statement was viewed as the long overdue government policy direction sanctioning subdivision.

The Kajiado District is one area that has been greatly affected by group ranch subdivision. Of the initial fifty-one incorporated group ranches there, forty-six have been subdivided.[125] Research, however, shows that the problems plaguing group ranches, such as gender bias, have infiltrated the subdivision process. According to

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121. Land (Group Representatives) Act, (1968) Cap. 287 § 13(1)-(2) (Kenya). Section 13(1) requires group representatives to seek the registrar's consent to dissolve. *Id.* § 13(1) The application should be made in writing, signed by a majority of the group representatives and supported by a copy of the meeting's minutes at which the dissolution resolution was passed. *Id.* As per section 13(2), this application must be submitted within fourteen days of passing of the resolution. *Id.* § 13(2).

122. Shauna BurnSilver & Esther Mwangi, *Beyond Group Ranch Subdivision: Collective Action for Livestock Mobility, Ecological Viability, and Livelihoods* 7 (CGIAR Statewide Program on Collective Action & Prop. Rights [CAPRi], Working Paper No. 66, 2007).

123. DEP'T FOR INT'L DEV., REALIZING THE ECONOMIC DEVELOPMENT AND POVERTY ALLEVIATION POTENTIAL OF NATURE IN MAGADI: A STUDY OF OL DONYO NYOIKE, OL KERI, OLKIRAMATIAN AND SHOMPOLE GROUP RANCHES 72 (2002) (on file with the African Conservation Centre Library, Nairobi, Kenya).

124. DAILY NATION (Nairobi, Kenya), Apr. 15, 1989.

125. Interview with Registrar of Group Representatives, in Nairobi, Kenya (Aug. 11, 2006).

a survey, women, though crucial resource users, have no role in the subdivision process, and moreover they believe "land is a man's affair and they need not be consulted on the process."[126] Just as group ranches have their indifferent governing committees, the subdivision process is controlled by distant parties—surveyors who exploit the ignorance of community members and subdivide land without considering resource distribution within ranches or the land's slope gradient.[127] Land divisions have also not been equal. A survey of the Enkaroni, Meto, and Nentanai group ranches revealed that two-thirds or more of the registered members received below average parcels, while nine percent of their registered members received more than twenty-five percent of the land.[128] As a result of these problems, there is growing anxiety over subdivision. For example, Imbirikani Group Ranch members have indicated they will petition for a general meeting to give the surveyors' absolute powers back to the group ranch committee.[129]

The government has a paradoxical role in the subdivision process in that it merely gives its consent to the land control board and mitigates conflicts that arise from the subdivision and leadership struggles.[130] Likewise, land adjudication officers—the assistant group representatives' registrars—have had their role reduced to attending Annual General Meetings, supervising elections, and updating group ranch registers.[131] The process hence lacks equity and transparency in many group ranches, and consequently subdivision has not resulted in equal parcel allotment to individual members, nor has it always benefited the potential or intended beneficiaries. More often, the system has unduly benefited the well-connected because they have been able to connive with management committees and private surveyors to manipulate the subdivision process to their advantage at the expense of less fortunate.[132] Additionally, this system appears to have severely undermined the cultural constraints that ordinarily would have limited individual self-interest for the common good.[133]

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126. *Id*.

127. *Id*.

128. Esther Mwangi, *Pitfalls for Privatization: Fingers on the Hand are Not Equal*, PERC REP., June 2004, at 12, 13 (2004), *available at* http://www.perc.org/pdf/june04.pdf.

129. P. Ntiati, *Group Ranch Subdivision Study in Loitoktok Division of Kajiado District, Kenya* 7 (Land Use Change Impacts and Dynamics, Working Paper No. 7, 2002).

130. *Id.* at 6.

131. *Id.*

132. *See* Mwangi, *supra* note 128, at 13-14.

133. *Id.*

V. TOWARD A SUSTAINABLE LAND USE LEGAL-POLICY FRAMEWORK FOR THE KENYAN RANGELANDS

The group ranch system needs to be modified or, perhaps, completely overhauled. Current land tenure and use is exposing entire communities to poverty. A concerted effort is necessary to devise a framework that promulgates sustainable land use and management practices, and there are two ways to create this framework. One way is for the State to undertake a series of legal and policy interventions, and the other is for rangeland communities to take adaptive measures to overcome the challenges they face.

A. Legal and Policy Level Interventions by the State

To ensure sustainable rangeland management for the benefit of concerned communities and posterity, the State can institute far-reaching reforms to restructure the current system. Several interventions are possible.

1. Development and Implementation of an Integrated Policy for Rangeland Administration

A major problem facing group ranch and general rangeland management is the absence of any guidance from the government pertaining to the implementation, and later review, of legislation. Two possible remedies exist. The first is adding into the Draft National Land Policy,[134] which is currently being debated, an integrated policy statement establishing mechanisms for effective rangeland (especially group ranch), administrative, and natural resource governance. This policy statement should also address post-group ranch activities in the rangelands and provide a framework for any subsequent legislative reforms that are necessary in order to implement its recommendations. The second remedy is to develop a separate rangeland policy but anchor it into the main land policy for harmonization. A process to develop an arid and a semi-arid land policy (ASAL) was recently undertaken.[135] However, the current ASAL draft wrongfully gives land governance a wide berth and suggests that further subdivision of communal lands is acceptable.[136]

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134. *See* MINISTRY OF LANDS, NATIONAL LAND POLICY (May 2007), *available at* http://www.ardhi.go.ke/onflydocuments/nlp/draftlandpolicy.pdf.

135. *See* REPUBLIC OF KENYA, DRAFT NATIONAL POLICY FOR THE SUSTAINABLE DEVELOPMENT OF ARID AND SEMI ARID LANDS OF KENYA 10 (2004) (on file with author). This first draft was generated in 2004, but no further progress seems to have been made.

136. *Id.* at 7.

Regardless of which remedy is chosen, the general policy aim must be towards establishing a governing system that is economically efficient and enhances benefit accruals for members. The policy should further social equity by dismantling patriarchy so that all members can participate in rangeland affairs. More specifically, it should recognize women's roles in rangeland communities and how lack of access to land rights or participation in decisionmaking hinders women's performance of their roles.[137] Thus any policy and accompanying legal reform should focus on the issues discussed in the following sections.

a. Disbanding the Group Representatives System

When dealing with African communities, the main error that most property theorists, like Hardin, and government policymakers have consistently made is that they assume communities *qua* communities do not have a juridical persona and thus cannot hold property rights in land directly.[138] Communities, though, have a certain commons bonds of kinship from marriage and blood relations, as well as through clans and the like. In fact, most group ranch members are related by belonging to similar clans.[139] Thus, the law should be amended to grant different community groups the ability to own property directly by recognizing them as legal corporate personas. This amendment would vest land title with the community allowing it to be managed according to communal rules. Decisionmaking would then occur at the community group's base thus involving most of the group's members and instilling in them a sense of responsibility to protect their individual land as a group. It will also ensure a level of inter- and intragenerational equity and secure commons ownership because each member will be responsible for his own and the group's collective destiny.

As an African commons, land would only be open for *mortis causa* transmissions to members of the community group.[140] The legal impairment regarding one's ability to subdivide or sell land to a non-communal person is thus removed.[141] This change would ensure that more open rangelands are supporting pastoralism and other activities, such as wildlife conservation for tourism purposes. Neighbors of the commons would also be impacted thus propagat-

137. *Id*. at 10.

138. *See* Okoth-Ogendo, *supra* note 18, at 107.

139. *See* Land Adjudication Act, (1968) Cap. 284 § 2 (Kenya) (defining a "group" to mean "a tribe, clan section, family or other group of persons, whose land under recognized customary law belongs communally to the persons who are for the time being the members of the group, together with any person of whose land the group is determined to be the owner").

140. *See generally* Okoth-Ogendo, *supra* note 18, at 108-09.

141. *Id.*

ing the concept of open rangelands to ensure ecological sustainability. Once several commonly owned community lands neighbor one another, pastoralism would be vibrantly enhanced as well as the mobility of people and livestock in search of pasture and water year-round.

b. Territorial Definition

Since the proposed transformation involves already existing groups, land should be clearly defined in order to protect community interests and secure each group's tenure in the commons against land grabbing. A number of legal steps are therefore required. For instance, changes are needed to secure communal land interests through registration, especially when land is owned by different communities within their recognized clan or other names.

c. General Governance

Many measures have been proposed to further general governance of the commons such as recognizing the centrality of customary law to rangeland administration. Accordingly, with the exception of those promulgating patriarchy and inequity, different customary laws should be codified so that they are no longer subordinate to other statutory laws. Members would also need to set up internal rules setting out membership duties and responsibilities.

As evidenced by communities using elected committees to manage water dams and nursery schools, elective leadership is now widely preferred.[142] In order to ensure that elections remain the preferred method of filling leadership positions, legislation should be passed to protect the people's elective voice from unconscionable influences and help overcome issues like illiteracy. At a minimum, legislation must mandate that all group ranch elections be conducted by secret ballot. It should also require a number of literate elders, who have been sworn to confidentiality using their traditional/religious communal practices, to work alongside the registrar in overseeing voting processes. These elders would anonymously record the electoral preferences of illiterate members and immediately submit the ballots to the registrar for counting.

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142. Both the Kijape and Nkiroriti group ranches have elected committees in charge of the local nursery schools. *See supra* note 110. At the Morupusi group ranch, there is an elected committee in charge of sand mining on the members' behalf. *Id.* Also, fifty individuals of the Meto and Enkaroni ranches indicated that an elected committee is charged with overseeing maintenance as well as collecting money to finance maintenance activities. *See generally* Mwangi, *supra* note 128.

Finally, measures must be taken to address the actions by officials who exceed their electoral term in office. The State should have the power to nullify their decisions. If the above recommendations are not adopted, rangeland governance will be condemned to complete disarray and unsustainability.

2. Implementing Rangeland Physical Planning

The Physical Planning Act regulates Kenya's physical development.[143] Regional development plans for rural areas, like rangelands, may provide for "planning, replanning, or reconstructing the whole or part of the area comprised in the plan, and for controlling the order, nature and direction of development."[144] Local authorities are responsible for implementing these plans in ways most suited to their needs.[145] This Act is an important instrument in harmonizing rangeland management planning with other land uses. However, despite the current legal framework being in place since 1996, this is little evidence of physical planning implementation.

B. Adaptive Measures

Rangeland communities have taken steps to cope with group ranch decay, and they have many more legal options available to them.

1. Preempting Group Ranch Subdivision

Faced with a crippling legal system, economic woes and erratic weather, rangeland communities have had to be innovative in order to thwart efforts to subdivide. While some communities are struggling to revise their subdivision, others are taking or have taken measures to preempt theirs. For example, all thirteen group ranches in the Laikipia District have formed a trust, Naibung's conservancy, in order to better swap pasture land and develop projects across ranch boundaries.[146] Similarly, the Shompole and Ol Kiramatian group ranches have prevented subdivision by capitalizing on their lands' scenic beauty and charging tourists viewing fees to help raise communal funds.[147] These groups have also incorporated some elements of privatization into their reform efforts in that each member has been granted a land parcel for cultiva-

143. Physical Planning Act, (1996) Cap. 6 (Kenya).
144. *Id.* § 16.
145. *Id.* § 29.
146. A copy of the trust deed is on file with the author.
147. AFRICAN CONSERVATION CENTRE, *supra* note 31, at 12.

tion; members are then free to either use or lease their land to non-Maasai for an annual fee.[148]

This overall approach towards preempting subdivision now has popular support amongst people who are struggling to secure a basic livelihood. Most of these innovations, if not all, have been supported by non-governmental organizations and hence have operated outside of official policy channels.[149] Questions regarding the sustainability of these efforts have therefore arisen, but the involvement of private investors in tourism projects appears to have alleviated these concerns.[150]

2. Post-Group Ranch Subdivision Arrangements

Pastoral producers in Kenya face the dilemma of "being caught between new land tenure rules associated with the dissolution of group ranches and subdivision of communal rangelands, and the *unchanged* ecological exigencies of their dryland systems."[151] A survey conducted in group ranches at various subdivision stages provides strong evidence that herders are not only attempting to diversify and intensify their production strategies but are also trying to increase their spatial access to resources through pasture sharing and swapping mechanisms. These emergent strategies represent examples of sustained collective action, which was theoretically unexpected after the dissolution of group ranches and the creation of subdivided property assignments.[152] However, this survey also showed that many post-subdivision mechanisms have emerged—specifically in the subdivided Nentanai, Meto, and Enkaroni group ranches—that act to further household foraging beyond one's private land parcels.[153] Households do so by redistributing their herds and swapping/sharing their pastures between extended family members and friends.[154] Such exchanges reflect

148. *Id.* at 31.

