Preserving Nepal's National Parks: Law and Conservation in the Developing World

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There is no doubt that tourism could eventually prove to be one of Nepal's major industries, and that another Switzerland or Kashmir lies shrouded and unrevealed to the world due only to inaccessibility.

—E.P. Gee (1963)

The mountains are still there and so is the park, attracting dozens of expeditions and thousands of trekkers from every nation, but over the last thirty years I have seen those forests and parklands being dramatically destroyed in response to the urgent needs of the visitors for firewood for heating and cooking.

—Sir Edmund Hillary (1986)

It must be understood that without local people's cooperation and support, the integration of conservation and human development in the protected areas cannot be achieved.

—Mingma Norbu Sherpa (1993)

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Despite its status as one of the world's poorest nations and its explosive population growth rate, Nepal is pursuing one of the developing world's more progressive nature conservation policies. Since 1973, when Royal Chitwan National Park was designated the country's first national park, Nepal has set aside nearly fifteen percent of...
its land for national park and other protected area purposes.\(^1\) Gradually moving from a strict preservation approach to community-oriented conservation strategies, Nepal has created an array of national parks, wildlife reserves, and conservation areas, and is now experimenting with buffer zone designations to enhance existing protective designations. Even as Nepal has made the difficult transition from a monarchy to a constitutional democracy,\(^2\) its commitment to nature conservation has not visibly waned.

With its manifold natural treasures and rich cultural heritage, Nepal has adopted the view that an enlightened conservation policy can stimulate economic development. Although most of Nepal's people, following centuries-old patterns, are engaged in subsistence agriculture,\(^3\) tourism has become an important national industry.\(^4\) Indeed, to secure much needed foreign currency, the government has aggressively promoted tourism, resulting in an increase in visitors from around 6200 in 1966 to over 325,000 in 1992, with gross foreign exchange earnings exceeding U.S. $64 million.\(^5\)

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1. Joel T. Heinen & Bijaya Kattel, *Parks, People, and Conservation: A Review of Management Issues in Nepal's Protected Areas*, 14 POPULATION AND ENV'T 49, 50, 72 (1992). Because Nepal contains extensive religious sites, the effective size of its preserved areas actually extends beyond fifteen percent of its land base. *Id.* at 72-73. See also infra APPENDIX A for a listing of Nepal's national parks, wildlife reserves, and conservation areas, and APPENDIX B for a map depicting the location of Nepal's protected areas.


However, this phenomenal growth in tourism and accompanying development pressures imperil Nepal's national treasures. With more and more adventuresome travelers coming to experience Nepal's mountains and wildlife, and with the nation's population growing at an undiminished rate, environmental degradation—particularly deforestation and wildlife habitat loss—has intensified in many areas. At the same time, the press of development and foreign influences is modifying local cultural institutions and economic expectations. Within this dynamic setting, Nepal's challenge has been to devise an effective conservation policy that protects its natural heritage without sacrificing its cultural attributes.

Elsewhere in the developing world, similar pressures are being placed on nature conservation efforts. Indigenous population growth, economic development aspirations, and the wholesale arrival of western tourists are straining delicately balanced environmental systems and jeopardizing fragile biological resources. As a result, most parks and nature reserves have become mere islands, no longer capable of meeting the evolutionary and ecological requirements of native species. Yet from the perspective of local inhabitants, a national park

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7. Jack D. Ives & Bruno Messerli, The Himalayan Dilemma: Reconciling Development and Conservation 59-66 (1989). Deforestation in the Himalayan region is well-documented, although there is now considerable debate over whether the rate of deforestation has escalated dramatically in recent years, particularly since 1950. Id. For a general description of the deforestation that has occurred in South Asia, see James Rush, The Last Tree: Reclaiming the Environment in Tropical Asia (1991), which concludes that even well-intentioned governments have been unable to prevent destruction of indigenous forests.

8. See Byers & Banskota, supra note 6 (discussing the impacts from tourism in Sagarmatha National Park and Makalu-Barun National Park).


designation can represent a significant obstacle in the daily quest for survival. Myriad restrictions on such traditional subsistence activities as firewood gathering and livestock grazing often accompany a national park designation. Moreover, the impetus for protecting park areas generally has come from distant officials or consultants with no local attachments.

Without local support, park managers may be unable to attain their conservation objectives. The developing nations have neither the technical nor the financial resources to rely solely upon a model of centralized regulatory control to protect park ecosystems or biodiversity levels from the escalating demands of nearby inhabitants. To ensure meaningful ecosystem protection, park managers have therefore begun to pursue innovative zoning and other conservation strategies designed to integrate park lands with the surrounding environment. To enlist the local populace in preservation efforts, park officials are also beginning to devise institutions and procedures that will involve local villagers in resource management and planning decisions. By recognizing that protected area management presents greater sociopo-

11. Keith Garratt, The Relationship Between Adjacent Lands and Protected Areas: Issues of Concern for the Protected Area Manager, in National Parks, Conservation, and Development, supra note 10, at 65. For a graphic accounting of such a relationship between local residents and a national park, see Sunjay K. Nepal & Karl E. Weber, Struggle for Existence: Park-People Conflict in the Royal Chitwan National Park, Nepal. See also infra notes 85-87, 147-54 and accompanying text.

12. See Adam Malik, Opening Address: Protected Areas and Political Reality, in National Parks, Conservation, and Development, supra note 10, at 10 (discussing the constraints faced by developing nations in conservation efforts). See generally Parks For Life: Report of the Fourth World Congress on National Parks and Protected Areas (Jeffrey A. McNeely ed., 1992) [hereinafter Parks For Life].

13. See, e.g., Garratt, supra note 11, at 66; Raymond F. Dasmann, The Relationship Between Protected Areas and Indigenous Peoples, in National Parks, Conservation, and Development, supra note 10, at 668. A principal regional zoning strategy is the Biosphere Reserve concept, which involves concentric zoning surrounding a protected core area, with increasingly intensive uses permitted depending on the distance from the core area. See Bernd von Droste zu Hülshoff, How UNESCO's Man and the Biosphere Programme Is Contributing to Human Welfare, in National Parks, Conservation, and Development, supra note 10, at 689. See also infra note 201 and accompanying text. To address resource conservation and nature protection on a global scale, the IUCN has devised a classification system for protected areas. The different categories include: (1) scientific reserve/strict nature reserve; (2) national park; (3) natural monument/natural landmark; (4) nature conservation reserve/managed nature reserve/wildlife sanctuary; (5) protected landscape or seascape; (6) resource reserve; (7) natural biotic area/anthropological reserve; (8) multiple use management area/managed resource area; (9) biosphere reserve; (10) world heritage site (natural). Commission on National Parks and Protected Areas, International Union for the Conservation of Nature, Categories, Objectives and Criteria for Protected Areas, in National Parks, Conservation, and Development, supra note 10, at 47.

14. Examples of these efforts can be found in Parks, Peaks, and People, supra note 6. See also Culture and Conservation: The Human Dimension in Environmental Planning (Jeffrey A. McNeely & David Pitt eds., 1985) (discussing the importance of culture in environmental planning).
litical than biological challenges, conservationists can begin to design new legal schemes and institutional structures to protect the world's rapidly vanishing natural heritage.

Nepal is now engaged in meeting these challenges. In the twenty years since its first national park was established, Nepal's conservation policies have undergone an extensive evolution. Originally oriented toward preserving designated landscapes or species through the exercise of central regulatory authority, Nepal's policy has now shifted toward the protection of ecosystems and the integration of local people into the conservation effort. The new policy incorporates important principles of community involvement and sustainable development.

This shift is reflected in two new conservation practices. First, the government increasingly relies on hybrid designations, such as conservation areas and buffer zones, to achieve conservation objectives. Second, while originally the Nepalese government had assumed full responsibility for the administration of its protected areas, nongovernmental organizations (NGO's) have become an important force in conservation policy and management. The legal and policy issues raised by these practices have major ramifications for future nature conservation efforts.

This article explores the laws and policies that Nepal has adopted to pursue its nature preservation goals. The article begins by providing an overview of Nepal, including its political history and significant conservation policy developments. Then, it examines specific examples of each of the principal protective designations—national parks, conservation areas, joint national park and conservation areas, and buffer zones—as well as related management strategies. Included in this examination is a comparison of the strengths and weaknesses of each approach. As we shall see, as Nepal modifies its conservation

15. See infra part I.C.
16. On the general topic of protected area management and local community involvement, see NATURAL CONNECTIONS: PERSPECTIVES IN COMMUNITY-BASED CONSERVATION (David Western and R. Michael Wright eds., 1994); MICHAEL WELLS & KATRINA BRANDON, PEOPLE AND PARKS: LINKING PROTECTED AREA MANAGEMENT WITH LOCAL COMMUNITIES (1992).
17. On the general topic of protected areas and economic development, see JOHN A. DIXON & PAUL B. SHERMAN, ECONOMICS OF PROTECTED AREAS: A NEW LOOK AT BENEFITS AND COSTS (1990); PROTECTED AREA ECONOMICS AND POLICY: LINKING CONSERVATION AND SUSTAINABLE DEVELOPMENT (Mohan Munasinghe & Jeffrey A. McNeely eds., 1994).
18. See infra part III discussing the conservation area concept; see infra part V discussing the buffer zone concept.
19. Regarding the important role that nongovernmental organizations are playing in international conservation efforts, see A. Dan Tarlock, The Role of Non-Governmental Organizations in the Development of International Environmental Law, 68 CHI.-KENT L. REV. 61 (1993). See infra part III.A discussing the role of nongovernmental organizations in the Annapurna Conservation Area.
policies to integrate nature preservation goals with local economic and other interests, it must recognize both very real jurisdictional concerns and the continuing need for central oversight to meet fundamental conservation objectives. Drawing upon these insights, the article concludes with some general observations about Nepal’s experience and the lessons it provides for nature preservation efforts elsewhere in the developing world.

I
UNDERSTANDING NEPAL: GEOGRAPHY, POLITICS, AND CONSERVATION

A. Geopolitical Overview of a Himalayan Kingdom

Nepal is a small, landlocked nation situated between India and the Tibetan Autonomous Region of China in central Asia. Nestled in the Himalayan mountains, Nepal is regarded as the world’s most mountainous nation. The country covers 56,827 square miles, approximately the size of Tennessee.20 Nepal’s diverse topography can be roughly divided into three regions: the lowland Terai, a flat tropical area bordering India; the central middle hills that function as a transition zone; and the high mountains of the Himalayan range along the Tibetan border.21

As in most developing countries, population growth is a critical problem. Nepalese women have, on average, nearly 6.3 children.22 At this rate, the current population of nineteen million will double within thirty years.23 The populace lives mostly in the Terai or the middle hills, although a few rugged groups like the Sherpas inhabit the high mountain country.24 Nepal’s populace includes numerous ethnic groups such as the Newar, Tamang, Rais, Gurungs, and Magars, who coexist rather amicably.25 Nepal is officially designated a Hindu country,26 although its Hinduism has been influenced by Buddhism with roughly five percent of the population being Buddhist.27

21. Id. India is a pervasive influence throughout southern Nepal, where the caste system is still quite evident, while Tibetan Mongoloid influences are extant within the northern ethnic groups. See generally Bista, supra note 3.
22. NEPAL AND BHUTAN COUNTRY STUDIES, supra note 2, at 66.
23. 1993 NEPAL ENVIRONMENTAL ACTION PLAN, supra note 4, at 22.
24. NEPAL AND BHUTAN COUNTRY STUDIES, supra note 2, at xxxiv.
25. BACKGROUND NOTES, supra note 3, at 1; See LUDWIG F. STILLER, THE RISE OF THE HOUSE OF GORKHA: A STUDY IN THE UNIFICATION OF NEPAL, 1768-1816 (1973) (describing how these diverse ethnic groups were united to create the modern Nepalese state). See generally BACKGROUND NOTES, supra note 3, at 74-75.
27. BACKGROUND NOTES, supra note 3, at 3.
Owing to the nation’s extreme poverty and rural character, most Nepalese rely directly upon forest resources to meet their energy, housing, and animal husbandry needs. Nepal’s annual per capita income is estimated at $150, and more than half of the population lives in absolute poverty, earning less than $100 annually. The Nepalese depend largely upon subsistence agriculture for their livelihood and derive more than eighty percent of their energy needs from forest products. Though tourism has become an important and expanding industry (and provides one of the nation’s principal sources of foreign currency), it also adds to the severe stress that Nepal’s rapidly growing population has placed on its land and forest resources. As a result of these various pressures, Nepal’s forest land base declined from 6.5 million hectares to 4.8 million hectares between 1964 and 1974, and human-caused erosion became a major concern.

Significant changes in Nepal’s political system have fostered major development initiatives, including a national commitment to tourism and nature conservation. Until the early 1950’s, Nepal was effectively isolated from the rest of the world. The ruling Rana family, which had ousted the entrenched monarchy a century earlier, prohibited entrance into the country. This policy was easily enforced due to the natural barrier created by the Himalayas. When the Ranas were toppled in a 1951 revolution, however, the newly restored monarchy opened the country to the outside world. The reinstated royal family moved to promote public education (forbidden under the Ranas) and to encourage tourism, viewing foreign exchange as a key component of its development strategy. Believing that a commitment to conservation would foster foreign tourism, the royal family supported the establishment of an expansive national park system.

28. Id. at 5; National Conservation Strategy for Nepal, supra note 4, at 7.
29. Id. at 1, 6-7; 1993 Nepal Environmental Action Plan, supra note 4, at 43-44.
31. See Nepal and Bhutan Country Studies, supra note 2, at 15-52; see also Shaha, supra note 2.
Recent political changes, however, raise questions about the continuing vitality of these policies. Under the royal family, political parties were banned, and the country was governed through a tightly controlled Panchayat system of local government. This led to a 1990 revolt, which successfully established a democratic political system based on an elected, representative parliament. It remains to be seen whether the newly elected government will prove as fully supportive of conservation programs.

B. Beginnings of Preservation: Creating a National Park System

Serious preservation efforts did not begin until 1973. Before then, the monarchy had unsuccessfully sought to protect small patches of jungle lands in the Terai, primarily to safeguard the vanishing rhinoceros population from poachers and village encroachment. In 1973, after consulting with several foreign scientists, Nepal established Royal Chitwan National Park in the central Terai as the nation’s first national park. Three years later, again relying upon the reports of foreign advisers, Nepal designated Sagarmatha National Park in the Himalayan mountains, as well as several other parks and reserves in locations scattered throughout the Terai and high mountains. For the most part, these early parks were designed to protect spectacular resources, such as Royal Chitwan’s rhinoceros population and the Everest mountain environment.

Since the 1970’s, the system has been further expanded. It now includes seven national parks, four wildlife reserves, two conservation

35. The Panchayat system consisted of a partyless National Panchayat (Assembly) with representatives elected from seventy-five administrative districts located across the country. Because the king retained sovereign power and functioned essentially as an absolute monarch, the national Panchayat had little real power. See BISTA, supra note 3, at 103-06.

36. NEPAL AND BHUTAN COUNTRY STUDIES, supra note 2, at 150-54. Significantly, the new Nepalese Constitution contains an aspirational (and therefore not judicially enforceable) provision stating that “[t]he State shall give priority to the protection of the environment of the country... [and] also make special arrangements for the protection of rare animal species, the forests and vegetation of the country.” NEPAL CONST. pt. IV, § 26(4), reprinted in CONSTITUTIONS OF THE COUNTRIES OF THE WORLD, supra note 2, at 35.

37. Some jungle areas also had been set aside as hunting reserves for the royal family and its guests, but these areas were not otherwise open to visitors. NATIONAL PARKS AND WILDLIFE CONSERVATION PROJECT, HIS MAJESTY’S GOVERNMENT OF NEPAL, ROYAL CHITWAN NATIONAL PARK MANAGEMENT PLAN, 1975-79, at 4 (1975) [hereinafter ROYAL CHITWAN NATIONAL PARK MANAGEMENT PLAN].

38. See infra part II.A for a discussion of Royal Chitwan National Park.

39. See infra part II.B for a discussion of Sagarmatha National Park. Other protected areas established in 1976 were the Kosi Tappu Wildlife Reserve, Royal Bardia National Park, Sukla Phanta Wildlife Reserve, Langtang National Park, and Rara National Park. See infra APPENDIX A.
areas, and one hunting reserve.40 Most of the preserves, however, are located in the Terai or Himalayas. No serious preservation effort has focused on the middle hills.41

The National Parks and Wildlife Conservation Act of 1973 governs administration of Nepal's national parks and wildlife reserves. According to the Act, a national park is "an area reserved for the protection, management and use of wildlife, vegetation, and landscape, along with the natural environment."42 Entry into national parks is prohibited unless the warden or another officer grants permission.43 The Act explicitly limits the use of park lands and resources, restricting hunting, mining, logging, grazing, building construction, and stream diversion.44 Hotels, lodges, and other facilities may be operated within national parks with government permission and under contract.45 Designated park officials are given law enforcement powers, including the power to search and arrest for violations of these prohibitions.46 Alleged violations are tried before a court,47 which can impose penalties ranging from 1-5 years imprisonment or fines up to

40. See infra APPENDIX A for a complete listing of Nepal's protected areas. See also infra APPENDIX B for a map of Nepal's national parks and protected areas.

41. 1993 NEPAL ENVIRONMENTAL ACTION PLAN, supra note 4, at 38; A LEGISLATIVE AND INSTITUTIONAL FRAMEWORK FOR ENVIRONMENTAL MANAGEMENT IN NEPAL, supra note 33, at 61.


43. Id. § 4. As a practical matter, this entry restriction is enforced against foreign tourists, but it is not generally enforced against local residents.

44. Id. § 5. The warden, however, can grant exceptions to these prohibitions. As we shall see, the Department regularly has either relaxed or not enforced some of these prohibitions to maintain cordial relations with neighboring villagers. See infra notes 112, 168-70 and accompanying text.

45. Id. § 6.

46. Id. §§ 23, 24. According to these provisions, a "prescribed officer" may conduct a search or undertake an arrest. The statute defines a "prescribed officer" as someone who is vested with these responsibilities in the implementing regulations. Id. § 2(k). In the case of Royal Chitwan National Park, for example, the governing rules provide that "the Assistant Warden, Forest Guards or other employees of the Park may, after obtaining warrants from the warden, arrest any person on the charge of having acted in contravention of the Act, or search his belongings or means of transport." MINISTRY OF FORESTRY, HIS MAJESTY'S GOVERNMENT OF NEPAL, ROYAL CHITWAN NATIONAL PARK RULES § 22 (1974) [hereinafter ROYAL CHITWAN NATIONAL PARK RULES].

47. National Parks and Wildlife Conservation Act at § 31. Under the Royal Chitwan National Park rules, adjudicatory power over minor offenses is vested either with the warden or assistant warden, but more serious offenses must be tried before the conservator of the Chitwan Forest Division Office. ROYAL CHITWAN NATIONAL PARK RULES, supra note 46, at §§ 25, 26.
$500.\textsuperscript{48} Significantly stiffer penalties are imposed for poaching endangered species.\textsuperscript{49}

The Department of National Parks and Wildlife Conservation (DNPWC), which was established in 1980, is responsible for administering Nepal's protected area system. Under the National Parks and Wildlife Conservation Act of 1973, the Department has authority to promulgate rules enforcing the statutory provisions governing park management.\textsuperscript{50} The Department is part of the Ministry of Forestry and Soil Conservation, along with the Department of Forestry and other resource management agencies.\textsuperscript{51}

Although the Department is responsible for managing park lands and resources, several other government agencies have key responsibilities that affect park resources. The Royal Nepal Army is responsible for enforcing park regulations; it receives about seventy-five percent of the annual DNPWC budget to deploy soldiers at park headquarters sites throughout the system.\textsuperscript{52} The Ministry of Tourism is responsible for regulating trekking, which includes setting permit numbers and opening new areas to foreign visitors.\textsuperscript{53} Because most of Nepal's national parks border public forest lands, the Department of Forestry plays a central role in ensuring the integrity of park ecosystems.\textsuperscript{54} Unfortunately, the lack of coordination among these government agencies undermines important conservation efforts.\textsuperscript{55}

\textsuperscript{48} National Parks and Wildlife Conservation Act at § 26.

\textsuperscript{49} Id. at § 26(1)-(2). In 1993, the Fourth Amendment to the National Parks and Wildlife Preservation Act increased penalties for wildlife poaching and related violations. For violations involving endangered species, the penalties can reach $2000 and 15 years imprisonment; for other violations, the penalties can reach $1500 and 10 years imprisonment. National Parks and Wildlife Conservation Act of 1973, as amended by the National Parks and Wildlife Conservation (Fourth Amendment) Act 2049 § 9 (1993), 43 Nepal Gazette, No. 15 (Extraordinary). See infra Appendix D.

\textsuperscript{50} Id. at § 33. General rules governing the park system were promulgated in 1974, followed by separate sets of rules for the jungle and mountain parks. See Royal Chitwan National Park Rules, supra note 46; His Majesty's Government of Nepal, Himalayan National Park Rules 2036 (1980) [hereinafter Himalayan National Park Rules]. See infra notes 142-43, 149-54, and accompanying text for specific application of these rules.

\textsuperscript{51} A Legislative and Institutional Framework for Environmental Management in Nepal, supra note 33, at 60.

\textsuperscript{52} 1993 Nepal Environmental Action Plan, supra note 4, at 38; Upreti, supra note 31, at 29. These soldiers are often poorly trained for their conservation responsibilities.

\textsuperscript{53} 1993 Nepal Environmental Action Plan, supra note 4, at 44.

\textsuperscript{54} Id. at 39.

\textsuperscript{55} See infra part VI.C.
C. Preservation Modified: Addressing Ecological and Human Interests

The original National Parks and Wildlife Conservation Act of 1973 has been amended four times. Each amendment has expanded the basic conception of the national park system. One amendment, triggered by the Annapurna Conservation Area proposal, authorized creation of conservation areas as an alternate method for protecting sensitive lands while accommodating the needs of local villagers. In 1991, the national park and conservation area concepts were merged to create the Makalu-Barun National Park and Conservation Area. Then, in 1993, responding to pressing transboundary conflicts at Royal Chitwan National Park and elsewhere, another amendment authorized the Department to establish and manage buffer zones outside park boundaries. Moreover, this same amendment authorized park officials to create local User Group Committees (UGC's) to participate in managing park resources, and it provided that thirty to fifty percent of the revenues derived from the parks ("30/50 funds") would be distributed to local communities.

With these legal changes, Nepal has committed itself to a preservation policy based on protecting core park areas while permitting more intensive resource use on adjacent lands. However, the Department is still trying to determine how best to exercise its authority to manage conservation areas and buffer zones. These responsibilities are forcing the Department to integrate nature conservation, local participation, and sustainable development policies.

Underlying these legal changes are several important shifts in Nepal's fundamental conservation strategy. Originally, drawing upon a North American preservation model, the early parks were designed largely to exclude people from protected areas. The boundaries of Royal Chitwan National Park were drawn to exclude most villages, and villagers initially were forbidden from removing any forest products from the park. When Rara National Park was established in the western Himalayas in 1976, three entire villages were removed and

57. See infra part IV.A.
59. See infra parts V.D., V.E.
60. For a discussion of alternative national park models, see Jeffrey A. McNeely, Introduction: Protected Areas Are Adapting to New Realities, in NATIONAL PARKS, CONSERVATION, AND DEVELOPMENT, supra note 10, at 1.
61. NEPAL & WEBER, supra note 11, at 63-64.
relocated under acrimonious circumstances. In Sagarmatha National Park, although the native Sherpa villages were permitted to remain, the central authorities strictly regulated the use of forest products and other park resources.

Moreover, there was no apparent effort to design these early parks to correspond to ecological boundaries. Rather, the designated boundaries were based on political, economic, and aesthetic considerations that left important wildlife habitat and related ecosystem components unprotected. In short, responding to political pressures and relying entirely upon central governmental authority, Nepal's early conservation policy was neither ecologically sound nor particularly sensitive to local inhabitants.

This situation is now changing. The sharp escalation in tourism and unrelenting population pressures have prompted a re-examination of basic preservationist policies. Conservationists now acknowledge the need to ground policy in terms of ecosystems in order to achieve important biodiversity goals. Conservationists also recognize the necessity of involving local people in basic policy decisions to garner support for conservation efforts.

This new attitude toward conservation is demonstrated by three significant policy shifts. First, boundary designations for Nepal's newer protected areas, including Shey-Phoksundo National Park, Annapurna Conservation Area, and Makalu-Barun National Park and Conservation Area, reflect each area's unique ecosystems, taking into

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63. Id. at 311-12.
65. See, e.g., 1993 NEPAL ENVIRONMENTAL ACTION PLAN, supra note 4, at 38-39. See generally NATIONAL PARKS, CONSERVATION, AND DEVELOPMENT, supra note 10 (discussing several community-based conservation projects); NATURAL CONNECTIONS: PERSPECTIVES IN COMMUNITY-BASED CONSERVATION, supra note 16 (discussing the world's protected areas and prospects for community-based development).
account natural boundaries and environmental pressures. Second, the new conservation area and buffer zone designations are designed to integrate existing villages into the preservation effort, providing for local participation in resource management as well as sustainable economic opportunities. And despite the rigorous tenor of the original national park legislation, it has been flexibly applied in the older parks to accommodate local needs. Third, acknowledging that it lacks critical resources and skills, the government has sought to recognize and strengthen the role played by NGO's interested in sharing management responsibility in sensitive areas, namely the Annapurna and Makalu-Barun regions. In short, national park management in Nepal has been transformed from a policy based on strict wilderness preservation through centralized regulation to one based on community-level conservation and sustainability at the ecosystem level.

These developments in park management policy mirror similar developments in Nepal's forest management policy. During the late 1950's, to replace the feudal land tenure system, the Nepalese government placed all of the nation's forests under central control. This policy shift effectively displaced the indigenous management systems that had evolved over centuries in the villages. However, this centralized system did not work; it instead fostered a "tragedy of the commons." Without any ownership or management responsibility for the forests, local villagers proceeded to harvest them at an accelerated, unsustainable rate. Lacking both resources and training, the Department of Forestry proved unable to manage or police the nation's


68. See 1993 NEPAL ENVIRONMENTAL ACTION PLAN, supra note 4, at 39-41.

69. See generally WILLIAM ASCHER AND ROBERT HEALY, NATURAL RESOURCE POLICYMAKING IN DEVELOPING COUNTRIES: ENVIRONMENT, ECONOMIC GROWTH, AND INCOME DISTRIBUTION (1990) (discussing how natural resource policy is evolving to address sustainable development issues in the developing world).