149. Such organizations include the African Wildlife Foundation (AWF) operating in the Laikipia, Samburu, Isiolo, and Kajiado districts and the African Conservation Centre (ACC) operating in the Kajiado, Narok, and Samburu districts. *See* African Wildlife Foundation, www.awf.org (last visited June 13, 2009); African Conservation Centre, www.conservationafrica.org (last visited June 13, 2009).

150. The AWF, for instance, has involved private investors in the construction and management of an eco-lodge in the Kijape group ranch. Kijabe Trust, http://www.awf.org/section/engaging_you/kijabetrust (last visited June 13, 2009). Meanwhile, the ACC has been working with Art of Ventures Group on a similar project in the Shompole group ranch. Shompole Ecotourism Development Project, http://www.conservationafrica.org/conservationprojects/project-details.php?pid=11 (last visited June 13, 2009); The Art of Ventures, http://www.atta.travel/member_detail.aspx?AT_ID=350 (last visited June 13, 2009).

151. Mwangi & BurnSilver, *supra* note 122, at 2 (emphasis in original).

152. *Id.* at 8.

153. *Id.* at 20.

154. *Id.*

efforts to implement rotational grazing at a shared price, and they occur with the understanding that they are based on need and will be reciprocated in time. Some leasing arrangements also occur based on monetary or property (animal) exchanges as payment for pasture, but these purely economic arrangements are rare.[155] At the time of this survey, thirty-nine percent of the interviewed individuals from Nentanai, Meto, and Enkaroni indicated that some of their livestock wholly resided on another's land parcel.[156] Of the fifty-three individuals without livestock on their land, they indicated that fifty-seven percent of their animals went to family and members of the same group ranch, twenty-two percent went to friends of the same group ranch, and eighteen percent had merely been moved to different land parcels they owned.[157] Only a small proportion, about four percent, indicated that some of their livestock were in other locations, such as the Elangata Wuas Group Ranch and in Tanzania.[158] Pasture leasing was also used to redistribute animals. Eleven of the surveyed individuals indicated they were leasing and/or buying pasture access at fees ranging from 500 to1500 KSHs per month; of these eleven households, three were pure leases and eight were either a mix of leasing and pasture sharing or leasing additional pastures with no sharing arrangement.[159] Legislation, however, needs to be passed to ensure these flexible associations between individual landowners are subject to regulation by the commons.

3. Flexible Legal Options

Communities have many legal options to help them cope with subdivision's aftermath or enhance open rangeland access within the group ranch framework. One option is to go to court and get an environmental easement.[160] Courts should only issue these easements to further environmental management principles by imposing obligations on the burdened land in perpetuity, for a term of years, or for an equivalent interest under customary law. These easements may also exist in gross: that is, their validity should not be dependent upon the benefited land parcel's vicinity.

Managers of individually owned communal lands also have the option of land trusts. This option normally involves setting up an irrevocable trust via a trust deed. These trusts set up loose lan-

155. *See id.* at 27.
156. *Id.* at 21.
157. *Id.*
158. *Id.*
159. *Id.*
160. Environmental Management and Co-ordination Act, (1999) Cap. 8, § 112 (Kenya).

downer associations, such as the South Rift Association of Land Owners (SORALO) which brings together thirteen of the Kajiado District's group ranches.[161] The SORALO is structured so that each group ranch can nominate a trustee, and it aims to open the South Rift as a tourist destination by linking the Masai Mara National Reserve and Amboseli National Park.[162] This goal is to be achieved by maintaining the entire area as open rangeland, which involves stemming subdivision or convincing individual landowners—by promising commensurate compensation/benefits—to forgo land to wildlife and open range livestock keeping.[163] It also involves preparing joint land use plans, establishing security modalities, laying the needed infrastructure, and strengthening the livestock based economy which is most compatible with the ideal open rangeland.[164]

VI. CONCLUSION

Rangeland management is complex; the climate is harsh, and the low rainfall level makes them unsuitable for sedentary lifestyles like large-scale agriculture. Group ranch subdivision has only reduced the amount of land available for pastoralism and forced communities to develop innovative post-subdivision associations.

The group ranch concept was founded on the incorrect assumption that Kenyan rangelands were devoid of any management control. Over the years, however, group ranches have paradoxically decayed, fallen apart, and even been subdivided. In essence, what was set up to avoid Hardin's "tragedy of the commons" scenario ended up being one. So far, legislation has failed to correct this unexpected "tragedy" for various reasons, and group ranches have failed to either originate or facilitate any meaningful sustainable development for their members. The question, then, is whether group ranches should be left to their own devices and possibly collapse or, alternatively, be subdivided and have the communities sorted out by natural selection. Collectively though, group ranches constitute the Kenyan rangeland ecosystem. The only suitable use for these lands is pastoralism, eco-tourism, and wildlife preservation. These land uses cannot be performed when land has been subdivided and fenced in.

The current group representatives system, however, is not viable because it allows for subdivision and has inherent structural

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161. The South Rift Association of Land Owners (SORALO) Trust, http://www.tourisme-solidaire.org/projet/pdf/C3KenyaSORALO.pdf (last visited June 13, 2009).

162. Kamanga Interview, *supra* note 100.

163. *Id.*

164. *Id.*

weaknesses. It must therefore be converted into an "African commons" communal ownership system, where land and its attendant resources are managed by a recognized community. Such a change requires radical legislative and policy reforms that vest land title and decisionmaking authority—except for title appropriation which is vested to the entire community in trust for future generations—to the lower levels of the community. Any reforms must also introduce intragenerational, gender, and leadership equity with regard to sharing benefits and responsibilities. Until the Kenyan rangelands' landholding and use structure is reformed, sustainability cannot be achieved.

ASSESSING THE VALIDITY OF LINKING PROGRAMS: A CASE STUDY OF DESTIN, FLORIDA'S INNOVATIVE ATTAINABLE WORKFORCE HOUSING PROGRAM

RUBINA SHALDJIAN*

I. INTRODUCTION

Housing is the largest expense for most Americans.[1] While most allocate 25% to 30% of their budget to housing, the poorest often spend closer to 50% of their income.[2] In fact, approximately ninety-five million Americans either live in sub-standard properties or spend more than 30% of their income on housing.[3] These figures show that an increase in housing or rent prices can have a serious impact on people's lives.[4] Unfortunately, due mainly to

* J.D., Florida State University College of Law, 2009. I would like to thank Professor J. B. Ruhl for his guidance.

1. John M. Quigly & Steven Raphael, *Is Housing Unaffordable? Why Isn't It More Affordable?*, 18 J. ECON. PERSP. 191, 191 (2004).

2. *Id.*; Larkin M. Moore, Comment, *Stranded Again: The Inadequacy of Federal Plans to Rebuild an Affordable New Orleans After Hurricane Katrina*, 27 B.C. THIRD WORLD L.J. 227, 231 (2007).

3. Moore, *supra* note 2, at 231.

4. *See* Quigly & Raphael, *supra* note 1, at 192. The increase in property and rent prices also impacts the economy because when people spend more money on housing, they have less money to spend elsewhere.

stagnant or declining wages accompanied by increasing housing prices,[5] America's affordable housing problem worsened during the first half of this decade despite a period of moderate growth.[6] Low-income Americans are also more commonly the victims of predatory lending.[7] The poorest pay the highest fees to borrow money and are more likely to foreclose.[8] In fact, in recent years, over two million sub-prime loans have already failed or will end in foreclosure.[9] Additionally, the United States has suffered the consequences of numerous natural disasters, particularly the 2005 hurricanes that displaced hundreds of thousands of people.[10] The poorest of these evacuees lack the means to return and rebuild,[11] and it appears that government recovery efforts do not include sufficient plans to that end.[12]

A lack of affordable housing also affects children. Children who do not have access to safe and affordable housing are more likely to have health problems.[13] For example,

> [a]bout 21,000 children have stunted growth attributable to the lack of stable housing; 10,000 children between the ages of 4 and 9 are hospitalized for asthma attacks each year because of cockroach infestation at home; and more than 180 children die each year in house fires attributable to faulty electrical heating and electrical equipment.[14]

These children are also more prone to illness, including mental illness as adults, regardless of living conditions in later years.[15] Conversely, children who have access to proper affordable housing are more likely to stay in school, get better grades, and find gainful employment when they become older.[16] Also, girls are less likely to have children before the age of majority.[17]

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5. *See* DANILO PELLETIERE & KEITH E. WARDRIP, NAT'L LOW INCOME HOUS. COAL., HOUSING AT THE HALF: A MID-DECADE PROGRESS REPORT FROM THE 2005 AMERICAN COMMUNITY SURVEY 4-5 (2008), *available at* http://www.nlihc.org/doc/Mid-DecadeReport_2-19-08.pdf.

6. *Id.* at 2.

7. *Id.*

8. *See* Habitat for Humanity, U.S. Statistics and Research, http://www.habitat.org/how/why/us_stats_research.aspx (last visited June 13, 2009).

9. *Id.*

10. PELLETIERE & WARDRIP, *supra* note 5, at 1.

11. SUSAN J. POPKIN, MARGERY A. TURNER & MARTHA BURT, REBUILDING AFFORDABLE HOUSING IN NEW ORLEANS: THE CHALLENGE OF CREATING INCLUSIVE COMMUNITIES 1 (2006), *available at* http://www.urban.org/UploadedPDF/900914_affordable_housing.pdf.

12. *See* Moore, *supra* note 2, at 230.

13. Habitat for Humanity, *supra* note 8.

14. *Id.*

15. *Id.*

16. *See id.*

17. *Id.*

Across the country, the problem is the same. Even if employment is readily available, affordable housing may not be. For example, in the City of Destin ("Destin"), Florida, housing prices have stabilized, but they are still beyond the reach of many.[18] As a result, workers either live in overcrowded conditions or put up with lengthy commutes.[19] Not only do these undesirable living conditions increase traffic congestion and pollution,[20] they also lead to "labor shortages and absenteeism."[21] It is projected that such labor shortages will lessen the city's economic attractiveness to businesses and developers.[22] Tourist development is also suffering because it is dependent on a workforce that cannot afford Destin housing.[23] Continued development is partially responsible for the problem since workers are first needed to build and then to maintain and operate.[24]

In Florida, the median income is $54,445[25] per year, and the median resale price of a single family residence is $248,400.[26] The national averages are slightly lower than Florida. The national median income is $48,201,[27] and resale prices hover around $225,000.[28] As of March 2007, the area median income (AMI) for Okaloosa County, which includes the City of Destin, was $62,600.[29] The median single family resale price in Okaloosa County is $241,100,[30] which appears to be in line with the rest of Florida and the country. However, the same is not true of the City of Destin. In Destin, the median price for a single family resale is $526,803.[31]

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18. *See* JAMES C. NICHOLAS, CITY OF DESTIN ATTAINABLE WORKFORCE HOUSING STUDY 3 (2007), *available at* http://www.cityofdestin.com/clientuploads/Documents/commdev/Impact_Linkage_Fees/3Destin_AFReport3.pdf.

19. *Id.* at 4. "16% of Destin employees [commute] into the county and 31% of all workers [travel] 30 minutes or more to get to work." *Id.* at 7 (footnote omitted).

20. *See* Home Builders Ass'n of N. Cal. v. City of Napa, 108 Cal. Rptr. 2d 60, 62 (Ct. App. 2001).

21. NICHOLAS, *supra* note 18, at 4-5.

22. *Id.* at 3.

23. *See id*. at 5.

24. *Id.* at 3. The study shows there are also employees in Destin who produce goods and services that have housing needs. *Id.* at 20.