70. A LEGISLATIVE AND INSTITUTIONAL FRAMEWORK FOR ENVIRONMENTAL MANAGEMENT IN NEPAL, supra note 33, at 49.

71. Id. at 49-54. See also K.H. Gautam, Evolving Forest Legislation: Strengthening or Weakening Indigenous Forest Management?, in INDEPENDENT MANAGEMENT OF NATURAL RESOURCES IN NEPAL 299 (Devika Tamang et al. eds., 1992).

72. A LEGISLATIVE AND INSTITUTIONAL FRAMEWORK FOR ENVIRONMENTAL MANAGEMENT IN NEPAL, supra note 33, at 50.
Once this became apparent, the government implemented a new community-based forest management policy. Under this policy, Nepal's forests are being returned to community management, which means locally created forest user groups are primarily responsible for resource planning and sustainable management. Thus, Nepal's forest and national park management policies have undergone a similar transformation, shifting from a centralized management system to an indigenous, community-based system to better sustain these critical resources.

Despite these major shifts in natural resource management philosophy, many critical issues involving Nepal's national parks have yet to be resolved. These include: (1) reconciling the central-regulatory thrust of the governing legislation with the new commitment to local involvement in conservation efforts; (2) structuring workable relationships between national park authorities and the NGO's that are playing key roles administering important areas; and (3) implementing the newly devised buffer zone management authority to protect park ecosystems while also promoting harmonious community relations. By examining these and other legal changes in specific contexts, the following sections explore how reform has affected Nepal's park system and identify lessons that Nepal's experience offers to conservation efforts in other developing countries.

II

NATIONAL PARKS: CONFRONTING THE LIMITS OF PRESERVATION

The problems with Nepal's early conservation policies are most evident in Royal Chitwan and Sagarmatha national parks. These are two of the oldest and most heavily visited national parks. Because they are located in such different settings, these two parks confront quite different problems. Few villages are situated within Royal Chitwan National Park, but it is ringed with extensive perimeter settlements. In contrast, Sagarmatha National Park encompasses several

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73. Id. at 51.
74. Id. at 52.
75. Id. See generally D.A. GILMOUR & R.J. FISHER, VILLAGERS, FORESTS AND FORESTERS: THE PHILOSOPHY, PROCESS AND PRACTICE OF COMMUNITY FORESTRY IN NEPAL (1991) (providing an overview of the history and implementation of community forestry programs in Nepal).
76. The article focuses primarily on four protected areas: Royal Chitwan National Park, Sagarmatha National Park, Annapurna Conservation Area, and Makalu-Barun National Park and Conservation Area. These areas were selected because the resource management problems confronting each of them are similar to those confronting Nepal's other national parks and wildlife reserves. In addition, information about these areas was readily accessible.
villages, with perimeter development concentrated in a narrow corridor. These parks, therefore, provide contrasting settings for examining whether Nepal's basic national park legislation effectively addresses critical resource management problems.

A. Royal Chitwan National Park: Coping With Adjacent Villages

Designed to preserve Nepal's rapidly dwindling rhinoceros and tiger populations, Royal Chitwan National Park has succeeded where several earlier preservation efforts had failed. Until the 1950's, the Terai region where Royal Chitwan is located was only sparsely inhabited owing to the prevalence of malaria. Once malaria was brought under control, Nepal's hill people began migrating to the Terai. This migration has placed an enormous strain on the native wildlife populations and their habitat.

Early efforts to control poaching and preserve dwindling habitat were mostly unsuccessful. Recalcitrant settlers disregarded an initial national park designation and actually began cultivating the designated lands for agricultural purposes. From 1950 to 1968, the rhinoceros population decreased by nearly ninety percent, dropping from over 800 animals to less than 100. During that same period, the tiger population dwindled to fewer than 25 animals. To protect the wildlife and its habitat, several international scientists recommended that the government formally create a national park system and impose severe restrictions on local access.

The Nepalese government responded by adopting the National Parks and Wildlife Conservation Act of 1973. Under the Act, the government then created Royal Chitwan National Park to protect the rhino...
noceros and several other species.\textsuperscript{83} For the first time, the government imposed legal restrictions on local inhabitants who had previously used the nearby forest resources virtually unfettered. Hunting was outlawed in an effort to control poaching,\textsuperscript{84} and villagers were forbidden from entering the park to cut firewood or thatch, or to graze domestic livestock.\textsuperscript{85}

These restrictions created a serious hardship for the nearby subsistence-level villagers. With more than a quarter million people living just beyond the park perimeter, and local forest resources badly depleted,\textsuperscript{86} many villagers have persisted in entering the park illegally to harvest resources and graze livestock. In response, the Nepalese Army, which is responsible for enforcing national park policies, has aggressively enforced park regulations against the villagers, often exacerbating tensions between park officials and local inhabitants.\textsuperscript{87}

\begin{itemize}
\item \textsuperscript{84} Local villagers and international rings had illegally exported the rhino horn to China, where it is highly valued as an aphrodisiac. Rhino horn sells for $10,000 to $20,000 per kilogram on the black market. Kedar Sharma, \textit{Nepal: Rhino Census Shows Population Has Bounced Back}, INTER PRESS SERVICE, Apr. 27, 1994, available in LEXIS, NEXIS library, INPRES File. A local villager who poaches the rhino will receive approximately $600 for his efforts, which represents nearly four times the average Nepali's annual income. Cf. Partha S. Banerjee, \textit{Running Out of Lives: Twenty Years After a Successful Drive to Save the Tiger, Big Cat Is in Danger Again}, \textit{Newsday}, May 4, 1993, at 69 (discussing illegal trade in tiger bones).
\item \textsuperscript{85} For subsistence farmers, these limitations presented a significant hardship. Eighty percent of Nepalese rely on firewood for heating and cooking, which results in the loss of 100,000 hectares of forest land each year. Uday Sharma, \textit{supra} note 78, at 135. In the Terai, where families are primarily engaged in subsistence agriculture, the percentage of people relying on firewood is probably higher. In the Terai villages, approximately 5.5 domestic animals are owned per household; over forty percent of the fodder used to feed these animals comes from public forests. Uday R. Sharma \& William W. Shaw, \textit{Role of Nepal's Royal Chitwan National Park in Meeting the Grazing and Fodder Needs of Local People}, 20 ENvtl. CONSERVATION 139, 140 (1993).
\item \textsuperscript{86} Human settlements adjacent to the park encompass approximately 37 Panchayats, which include 320 villages and over 260,000 people. Uday Sharma, \textit{supra} note 78, at 138. Moreover, there is very little forest land remaining outside the park's northern border along the Rapti River; other than a narrow band of heavily used forest land, the remainder of the area is cultivated, including even much of the flood plain adjacent to the river. See \textit{Nepal \& Weber}, \textit{supra} note 11, at 90-91.
\item \textsuperscript{87} See 1993 \textit{Nepal Environmental Action Plan}, \textit{supra} note 4, at 38; \textit{Nepal \& Weber}, \textit{supra} note 11, at 63-65. The military has an extensive presence in the park; estimates are that there is approximately one armed guard per square kilometer. Uday Sharma, \textit{supra} note 78, at 136. Although the army guards generally enforce poaching limitations strictly, they do not always enforce other resource extraction limitations, often because the soldiers identify with the difficult plight of rural villagers. See Sharma \& Shaw, \textit{supra} note 85, at 140.
\end{itemize}
From its inception, Royal Chitwan National Park has been managed to protect indigenous wildlife species.\(^8\) Over time, the protected area has been expanded to afford additional protection for these species. Park boundaries were extended in 1978 to include additional lands in the Rapti Valley, increasing the park's size to 932 square kilometers.\(^9\) In 1984, Parsa Wildlife Reserve was established adjacent to the park's eastern boundary to ensure additional habitat protection.\(^9\) Moreover, south of the park, in India, the Valmiki Wildlife Reserve has been established, creating a protected area totalling 1900 square kilometers.\(^9\)

Although Royal Chitwan creates an important refuge, it has not solved all the region's conservation problems. In 1984, the UNESCO World Heritage Committee designated Royal Chitwan National Park as a World Heritage Natural Site, thus recognizing the park's "outstanding universal value."\(^9\) Nonetheless, poaching continues to be a major concern, with eleven rhino deaths attributed to poachers in 1993.\(^9\) Villagers also continue to enter the park illegally to remove forest products and to graze livestock.

Royal Chitwan National Park is one of the most heavily visited of Nepal's national parks. In 1992-93, over 57,000 tourists visited the park. This figure represents nearly three-quarters of the tourists who visited Nepal's national parks that season.\(^9\) The park's popularity has spawned a growing local tourist industry, and this has had serious environmental repercussions. During the past fifteen years, the number of lodges located in Suaraha on the park's northern border (adjacent

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88. The 1975 General Management Plan acknowledges that the park was established for "the conservation of the indigenous Terai Fauna," particularly endangered species such as the rhino, tiger, gaur, gangetic dolphin, and gharial. ROYAL CHITWAN NATIONAL PARK MANAGEMENT PLAN, supra note 37.
89. Uday Sharma, supra note 78, at 135.
90. Heinen & Kattel, supra note 1, at 54.
91. Id. at 57.
92. Id. at 55. World Heritage Natural Sites are governed by an international convention in which each member nation agrees to "endeavor, in so far as possible, and as appropriate for each country ... to take the appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage ..." International Convention for the Protection of the World Cultural and Natural Heritage, done Nov. 23, 1972, art. 5(d), 27 U.S.T. 37, 41, 1037 U.N.T.S. 151, 154 (entered into force Dec. 17, 1975). See generally WORLD HERITAGE TWENTY YEARS LATER, supra note 5.
93. Kedar Sharma, supra note 84.
94. MINISTRY OF FORESTRY, HIS MAJESTY'S GOVERNMENT OF NEPAL, DEPARTMENT OF NATIONAL PARKS AND WILDLIFE CONSERVATION ANNUAL REPORT 93 (1993). Most of these visits were for the express purpose of viewing the park's wildlife. Interview with Ramprit Yadav, Chief Warden of Royal Chitwan National Park, in Kathmandu, Nepal (Nov. 5, 1993).
to the Rapti River) has jumped from one to forty.\textsuperscript{95} In addition, there are now seven lodges located inside the park; six of these were built in the last ten years.\textsuperscript{96}

Despite the increase in tourism, few local villagers have benefited directly from the influx of foreign visitors or their money.\textsuperscript{97} Most Chitwan trips are booked in Kathmandu. Local residents own few lodges, and the lodges employ only a handful of villagers.\textsuperscript{98} Moreover, to provide modern conveniences, such as hot water, the lodges located outside the park consume firewood and other forest resources at a rate far exceeding use by residents.\textsuperscript{99} Lodges located inside the park, on the other hand, are subject to departmental regulations that limit their consumption practices.\textsuperscript{100} Nevertheless, their mere presence has a fragmenting impact on wildlife habitat.\textsuperscript{101}

The presence of the park with its protective requirements for wildlife has created additional problems between park officials and local villagers. Rhinos and other large animals regularly leave the park and cross the Rapti River to consume village crops and prey on domestic livestock.\textsuperscript{102} Occasionally, unwary villagers are killed in these forays.\textsuperscript{103} The impoverished villagers are unable to erect sturdy enough fences to deter the rhinos, and other deterrent measures have been largely unsuccessful.\textsuperscript{104} Given Nepal's extreme poverty, govern-

\textsuperscript{95} Interview with Ramprit Yadav, supra note 94. See also Heinen & Kattel, supra note 1, at 56.
\textsuperscript{96} Interview with Ramprit Yadav, supra note 94.
\textsuperscript{97} Contrast this situation, however, with the one prevailing in Sagarmatha National Park. See infra note 160 and accompanying text.
\textsuperscript{98} Heinen & Kattel, supra note 1, at 56.
\textsuperscript{99} Interview with Ramprit Yadav, supra note 94. Knowledgeable observers estimate that a foreign tourist will use four times the amount of wood consumed by a Nepali for heating and cooking. Heinen & Kattel, supra note 1, at 72. Although tourist lodges, by passing the cost on to their customers, could switch to kerosene and other non-wood fuel sources, it would be impossible for most impoverished residents to use fuel sources other than firewood.
\textsuperscript{100} But see infra notes 301-03 and accompanying text discussing the Department's buffer zone management authority under the Fourth Amendment to the National Parks and Wildlife Conservation Act as it might apply to lodges located outside the park.
\textsuperscript{101} Interview with Ramprit Yadav, supra note 94. According to the Chief Warden, the presence of these lodges inside the park has a negative impact on wildlife habitat: it fragments the available habitat and brings people into too-close contact with the animals, sometimes even facilitating poaching. Lodge owners counter that their constant presence inside the park is a deterrent to poachers. Id.
\textsuperscript{102} Uday Sharma, supra note 78, at 135-36. Crop losses can be substantial, sometimes reaching 80-90 percent of the planted crop—a major loss for subsistence farmers who depend on a successful harvest to survive. Id. at 136. See also Nepal & Weber, supra note 11, at 56-61.
\textsuperscript{103} According to one estimate, ten people were killed inside the park during 1990. Nepal & Weber, supra note 11, at 62.
\textsuperscript{104} Id. at 56. The principal method that local farmers use to deter rhinos from entering their cultivated fields is to build an elevated platform on the perimeter of the field and
ment compensation for crop damage is unavailable, although park officials observe that opening the park annually for thatch gathering serves as a rough form of compensation. Nonetheless, villagers sometimes express the view that hunting should be allowed to deter wildlife depredation outside the park. Park officials are unwilling to go this far; rather, they hope that dispersing buffer zone management funds will ameliorate some of the ill will that villagers harbor due to the conservation restrictions.