25. U.S. Census Bureau, Median Family Income in the Past 12 Months by Family Size, http://www.census.gov/hhes/www/income/medincsizeandstate.html (last visited June 13, 2009).

26. NICHOLAS, *supra* note 18, at 7 tbl.4 (citations omitted).

27. CARMEN DENAVAS-WALT, BERNADETTE D. PROCTOR & JESSICA SMITH, INCOME, POVERTY, AND HEALTH INSURANCE COVERAGE IN THE UNITED STATES: 2006, at 12 (2007), *available at* http://www.census.gov/prod/2007pubs/p60-233.pdf.

28. NICHOLAS, *supra* note 18, at 7 tbl.4 (citations omitted).

29. Gerald Mucci, Toward Attainable Workforce Housing Through Legislative Incentives and Flexibility: Options and Recommendations 4 (2007) (unpublished report prepared for the City of Destin, Florida) (on file with author) (noting that according to the U.S. Department of Housing and Urban Development, the AMI had previously been $57,800).

30. NICHOLAS, *supra* note 18, at 7 tbl.4.

31. *Id.*

This price is more than double the Florida, national, and Okaloosa County numbers. In fact, "for market forces to reinstitute affordability of the median home to the median household income, median prices would have to fall by 62%, from $526,803 to $198,222. Such a decline is not foreseen."[32] Adding insult to injury, much of the Destin workforce earns significantly less than the Okaloosa County AMI. For example, the annual household income of construction employees is $45,739, which is 79% of the median.[33] Operational and maintenance workers earn slightly more with an average annual household income of $51,937, or 83% of the Destin median.[34]

The City of Destin, like numerous other cities in the United States, has been trying to rectify the disparity. Destin's Community Development Director, Gerald Mucci, has suggested that Destin begin by offering developer incentives only if they will lead to sustainable, affordable housing for the workforce.[35] Mucci's study shows that those with a household income between 50% and 140% of the $62,600 median, or $31,300 and $87,640 respectively, will find it challenging to purchase a home in Destin without assistance.[36] Those in this income range can afford to pay between $682 and $1,990 per month in rent or purchase a primary residence between $92,000 and $235,000.[37] While there are a limited number of units below $800 per month, rent in Destin can exceed $2,000 per month.[38] Sales prices begin around $160,000.[39] But similar to the rental rates, lower-priced units are in short supply with most homes priced well above $300,000.[40] As the numbers suggest, an affordable-housing program is needed to close the difference be-

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32. *Id.* at 11. While the State of Florida saw single family home values decline slightly over 3% between April 2006 and 2007, Destin's values appear to remain steady. Florida Sales Report—April 2007, Single Family, Existing Homes, http://media.living.net/statistics/2007/April_07_Sin_Fam_Ex_Chart.pdf (last visited June 13, 2009).

33. *Id.* at 21.

34. *Id.* at 24.

35. Mucci, *supra* note 29, at 1.

36. *Id.* at 4.

37. *Id.* at 5. The rent figures do not include non-elective utilities. *Id.* at 5 n.2. With regard to the home purchase price, the study employs a 30% front-end debt-to-income (DTI) ratio, which includes non-elective utilities. *See id.* at 5. This is lower than the current permissible Federal Housing Administration (FHA) DTI ratio of 31/43. U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT, HUD-FHA SINGLE FAMILY HOUSING, HOMEOWNERSHIP CENTER REFERENCE GUIDE 2-12 (2005), *available at* http://www.hud.gov/offices/hsg/sfh/ref/sfhp2-12.cfm. Usually, FHA ratios are higher than the ratios of conforming conventional loans, which tend to be around 28/36. Mortgage Bankers Association, Qualifying for a Mortgage, http://www.homeloanlearningcenter.com/MortgageBasics/QualifyingforaMortgage.htm (last visited June 13, 2009); *see also* Mucci, *supra* note 29, at 5 n.3 (discussing the program's mortgage assumptions).

38. Mucci, *supra* note 29, at 5.

39. *Id.*

40. *Id.*

tween what the workforce can afford—based on program guidelines—and the market price.[41] This contribution is called a "buy-down" and would allow the workforce the ability to live where it works.[42] The "buy-down" may be achieved in one of two ways: direct subsidies from third party organizations created by the legislature[43] or through Community Land Trusts, which receive funding from a variety of sources including contributions from state and private parties.[44]

Since a lack of affordable housing impacts adults, children, the economy, and the environment, this Article seeks to show that local governments can take the necessary steps to rectify the shortage without fear of legal ramifications.

Part II explores the emergence of linkage programs as a method of financing workforce housing. It explains that this type of program is gaining increased support due to tax cuts, lack of federal funding, and high home prices. This section also provides examples of various linkage programs from around the country as proof of their effectiveness.

Part III details the linkage ordinance currently pending in Destin, Florida and explains that the ordinance is suitable for a case study because of its comprehensive and flexible nature. These qualities make it more likely that the regulation will survive a challenge, because if a court is unhappy with a particular provision it may simply sever it without disturbing the rest.

Part IV uses the pending Destin ordinance to determine whether such programs are valid. It first concludes that local governments have the authority to enact linkage programs. It then argues that this type of ordinance can withstand the rational basis standard of review when challenged on equal protection and due process grounds. Next, it determines that the ordinance survives a constitutional takings analysis. Finally, it examines the applicability of the *Nollan*/*Dolan* standard and its consequences.

This Article concludes that if municipalities follow Destin's example in implementing linkage programs of their own the programs will likely come out of a challenge more or less unscathed. Therefore, local governments should create these programs without fear that their efforts will be in vain.

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41. *Id.* at 6, 6 n.6.

42. *Id.* at 5. On a monthly basis, it is less expensive to buy-down rent than to buy-down a mortgage. *Id.* at 6 n.5; *see also id.* at 6 (comparing rental and mortgage buy-downs).

43. Mucci, *supra* note 29, at 6.

44. *Id.* at 7. This option will better assure the sustainability of affordable housing.

II. HISTORY OF IMPACT FEES AND AFFORDABLE HOUSING

The popularity of government use of development exactions[45] to finance infrastructure is partially due to tax cuts and a reduction in federal funding. Increasing property values have further pushed municipalities to impose similar exactions to mitigate the social and environmental impacts of new development. These programs, commonly called linkage fees, come in many different forms. Several are currently in place around the country and are proving to be quite successful in mitigating the shortage of workforce housing.

A. Financing Infrastructure

Since 1926, local planning and land use regulations have been recognized as a valid use of the police power.[46] Zoning ordinances are the most common planning tool because they are likely to have an immediate effect on the community.[47] However, "zoning without planning lacks coherence and discipline in the pursuit of goals of public welfare which the whole municipal regulatory process is supposed to serve."[48] For this reason, many jurisdictions require a comprehensive plan and believe that it is crucial to successful planning and zoning because it acts as a roadmap for local officials[49] and ensures a more controlled and consistent use of the police power.[50]

Nevertheless, despite all the planning and regulation, land use is far from static. As Richard Babcock once pronounced, "The name of the zoning game is change."[51] "Change" in this context is used broadly and is meant to include everything from applications to change the zoning of a particular property to applications for the subdivision of a particular parcel in order to build. With every applicant that seeks change, the government must ensure that the request is consistent with the comprehensive plan, but also that the change is in the community's best interest.[52]

The financing of infrastructure, generally through development exactions, is one of the things for which local governments must plan. While there is evidence that development exactions existed

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45. *See infra* p. 343 and note 61.

46. Charles M. Haar, *In Accordance with a Comprehensive Plan*, 68 HARV. L. REV. 1154, 1154 (1955) (citing Village of Euclid v. Amber Realty Co., 272 U.S. 365 (1926)).

47. *Id.*

48. *Id.*

49. *Id.* at 1155.

50. *See id.*; Udell v. Haas, 235 N.E.2d 897, 900-901(N.Y. 1968).

51. DAVID L. CALLIES, ROBERT H. FREILICH & THOMAS E. ROBERTS, CASES AND MATERIALS ON LAND USE 83 (4th ed. 2004).

52. *Id.* at 83-84.

in colonial times,[53] the 1980s brought their increased use.[54] Local governments ordinarily financed infrastructure "through general revenues and the issuance of general obligation bonds that [were] pledged against local property tax collections."[55] However, tax cuts and reductions in federal funding left municipalities in financial trouble.[56] Local governments had no choice but to find a creative way to finance infrastructure.[57] At their core, development exactions, such as in-lieu fees and impact fees,[58] are conditions that local governments impose on the parties that seek change.[59] They force developers to internalize the negative externalities that they impose on the community through their development.[60] Initially, this practice was reserved for financing schools, streets, parks, museums, and the like.[61] However, exactions soon branched out to include linkage fees.[62] While traditional exactions, such as impact fees, help mitigate infrastructure shortages that come with new development, linkage fees address social concerns that arise out of the new development.[63] Linkage fees have helped municipalities

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53. Gus Bauman & William H. Ethier, *Development Exactions and Impact Fees: A Survey of American Practices*, 50 LAW & CONTEMP. PROBS. 51, 51 n.1 (1987).

54. *See* Robert Collin & Michael Lytton, *Linkage: An Evaluation and Exploration*, 21 URB. LAW. 413, 428 (1989); Donald L. Connors & Michael E. High, *The Expanding Circle of Exactions: From Dedication to Linkage*, 50 LAW & CONTEMP. PROBS. 69, 69 (1987).

55. Bauman & Ethier, *supra* note 53, at 51.

56. Connors & High, *supra* note 54, at 69. At the time, taxpayers wanted to stop paying for these types of services through their ad valorem taxes because the tax increases were not proportional to the increase in services. *See* Bauman & Ethier, *supra* note 53, at 52.

57. Connors & High, *supra* note 54, at 69.

58. Impact fees are development exactions charged by municipalities to mitigate the effect the development has on infrastructure. *See* James A. Kushner, *Property and Mysticism: The Legality of Exactions as a Condition for Public Development Approval in the Time of the Rehnquist Court*, 8 J. LAND USE & ENVTL. L. 53, 131-32 (1992). Likewise, municipalities may ask that new developments dedicate land for things such as parks or open spaces. *Id.* at 128. However, when a dedication is impossible or unnecessary, the local government may impose a fee instead of dedication. *Id.* This fee is commonly referred to as an "in-lieu" fee. *Id.*

59. Connors & High, *supra* note 54, at 70. Exactions are "condition[s] precedent to the issuance of a special permit, a conditional use permit, a subdivision approval, or an amendment to a zoning map." *Id.* at 70. Those who work in the field of land use define development exaction as "a governmental requirement that a developer dedicate or reserve land for public use or improvements, or pay a fee in lieu of dedication, which is used to purchase land or construct public improvements." Bauman & Ethier, *supra* note 53, at 56. This effectively transfers the burden of supplying infrastructure from local government and the taxpayers to the private sector. *Id.* at 52.

60. Collin & Lytton, *supra* note 54, at 428; Connors & High, *supra* note 54, at 69. "An externality arises when the producer of a good imposes a cost on third parties, which he does not pay–that is, which is 'nonpriced.' " John A. Henning, Jr., Comment, *Mitigating Price Effects with a Housing Linkage Fee*, 78 CAL. L. REV. 721, 731 (1990).

61. Deborah Rhoads, Comment, *Developer Exactions and Public Decision Making in the United States and England*, 11 ARIZ. J. INT'L & COMP. L. 469, 474 (1994).

62. *See id.*

63. Michael T. Kersten, Comment, *Exactions, Severability and Takings: When Courts Should Sever Unconstitutional Conditions from Development Permits*, 27 B.C. ENVTL. AFF. L. REV. 279, 287(2000). Linkage programs are specifically "designed to raise capital funds

get developers involved in financing things such as public transportation, day care, and even affordable housing.[64] In return for their contribution, developers are granted permission to proceed with their development.[65]

B. Inclusionary Zoning and Linkage Programs

The history of a planned affordable housing initiative in the Unites States began in the early twentieth century and was influenced by the co-operatives that existed in England in the late nineteenth century.[66] In the early 1920s, labor unions were largely responsible for sponsoring these affordable residences.[67] In 1927, the New York State Limited Dividend Housing Companies Act lent support to the development of affordable housing.[68] However, it was not until 1971 that the United States began using inclusionary zoning "as a viable land use control."[69] A recent increase in property values has fueled the movement supporting such regulations.[70] Additionally, the branching out of so-called "traditional" exactions was justified by the reasoning that taxpayers should not have to pay for the social burdens imposed by developers while the developers profit without consequence.[71] In the 1980s, office developments were the primary targets of linkage fee ordinances, and the collected funds were used to address the shortage of affordable

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for the 'soft' or 'social' infrastructure items . . . and are viewed as the latest form of developer funding requirement." Julian Conrad Juergensmeyer, Impact Fee Legal Review Memorandum 12 (Sept. 17, 2007) (unpublished report prepared for the City of Destin, Florida) (on file with author).

64. Rhoads, *supra* note 61, at 474.

65. Juergensmeyer, *supra* note 63, at 12 n.44 (quoting Christine Andrews & Dwight Merriam, *Defensible Linkage*, *in* DEVELOPMENT IMPACT FEES 227 (Arthur C. Nelson ed., 1988)).

66. Gerald W. Sazama, *Lessons from the History of Affordable Housing Cooperatives in the United States: A Case Study in American Affordable Housing Policy*, 59 AM. J. OF ECON. & SOC. 573, 576-77 (2003). The author notes that the first housing co-operative in England was created in Rochdale in 1884 by a group of workers and also explains that in housing cooperatives, residents jointly own the building. *Id.* at 575-76.

67. *Id.* at 578.

68. *Id.* The Limited Dividend Housing Companies Act was a government "subsidy through [a] tax abatement." Curtis Berger, Eli Goldston & Guido A. Rothrauff Jr., *Slum Area Rehabilitation by Private Enterprise*, 69 COLUM. L. REV. 739, 752 n.63 (1969).

69. Brian R. Lerman, Note, *Mandatory Inclusionary Zoning—The Answer to the Affordable Housing Problem*, 33 B.C. ENVTL. AFF. L. REV. 383, 386 (2006); *see also* Barbara Ehrlich Kautz, *In Defense of Inclusionary Zoning: Successfully Creating Affordable Housing*, 36 U.S.F. L. REV. 971, 977 (2002) (explaining that the first ordinance was in Fairfax County, Virginia). While most zoning ordinances address like use and space, inclusionary zoning also considers affordability. Lerman, *supra*, at 385.

70. *See* Lerman, *supra* note 69, at 386 (citing Douglas R. Porter, *The Promise and Practice of Inclusionary Zoning, in* GROWTH MANAGEMENT AND AFFORDABLE HOUSING: DO THEY CONFLICT? 212, 213 (Anthony Downs ed., 2004)).

71. Collin & Lytton, *supra* note 54, at 428-29; Kersten, *supra* note 63, at 287.

housing.[72] This was because new office developments attracted workers to move to the area and created or aggravated the lack of affordable housing.[73] The situation was worsened when the new residents came and the short supply of homes drove up prices.[74] Additionally, "[c]ommercial development[s] . . . [often] displace residents, either directly, by building on their housing sites, or indirectly, by reducing the land available for potential residential development."[75]

To ensure that its citizens do not run out of affordable housing alternatives, it is crucial that a local government have a proper plan.[76] In fact, without proper planning, existing zoning regulations and standards are often an impediment to affordable housing.[77] "Zoning is fundamentally exclusionary by the nature of its separation of land uses and the fact that if no specific provision for a land use is made, that use is generally excluded from a jurisdiction."[78] When affordable housing goals are included in the planning process, it "can prevent or reduce the opportunities for opponents . . . to block, delay, and impose additional costs on development proposals because fewer discretionary land-use approvals are needed and zoning/planning standards are likely to be more accommodating."[79] Many states have found that a good way to plan for affordable housing is to incorporate related goals into their statutes, leaving local governments with no other choice but to plan accordingly.[80]

There is a variety of ways to plan for inclusionary housing. Mandatory set-asides allow money to accumulate by setting aside a portion of local taxes.[81] Land transfer programs allow the trans-

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72. Collin & Lytton, *supra* note 54, at 427, 430.

73. *Id.* at 427.

74. *Id.*

75. *Id.*

76. SECTION OF STATE AND LOCAL GOV'T LAW, AM. BAR ASS'N., THE LEGAL GUIDE TO AFFORDABLE HOUSING DEVELOPMENT 4 (Tim Iglesias & Rochelle E. Lento eds., 2005) [hereinafter ABA].

77. *See id.* Through a creative use of common land use regulations such as "minimum lot area requirements, minimum floor area requirements, limitations on multifamily dwellings and manufactured housing, minimum yard, setback and other extraordinary bulk requirements, and growth management caps," local governments successfully exclude on the basis of race, religion, and socio-economic status. CALLIES, FREILICH & ROBERTS, *supra* note 51, at 535.

78. Collin & Lytton, *supra* note 54, at 430. Many communities justify the use of zoning to exclude by claiming that it helps maintain the community's character. Lerman, *supra* note 69, at 386.

79. ABA, *supra* note 76, at 4.

80. *Id.* at 7.

81. *Id.* at 290-91. The ability to choose this option rests on some type of enabling legislation that allows the set-aside. *Id.* at 291. Pennsylvania; St. Louis, Missouri; Seattle, Washington; New Orleans, Louisiana; and Massachusetts also use set-asides. *Id.* at 291-96.

fer of land for affordable housing.[82] Some municipalities choose to issue bonds and use that money for workforce housing.[83] Others waive a variety of development fees for the construction of affordable housing.[84] Tax increment financing is another method to set money aside.[85] Finally, the city may choose to impose a linkage fee.[86] It is important to note that if the plan includes a linkage fee, the government must have a nexus study, which is "an economic report establishing how much housing demand is created by each square foot of non-residential space."[87]

C. Linkage Programs in New Jersey, Massachusetts, and California

Examples of successful linkage programs can be found in New Jersey, Massachusetts, and California. These linkage programs use various methods to achieve their goals.

New Jersey takes a sort of "fair share" approach, whereby municipalities are allocated their "proportional obligation of low and moderate-income housing."[88] However, due to criticism, New Jersey modified its rigid approach to a more flexible one that is consistent with smart growth called "growth share."[89] Nevertheless, local governments must take affirmative steps to provide affordable housing.[90] The Council on Affordable Housing (COAH) establishes New Jersey's inclusionary policies and authorizes the use of development fees.[91] At first, local governments used the mandatory

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82. *Id.* at 314. Land transfers are used in Detroit, Michigan; New York, New York; and New Orleans, Louisiana. *Id.* at 314-18.

83. *Id.* at 318. Polk County, Iowa; San Francisco, California; and Charlotte, North Carolina all use bond financing. *Id.* at 318-21.

84. *Id.* at 321. Both Fort Lauderdale and Tallahassee, Florida and Salt Lake City, Utah use these types of programs. *Id.* at 321-23.

85. ABA, *supra* note 76, at 323. When a city designates an area as a redevelopment area, the existing assessed value for tax purposes of properties within that zone becomes the "base." CALLIES, FREILICH & ROBERTS, *supra* note 51, at 634. In other words, the assessed value is "frozen" so that the property owners do not pay more taxes while redevelopment occurs. However, as property values increase with redevelopment, so do the assessed values. Once that happens, the property owner pays taxes on the new assessed value, but the city puts the difference between the taxes collected under the new assessed value and the base assessed value into a special fund to pay for redevelopment. Despite having to pay more taxes, property owners benefit because, presumably, their property values have increased as a result of the neighborhood improvements. *See id.* at 634-647 (explaining and evaluating the pros and cons of tax increment financing). Tax Increment Financing is used in California; Oregon; Chicago, Illinois; and Minneapolis, Minnesota. ABA, *supra* note 76, at 323-28.

86. ABA, *supra* note 76, at 296.

87. *Id.* at 297.

88. *Id.* at 12-13 (citing N.J. STAT ANN. §§ 52:27D-307c(1) (West 2003)).

89. *Id.* at 15.

90. *Id.* at 310.

91. *Id.*

set-aside as their primary tool.[92] But the trend has shifted to fees imposed on new construction.[93]

Massachusetts has enabling legislation that allows voters to approve "a surcharge of not more than 3% of real property levies,"[94] a percentage of which is allocated to workforce housing.[95] However, Boston takes a different approach. The city has had its own inclusionary program in place for over twenty years.[96] Based on the results of a 1986 study,[97] Boston began a linkage program that applies to large commercial developments and gives developers the option to pay a per-square-foot fee or build workforce housing. [98] The Neighborhood Housing Trust (NHT) collects the money generated by the fee and has the discretion to choose which projects to finance.[99] "Since 1985, the NHT has spent more than $80 million in linkage fees (more than $4 million per year) and created or preserved 6166 affordable housing units."[100] The program requires that owner-occupied affordable units remain so for fifty years, whereas rental units must be affordable forever.[101]

In California, state law specifies how local officials can "address the housing needs of all economic segments of the community" in the comprehensive plan.[102] Additionally, each jurisdiction's "fair share" of housing is determined, assigned, and incorporated into the local plan.[103] Like Boston, following a study in 1989, the City of Sacramento decided to impose a per-square-foot linkage fee on all new commercial development, additions, and possibly even other improvements.[104] Developers have the option of only paying 20% of the fee if they choose to build housing themselves.[105] However, unlike the Boston program, the type of housing developers build to take advantage of the reduced fee does not have to be af-

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92. *Id.*

93. *Id.* The fee applies to both residential and commercial construction. *Id.*

94. *Id.* at 296.

95. *Id.* (citing MASS. GEN. LAWS, ch. 44B, § 6 (West 2003)).

96. *Id.* at 302.

97. *Id.* at 303.

98. *Id.* at 302. The fee of $7.18 per square foot is imposed only on projects with over 100,000 square feet. *Id.*

99. *Id.* at 303.

100. *Id.*

101. *Id.*

102. *Id.* at 8; CAL. GOV'T CODE § 65580(a) (2008) ("The availability of housing is of vital statewide importance, and the early attainment of decent housing and a suitable living environment for every Californian, including farmworkers, is a priority of the highest order.").

103. ABA, *supra* note 76, at 8 (citing CAL. GOV'T CODE § 65584 (2004)).

104. *Id.* at 304. In 2004, the fees ranged from $0.39 per square foot to $1.56 per square foot, depending on the type of commercial use. *Id.* However, this fee was based on the 1989 study, and a new study showed that the subsidy cost had increased. *Id.* at 305. As a result, the city increased its fees between 10% and 30% of the maximum the original study allowed. *Id.*

105. *Id.* at 304.

fordable.[106] The collected fees are placed in a trust, and the Sacramento Housing and Redevelopment Agency is responsible for their allocation.[107] Since 1989, the city has spent over $14.6 million on over 1,600 residences, including 1,200 for households with low to very low income.[108]

New Jersey, Massachusetts, and California show us that these linkage programs are effective at reducing the low-income housing shortage. Therefore, the determination of whether linkage programs can withstand challenges at every level is crucial.