Relying upon its regulatory authority under the National Parks and Wildlife Conservation Act of 1973, the Department has adopted rules strictly limiting local access to the park. In 1974, the Department prohibited firewood gathering, livestock grazing, and thatch collection in Royal Chitwan National Park. To protect against poaching, the Department also outlaws hunting, forbids firearms within the park, and prohibits park entry from dusk to dawn.

At first, park officials rigorously maintained the prohibition on firewood gathering and livestock grazing, even though fuelwood and grass were not widely available in the area's badly depleted forests. This led to three years of acrimonious conflict between park officials and villagers. In 1977, the Department revised its original "no access" policy to permit villagers to enter the park for twenty days to cut thatch for homes and other domestic purposes. Access for firewood gathering and livestock grazing, however, remains strictly prohibited, though violations continue to occur.

then stand guard during the night, when most depredation occurs. See Uday Sharma, supra note 78, at 136.

105. Uday Sharma, supra note 78, at 142. See infra note 112 and accompanying text regarding the change in policy from the earlier prohibition.

106. NEPAL & WEBER, supra note 11, at 62. See also Uday Sharma, supra note 78, at 142-43.

107. See infra notes 321-27 and accompanying text.

108. See supra notes 42-55 and accompanying text for a discussion of this legislation.

109. ROYAL CHITWAN NATIONAL PARK RULES, supra note 46, § 9. However, park officials may authorize the destruction of rogue animals responsible for human casualties or extensive crop losses. Id. § 10. Furthermore, individuals can kill wild animals in self-defense or to protect domestic livestock. Id. § 21. The law requires that park officials be notified immediately if a depredating animal has been killed.

110. Id. § 7.

111. More specifically, the park is closed between 6 p.m. and 6 a.m. Id. § 18.

112. NEPAL & WEBER, supra note 11, at 64. The number of "access" days has now been reduced to fifteen days. Id. The volume of grass removed from the park is not insignificant. In 1986, it was estimated that 60,000 people removed approximately $450,000 worth of grass and grass products. John F. Lehmkuhl et. al, National Parks and Local Development: Grasses and People in Royal Chitwan National Park, Nepal, 15 ENVTL. CONSERVATION 143, 148 (1988) (providing history of park policy on grass cutting and discussing results of survey to determine grass cutting patterns).

113. See NEPAL & WEBER, supra note 11, at 47-53. Nepal and Weber estimate that 26 to 50 illegal loads of firewood per village household are removed from the park each year. Id. at 51.
Although the governing legislation and regulations provide ample legal authority to protect park resources, the Department simply does not have the resources to police the park and secure its perimeter against the enormous pressures that the burgeoning local population is placing upon it. By 1986, the Royal Chitwan National Park rhino population had sufficiently recovered that park officials began transplanting some animals to Royal Bardia National Park in western Nepal. Nonetheless, as the rash of rhino poaching incidents in 1993 indicates, poaching continues to be a major problem. And even though park officials have relaxed the thatch-gathering prohibition, local villagers continue illegally to harvest firewood and thatch from within the park, and to graze livestock there. The sad reality is that little fuelwood or grazing land is available in the depleted forests ringing the park.

Further, because local citizens are deriving few direct benefits from the park or increased tourist traffic, they have little incentive not to exploit the park for their own needs.

To reduce pressure on park resources, conservation policy must address the need for improved resource management on lands outside the park. This involves not only improving productivity on these adjacent lands, but also assisting with infrastructure development, such as improved roads, schools, and sanitation. Moreover, further efforts must be made to secure adequate habitat for wildlife beyond park boundaries, or to provide compensation for crop damage. In short, buffer zone management must become an essential part of conservation policy.

In 1993, with passage of the Fourth Amendment to the National Parks and Wildlife Conservation Act (or the Buffer Zone Management Act), the Department received explicit legal authority to engage in buffer zone management and to enlist local villagers in cooperative conservation efforts. The 1993 Amendment both expands the Department’s authority over ecologically critical adjacent lands and radically departs from the highly centralized management approach reflected in the original governing legislation. A carefully implemented buffer zone management strategy may begin to resolve Royal Chitwan National Park’s most pressing resource management problems.

115. See supra note 93 and accompanying text.
116. See Sharma & Shaw, supra note 85; Uday Sharma, supra note 78.
117. NEPAL & WEBER, supra note 11, at 91, 94.
118. See id. at 89-90; Sharma & Shaw, supra note 85, at 141-42.
119. See infra notes 289-96 and accompanying text for a discussion of buffer zone management.
B. *Sagarmatha National Park: Making Peace with Residents*

Sagarmatha National Park is located in the Himalayan mountains of central Nepal. Flanking Mount Everest, the world's highest peak, Sagarmatha National Park embraces 1148 square kilometers of spectacular and rugged mountainous terrain. Elevations range from mountain valleys at 3000 meters to the peak of Mount Everest at over 8800 meters. The park's high alpine terrain is quite fragile; trees and other vegetation grow slowly at elevations over 3300 meters. Park wildlife include the Himalayan tahr, musk deer, wolf, and perhaps snow leopard, though several species are declining due to limited habitat and human encroachment.

The park is also home to nearly 3000 Sherpas, who have resided in the Solu Khumbu region since migrating from the Tibetan Plateau nearly four centuries ago. Principal Sherpa villages located within the park are Namche, Thame, Khunde, Khumjung, Pangboche, and Phortse. Several Buddhist monasteries and other important religious sites are also located within the park, including the Tengboche Monastery, which is the home of the Sherpas' spiritual leader. Owing to its myriad natural and cultural assets, the park has been designated a World Heritage Site by the UNESCO World Heritage Committee.

Sagarmatha National Park was established in 1976 despite opposition from many Sherpas, who resented the government's intrusion into their mountain stronghold. Until then, the Sherpas had lived in relative isolation as traders and pastoralists, though they had gained international acclaim for their mountaineering prowess. Reports

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122. *Id.*

123. *Id.*


125. Park headquarters are located at Namche, which is the first village inside the park that visitors encounter on the traditional trekking route. Heinen & Kattel, *supra* note 1, at 62.


129. Much of the Sherpas' fame as high-altitude mountaineers can be traced to the exploits of Tenzing Norgay, who accompanied Sir Edmund Hillary on the initial ascent of Mount Everest. *See* SIR EDMUND HILLARY, HIGH ADVENTURE (1955).
from both Nepalese and international scientists persuaded the government that increasing tourism pressures and resultant changes in the Sherpa lifestyle endangered local forest resources and thus required government oversight and regulation. In addition, the government was convinced that creation of Sagarmatha National Park would help Nepal in its campaign to attract more foreign visitors to the country.

By the time the park was designated, tourism was already having a visible impact on the Everest region. In 1964, following construction of a new airstrip only a day’s walk from the Sherpa village of Namche, the Everest area became readily accessible to tourists. The number of visitors rapidly escalated from just 20 per year in 1964 to over 3500 per year just ten years later. As these developments unfolded, many observers began predicting a serious ecological disaster if the prevailing forest consumption practices continued unchecked.

Under the prodding of Sir Edmund Hillary, a major Sherpa benefactor following his historic Mount Everest ascent, the Sherpas reluctantly acceded to the creation of Sagarmatha National Park. However, the Sherpas’ acceptance of this plan was contingent on two conditions: (1) they would not be displaced from their land; and (2) they would be included in managerial decisions. This arrangement represented a major departure from the Nepalese government’s previous approach to national park establishment. Three years earlier, in 1973, the plans for Royal Chitwan National Park purposefully eliminated indigenous settlements within the park. The creation of

130. JAMES F. FISHER, SHERPAS: REFLECTIONS ON CHANGE IN HIMALAYAN NEPAL 141-42 (1990); STEVENS, supra note 62, at 310 (discussing the general history of Sagarmatha National Park’s forestry regulations).
131. BARBARA BROWER, SHERPA OF KHUMBU: PEOPLE, LIVESTOCK AND LANDSCAPE 73 (1991). Moreover, the government may even have perceived, correctly, that the Sherpa people, as manifested through their Buddhist culture and rituals, would prove a major attraction to many tourists. Id. at 67.
132. FISHER, supra note 130, at 66.
133. BROWER, supra note 131, at 67-68; FISHER, supra note 130, at xxiii.
134. BROWER, supra note 131, at 152. Although early park proponents widely asserted that, due to changes in local forestry practices and escalating visitation numbers, the Solu Khumbu region was experiencing rapid deforestation as well as overgrazing problems, subsequent observers have rather convincingly argued that the early reports were exaggerated and that most erosion problems can be traced to the area’s geologic instability rather than to human-induced causes. Id. at 152-58.
135. Weber, supra note 121, at 208. Following his Everest triumph, Hillary worked to provide the Sherpas with schools, medical clinics, and other modern amenities. See FISHER, supra note 130, at 68-71. He is largely responsible for siting and constructing the Lukla airstrip to provide Sherpas with access to the outside world. Id. at 68-71.
136. STEVENS, supra note 62, at 311-12.
137. Id.
138. See supra notes 60-61 and accompanying text.
Rara National Park in the mountains of western Nepal similarly involved the forcible eviction of the residents of three local villages.  

In the Everest region, however, the park was designed around existing Sherpa villages. For the first time, the government made a substantive commitment to harmonize park management with the indigenous population. Park officials were given broad regulatory powers to protect park lands and resources, but the Sherpas retained ownership rights over their private and communal lands. As a result, park management policy reflects an uneasy accommodation between the government's commitment to centrally regulated environmental protection and its acquiescence to local participation in park management decisions.

This tension is reflected in the principal legal authorities governing park management. These include the National Park and Wildlife Conservation Act of 1973, its implementing regulations, and a park management plan. Based upon the highly prescriptive national park legislation, the Himalayan National Park Rules contain numerous prohibitions designed to protect park resources, including restrictions on woodcutting, livestock grazing, mining, hunting, and fishing. On the other hand, the Sagarmatha National Park Management Plan is specifically designed to address Sherpa concerns. Besides providing for "permanent conservation" of the park's wildlife and vegetation, the plan calls for protection of Sherpa culture and religious heritage. The plan commits park officials "to establish and maintain close formal and informal consultation and liaison with the local populace as a continuing source of advice to park management." In addition, it sanctions environmentally appropriate tour-

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139. Heinen & Kattel, supra note 1, at 56. The government permanently relocated these villages to the lowland Terai region. Id. See also Conservation Hits the Villages: Nepal's Annapurna Sanctuary and Annapurna Circuit, Buzzworm, May 1993, at 58; Sue Thompson, Trekking to Save the Tree Line, Geographical Mag., Aug. 1992, at 31.
140. Stevens, supra note 62, at 311.
141. Id. at 309-15.
142. See supra notes 42-55 and accompanying text for a description of this legislation.
143. Himalayan National Park Rules, supra note 50. The rules do, however, authorize the Chief Warden to permit local villagers to collect wood and graze livestock within the park, but only in designated areas. Id. §§ 24, 27.
144. His Majesty's Government of Nepal/New Zealand Cooperative Project, Sagarmatha National Park Management Plan (Preamble) (1981) [hereinafter Sagarmatha National Park Management Plan]. Interestingly, although the Management Plan was completed a year before the Himalayan National Park Rules, the rules do not incorporate notions of local participation and involvement in resource management policy, perhaps because the rules were designed to apply to all mountain parks, not just Sagarmatha.
145. Id. § 1.1.
ism promotion "in a manner which will provide economic benefit to the local population and to Nepal."\textsuperscript{146}

The government's forest regulation policies have proved the most contentious park resource management issue. Following creation of the park, the government imposed rigid limitations on access to the area forests, exacerbating tensions between the fledgling park administration and long-time residents.\textsuperscript{147} With little consultation and no regard for existing indigenous forest management systems, park administrators prohibited all wood cutting within the park, either for firewood or construction timbers (although dead wood could be collected with a permit).\textsuperscript{148} When park officials ignored local residents' objections to the ban, some residents continued to collect wood illegally.\textsuperscript{149} The army's clumsy enforcement efforts further eroded relations between park officials and the local populace.\textsuperscript{150}

Gradually, the original rigid limitations were modified. New Zealand-trained Sherpa park wardens arrived and renewed local consultation efforts.\textsuperscript{151} Villagers were allowed to collect dead fuelwood without a permit, and families were allowed to fell three large trees from park forests to use as house timbers. Moreover, the Sherpas were eventually convinced to reinstitute a local forest management system.\textsuperscript{152} Park officials, however, retain ultimate control over forest resource decisions and have not officially sanctioned the local management system.\textsuperscript{153} Nonetheless, with the park's renewed emphasis on local participation in forest management decisions, Khumbu residents have become more supportive of the park designation and much of the tension has dissipated.\textsuperscript{154}

Tourism impacts have been a key factor prompting park officials to institute an intensive forest management system. Since the park was established, tourism has escalated from approximately 3000 visitors in 1974 to more than 11,000 visitors in 1992.\textsuperscript{155} Because organized

\textsuperscript{146} Id.