III. DESTIN: A CASE STUDY

The preceding examples show that linkage programs help increase affordable housing when local governments properly plan. Thus, to formalize a workforce housing program, a city must define the program in a way that takes income and home prices into consideration and also spells out qualification criteria.[109] The city must then build this standard into its Comprehensive Plan or Land Development Code provisions that deal with any incentives to build workforce housing.[110] For example, one of the goals included in the Destin Comprehensive Plan is the "[maintenance of] a balanced and sustainable local economy" through the "availability of a stable and qualified workforce" to ensure the continuation of the community's character.[111]

Destin officials fear that the lack of workforce housing will lead to the deterioration of the local economy.[112] To remedy the situation, the city has proposed the addition of an attainable workforce housing linkage fee to its Land Development Code.[113] The proposed Destin ordinance offers a menu of options to those seeking to develop[114] or redevelop.[115] The party seeking the change must submit

106. *Id.*
107. *Id.*
108. *Id.*
109. *See* Mucci, *supra* note 29, at 7.
110. *See id.*
111. Destin, Fla., Attainable Workforce Housing Linkage Fee, Ordinance 07-26-LC, § 19.05.01(A)-(B) (2007) (becoming effective ninety days after passage by the Destin City Council and signature by the Mayor). The City attributes its character to its workforce working, playing, studying, and voting in the area. *Id.* §§ 19.05.01(B), (H).
112. *Id.* § 19.05.01(G).
113. *See id.* §§ 19.05.00-19.05.16. The ordinance's state purpose is to "ensure there is an attainable supply of housing for fifty percent (50%) of the City's workforce, and their families." *Id.* § 19.05.02.
114. *Id.* § 19.05.05; *see also* § 19.05.06. Development is defined as the "carrying out of any building activity or mining operation, the making of any material change in the use or appearance of any structure or land, or the dividing of land into three or more parcels." FLA. STAT. § 380.04 (2008).
115. Destin, Fla., Attainable Workforce Housing Linkage Fee, Ordinance 07-26-LC, § 19.05.05. While the ordinance does not describe redevelopment in its definitional section,

a Plan to the City Manager.[116] Based on the specifications in the ordinance, the Plan must include a calculation of the amount of affordable housing needed by the development, as well as the method chosen to accomplish the statutory requirement.[117] The methods made available by the ordinance are "on-site or off-side construction of units, conversion of free market units, payment of a fee in-lieu, conveyance of land for attainable housing, or a combination" of these methods.[118] The developer may also assign its responsibility to a government-approved, non-profit affordable housing provider.[119] The method chosen by the party seeking change must be justified[120] and may require additional information before it can be approved.[121]

From the ordinance, it appears that on-site construction is preferred unless the City Manager deems it impracticable.[122] To be impracticable, the on-site construction must be inconsistent with the comprehensive plan, far from existing or planned infrastructure, contrary to the development code, in violation of state or federal law, or incompatible with surrounding uses.[123] Impracticability may also be found if the affordable housing project could be joined to another off-site project or if there is less than one unit needed.[124] If on-site construction is impracticable, the applicant may build off-site or convert a free-market unit.[125] For the City Manager to approve either method, the proposal must be consistent with the comprehensive plan, close to services and infrastructure, consistent with state and federal law, and compatible with surrounding land uses.[126] The applicant may also choose to convey land, but it must be proportional in size to the housing need resulting from the

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it does specify that "redevelopment, remodeling or expansion of a legally preexisting residential use of land" that is less than "100 square feet of heated or air-conditioned area floor area" is exempt from the inclusionary housing requirements. *Id.* § 19.05.07(C). Likewise, mitigation is not required for the construction of a unit with deed restrictions ensuring it remain affordable; the construction of units smaller than 1,000 heated and air-conditioned square feet to be used for full time residency; certain non-residential redevelopments; remodels or expansions; the construction of buildings for temporary use; or for the construction of workforce housing. *Id.* §§ 19.05.07(A)-(B), (D)-(F).

116. *Id.* § 19.05.08(A).

117. *Id.* § 19.05.08(B)(1)-(2).

118. *Id.* § 19.05.08(B)(2).

119. *Id.* § 19.05.09(G).

120. *Id.* § 19.05.08(B)(2).

121. *Id.* § 19.05.08(B)(3)-(6). For example, if a developer or redeveloper chooses to build attainable workforce units, the Plan must include a site plan, "[a] summary of the number of . . . units, the number and size of bedrooms of each unit, the rental/sale mix, and the sales price or rent for each unit" and, finally, any restrictions that will allow the units to remain affordable. *Id.* § 19.05.08(B)(3)(a)-(c).

122. *Id.* § 19.05.09(B).

123. *Id.* § 19.05.09(B)(1)-(7).

124. *Id.* §§ 19.05.09(B)(5), (B)(7).

125. *Id.* § 19.05.09(C)-(D).

126. *Id.*

development.[127] As with the on- and off-site construction and the market conversion options, the land being conveyed must be consistent with the comprehensive plan and near infrastructure and services.[128] It must comply with the Land Development Code.[129] The land must have a fair market value "comparable to the cost to mitigate the need for attainable workforce housing attributable to the development."[130] Once the land is conveyed, the city may only use the land for workforce housing development.[131] However, the city council may sell the property and place the proceeds in a trust account established solely to further workforce housing goals.[132] The final option for the applicant is to pay an in-lieu fee based on the schedules set forth in the ordinance when the building permits are issued.[133] Lastly, the subsidy and fee schedules are updated annually on September 1st.[134]

Despite the existence of linkage programs, the comprehensive nature of the Destin ordinance makes it a good candidate for a case study. The ordinance not only offers a menu of available options, but may also allow the party seeking change to make an independent calculation according to the parameters set out in the regulation.[135] This level of flexibility will likely improve the ordinance's ability to withstand judicial scrutiny,[136] especially since courts can simply sever the parts they disagree with rather than striking down the entire regulation.[137]

IV. CHALLENGES

There are several grounds on which to challenge the linkage program in Destin. Challenges to the government's authority are common because if successful they obviate the need to litigate on any other matters. Nevertheless, the failure of this argument does not mean all is lost for the challenger. Other arguments against

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127. *Id.* § 13, 19.05.09(E)(1).

128. *Id.* § 19.05.09(E)(1)(a)(1)-(2).

129. *Id.* § 19.05.09(E)(1)(a)(3).

130. *Id.* § 19.05.09(E)(1)(b). Fair market value is initially determined at the time the Plan is reviewed and is confirmed along with the approval of the site plan or plat. *Id.* § 19.05.09(E)(1)(b)(1)-(2). A real estate commission is not included in the amount. *Id.* § 19.05.09(E)(1)(b)(3).

131. *Id.* § 19.05.09(E)(1).

132. *Id.* § 19.05.09(E)(2)(a)-(b).

133. *Id.* § 19.05.09(F); *see also id.* § 19.05.12(A)-(B) (detailing residential and non-residential in-lieu fee schedules).

134. *Id.* § 19.05.09(F)(2).

135. Juergensmeyer, *supra* note 63, at 15-16.

136. *Id.* at 15.

137. *Id.* at 16.

harmful land use regulations may be based in equal protection, substantive due process, and takings jurisprudence. [138]

A. Authority: Police Power, Home Rule, and Enabling Legislation

Challenges to land use regulations often begin with a claim that the local government did not have the authority to impose them.[139] If the court does not find that such power lies with the government, it may invalidate the ordinance that imposes development exactions as being ultra vires.[140] Therefore, since a linkage ordinance is a land use regulation, the first argument likely to be made is that the government did not have the right to regulate in the first place. For this reason, it is important to examine the potential sources of authority for enacting such fees.

Courts have long held that the police power is the basis for the local government's authority to enact zoning laws.[141] It follows that imposing exactions is part of the police power, which allows local governments to protect the health, safety, and general welfare of its people.[142] Courts reason that this power derives from the "state constitutional guarantees of municipal home rule,"[143] which is a concept that began in the late 1800s when states began to amend their constitutions to allow localities to create charters and govern themselves with regard to local matters.[144]

Sometimes, the law specifically authorizes the linkage program. For example, the City of Boston ("Boston") has the express authority to regulate affordable housing.[145] However, if the court cannot find legislation that grants the municipality the power to specifically impose the exaction, the court may find that the power to impose the exaction is derived from the state's regulations pertaining to land use and zoning.[146]

Along the same lines, it is possible for the court to infer the power to impose linkage fees from affordable housing laws. Many states have inclusionary zoning statutes. For example, Arizona, Rhode Island, and Vermont specifically require authorities to in-

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138. Lerman, *supra* note 69, at 394 nn.97-98.

139. Rhoads, *supra* note 61, at 478.

140. *Id.* at 479.

141. *See, e.g.*, Village of Euclid v. Ambler Realty Co., 272 U.S. 365, 395 (1926); Kautz, *supra* note 69, at 989-90 (stating that to be upheld, it must be "fairly debatable that an ordinance [is] reasonably related to the general welfare").

142. Rhoads, *supra* note 61, at 479.

143. *Id.*

144. Richard Briffault, *Our Localism: Part I—The Structure of Local Government Law*, 90 COLUM. L. REV. 1, 10 (1990).

145. 1956 Mass. Acts 665, § 16.

146. Rhoads, *supra* note 61, at 478.

clude affordable housing in the comprehensive plan.[147] Oregon also acknowledges the importance of planning for affordable housing.[148] Likewise, the Florida legislature expressly grants local governments the authority to "adopt and maintain in effect *any* law, ordinance, rule, or other measure . . . for the purpose of increasing the supply of affordable housing using land use mechanisms such as inclusionary housing ordinances."[149] Like other states, local governments in Florida *must* include affordable housing in their comprehensive plans.[150]

Therefore, an ordinance like the one in Destin, Florida will likely withstand a challenge that the local government does not have the authority to regulate affordable housing.

B. Constitutional Grounds

Inclusionary zoning ordinances may be challenged on three constitutional grounds: (1) that the different treatment of properties subject to the ordinance violates the Equal Protection Clause; (2) that substantive due process prevents the government from interfering with the challenger's property rights; or (3) that the ordinance constitutes a taking.[151]

1. Equal Protection

The Equal Protection Clause provides that "[n]o State shall. . . deny to any person within its jurisdiction the equal protection of the laws."[152] The Clause is primarily concerned with unfair classifications. However, courts recognize that all laws classify to some extent,[153] and the mere fact that a law classifies does not necessarily render it invalid.[154] Based on the type of classification, courts first determine the level of scrutiny applicable to the law being challenged.[155] Strict scrutiny is a "harsh standard [that] imposes a heavy burden of justification upon the state and should be applied only to those actions by the state which abridge some fundamental right or affect adversely upon some suspect class of per-

147. ARIZ. REV. STAT. ANN. § 9-461.05(E)(6) (2007); R.I. GEN. LAWS § 45-22.2-6 (2007); VT. STAT. ANN. tit. 24 § 4382 (2007).

148. OR. REV. STAT § 197.307 (2008).

149. FLA. STAT. § 166.04151 (2008) (emphasis added).

150. FLA. STAT. § 163.3177(6)(f)(1)(d) (2008).

151. Lerman, *supra* note 69, at 394, 394 n.97.

152. U.S. CONST. amend. XIV, § 1.

153. Romer v. Evans, 517 U.S. 620, 631 (1996).

154. Markham v. Fogg, 458 So. 2d 1122, 1127 (Fla. 1984) (discussing *In re* Estate of Greenberg, 390 So. 2d 40, 42 (Fla. 1980)).

155. Fla. High Sch. Activities Ass'n v. Thomas, 434 So. 2d 306, 308 (Fla. 1983).

sons."[156] As a general matter, classifications based on race, ethnicity, religion, and other such characteristics are considered suspect.[157] Under this standard of review, the challenger will likely prevail;[158] strict scrutiny, however, is not the applicable standard to land use regulations.[159] The rationale is that states should have discretion when it comes to regulating social or economic issues because the democratic process will act as a check and ensure that the government does not overstep its bounds.[160]

If the classification is not suspect, the court applies rational basis review and presumes that the law is constitutional. [161] It is up to the challenger to prove the state had no legitimate interest in enacting the law, and even if the state had a legitimate interest, the classification is not reasonably related to it. [162] The rational basis standard is difficult for challengers to overcome.[163] Courts are not in the business of criticizing a legislature's policies[164] and will only strike down a law if there is evidence that the legislature's sole motivation was a "bare . . . desire to harm a politically unpopular group."[165] Likewise, a court will not hesitate to invalidate legislation that is either arbitrary[166] or based on a pretext.[167] It should be noted that the government does not need to achieve its legitimate objectives all at once; there "is no requirement of equal protection that all evils of the same genus be eradicated or none at all."[168]

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156. *Id.*; *see also* United States v. Carolene Prod. Co., 304 U.S. 144, 152-53 n.4 (1938) (discussing the factors to be considered in determining whether heightened scrutiny is appropriate); Laura Padilla, *Reflections on Inclusionary Housing and a Renewed Look at Its Viability*, 23 HOFSTRA L. REV. 539, 612 (1995) (explaining that under strict scrutiny, the government must prove that it has a compelling interest and the regulation is narrowly tailored to that end).

157. *Romer*, 517 U.S. at 633 (citing Louisville Gas & Elec. Co. v. Coleman, 277 U.S. 31, 37-8 (1928)); *Carolene Prod.*, 304 U.S. at 152-53, 153 n.4; Michael S. Giaimo, *Challenging Improper Land Use Decision-Making Under the Equal Protection Clause*, 15 FORDHAM ENVTL. L. REV. 335, 335 (2004); *see generally* Castaneda v. Partida, 430 U.S. 482 (1977) (finding strict scrutiny appropriate for a racially discriminatory jury selection process).

158. Padilla, *supra* note 156, at 612.

159. *Id.*

160. City of Cleburne v. Cleburne Living Ctr., 473 U.S. 432, 440 (1985).

161. *Thomas*, 434 So. 2d at 308.

162. *Id.* "The burden is upon the party challenging the statute or regulation to show that there is *no* conceivable factual predicate which would rationally support the classification under attack." *Id.* (emphasis in original).

163. *See*, *e.g.*, *id.*

164. *See*, *e.g.*, Ry. Express Agency, Inc. v. New York, 336 U.S. 106, 109 (1949) (refusing to consider the wisdom or propriety of the particular regulation).

165. U.S. Dep't of Agric. v. Moreno, 413 U.S. 528, 534 (1973) (invalidating the Food Stamp Act because the legislative history showed that the only reason for its enactment was to prevent hippies and hippie communes from receiving social assistance).

166. Markham v. Fogg, 458 So. 2d 1122, 1127 (Fla. 1984).

167. W. & S. Life Ins. Co. v. State Bd. of Equalization of Cal., 451 U.S. 648, 671-72 (1981).

168. *Ry. Express Agency*, 336 U.S. at 110.

Historically, equal protection claims have been related to laws that classify and treat *groups* in a disparate manner.[169] Recently the U.S. Supreme Court faced the question of whether there can be an equal protection claim where the plaintiff does not belong to a class or a group but is a "class of one."[170] The Court explained that the Equal Protection Clause serves to protect against "intentional and arbitrary discrimination" whether that discrimination stems directly from the statute or from governmental interpretation of the statute.[171] It held that the size of the class or group is irrelevant to an equal protection claim.[172] A plaintiff may successfully bring an equal protection claim as "a 'class of one' where [she] alleges that she has been intentionally treated differently from others similarly situated and that there is no rational basis for the difference in treatment."[173]

Therefore, in *Village of Willowbrook v. Olech*,[174] the Olechs succeeded in bringing an equal protection claim when the Village of Willowbrook ("Village") conditioned their connection to the municipal water supply on the granting of a thirty-three foot easement, whereas their neighbors were only required to grant fifteen feet.[175] As a result, the Olechs were deprived of water for three months.[176] The Olechs argued that when the government treats someone differently because of "reasons wholly unrelated to any legitimate state objective," the government violates the Equal Protection Clause.[177] Here, the Olechs claimed local officials were reacting to a lawsuit the couple had previously filed against the Village.[178] The Court concluded that the allegation that the Village's demand was "irrational and wholly arbitrary" was sufficient for an equal protection claim.[179] In his concurrence, Justice Breyer echoed Judge Posner by expressing concern that the so-called added factor of "ill will" was necessary for the claim so that an ordinary zoning decision does not become a constitutional case.[180]

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169. Giaimo, *supra* note 157, at 335.

170. Vill. of Willowbrook v. Olech, 528 U.S. 562, 564 (2000) (per curiam).

171. *Id.*

172. *Id.*

173. *Id.* (citing Allegheny Pittsburgh Coal Co. v. Comm'n of Webster County, 488 U.S. 336 (1989); Sioux City Bridge Co. v. Dakota County, 260 U.S. 441 (1923)).

174. *Id.*

175. *Id.* at 563.

176. *Id.* The Olechs needed to connect to the municipal water supply because their well had broken down. Olech v. Vill. of Willowbrook, 160 F.3d 386, 387(7th Cir. 1998).

177. Brief of Respondent at 18, Vill. of Willowbrook v. Olech, 528 U.S. 562 (2000) (No. 98-1288).

178. *Willowbrook*, 528 U.S. at 563.

179. *Id.* at 565 (internal quotation marks omitted).

180. *Id.* at 565-66 (Breyer, J., concurring); Olech v. Vill. of Willowbrook, 160 F.3d at 388; Giaimo, *supra* note 157, at 339.

Since it is generally accepted that assisting the less fortunate with housing is a legitimate governmental purpose,[181] challenging an ordinance like the one in Destin would require a showing that the classification is not reasonably related to the legitimate government end of providing affordable housing. Depending on the circumstances, challengers to this type of linkage ordinance may include those who live in the inclusionary units and those who live in the market-rate units.[182] However, developers are the most likely to object.

Developers may argue that the classification is not rationally related to the government's end because the conditions the city seeks to impose are to correct a general wrong—a wrong not entirely caused by the use of the particular parcel to be developed.[183] However, this argument is easily refuted if a city, like Destin, presents evidence that development causes a shortage in affordable housing. Such a deficiency does not occur over night, nor is it the result of any single development; it is a consequence of ongoing construction over an extended period. Therefore, all developers must contribute to resolving the problem they create because no one developer is capable of doing it alone. Under this rational basis review, an incidental public benefit is enough to sustain the regulation.[184]

For the same reason, no developer will be able to successfully argue that the classification is not rationally related to the government end because it singles the applicant out as a "class of one" to bear the cost of solving a community-wide problem. Additionally, an ordinance like the one pending in Destin is so comprehensive that it applies to a wide variety of development, redevelopment, and remodeling.[185] Such an ordinance contains detailed tables indicating the amount that each developer must contribute.[186] Different requirements for different uses are also included,[187] as are standards for independent calculation in case a developer disagrees with the statutory requirement.[188] In other words, not only is the ordinance generally applicable, but it is also specific enough to

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181. Home Builders Ass'n of N. Cal. v. City of Napa, 108 Cal. Rptr. 2d 60, 64 (Ct. App. 2001); *see also* S. Burlington County NAACP v. Mt. Laurel, 456 A.2d 390, 415 (N.J. 1983) ("[R]egulations that do not provide the requisite opportunity for a fair share of the region's need for low and moderate income housing conflict with the general welfare and violate the state constitutional requirements of substantive due process and equal protection.").

182. *See* Padilla, *supra* note 156, at 615-25 (discussing the effects of restraints on alienation).

183. *Id.* at 614.

184. *Id.*

185. Destin, Fla., Attainable Workforce Housing Linkage Fee, Ordinance 07-26-LC, §§ 19.05.05, 19.05.07(C) (2007).

186. *Id.* §§ 19.05.09, 19.05.12.

187. *Id.*

188. *Id.* §19.05.10.

be tailored to each type of development, thus reducing the chance of singling out one developer to carry the burden.

Therefore, a city with an ordinance like the one pending in Destin will likely withstand a challenge by developers because the ordinance is rationally related to the government's legitimate purpose of providing affordable housing.

2. Due Process

Due process has two components: procedural and substantive. Procedural due process requires notice and a hearing before the state deprives someone of a life, liberty, or property interest.[189] However, we are most concerned in this scenario with substantive due process.

Substantive due process protects a wide range of individual rights against unjustifiable government conduct.[190] The generally applicable level of scrutiny is rational basis and, like equal protection, requires that the government regulation be rationally or reasonably related to a legitimate governmental interest.[191] Again, this standard is not difficult for state actors to overcome because all they need is a legitimate reason for depriving the right; the presumption of constitutionality remains.[192] The challenger may only prevail by showing that the government's conduct was truly irrational, such as a "decision made by flipping a coin."[193]

In a due process challenge, strict scrutiny is only triggered when a fundamental right—one "implicit in the concept of ordered liberty"—is at stake.[194] Since this language is ambiguous, precedent is the key to determining whether the state regulation has deprived the challenger of a fundamental right. As a general matter, history shows that fundamental rights include a married couple's right to privacy,[195] a woman's right to have an abortion,[196]

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189. CALVIN MASSEY, AMERICAN CONSTITUTIONAL LAW: POWERS AND LIBERTIES 431-432 (2d ed. 2005).

190. Haire v. Fla. Dep't. of Agric. & Consumer Servs., 870 So. 2d 774, 781 (Fla. 2004) (citing Dep't of Law Enforcement v. Real Prop., 588 So. 2d 957, 960 (Fla. 1991)).

191. Lerman, *supra* note 69, at 394. "[T]here must be a rational or reasonable relationship between the government's ends and its means." Steven J. Eagle, *Substantive Due Process and Regulatory Takings: A Reappraisal*, 51 ALA. L. REV. 977, 1006 (2000) (quoting Richard A. Fallon, Jr., *Some Confusions About Due Process, Judicial Review, and Constitutional Remedies*, 93 COLUM. L. REV. 309, 310 (1993)).

192. Lerman, *supra* note 69, at 394.

193. CALLIES, FREILICH & ROBERTS, *supra* note 51, at 403 (citing Lemke v. Cass County, 846 F.2d 469, 472 (8th Cir. 1987)).

194. Griswold v. Connecticut, 381 U.S. 479, 500 (1965) (Harlan, J., concurring) (quoting Palko v. Connecticut, 302 U.S. 319, 325 (1937)).

195. *Griswold*, 381 U.S. at 485-86.

196. Roe v. Wade, 410 U.S. 113, 153 (1973).

the right to use contraception,[197] the right to live with extended family,[198] and the right to make child-rearing choices.[199] There is no precedent to suggest that strict scrutiny should apply to an inclusionary housing ordinance like the one in Destin.

Before proceeding with the analysis, it is important to note that there has been some confusion in land use jurisprudence with regard to due process and takings.[200] The Fifth Amendment states that "[n]o person shall . . . be deprived of life, liberty, or property without due process of law;[201] nor shall private property be taken for public use, without just compensation."[202] This passage indicates two ways in which the government may abuse its power.[203] The main reason for the jurisprudential confusion is the courts' use of similar verbiage to describe both types of abuses in the past.[204] Fortunately, the Supreme Court clarified the distinction in *Lingle v. Chevron*.[205] It is important to keep substantive due process and takings separate because of the different remedies available for their violation.[206] A substantive due process violation leads to an invalidation of the government action.[207] In contrast, when there is a Takings Clause violation, the government may either allow the landowner to keep her property or pay her just compensation and continue exercising its power of eminent domain.[208]

A challenge to an ordinance like the one in Destin on substantive due process grounds will require a showing that the city does not does not have a legitimate interest in providing workforce housing[209] and, if it does, that the regulation does not "bear[ ] a rational relation to a legitimate legislative purpose . . . and [is] not discriminatory, arbitrary, or oppressive."[210] Courts remain deferential to the legislature in their analysis.[211]

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197. Eisenstadt v. Baird, 405 U.S. 438, 453-54 (1972).

198. Moore v. City of E. Cleveland, 431 U.S. 494, 499 (1977).

199. Pierce v. Soc'y of Sisters, 268 U.S. 510, 534-35 (1925).

200. CALLIES, FREILICH & ROBERTS, *supra* note 51, at 397; Eagle, *supra* note 191, *passim*.

201. U.S. CONST. amend. V. This is known as the "police power." Tampa-Hillsborough County Expressway Auth. v. A.G.W.S. Corp., 640 So. 2d 54, 57 (Fla. 1994).

202. U.S. CONST. amend. V. This is known as "the power of eminent domain." *A.G.W.S.*, 640 So. 2d at 57.

203. *A.G.W.S.*, 640 So. 2d at 57.

204. CALLIES, FREILICH & ROBERTS, *supra* note 51, at 397.

205. Lingle v. Chevron U.S.A. Inc., 544 U.S. 528, 540-41 (2005).

206. *A.G.W.S.*, 640 So. 2d at 57; CALLIES, FREILICH & ROBERTS, *supra* note 51, at 397.

207. *A.G.W.S.*, 640 So. 2d at 57.

208. *Id.*

209. "The first step in determining whether legislation survives the rational basis test is identifying a legitimate government purpose which the governing body could have been pursuing." WCI Cmtys. v. City of Coral Springs, 885 So. 2d 912, 914 (Fla. 4th DCA 2004).