\textsuperscript{147} STEVENS, supra note 62, at 311-15. No similar attempt, however, was made to regulate grazing. See infra notes 165-70 and accompanying text.

\textsuperscript{148} STEVENS, supra note 62, at 312; Stevens & Sherpa, supra note 124, at 78.

\textsuperscript{149} STEVENS, supra note 62, at 316; Interview with Lhakpa Sherpa, Trekking Guide and Lodge Owner, in Namche, Nepal (Oct. 6, 1993).

\textsuperscript{150} STEVENS, supra note 62, at 312, 314; Interview with Ang Pherba Sherpa, Village Development Council Vice Chair, in Namche, Nepal (Oct. 13, 1993).

\textsuperscript{151} Stevens & Sherpa, supra note 124, at 78-79.

\textsuperscript{152} Id. at 79.


\textsuperscript{154} Stevens & Sherpa, supra note 124, 79-81; STEVENS, supra note 62, at 320; Interview with Lhakpa Sherpa, supra note 149.

\textsuperscript{155} Michael P. Wells, Neglect of Biological Riches: The Economics of Nature Tourism in Nepal, in 2 BIODIVERSITY AND CONSERVATION 445, 456 (1993); BROWER, supra note
trekking groups and mountaineering expeditions were consuming large quantities of firewood, early park officials were prompted to adopt policies requiring trekkers and others to be self-sufficient with kerosene.\textsuperscript{156} The policies also prohibited even guides and porters from cutting firewood for personal use while in the park.\textsuperscript{157} The ban, which has continued, appears to have reduced some of the pressure on park resources, particularly in the higher elevations where juniper bushes were being decimated for campfires and lodge cooking.\textsuperscript{158}

However, a new set of forest management problems is now surfacing inside the park. Widely regarded as very astute traders,\textsuperscript{159} the Sherpas have capitalized on the opportunity presented by the growing interest in trekking and ecotourism.\textsuperscript{160} Many local families have constructed lodges and teahouses to accommodate trekkers. Since the lodges are constructed on private lands, park officials have little direct control over their location, appearance, or management.\textsuperscript{161} Yet with the proliferation of new and larger lodges designed to meet Western expectations, Namche residents have pressured park officials to allow them to cut additional lodge timbers from within the park.\textsuperscript{162} And

\textsuperscript{131}, at 67-68. Under Nepal's governmental structure, the Ministry of Tourism, not the Department of National Parks and Wildlife Conservation, is responsible for regulating trekking, and it has been reluctant to discourage visitation since tourism generates much of the nation's vital foreign exchange. Wells, \textit{supra}, at 462.

\textsuperscript{156}. A kerosene depot was established at Jorsalle, the park entrance. However, despite the kerosene requirement, some organized trekking groups continue illegally to use firewood for cooking and heating. Brower, \textit{supra} note 131, at 159; Stevens, \textit{supra} note 62, at 394.

\textsuperscript{157}. \textit{Sagarmatha National Park Management Plan}, \textit{supra} note 144, §§ 3.4, 3.6.

\textsuperscript{158}. Stevens, \textit{supra} note 62, at 392-95.

\textsuperscript{159}. Fortuitously, tourism arrived in the Khumbu during the early 1960's just as the Chinese, who had forcibly imposed their rule on Tibet, were closing the border between Nepal and Tibet, thus foreclosing the Sherpas' traditional trans-Himalayan trading routes. See generally Stevens, \textit{supra} note 62, at 350-53.

\textsuperscript{160}. Although the burgeoning tourism economy has brought prosperity to many Sherpa families, the financial benefits have not been evenly distributed. The village of Namche has enjoyed obvious growth. Other villages located off the regular trekking route, such as Thame and Khunde, have changed little, though many residents regularly leave home to work during the trekking seasons. Stevens, \textit{supra} note 62, at 44. Throughout the region, the presence of foreign trekkers who have money to spend has generated inflationary pressures, which adversely impact those villagers who are not participating in the trekking economy. The presence of salaried park employees and soldiers has also contributed to inflation, particularly in the price of food and other staples. See id. at 370-83; Brower, \textit{supra} note 131, at 88-89.

\textsuperscript{161}. Interview with Puran Shrestha, \textit{supra} note 153. Not surprisingly, Sherpa political leaders express vehement opposition to government regulation of private property, either within or outside the park. Interview with Ang Pherba Sherpa, \textit{supra} note 150. Park officials and local political leaders have, however, supported foreign-aided reforestation programs, and several nurseries are now located within the park. Weber, \textit{supra} note 121, at 213.

\textsuperscript{162}. Initially, even though traditional Sherpa house construction practices required large timbers as supporting beams, park officials banned all timber cutting in the park. Eventually, this rule was modified to allow families to fell three large trees for housing
with the proliferation of lodges, more and more trekkers—perhaps as many as half of the area's visitors—are eschewing organized treks and venturing into the region on their own. They are staying in the lodges, where they are fed and warmed using local firewood. Because the kerosene requirement does not apply to these lodges, the local forests are again being heavily impacted by lodge owners seeking firewood for their guests.

The burgeoning tourism economy also accounts for a perceptible increase in livestock numbers, which has resulted in overgrazing in some locations within the park. In Sherpa culture, yaks are viewed as a reflection of personal wealth; they are also used in trekking, where a yak can carry twice the load of a porter. As a result, many Sherpa families, particularly in Namche, have invested their tourism-generated income in livestock, mostly the crossbred zopkio. This increase in livestock numbers has altered traditional grazing patterns and has created intervillage conflict over the available range.

Despite the chief warden's legal authority to regulate grazing within the park, park officials have refrained from using this power to intervene in grazing matters. Instead, in sharp contrast to their forest management policy, they have deferred to the Sherpas' expertise on local range conditions and have allowed the Sherpas to handle the problem through their own processes. The grazing controversy has
thus provided local residents with an opportunity to demonstrate that their traditional management approaches can assure protection of the park's ecological integrity.170

Besides confronting significant internal natural resource problems, Sagarmatha National Park also faces related external pressures, particularly in the Lukla corridor, which most trekkers use to enter the park. In 1964, with completion of the Lukla airstrip, travel time from Kathmandu to the Everest region was reduced from a rugged two-week trek over numerous ridges to a short forty-minute plane ride.171 Most park visitors now rely upon the daily flights to bring them to Lukla, which is located at 33,000 meters and less than a day's walk from the park entrance at Jorsalle. To accommodate the growing number of trekkers, enterprising Sherpas have constructed numerous lodges along the Lukla corridor route, and more lodges are under construction.172 Teahouses and restaurants have also proliferated along the route, offering such amenities as Coca Cola, western-style meals, and hot showers.

As is the case inside the park, the timber used to construct these lodges and the firewood used to heat them are taken from the local forests. This development places additional pressure on perimeter forests that have already suffered from both escalating visitor pressures and Namche residents seeking wood outside the park. But be-

overgrazing is occurring within the park. STEVENS, supra note 62, at 401. Indeed, concluding that livestock pressures have not yet produced serious environmental degradation, one knowledgeable commentator argues that traditional resource management practices are adequately protecting the range. She further argues that park officials should place greater reliance upon these traditional, indigenous systems for resource management purposes, rather than relying upon a highly centralized regulatory approach that alienates the local populace from park management goals. BROWER, supra note 131, at 172-74. See also Barbara Brower, Crisis and Conservation in Sagarmatha National Park, Nepal, 4 SOC'y AND NAT. RESOURCES 151, 158 (1991).

170. Electrical power has also recently arrived in the Khumbu region. BROWER, supra note 131, at 162-64. Although the hydropower generators are located inside the park, park officials have no jurisdictional authority over these projects. While the projects should reduce dependence on firewood as an energy source, the arrival of modern technology could place other park resources at risk and erode local cultural institutions. FISHER, supra note 130, at 141, 162. The Tengboche Monastery was already once destroyed in an electrical fire. Id. at 171, 189. Yet with local residents firmly situated within the park and prospering from the tourist trade, modernizing developments and influences will surely continue. Unless park officials enjoy the confidence of the local residents, they will not be able to influence development proposals merely by asserting that park resources are at risk.

171. FISHER, supra note 130, at 66.

172. DEPARTMENT OF NATIONAL PARKS AND WILDLIFE CONSERVATION, His MAJESTY'S GOVERNMENT OF NEPAL, BEGINNING WITH BUFFER ZONE FOR BIODIVERSITY 9 (1993) [hereinafter BEGINNING WITH BUFFER ZONE FOR BIODIVERSITY] (on file with author). The park warden estimates that new lodges are being built at the rate of twenty per year. Interview with Puran Shrestha, supra note 153.
cause these lodges are located on private land and outside the park, they are not subject to government regulation.

Although the Department of Forestry has established local user groups under its community forestry program,\textsuperscript{173} meaningful woodcutting constraints have yet to be imposed outside the park.\textsuperscript{174} The recently adopted Buffer Zone Management Act, however, provides the Department of National Parks and Wildlife Conservation with the legal authority to address lodge construction and deforestation problems outside park boundaries.\textsuperscript{175} It also allows the Department to involve adjacent villagers in the conservation effort. How this new authority is exercised will be critical to preserving the Everest region ecosystem. Unless the national park's perimeter forests are protected against overconsumption, forest conservation efforts within the park cannot alone sustain its ecological integrity.

III

THE CONSERVATION AREA CONCEPT: ENVIRONMENTAL PROTECTION AND SUSTAINABLE DEVELOPMENT IN THE ANNAPOURNA HIMAL

In 1988, Nepal radically departed from the traditional national park model of nature conservation by designating the region surrounding the world-renowned Annapurna massif as its first conservation area. Seeking to avoid the park-people conflicts that had plagued the Royal Chitwan and Sagarmatha national parks, the government endorsed use of the conservation area concept as a new nature conservation strategy. Where Royal Chitwan and Sagarmatha parks relied upon a scheme of centrally imposed governmental regulations enforced by the military, Nepal entrusted administration of the Annapurna Conservation Area to the King Mahendra Trust For Nature Conservation, a legally sanctioned, indigenous non-governmental organization (NGO) with strong ties to the central government. The King Mahendra Trust has vested considerable management responsibility with local villagers on the principle that those who live in the area should be directly responsible for its welfare. Although conservation areas engender their own unique problems, the concept represents a promising alternative to the national park model, particularly in ecologically sensitive areas that are also home to indigenous peoples.

\textsuperscript{173} See supra notes 74-75 and accompanying text.
\textsuperscript{174} Interview with Puran Shrestha, supra note 153.
\textsuperscript{175} See infra notes 290-95, 304-05 and accompanying text.
A. The Annapurna Conservation Area: An Experimental NGO Project

The Annapurna region is an extraordinarily diverse area in central Nepal acclaimed for its trekking opportunities. The region embraces the subtropical lowlands surrounding Pokhara, the middle hills covering the southern flank of the Annapurna massif, the alpine terrain of the mountains, and the high desert country of the Tibetan plateau. Major geographical features include the four distinctive Annapurna peaks; Mount Dhaulagiri, one of the world’s highest mountains; and the Kali Gandaki gorge, one of the world’s deepest river chasms. The region also encompasses diverse biological resources: faunal species include musk deer, snow leopards, and blue sheep; floral species include rhododendron and pine forests, and many different orchids. Culturally, numerous ethnic groups make their home in the region, including Gurungs, Magars, Manangis, Tibetans, and Thakalis. Both Hinduism and Buddhism are practiced, and the village of Muktinath is sacred to both religious groups.

The origins of the Annapurna Conservation Area began with the passage of the King Mahendra Trust For Nature Conservation Act. In 1982, Nepalese officials recognized that the chronically underfunded government was unable to meet the nation’s myriad conservation needs. To address this problem, Nepal created the King Mahendra Trust as an indigenous NGO with ties to both the royal government and international conservation circles. According to the Act, the Trust aims to “conserve, promote and manage wildlife and other natural resources; make necessary arrangements for the development of National Parks and Reserves; [and] undertake scientific


177. These peaks gained international recognition following publication of Maurice Herzog’s classic account of his triumphant 1951 climbing expedition. Maurice Herzog, Annapurna: Conquest of the First 8000-Metre Peak (1951).

178. Bruce W. Bunting et al., Annapurna Conservation Area: Nepal’s New Approach to Protected Area Management, in Resident Peoples and National Parks, supra note 9, at 161.

179. Id. at 162.

studies on, and conduct research in, wildlife and other natural resources.”

Despite the Trust’s ambitious mission, it is given few explicit powers beyond accepting donations from national and international aid organizations. The Act establishes a fifteen-member board of directors that includes high-level government officials as well as representatives from NGO’s and other international organizations. However, the central government retains rulemaking power, and the Trust must coordinate with the government through the Department of National Parks and Wildlife Conservation. Nonetheless, the mere creation of this semi-independent organization was sufficient to convince international aid organizations to provide much-needed financial support for Nepal’s conservation efforts. Channeling funds through the Trust assured donors that their money would not disappear in the hands of the often unreliable and bureaucratically cumbersome central government.