210. Haire v. Fla. Dep't of Agric. & Consumer Servs., 870 So.2d 774, 782 (Fla. 2004) (quoting Chicago Title Ins. Co. v. Butler, 770 So. 2d 1210, 1215 (Fla. 2000)); *accord WCI Cmtys.*, 885 So. 2d at 914. "The second step of the rational basis test asks whether a rational

Government has the discretion to impose social and economic legislation.[212] Furthermore, affordable housing is commonly considered a legitimate governmental purpose.[213] An ordinance like the one in Destin is undoubtedly within the scope of the government's police power, which requires government to protect the health, safety, and welfare of its people. One can hardly say that protecting its citizens from economic collapse is not within the scope of the government's power or in the community's best interest. Therefore, the challenger will likely fail to prove that the regulation is not a legitimate government interest.

Likewise, a challenger will likely fail to prove that a linkage ordinance like the one proposed in Destin is not a rational or reasonable way of achieving the goal of increasing low-income housing. Aside from the fact that a challenger faces an uphill battle under rational basis review, [214] the ordinance clearly achieves what it sets out to do. Furthermore, the City of Destin extensively studied the issue[215] before assessing that if it does not take action there will be serious economic implications in the future. A city wishing to follow in Destin's footsteps should do the same to prevent an allegation of carelessness and arbitrariness.

Since the government has a legitimate interest in providing affordable housing and a linkage ordinance is a rational way of achieving that goal, it therefore follows that a challenger will likely lose on substantive due process grounds.

3. Takings

Developers may challenge an ordinance by claiming it amounts to a taking under the Fifth Amendment.[216] Courts use different approaches depending on the nature of the government action. Exactions, particularly land dedications, receive a level of higher scrutiny, which is known as the *Nollan*/*Dolan* standard.[217]

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basis exists for the enacting government body to believe that the legislation would further the hypothesized purpose." *Id.*

211. *Haire*, 870 So. 2d at 782 (citing Horsemen's Benevolent & Protective Ass'n v. Div. of Pari-Mutuel Wagering, 397 So. 2d 692, 695 (Fla. 1981)); *see also* Orange County v. Costco Wholesale Corp., 823 So. 2d 732, 736 (Fla. 2002) (explaining that courts must remain deferential to the legislature when the regulation is not arbitrary or discriminatory).

212. *WCI Cmtys.*, 885 So. 2d at 914.

213. Lerman, *supra* note 69, at 394.

214. "The question is only whether a rational relationship exists between the ordinance and a conceivable legitimate governmental objective. If the question is at least debatable, there is no substantive due process violation." *WCI Cmtys.*, 885 So. 2d at 914 (citation omitted).

215. *See supra* Part II; *see generally* Juergensmeyer, *supra* note 63, *passim*; Mucci, *supra* note 29, *passim*; NICHOLAS, *supra* note 18, *passim*.

216. Lerman, *supra* note 69, at 394-95.

217. *See infra* Part IV.B.3.b.

However, since the Supreme Court has never decided on whether a linkage fee is the type of exaction to receive such scrutiny,[218] an analysis under both the traditional and the *Nollan*/*Dolan* approach is necessary to determine whether a linkage program in support of workforce housing is constitutionally valid.

a. Penn Central *Approach*

Courts have struggled to determine exactly what constitutes a taking for the purposes of the Fifth Amendment.[219] Generally, there is a taking when the government deprives a landowner of the physical use of the property.[220] This permanent physical occupation of the property is a taking per se, [221] and it is fairly easy to recognize.[222] A taking per se automatically entitles the owner to just compensation regardless of the extent of the invasion.[223] Likewise, a government regulation that in essence deprives a property owner of all economic use constitutes a taking per se.[224] In other words, "[t]he state must pay when it regulates private property under its police power in such a manner that the regulation effectively deprives the owner of the economically viable use of that property, thereby unfairly imposing the burden of providing for the public welfare upon the affected owner."[225]

The problem is that most takings cases cannot be organized into such neat categories. When a court finds itself in this gray zone, it may be inclined to find that a regulation effects a taking if it goes "too far."[226] The court focuses "upon the 'severity of the burden' that government imposes upon private property rights"[227] and

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218. Some people argue that a linkage fee, like an impact fee, is an exaction because they both provide a public benefit. James E. Holloway & Donald C. Guy, *A Limitation on Development Impact Exactions to Limit Social Policy-Making: Interpreting the Takings Clause to Limit Land Use Policy-Making for Social Welfare Goals of Urban Communities*, 9 DICK. J. ENVTL. L. & POL'Y. 1, 20 (2000). But it may also be argued that linkage fees are not the same as traditional exactions, which are ordinarily used to provide more tangible things like sewers and schools.

219. Penn Cent. Transp. Co. v. City of New York, 438 U.S. 104, 123 (1978).

220. *Id.* at 124. When the government physically invades property, the ad hoc factual analysis is unnecessary because it is automatically a taking. Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1015 (1992); *Penn Cent.*, 428 U.S. at 124.

221. Lingle v. Chevron U.S.A. Inc., 544 U.S. 528, 538 (2005); Mark Fenster, *Takings Formalism and Regulatory Formulas: Exaction and the Consequences of Clarity*, 92 CAL L. REV. 609, 618-19 (2004).

222. Fenster, *supra* note 221, at 618-19.

223. *Chevron*, 544 U.S. 538 (citing Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419 (1982)).

224. *Id.*; *Lucas*, 505 U.S. at 1015.

225. Tampa-Hillsborough County Expressway Auth. v. A.G.W.S. Corp., 640 So. 2d 54, 58 (Fla. 1994).

226. *Chevron*, 544 U.S. at 537 (quoting Pa. Coal Co. v. Mahon, 260 U.S. 393, 415 (1922)); *Lucas*, 505 U.S. at 1014.

227. *Chevron*, 544 U.S. at 539.

decides whether it is the functional equivalent of a per se taking.[228] There is no magic formula.[229] Instead, a fact-intensive inquiry must be undertaken.[230] To guide them, courts use the factors set forth in *Penn Central*:[231] the regulation's economic impact on the property owner, the nature of the government action, and the regulation's effect on the owner's investment-backed expectations.[232] It is important to note that while the analysis begins with the presumption that the government taking is for a public purpose, if the government conduct is found to violate due process, "[n]o amount of compensation can authorize [the] action."[233]

A linkage program like the one in Destin falls in the gray zone of takings law. Therefore, to determine whether the regulation effects a taking, we must consider the *Penn Central* ad-hoc balancing test. Regardless of the option the challenger chooses, the regulation is likely to have minimal economic impact. Often, these types of programs involve developer incentives such as density bonuses or expedited review.[234] While the Destin ordinance does not specify these benefits, the city's Community Development Director has mentioned the importance of these incentives to the process.[235] Additionally, the Destin ordinance contains a provision allowing an applicant to make an independent calculation of what it would take to mitigate the impact of the development. [236] Furthermore, an ordinance that allows options is more likely to be upheld because it allows the property owner to choose the option that best serves the needs of the development.[237]

The Court in *Penn Central* explicitly stated that a taking is less likely to occur when the government action is for the greater good.[238] When the workforce cannot afford to live near its place of employment, it has two options. Workers can either live in overcrowded conditions near where they work or they can live further and commute. While both are undesirable, the second option harms the environment by increasing traffic congestion and pollution.[239] It also leads to "labor shortages and absenteeism,"[240] which

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228. *Id.*
229. *Penn Cent.*, 438 U.S. at 124.
230. *Id.*
231. *Id.* at 104; *Chevron*, 544 U.S. at 539.
232. *Penn Cent.*, 428 U.S. at 124.
233. *Chevron*, 544 U.S. at 543.
234. *See, e.g.*, Home Builders Ass'n of N. Cal. v. City of Napa, 108 Cal. Rptr. 2d 60, 64 (Ct. App. 2001) (noting that the inclusionary zoning ordinance provided for developer incentives).
235. *See supra* note 29.
236. *See Napa*, 108 Cal. Rptr. 2d at 64 (describing an ordinance like the one in Destin).
237. *See, e.g.*, *id*. at 67 (discussing the impact of available alternatives on the decision).
238. *Penn Central*, 438 U.S. at 124.
239. *Napa*, 108 Cal. Rptr. 2d at 62.
240. NICHOLAS, *supra* note 18, at 5.

can be devastating to a local economy. For example, in Destin, Florida, the workforce is needed to keep the city's tourist industry thriving, while in Napa, California the workforce is a crucial part of the wine industry.[241]

Developers will also have a difficult time satisfying the final *Penn Central* prong. With an ordinance like the one pending in Destin, developers understand what the government is going to charge them because the ordinance specifies the fees.[242] Thus, developers can consider the fees and profit expectations in their planning process before beginning a project. After all, the government is not forcing anyone's hand. While all developers must contribute to the mitigation, the ordinance's flexibility allows them to choose the best method for their goals. For example, they can remain in control and consider the fees when determining what they expect to gain from the project. Furthermore, with the Destin ordinance, developers have the option to make an independent calculation if they feel the economic impact of the statutory requirement is too burdensome.

The *Penn Central* analysis is a balancing test; there is no outcome-determinative factor. Based on this analysis, it is unlikely that a court will hold that the Destin constitutes a taking under the Fifth Amendment, especially since courts are less likely to find a taking "when interference [with an owner's property rights] arises from some public program adjusting the benefits and burdens of economic life to promote the common good."[243]

b. Nollan/Dolan *Standard*

A different standard, generally known as the *Nollan*/*Dolan* test, applies to exactions on development projects.[244] This standard departs from a basic takings analysis since it imposes a higher level of scrutiny, requiring courts to judge the soundness of the government's action.[245]

The Nollans purchased a beachfront house.[246] Pursuant to a California law that required rebuilding when a house falls into disrepair, they applied to the California Coastal Commission

241. *See Napa*, 108 Cal. Rptr. 2d at 62 (explaining the consequences of a shortage of workforce housing).

242. Destin, Fla., Attainable Workforce Housing Linkage Fee, Ordinance No. 07-26-LC § 19.05.12 (2007).

243. *Penn Central*, 428 U.S. at 124.

244. Kautz, *supra* note 69, at 991.

245. Mark Fenster, *Regulating Land Use in a Constitutional Shadow: The Institutional Contexts of Exactions*, 58 HASTINGS L.J. 729, 731-32 (2007) (suggesting that the same level of scrutiny should consistently apply to all takings analyses in order to prevent confusion).

246. Nollan v. Cal. Coastal Comm'n, 483 U.S. 825, 827 (1987).

("Commission") for a permit to rebuild it.[247] The Commission agreed to grant the permit if the Nollans agreed to grant a public beach access easement access across their property.[248] The justification for the demand was that the easement would mitigate the public backlash that would arise due to the visual obstructions on the coastline.[249] The Court held that the condition was a taking under the Fifth Amendment unless there was a nexus between the imposed condition and the prevention of harm from development.[250] The Court ruled in the Nollan's favor and found no nexus between the condition and the development's impact.[251]

A few years after the *Nollan* decision, Ms. Dolan, a property owner, applied for a permit to expand the existing building and parking lot on her property.[252] The city conditioned the permit issuance on the dedication of the floodplain portion of her property for drainage purposes and another portion for use by pedestrians and bicyclists.[253] The Court followed *Nollan* and stated that the first step in deciding whether there is a Fifth Amendment taking is to determine whether there is a nexus between the imposed governmental condition and the asserted legitimate state interest.[254] Once a nexus is established, the analysis then requires an examination of the degree of that connection.[255] Specifically, the connection must be roughly proportional.[256] While there is "[n]o precise mathematical calculation[,] . . . the city must make some sort of individualized determination that the required dedication is related both in nature and extent to the impact of the proposed development."[257] Indeed, the reason for ruling in Dolan's favor was that the city was not able to show rough proportionality between the conditions it imposed and the project's expected impact.[258]

The concepts from the *Nollan* and *Dolan* cases were combined to form the standard we know today. When the government has a legitimate purpose under its police power, it has the right to impose conditions on a developer. [259] However, there must be an essential nexus between the condition and the purported harm

247. *Id.* at 828.
248. *Id.*
249. *Id.* at 828-29.
250. *Id.* at 837.
251. *Id.* at 837, 839.
252. Dolan v. City of Tigard, 512 U.S. 374, 379 (1994).
253. *Id.* at 380.
254. *Id.* at 386 (citing *Nollan*, 483 U.S. at 837).
255. *Id.*
256. *Id.* at 391.
257. *Id.*; *see also* Kautz, *supra* note 69, at 992 (stating that the city has the burden to prove that the conditions are closely related to the specific impact of the project).
258. Kautz, *supra* note 69, at 992.
259. Paradyne Corp. v. State, 528 So. 2d 921, 927 (Fla. 4th DCA 1988).

against which the condition is trying to protect. [260] Furthermore, a local government is "required to make an individualized determination that there exists a 'rough proportionality' between the dedication and the nature and extent of the impact of the proposed development."[261] When either the essential nexus or rough proportionality requirements are absent, the property owner is entitled to just compensation because the exaction results in a taking.[262] The standard "requires cities to 'provide greater policy justifications to landowners and developers,' "[263] and this increased burden is the reason developers prefer this standard.[264] Interestingly, agreeing to a local government's conditions does not constitute a waiver of constitutional rights.[265]

After *Nollan* and *Dolan*, it was still unclear as to when the standard is required. Most relevantly, it is also unclear whether the standard applies to linkage programs.[266] In 1999, the U.S. Supreme Court attempted to clarify the applicability of *Nollan*/*Dolan* and explained in dicta that its has "not extended the rough-proportionality test of *Dolan* beyond the special context of exactions-land-use decisions conditioning approval of development on the dedication of property to public use."[267] Therefore, the standard would likely apply, at the very least, to the land dedication provision of the pending Destin ordinance.

However, there is still inconsistency in its application. For example, in *Home Builders Ass'n of Northern California v. City of Napa,* a California appellate court refused to apply the standard to Napa's linkage program.[268] It reasoned that heightened scrutiny is only necessary where an applicant negotiates with the government because such a scenario creates the risk of government abuse.[269]

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260. *Id.* "[T]he access-easement condition in *Nollan* could not be treated as an exercise of land use regulation power since the condition did not serve the public purposes related to the permit requirement." *Id.*

261. Sarasota County v. Taylor Woodrow Homes Ltd., 652 So. 2d 1247, 1251 (Fla. 2d DCA 1995) (quoting *Dolan*, 512 U.S. at 374) (applying the standard to permits conditioned on the dedication of property).

262. Fenster, *supra* note 221, at 613.

263. Kautz, *supra* note 69, at 991.

264. *Id.* at 992.

265. *Taylor Woodrow Homes*, 652 So. 2d at 1251-52.

266. *See* Fenster, *supra* note 245, at 744-45 (discussing the questions the Court has left unresolved).

267. City of Monterey v. Del Monte Dunes at Monterey, Ltd., 526 U.S. 687, 702 (1999); Kautz, *supra* note 69, at 993; *see also Monterey*, 526 U.S. at 703 (reasoning that the *Dolan* standard applies when the city imposes conditions on development and the landowner challenges the conditions as excessive but that the standard does not apply when the challenge is based on a flat-out denial of development).

268. Home Builders Ass'n of N. Cal. v. City of Napa, 108 Cal. Rptr. 2d 60, 65 (Ct. App. 2001).

269. *See* Krupp v. Breckenridge Sanitation Dist., 19 P.3d 687, 695-96 (Colo. 2001) (distinguishing between legislative and adjudicative exactions and refusing to apply *Nollan*/*Dolan* to

This risk does not exist where, as in *Napa*, the statute generally applies to everyone.[270] The following year, in *San Remo Hotel v. City and County of San Francisco*,[271] the California Supreme Court specifically faced the question of whether *Nollan*/*Dolan* applies to "exaction[s] imposed by legislation rather than by individualized adjudication,"[272] but it chose not to answer.[273]

If the pending Destin ordinance were challenged in a jurisdiction that makes the legislative/adjudicative distinction, it would likely survive because the traditional takings analysis would apply. In contrast, an ordinance of this nature would have a difficult time surviving in jurisdictions that do not make the distinction because those states apply a heightened standard to every exaction challenge. Nevertheless, all hope may not be lost for the government.

The first *Nollan* prong requires that there be a rational nexus between the imposed condition and the purported harm the condition is meant to protect against.[274] This step is satisfied here because there is a rational connection between employing low-income workers, such as construction workers in a development project and the added need for workforce housing in the area close to the development.

The second prong requires that the condition be roughly proportional to the impact the development is causing.[275] In *Dolan*, the local government was required to have individualized findings to support the condition.[276] The government may not satisfy this requirement if the condition does not respond to the development's specific impact on the community.[277] Since it is difficult to measure a particular development's social impact,[278] such as the need for affordable housing, it is difficult to determine whether a workforce housing study like the one in Destin will be sufficient to sustain the land dedication option of the ordinance. The Destin study spe-

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the former); Arcadia Dev. Corp. v. City of Bloomington, 552 N.W.2d 281, 286 (Minn. Ct. App. 1996) (explaining that *Nollan*/*Dolan* applies only to conditions imposed on an individualized basis); Homebuilders Ass'n of Metro. Portland v. Tualatin Hills Park & Recreation Dist., 62 P.3d 404, 409 (Or. Ct. App. 2003) (following California and imposing the less stringent, more deferential reasonable relationship standard on legislatively imposed exactions); Rogers Mach., Inc. v. Wash. County, 45 P.3d 966, 982 (Or. Ct. App. 2002) (following California and explaining that lower scrutiny is appropriate when exactions are imposed through legislation because the political process acts as an adequate check).

270. *Napa*, 108 Cal. Rptr. 2d at 65.

271. San Remo Hotel L.P. v. City & County of San Francisco, 41 P.3d 87 (Cal. 2002).

272. Fenster, *supra* note 245, at 750.

273. *Id.* The California Supreme Court accepted the distinction and held that a lower scrutiny applied in cases where the exaction is imposed by legislation. *San Remo Hotel*, 41 P.3d at 105-11.

274. Nollan v. Cal. Coastal Comm'n, 483 U.S. 825, 837 (1987).

275. Dolan v. City of Tigard, 512 U.S. 374, 391 (1994).

276. *Id.* at 395-96.

277. CALLIES, FREILICH & ROBERTS, *supra* note 51, at 253.

278. *Id.*

cifically includes the impact of new development in general on low-income workers, such as construction workers and workers who maintain the property after the completion of the project.[279] However, it is unclear whether a court would agree that this type of general, city-wide finding is enough to show a particular development's impact on affordable housing. Regardless, one redeeming quality of an ordinance similar to the one in Destin may be the number of options available to a developer; if a court decides to sever the offending land dedication provision, the ordinance itself would still stand because the remaining options are all valid.

c. Dual Rational Nexus Approach

Some jurisdictions, such as Florida and Ohio, use a similar approach as *Nollan*/*Dolan*, applying a state law "dual rational nexus test" to determine the validity of land dedications.[280] This test allows local governments to impose conditions as long as they "offset needs sufficiently attributable to the subdivision and so long as the funds collected are sufficiently earmarked for the substantial benefit of the subdivision residents."[281] The government bears the burden of showing two things: (1) that there is a rational nexus between the need and the increase in population attributable to the development and (2) that there is a rational nexus between the spending of funds and the benefit to residents of the development.[282] Earmarking the funds is sufficient to satisfy the second part of the test.[283]

The pending Destin ordinance will likely satisfy the first prong of this test because there is a rational connection between the need for increased affordable housing and new development. This is true regardless of whether the project is residential or commercial. In both cases, workers are needed to first build and later to maintain and operate the structures.[284] In the residential context, once con-

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279. *See* NICHOLAS, *supra* note 18, *passim*.

280. Hollywood, Inc. v. Broward County, 431 So. 2d 606, 611 (Fla. 4th DCA 1983) (applying the same standard to impact fees and legislative measures in Florida).

281. *Id.*; *accord* Home Builders Ass'n of Cent. Ariz. v. City of Scottsdale, 875 P.2d 1310, 1314 (Ariz. Ct. App. 1993) (stating that a fee must "result in a beneficial use" and must "bear a reasonable relationship to the burden imposed upon the municipality"); *see* St. Johns County v. N.E. Florida Builders Ass'n, Inc., 583 So. 2d 635, 637 (Fla. 1991) (stating that the test was explained in *Hollywood*); Home Builders Ass'n of Dayton & Miami Valley v. City of Beavercreek, 729 N.E.2d 349, 354-55 (Ohio 2000) (explaining the requirements of the dual rational nexus test). *But see* Greater Franklin Developers Ass'n, Inc. v. Town of Franklin, No. 95-02608, 1997 WL 573211, at *12 (Mass. Super. Aug. 11, 1997) (rejecting the dual rational nexus test).

282. *Hollywood*, 431 So. 2d at 611-12.

283. *Id.* at 612.

284. NICHOLAS, *supra* note 18, at 3.

struction is complete, a variety of lower-income workers are needed to maintain and service those homes. These include house cleaners, landscapers, and other manual laborers. In the commercial context, new development attracts workers which either creates or aggravates the shortage of affordable housing because it drives up prices.[285] Home prices are also impacted since commercial development reduces the quantity of land available for potential residential construction.[286] Regardless of the type of development, a rational nexus exists between the need for increased housing and the development.[287]

An ordinance like the one in Destin easily satisfies the second prong of this test because it specifies that the funds will be held in escrow for the construction of affordable housing.[288] There is a rational nexus between the spending of the funds and the benefit to the new development. This is true even if the low-income housing is off-site because the housing will still be in the same jurisdiction. As mentioned above, manual laborers help maintain residential properties after they are built. This helps keep homes and neighborhoods attractive, which benefits property values. In the commercial context, the benefit to the development is the consistent availability of employees. When employees live far from where they work, they have to commute. This not only increases traffic congestion and pollution, but it also leads to absenteeism.[289] The availability of lower-income workers in our communities means that there are attendants in our gas stations, cashiers to check us out at supermarkets, and wait staff in restaurants where we eat. Their presence is a benefit to all in the community since our local economies could crumble without them.

The proposed Destin linkage program would likely withstand a dual rational nexus analysis because there is a rational connection between the need for increased affordable housing and development. Likewise, there is a rational nexus between the money spent and the benefit to the development. Since the workforce housing in our communities creates benefits ranging from a healthier environment to higher property values, complying with the require-

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285. Collin & Lytton, *supra* note 54, at 427.

286. *Id.*

287. The Destin Linkage Program is distinguishable from *Volusia County v. Aberdeen at Ormond Beach*, which held that a public school impact fee was unconstitutional as applied to an adult community. 760 So. 2d 126, 128 (Fla. 2000). The Destin Linkage Program is different in that the availability of affordable housing has a direct effect on the economy, and the economy affects all residents, including those paying the fee.

288. Destin, Fla., Attainable Workforce Housing Linkage Fee, Ordinance 07-26-LC, § 19.05.11(A) (2007).

289. Home Builders Ass'n of N. Cal. v. City of Napa, 108 Cal. Rptr. 2d 60, 62 (Ct. App. 2001); NICHOLAS, *supra* note 18, at 4-5.

ments of a linkage program like the one in Destin is a small price to pay.

V. CONCLUSION

A linkage program meant to increase workforce housing is likely to withstand a legal challenge. A challenger will be unable to show that the local government does not have the authority to regulate affordable housing. If courts cannot find a statutory authority for such action, they traditionally hold that the zoning stems from the municipality's police power. Likewise, an ordinance like the one in Destin will likely withstand an equal protection challenge because the classification it creates is rationally related to the government's legitimate purpose of providing affordable housing. Based on similar reasoning, a challenger will also likely lose on substantive due process grounds. Finally, a court will likely find that an ordinance like the one in Destin does not constitute a Fifth Amendment taking. The linkage program will likely withstand the traditional *Penn Central* analysis since the test's factors are not outcome-determinative and courts are less likely to find a taking when the allegation arises out of a government program meant to advance the common good. Nor is it likely that a court will find a taking under *Nollan*/*Dolan* or a similar approach. While under this approach it is possible that the court may sever a provision it finds invalid, a linkage program like the one in Destin, Florida is likely to survive a legal challenge because other options provided to developers in the ordinance would remain valid. Thus, governments may enact linkage programs like one proposed in Destin with the confidence that their efforts will not be in vain.