In 1985, in response to intensive trekking pressures and accelerating deforestation problems, the Nepalese government contracted with the King Mahendra Trust to make recommendations for protecting the Annapurna region. By then more than 25,000 trekkers annually were visiting the Annapurna region, more than five times the number then entering the Everest region. Unlike the sparsely populated Everest region, which already had been designated a national park, the Annapurna region had a population of more than 40,000 people living in scattered villages. Many of these villages were feeling the impacts of trekking, namely inflationary pressures and increased de-

181. Id. § 9.
182. Id. § 10.
183. Id. § 5. Nepal’s King, who is designated patron of the Trust, appoints the Chair of the Board of Directors. The Chair is responsible for nominating all other members of the Board, including the secretary. The Chair chooses three members from among the Secretaries in His Majesty’s Government; three members from government departments or non-governmental agencies; four members from international agencies; and three other members. The secretary is chosen separately. See infra APPENDIX E.
184. Id. § 16.
185. Id. § 18.
186. Bunting et al., supra note 178, at 164-65. Indeed, seasoned observers acknowledge that corruption is rife throughout all levels of Nepalese government, primarily because government salaries are quite low. One knowledgeable observer estimated that seventy percent of foreign donor funds invested in the government’s forestry program cannot be accounted for.
187. The popularity of the Annapurna region can be attributed to its relatively easy access, the diversity of terrain and cultures encountered on the traditional trekking routes, and the international recognition attached to the Annapurna name. See Chandra P. Gurung, People’s Participation in Conservation: Annapurna Conservation Area Project, in PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON TROPICAL BIODIVERSITY “IN HARMONY WITH NATURE” 74, 77-78 (Kuala Lumpur, Malaysia, June 12-16, 1990).
188. Bunting et al., supra note 178, at 162-63.
mand for firewood and amenity services.\textsuperscript{189} Yet few villagers were successfully capitalizing on the opportunities presented by the increased tourism.\textsuperscript{190} Moreover, the trekking onslaught helped accelerate the pace of deforestation;\textsuperscript{191} one estimate suggested that the lodges in a single village were consuming a hectare of virgin rhododendron forest annually to meet tourist needs.\textsuperscript{192}

Perceiving that the region’s environmental integrity and cultural heritage were severely threatened by tourism-generated pressures, the King Mahendra Trust recommended designating the region surrounding the Annapurna peaks as a conservation area. This newly conceived conservation area concept was designed to integrate ecological protection goals with sustainable economic development opportunities.\textsuperscript{193} The Trust report pointedly rejected a national park designation, noting that local inhabitants depended heavily on forest resources to meet their basic subsistence needs.\textsuperscript{194}

The Report made several recommendations to secure local support and cooperation in the conservation effort. First, villagers should be included in resource management decisions and allowed to share the benefits from the influx of tourists. Second, alternative energy sources should be created so that harvesting of local forests is reduced. Third, local environmental education should be promoted. Finally, trekkers should be charged an entry fee, and a portion of the fee should be earmarked to support local community development and conservation projects.\textsuperscript{195} In sum, the proposal represented a fundamental departure from the country’s traditional, centralized conserva-

\textsuperscript{189} Id.  
\textsuperscript{190} It was estimated that only twenty cents of every three dollars expended daily by trekkers was spent locally in the Annapurna region. Id. at 162. The remainder was spent either in Kathmandu, Pokhara, or the trekker’s home country. KING MAHENDRA TRUST FOR NATURE CONSERVATION, ANnapurna Conservation Area Project: Conservation for Development (1986) [hereinafter CONSERVATION FOR DEVELOPMENT].  
\textsuperscript{191} Due to local population growth and the forest nationalization policy, deforestation was becoming a critical problem in several locations within the region. Bunting et al., supra note 178, at 162-63.  
\textsuperscript{192} CONSERVATION FOR DEVELOPMENT, supra note 190. See also Janardan B. Khatri-Chhetri, Indigenous Management of Forest Resources, in Indigenous Management of Natural Resources in Nepal 309 (Devika Tamang et al. eds., 1993).  
\textsuperscript{193} See Bruce W. Bunting & R. Michael Wright, Annapurna National Park: The Nepal Plan for Joining Human Values and Conservation of a Mountain Ecosystem, in People and Protected Areas in the Hindu Kush-Himalaya, supra note 34, at 63; Stevens & Sherpa, supra note 124, at 81-83.  
\textsuperscript{194} Bunting et al., supra note 178, at 166.  
\textsuperscript{195} Until this proposal was adopted, all fees collected for trekking or entering national parks were deposited in the central treasury; none of the monies were reinvested in parks or local conservation efforts—a situation that caused considerable local resentment toward the national parks. See Stevens & Sherpa, supra note 124, at 83.
tion methods in favor of a locally based approach relating environmental protection to economic welfare.\textsuperscript{196}

To implement the report’s recommendations, the Nepalese government amended the National Parks and Wildlife Conservation Act of 1973 to include conservation area designations. Under the amended statute, “conservation areas” are defined as “areas to be managed according to the integrated plan for the conservation of the natural environment and the balanced use of natural resources.”\textsuperscript{197} The amendment also enables His Majesty’s Government to contract out the management of conservation areas to any “institutions established with the objective of conservation of nature and natural wealth.”\textsuperscript{198} With these two provisions, Nepal significantly expanded its legal approach to land protection. It sanctioned multiple-use management in designated conservation areas, and it authorized non-governmental organizations (NGO’s) to assume management responsibility.

In 1988, following these statutory revisions, the Annapurna Conservation Area was officially designated in the Nepal Gazette, and management responsibility was transferred to the King Mahendra Trust under a ten-year management agreement.\textsuperscript{199} International organizations proceeded to loosen their purse strings and provide financial support for this unique program. Today, the Annapurna Conservation Area represents an important model for developing nations seeking to integrate environmental protection and sustainable development.\textsuperscript{200}

\textbf{B. Conservation Area Management: Local Participation and Sustainability}

Borrowing directly from the internationally recognized biosphere reserve concept,\textsuperscript{201} the King Mahendra Trust has developed a compre-

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\textsuperscript{196} For a description of the Trust’s Annapurna Conservation Area Project, see generally Thompson, \textit{supra} note 139; Gurung, \textit{supra} note 187, at 80-81.

\textsuperscript{197} National Parks and Wildlife Conservation Act of 1973 § 2(e)(1).

\textsuperscript{198} \textit{Id.} § 16.

\textsuperscript{199} Bunting et al., \textit{supra} note 178, at 165. At the end of ten years, management responsibility reverts to the Department of National Parks and Wildlife Conservation.


\textsuperscript{201} The biosphere reserve concept originated in the United Nations Educational, Scientific and Cultural Organization’s (UNESCO’s) “Man in the Biosphere” program, and is designed to insure species diversity throughout the world by designating representative ecosystems as reserves. The program’s goals are to protect representative ecosystems, promote scientific research and public education, and insure local economic opportunities. It
hensive regional management strategy for the Annapurna Conservation Area. The Trust's management plan utilizes a zoning scheme to protect the region's most fragile areas while authorizing resource use activities in other locations. The different management zones include a wilderness area centered on the Annapurna peaks and Dhaulagiri, a protected forest and seasonal grazing zone to meet basic subsistence needs, and an intensive multiple-use zone to accommodate villagers and tourists. In short, the plan creates concentric zones that emanate outward from the well-protected core, with more intense human activity allowed farther from the center.

The King Mahendra Trust has adopted a two-stage approach for implementing its conservation program. Initially, the Trust has focused its attention on the relatively small (800 square kilometer) Ghandruk region leading to the Annapurna Sanctuary, the area most heavily affected by trekking. Accomplishments in this region include creation of a local Lodge Management Committee, establishment of tree nurseries to promote reforestation, formation of Conservation and Development Committees to manage local resource development, creation of women's groups to foster improved conservation and sanitation practices, and construction of a microhydro project for


203. The new Makalu-Barun National Park and Conservation Area takes a similar area-management approach. See infra notes 230, 238-39 and accompanying text. This suggests that Annapurna's landscape zoning model is transferrable to other areas.


205. Originally, the Trust contemplated formation of Forest Management Committees, but that designation has been changed to Conservation and Development Committees in order to reflect the broad range of issues, including environmental concerns and community development projects, that these committees are responsible for addressing. *Id.* at 1.

206. In the developing world, it is well-documented that women play a major role in most subsistence activities (i.e. gathering firewood, tending gardens, and grazing livestock); thus, most sophisticated conservation programs now emphasize the need to educate rural women villagers to improve conservation practices. See *World Resources Institute, World Resources 1994-95: People and the Environment* 43-60 (1994).
alternative energy,\textsuperscript{207} and introduction of the "back boiler" system to conserve fuel in lodges.\textsuperscript{208} While Trust officials have emphasized local involvement in these efforts, they acknowledge that the Trust may have to intervene to ensure that conservation objectives are not compromised.\textsuperscript{209}

Recently, the Trust expanded its efforts into the larger (2600 square kilometer) area that encompasses the Annapurna Circuit trekking route, but it remains to be seen whether these programs can be effectively transferred beyond the Ghandruk region.\textsuperscript{210} Outside financial support clearly has been an important factor enabling the Trust to establish credibility in the Ghandruk region and to secure local cooperation in these innovative conservation programs. The costs will undoubtedly increase to cover the much larger second-stage area. Furthermore, quite different ethnic and cultural traditions must be accommodated in this area. Nonetheless, Trust officials believe that their experiences in Ghandruk will facilitate implementation elsewhere.\textsuperscript{211}

\textbf{C. Jurisdictional Problems: Defining the Locus of Power}

Despite its progress toward instilling a conservation ethic at the village level, the King Mahendra Trust's Annapurna Conservation Area Project still faces significant legal and administrative problems.


\textsuperscript{208} King Mahendra Trust for Nature Conservation, His Majesty's Government of Nepal, Annapurna Conservation Area Project: Three Year Progress Report, March 1986-December 1989, at 24-25 (Devendra S. Rana ed., 1990) [hereinafter Three Year Progress Report]. The "back boiler" system is designed to heat water through circulation coils in the traditional Nepali cooking stove. Rather than maintain a separate heating system for hot water to provide showers for trekkers, the pipes to heat the shower water run through the cooking hearth and connect to a drum of hot water, thus saving significant quantities of fuel wood. \textit{Id.}

\textsuperscript{209} Stevens & Sherpa, \textit{supra} note 124, at 83. Early on, Trust officials played a key role in convincing the Lodge Management Committee for the Annapurna Sanctuary that lodges should convert from fuelwood to kerosene. \textit{Id.} at 83-84. Moreover, Ghandruk-region villagers have proven much more receptive to the Trust's development project proposals than to some of the conservation projects, leading knowledgeable observers to anticipate problems in shifting local attention from the former to the latter as the project matures. \textit{Id.} at 86; interview with Daniel J. Miller, \textit{supra} note 200.

\textsuperscript{210} See Michael P. Wells, A Profile and Interim Assessment of the Annapurna Conservation Area Project, in NATURAL CONNECTIONS: PERSPECTIVES IN COMMUNITY-BASED CONSERVATION, \textit{supra} note 16, at 261-81.

\textsuperscript{211} Interview with Dr. Chandra Gurung, Project Director of Annapurna Conservation Area for the King Mahendra Trust for Nature Conservation, in Kathmandu, Nepal (Nov. 11, 1993). Drawing upon funds derived from the trekking entry fee, Trust officials plan to concentrate their efforts in the heavily impacted tourism corridors. Moreover, the Trust is prepared to open new offices in the villages of Lwang and Sikles. Other offices are planned for Manang and Jomsom. \textit{Two Year Progress Report, supra} note 204, at 50.
The most critical legal issue involves whether the Trust, as a nongovernmental organization, can be delegated sovereign governmental power to enforce resource management regulations for the conservation area. Notwithstanding the Trust’s commitment to principles of community involvement and local responsibility, recently completed draft conservation area regulations give conservation area managers substantial “veto” powers over local resource decisions. For example, the draft regulations give the warden and assistant warden review authority over local user-group recommendations, responsibility for preparing areawide management plans, and permitting authority that extends to private lands. The regulations also vest arrest, prosecutorial, and judicial powers in conservation area employees. But as nongovernmental employees, the Trust’s employees neither work for the government nor are they directly accountable to either the government or the local people. The resulting combination of power and lack of accountability creates the risk of abuse.

This potentially dangerous situation is further complicated because the Department of Forestry presently exercises supervisory responsibility over the public forests in the Annapurna region. However, the King Mahendra Trust for Nature Conservation Act of 1982 specifies that the Trust is to coordinate with the Department of National Parks and Wildlife Conservation (DNPWC). In fact, the DNPWC has no land holdings or responsibility in the Annapurna area, and departmental officials readily acknowledge that they have neither the resources nor expertise to administer such an ambitious, community-based conservation program. Yet the Department of Forestry is now phasing out its involvement in the region, potentially leaving the central government without any presence or authority there. And although Trust employees are developing some expertise in community organization and development, the staff includes few

212. Department of National Parks and Wildlife Conservation, His Majesty’s Government of Nepal, Conservation Area Management Regulation 2048 (Draft for Makalu-Barun Conservation Area) (on file with author) [hereinafter Draft Conservation Area Management Regulation 2048]. Draft conservation area regulations are now pending before the Ministry of Forestry. These draft regulations, which were prepared for the Makalu-Barun Conservation Area, are the only proposed regulations available in an English translation. Separate draft conservation area regulations for Annapurna Conservation Area are also pending before the Ministry of Forestry, but these regulations have not yet been translated into English. The author’s conversations with King Mahendra Trust officials, as well as with Makalu-Barun officials, suggest that the proposed regulations are actually quite similar for each area. See infra note 271 and accompanying text for further analysis of the relationship between these two sets of proposed conservation area regulations.

213. Id. at Nos. 10, 11, 26.

trained natural resource professionals who could assess environmental impacts and devise protective strategies.\footnote{215}{Interview with Biswa N. Upreti, supra note 66.}

Trust officials' public stance is that this situation does not present a problem. Consistent with its philosophy of local management and self-determination, the Trust publicly states it will entrust the villages with regulatory enforcement responsibilities. Village officials, acting either through locally created Conservation and Development Committees or established village councils, will assume responsibility for promulgating and enforcing local resource management regulations. These officials will also be responsible for arresting, prosecuting, and punishing offenders.\footnote{216}{Thomas J. Lueck, The Annapurna Experiment, N.Y. TIMES, May 19, 1991, at 14, 37. See also Stevens & Sherpa, supra note 124, at 82, 84.} Although this approach closely parallels the community forestry management strategy being implemented elsewhere,\footnote{217}{See supra notes 69-75 and accompanying text.} it is yet unproven in the Annapurna area, where tourism pressures have upset traditional resource management patterns and superimposed new economic incentives.

The conservation area entry fees that have been earmarked for return to the villages pose another potential problem for the Trust. These returned entry fees are intended to encourage villages to implement environmentally sensitive resource management policies. The fees, however, may not provide sufficient financial incentives for the villages to change their traditional practices.\footnote{218}{See infra notes 321-27 and accompanying text, further examining whether the financial incentives associated with the recent buffer zone management legislation are sufficient to encourage local cooperation for environmental protection.} Without sufficient economic incentives, Trust officials fear that villagers may not be fully committed to a conservation ethic.

Trust officials privately acknowledge the need for some continuing central authority to regulate resource management practices. Unless Trust employees have law enforcement powers, the Trust may not be able to prevent the illegal consumption of forest resources.\footnote{219}{Interview with Dr. Chandra Gurung, supra note 211. One report indicates that, over a five-year period, only 15 villagers have been punished by village councils for illegally cutting trees or killing deer. Lueck, supra note 216, at 37. See also Stevens & Sherpa, supra note 124, at 83 (acknowledging that the government must be prepared to intervene if conservation objectives are threatened). In fact, this concern probably accounts for the law enforcement provisions that are included in the draft conservation area regulations. See supra notes 213-14 and accompanying text.} Thus, Trust employees are reluctant to fully cede resource management responsibility to local villagers. The tension between this reluctance and the Trust's commitment to local control in principle is demonstrated by the very fact that Trust employees, rather than local...
authorities, prepared the Annapurna Conservation Area Management Plan.\textsuperscript{220}

Despite these problems, the Annapurna Conservation Area Project has been successful enough that the Nepalese government entrusted the King Mahendra Trust with administering the newly opened Mustang region. The Mustang region is a high desert plateau area north of the Annapurna range on the Tibetan border. Previously, this region was closed to foreigners and has been virtually isolated from the world for more than a century. Under a ten-year agreement, the Trust will apply the Annapurna Conservation Area model to the ethnically and geographically unique Mustang region. The Trust's efforts will focus on protecting the dry, fragile desert environment; developing alternative energy sources; and safeguarding the region's cultural heritage, which includes ancient Buddhist monasteries and artwork.\textsuperscript{221}

To defray the costs of the Mustang Conservation Area program and to control the number of visitors, the Nepalese government is charging an entry fee of $700 per person. Sixty percent of these fees are earmarked for local conservation activities.\textsuperscript{222} While the fee is steep enough to discourage mere curiosity seekers, some still worry that heavy tourist traffic could irreparably damage the region.\textsuperscript{223} The Ministry of Tourism recently raised the number of trekking permits from 600 to 2000 annually without consulting with either the Trust or the Department of National Parks and Wildlife Conservation.\textsuperscript{224} This move reinforces the need for the different government units to coordinate Nepal's tourism policies with its environmental and cultural conservation goals.\textsuperscript{225} Moreover, the Trust, which still lacks any real presence in much of the Annapurna region, may not have the resources necessary to administer both areas.\textsuperscript{226}

220. Although Trust employees solicited local input and comments on the Management Plan, the initial idea for the Annapurna Conservation Area came from outside the region, and the Plan itself—with its strong emphasis on nature conservation—was largely the brainchild of outside conservationists. See Stevens & Sherpa, supra note 124, at 83, 86.

221. CHANDRA GURUNG, KING MAHENDRA TRUST FOR NATURE CONSERVATION, UPPER MUSTANG CONSERVATION AND DEVELOPMENT PROJECT (Dec. 1992).

222. Conservation Hits the Villages, supra note 139, at 58.

223. Id. One report indicates that more than 900 people entered the region during the first year it was opened, with more than 100 of them entering it illegally. Although the government initially capped entries at 200 persons per year, it quickly raised that number to meet the demand. Id. The impact of opening the area is already being felt; a recent government report indicates that more than $150,000 worth of antiquities has been removed from the Mustang monasteries for sale on the art black market. Binod Bhattarai, Nepal: Tourists Leave Toilet Paper Trails in the Trans-Himalayas, \textit{Inter Press Service}, May 5, 1993, available in LEXIS, NEXIS Library, INPRES File.

224. Conservation Hits the Villages, supra note 139, at 58.

225. Id.

226. Upreti, supra note 31, at 29 (discussing shortage of manpower and resources).
Although troubling problems remain unresolved, the Annapurna Conservation Area experiment represents a promising new approach to land and resource protection in Nepal. By seeking to link local people (who depend upon the region's natural bounty) with conservation objectives, the program is designed to sustain the local economy while preserving the area's biological and aesthetic resources.227 Whether a still poorly educated local populace surviving at a subsistence level can meet this challenge remains to be seen. To ensure that the program meets its goals, central regulation may be required, particularly to address the escalating pressures of tourism.

IV
MERGING THE NATIONAL PARK AND CONSERVATION AREA CONCEPTS: PRESERVATION AND DEVELOPMENT IN THE MAKALU-BARUN REGION

Officially established in 1993, the Makalu-Barun National Park and Conservation Area is Nepal's newest and perhaps most innovative conservation project. Located in northeastern Nepal, the joint national park-conservation area designation is designed to protect the ecologically diverse yet sparsely settled region surrounding Mount Makalu, the world's fifth highest peak.228 The Makalu-Barun National Park and Conservation Area, like the Annapurna Conservation Area, represents a collaboration between the Nepalese government and an NGO, namely the United States-based Mountain Institute.229 But unlike the Annapurna Conservation Area, an innovative agreement giving the Department of National Parks and Wildlife Conservation an important role administering the Makalu-Barun area should avoid the difficult jurisdictional issues besetting the Annapurna arrangement. Nevertheless, the Makalu-Barun project still confronts the challenge of integrating central administrative authority with a policy promoting local involvement in resource management decisions.

227. Id. at 58. See generally Sam H. Ham et al., Applying Environmental Interpretation in Protected Areas of Developing Countries: Problems in Exporting a US Model, 20 ENVTL. CONSERVATION 232 (1993) (discussing the necessity for cultural sensitivity to local context).
229. The Makalu-Barun conservation project originally was spearheaded by the Woodlands Mountain Institute, which has since changed its name to the Mountain Institute. The Mountain Institute is located in Franklin, West Virginia.
A. The Makalu-Barun National Park and Conservation Area: A Joint Undertaking

The Makalu-Barun protected area embraces a 1500 square kilometer core national park and an adjacent 830 square kilometer conservation area. Generally following ecological boundaries, the protected area extends across a large, incredibly diverse region reaching from Mount Makalu's summit to the Arun River gorge. Vegetation zones range from tropical forests to alpine pastures to the pristine forests of the Barun watershed. The area is also home to twenty-five mammal species, including such rare species as the Assamese monkey, red panda, musk deer, great Tibetan sheep, and snow leopard. Over 130 species of birds inhabit the area, including two that are unique to Nepal. More than 3000 species of flowering plants have been identified, including 25 of Nepal's 30 species of rhododendron and 67 species of economically valuable medicinal or aromatic plants. Moreover, the Makalu-Barun area is contiguous to both Sagarmatha National Park and Tibet's Qomolungma Nature Preserve. Thus, Makalu-Barun now forms part of a protected region extending across more than 40,000 square kilometers in the Himalayas that has been referred to as the Mount Everest Ecosystem.

The boundaries of Makalu-Barun were carefully designed both to reflect ecological realities and to accommodate the subsistence needs of indigenous villagers. The Makalu-Barun region is not heavily

230. MAKALU-BARUN MANAGEMENT PLAN, supra note 66, at 25.
231. Id. at 13, 26. The protected area's boundaries are based on the presence of Sagarmatha National Park and the Tibet-Nepal border, as well as ecological features like the Arun River and various ridgelines. The boundary dividing the national park from the conservation area is a 2000-foot ridgeline; it places all but two small settlements in the conservation area rather than national park, thus maximizing the uninhabited land placed in national park status. Id. See also Byers & Banskota, supra note 6, at 97-99.
232. Roberts, supra note 228, at 22.
233. Heinen & Kattel, supra note 1, at 61.
235. Id. MAKALU-BARUN MANAGEMENT PLAN, supra note 66, at 13.
236. MAKALU-BARUN MANAGEMENT PLAN, supra note 66, at 10.
237. Daniel Taylor-Ide et al., Mountains, Nations, Parks, and Conservation: A Case Study of the Mt. Everest Area, 27.1 GEOJOURNAL 105, 105 (1992); Mana Man Singh, Environment: Nepal and China to Save “Roof of the World,” INTER PRESS SERVICE, Feb. 23, 1993, available in LEXIS, NEXIS Library, INPRES File. The Qomolungma Nature Preserve, however, is basically a “paper park,” i.e., a formally designated park, but one that is not actively managed, nor subject to rigorous protective requirements. The “greater ecosystem” concept has surfaced in the United States as a strategy for protecting biological diversity and ensuring the integrity of naturally functioning ecosystems. For additional information on the “greater ecosystem” concept, see R. EDWARD GRUMBINE, GHOST BEARS: EXPLORING THE BIODIVERSITY CRISIS (1992); THE GREATER YELLOWSTONE ECOSYSTEM: REDEFINING AMERICA'S WILDERNESS HERITAGE (Robert B. Keiter & Mark S. Boyce eds. 1991).
populated. The only permanent settlement within the national park is the Buddhist village of Saisima, which contains five households and a nunnery. Outside the park but within the conservation area, approximately 32,000 people live in scattered villages such as Tamku, Choyang, Seduwa, and Hedangna. Culturally, the local population consists of three major ethnic groups: the Rai, Shingsawa, and Sherpa. Poverty is endemic within the conservation area villages; most families practice subsistence agriculture, depending upon the region's forests and pastures to eke out a living. Because access is difficult, the region has not yet experienced much tourism. Fewer than 300 trekkers annually penetrate the area.

Soon, however, the region's relative isolation will be shattered by the construction of the Arun III hydroelectric project. Conceived in the early 1980's to harness the powerful Arun River, the Arun III project is designed to provide Nepal with much-needed electricity, though some power will be sold to India for hard currency. The project, which is jointly financed by the World Bank, Asian Development Bank, and other international organizations, will cost over $750 million, an amount nearly equal to Nepal's annual national budget. The anchor of the project will be a 68-meter high dam stretching more

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238. MAKALU-BARUN MANAGEMENT PLAN, supra note 66, at 38. In addition to the Saisima settlement in the Apsuwa Valley, a seasonal settlement is located at Dragnag in the Inkhu Valley; it is used for tending livestock during the summer grazing season. Id.

239. Many more people live across the Arun River just outside the protected area. To establish a local presence, Makalu-Barun officials have located the park headquarters office in Khadberi, which is outside the designated area but as far as electrical service extends. Regular air service is available in the nearby village of Tumlingtar, which is just a couple hours' walk from Khadberi. However, the nearest road is at least two days' walk from Tumlingtar. Interview with Alton Byers, Makalu-Barun Project Supervisor, in Kathmandu, Nepal (Sept. 1993).

240. MAKALU-BARUN MANAGEMENT PLAN, supra note 66, at 16.

241. Id. at 23. See supra note 239 for a description of access.

242. The Arun River headwaters are located in Tibet; the river eventually flows into Nepal and now forms the eastern boundary of the Makalu-Barun Conservation Area. The presence of the dam, which will be located in (or adjacent to) the Conservation Area, should not be inconsistent with the sustainable development philosophy governing management of these lands. See MAKALU-BARUN MANAGEMENT PLAN, supra note 66, at 23.

243. Nepal, located in the Himalayan mountains and bisected by numerous powerful rivers, has significant hydroelectric power potential that could be used to promote economic development, but that potential has not been fully developed. Indeed, the nation currently suffers from a chronic power shortage, which regularly results in blackouts in Kathmandu and elsewhere. NEPAL ELECTRICITY AUTHORITY, HIS MAJESTY'S GOVERNMENT OF NEPAL, ARUN III HYDROELECTRIC PROJECT ENVIRONMENTAL ASSESSMENT AND MANAGEMENT 7, 50-51 (May 1993) [hereinafter ARUN III ENVIRONMENTAL ASSESSMENT].

than 155 meters across the Arun River gorge. Because the selected site is so isolated, dam construction will require building 120 kilometers of new road through rugged terrain. Approximately 7,000 laborers, many recruited from elsewhere, will be employed to construct the dam and access roads.

Completion of the access road will permanently alter the undeveloped character of the Makalu-Barun region. The road will open this remote area up to modern products and services as well as expanded tourism. The Makalu-Barun managers view the project as an opportunity to demonstrate that development and environmental protection can coexist. From their perspective, the challenge of the project is to harmonize recent preservation efforts with the impending development.

Originally, the Makalu-Barun protected area proposal surfaced in the early 1980's. Two scientists affiliated with the Mountain Institute recommended that the Nepalese government create a national park to protect the region's unique biodiversity and pristine condition. Seeking to cultivate local support for such a conservation effort, their recommendation also proposed involving the populace by making "local village economics dependent upon conservation."

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245. *Arun III Environmental Assessment, supra* note 243, at 10. The project is designed as a "run of the river" generating facility, which means that power will be generated from normal river flows. The dam is necessary to direct the river's flow through twin headrace tunnels; it is not designed to impound waters for later release, which should eliminate most siltation and other problems accompanying impoundment structures. Nonetheless, a four kilometer area behind the dam will be inundated with a small reservoir. *Id.* at 10.

246. *Id.* at 12. The road is designed to follow the Arun River valley, which is quite steep and will entail the construction of eleven major bridges. *Id.* Estimates are that approximately 1146 families will be displaced from their homes. *Id.* at 52. Construction is estimated to take forty months. *Id.* at 51. In addition to the dam and access road, the Arun III project will require construction of approximately 400 kilometers of transmission line, linking the project with Kathmandu. *Id.* at 13. The cost of this road will exceed one million dollars per kilometer. *Nepal's Arun Hydro-power Project Economically Unfeasible, supra* note 244.

247. *Arun III Environmental Assessment, supra* note 243. Some villagers may secure employment on the project; others will have an opportunity to sell food, fuel, and the like to the work force. *Id.* Although contractors are required to give preference to local residents, the Environmental Assessment does not project how many residents will eventually be employed. *Id.* at 58. Regardless, the construction phase is expected to bring inflationary pressures to bear on the region, which will probably continue once the road is opened. *Id.* at 59.

248. *Id.* at 53-54. Makalu-Barun officials have not opposed the Arun III project, but they are committed to monitoring it closely to minimize environmental impacts and ensure sustainable local economic opportunities. *See Makalu-Barun Management Plan, supra* note 66, at 53-54. *See also* Roberts, *supra* note 228, at 16.

249. Taylor-Ide et al., *supra* note 237, at 107-08.

Subsequent studies culminated in the combined national park-conservation area proposal. The entire area would be jointly administered by Nepal’s Department of National Parks and Wildlife Conservation along with the Mountain Institute.\(^{251}\) In 1988, the Nepalese government and the Mountain Institute entered into a twelve-year agreement to manage the region to “preserve a showcase of great biological diversity” and to “demonstrate harmonious co-existence between community and conservation.”\(^{252}\) In 1993, Nepal’s newly elected Parliament adopted legislation officially establishing the Makalu-Barun National Park and Conservation Area.\(^{253}\)

**B. Managerial Dilemmas: Revisiting the Local Role**

The Makalu-Barun National Park and Conservation Area is managed under a comprehensive Management Plan that links protection of park resources with sustainable development in the adjacent conservation area.\(^{254}\) The Management Plan identifies and addresses a number of interrelated resource and development problems. Within the national park, the principal problems involve limiting the cutting of green trees or vegetation, maintaining domestic livestock grazing within sustainable levels, minimizing the impacts of the Saisima Buddhists’ subsistence agriculture, and planning for future trekking impacts.\(^{255}\) Inside the populated conservation area, the principal problems are the need to improve forest management practices, control slash-and-burn agroforestry, regulate domestic livestock grazing, prevent poaching, and reduce wildlife depredation, particularly crop damage.\(^{256}\)

A major goal of the Management Plan is to demonstrate that an enlightened conservation policy can improve local economic opportunities and ensure sustainable development by involving local people directly in the management and planning processes. Accordingly, the

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\(^{251}\) MAKALU-BARUN MANAGEMENT PLAN, supra note 66, at 12.

\(^{252}\) AGREEMENT BETWEEN HIS MAJESTY’S GOVERNMENT OF NEPAL AND WOODLANDS MOUNTAIN INSTITUTE, U.S.A., Aug. 29, 1988, at 1 [hereinafter NEPAL-WOODLANDS AGREEMENT] (on file with author). The Agreement, which establishes the terms of the relationship between the Mountain Institute and the Nepalese government, sets forth six general objectives: “(1) to preserve a showcase of great biological diversity; (2) to protect a repository of genetic resources; (3) to preserve a region of unexcelled natural beauty; (4) to create a scientific field laboratory; (5) to conserve watersheds; (6) to demonstrate harmonious co-existence between community and conservation.” \(\text{Id.}\) Subsequently, in 1993, this original agreement was supplemented to facilitate receipt of a major United Nations biodiversity conservation grant that will be used to expand management activities throughout the area. See infra note 270.

\(^{253}\) This is the first and, so far, only time that Nepal has created a national park through its new democratic processes.

\(^{254}\) MAKALU-BARUN MANAGEMENT PLAN, supra note 66, at 26.

\(^{255}\) \(\text{Id.}\)

\(^{256}\) \(\text{Id.}\)
Plan calls for: (1) funding village-initiated projects that are consistent with conservation objectives;\(^\text{257}\) (2) developing local user-groups to promote integrated conservation and development projects;\(^\text{258}\) (3) improving opportunities to market agricultural and other natural resource products;\(^\text{259}\) (4) integrating women (who play a major role in most subsistence agricultural activities) into the market economy;\(^\text{260}\) and (5) developing new trekking routes, while also training villagers as guides, lodge owners, and cooks.\(^\text{261}\) Moreover, the Plan is sensitive to the potential socio-economic impacts of the Arun III hydroelectric project. It calls for ongoing monitoring of environmental and cultural impacts, while assisting local people to secure employment and other opportunities with the project.\(^\text{262}\)

Under the legal framework governing the Makalu-Barun National Park and Conservation Area,\(^\text{263}\) the sovereignty and jurisdictional issues besetting management of the Annapurna Conservation Area should not present the same problem here.\(^\text{264}\) The Nepalese government, acting through the Department of National Parks and Wildlife Conservation, is directly involved in administering the Makalu-Barun area; it provides a Chief Warden to manage the park, as well as other government employees who serve as rangers and scouts. This means that government employees, who are politically accountable, are exercising sovereign police powers in the park.\(^\text{265}\) Moreover, although the Department’s legal authority over the adjacent conservation area was not entirely clear under the amended or-
Organic legislation, the recent buffer zone management legislation gives the warden express management authority in conservation areas.

The Department's lack of experience with multiple-use management and local participation in managerial schemes may present a more difficult problem. Indeed, the Makalu-Barun project is the first time that the Department has assumed responsibility for managing a conservation area. Nonetheless, the joint management arrangement with the Mountain Institute should provide government employees with an opportunity to acquire these much needed skills. This arrangement, however, is not without its own problems. The fact that the Mountain Institute's nongovernmental employees are paid much more than government employees has created some tension within the field staff, who are basically working side by side. This income discrepancy may be a precursor to future problems with the joint management arrangement.

266. In Makalu-Barun, the adjacent conservation area consists of public forest lands and private land holdings. Under the National Parks and Wildlife Conservation Act of 1973, there is no explicit statutory provision, other than the general rulemaking provision, that gives the Department management authority over conservation areas. National Parks and Wildlife Conservation Act § 33. However, the Department's authority to entrust management responsibility for conservation areas to NGO's certainly implies that it also has (and can retain) such authority. Id. § 16B. In addition, the fact that the amended National Parks and Wildlife Conservation Act authorizes the creation of conservation areas implies that the Department is vested with some management authority over these areas. Id. § 3(1).


268. See supra note 214 and accompanying text.

269. Although the Mountain Institute is a foreign nongovernmental organization (unlike the indigenous King Mahendra Trust, which administers the Annapurna Conservation Area), most Mountain Institute employees are Nepalese, not westerners. The Institute's native employees play an instrumental role in promoting local involvement in conservation decisionmaking. Many Institute employees also are higher caste Hindus than the villagers with whom they work, however, which can make it difficult to establish co-equal, trusting relationships. In the case of Department of National Parks and Wildlife Conservation employees, this caste problem is also present. Interview with Alton Byers, supra note 239.

270. Indeed, His Majesty's Government and the Mountain Institute recently engaged in protracted negotiations over a supplementary agreement to incorporate a $2.8 million grant from the United Nations Development Programme for biodiversity conservation into the original contractual agreement. Part of the problem involved who would control dispersal of the grant funds—a fact that highlights the difficulties involved in joint operating arrangements, particularly ones involving a non-native organization. Interview with Alton Byers, supra note 239. Eventually, the impasse was resolved by creating a Project Executive Committee and by granting the Mountain Institute initial oversight responsibility for the grant funds, with His Majesty's Government gradually assuming greater administrative responsibility for the grant. See Supplementary Agreement between Department of National Parks and Wildlife Conservation of the Ministry of Forest and Soil Conservation, His Majesty's Government and Woodlands Mountain Institute, Dec. 18, 1993, at 2 (on file with author).
The Department and the Mountain Institute have prepared draft regulations to address the unique problems presented by the conservation area concept. The draft regulations require that conservation areas be managed under a sustainable development standard, following preparation of a management plan. The draft regulations authorize appointment of a Chief Warden and subordinate officers. Each of these officials is delegated important supervisory and administrative powers. In addition, the regulations provide for creation of User Group Committees (UGC's), which are to be involved in local natural resource management decisions. The UGC's can collect fees for wood, forage, and other consumptive resource uses, with most of the funds to be reinvested in local conservation and development projects.

Despite the UGC provision, the regulations contain numerous prohibitions on resource use and development activities. For example, the regulations propose limits on timber harvesting, mining, hunt-

271. Although these draft regulations were evidently prepared for the Makalu-Barun National Park and Conservation Area, they were written in rather generic terms, and their general language suggests that the proposed regulations were designed to be universal in scope and potentially applicable to all conservation areas. In fact, the draft regulations address conservation area management by either the government or nongovernmental organizations. This conclusion is consistent with the author's interview with Biswa N. Upreti, supra note 66. (Mr. Upreti, who is a lawyer, was responsible for drafting these regulations under a contractual arrangement with the Makalu-Barun Project.) See also supra note 212 and accompanying text.

An important immediate question, of course, is whether these regulations might also apply to the Annapurna Conservation Area. Annapurna Conservation Area Project officials maintain that they have prepared a separate set of proposed regulations (not translated into English) that are being reviewed by central governmental authorities. Interview with Chandra Gurung, supra note 211. See also supra note 212 and accompanying text. Although Nepal does not have a tradition of individual regulations for separate protected areas, the need to tailor conservation area requirements to local needs and traditions supports creating different regulations for these areas despite the inefficiencies involved.

272. DRAFT CONSERVATION AREA MANAGEMENT REGULATION 2048, supra note 212, at no. 28.

273. Id. at no. 4.

274. The Chief Warden's duties include preparing a management plan for the conservation area, appointing various subordinate officials, and supervising conservation and development activities within the area. Id. at no. 8. Subordinate officials include Warden Officers and Assistant Warden Officers. Id. at no. 9. The Warden Officer is primarily responsible for preparing and implementing annual development and conservation plans, collecting scientific information, and supervising subordinate employees. Id. at no. 10. The Assistant Warden Officer is primarily responsible for organizing and supervising local User Group Committees (UGC's). Id. at no. 11.

275. Id. at nos. 12, 14, 15. The recent National Parks and Wildlife Conservation (Fourth Amendment) Act 2049 § 5(1) (1993), 43 Nepal Gazette, No. 15 (Extraordinary), also gives the warden authority to create UGC's either for national parks or conservation areas. See also infra part V.D. Nevertheless, the draft regulations contain important provisions defining the scope of UGC authority in conservation areas.

276. DRAFT CONSERVATION AREA MANAGEMENT REGULATION 2048, supra note 212 at no. 19. See infra note 295 and accompanying text.
ing, agriculture, and grazing. Moreover, the regulations authorize the central government to delegate its powers to a managing organization and grant conservation area employees both enforcement and adjudicatory authority.

To avoid a local backlash against the conservation area designation, Makalu-Barun officials should fully explain to villagers exactly what their authority and responsibilities will be under the proposed regulations. The proposed conservation area regulations actually favor central control of resource management decisions over local control. Although the regulations provide for locally formed UGC's to oversee resource uses, they also severely limit the scope of a UGC's power. The Chief Warden retains final authority over most UGC decisions. He must approve UGC work plans; he can dissolve UGC's that are not meeting their obligations; he can deny permission to cut trees or extract other resources; and he has the authority to issue or deny permits for all commercial activities on public and private lands. While the UGC's can collect fees for wood, forage, and other consumptive resource uses, they must transfer twenty percent of the fees to the conservation area authorities. Given the need for some centralized administration to monitor the cumulative impact of myriad local resource decisions, this retention of

277. DRAFT CONSERVATION AREA MANAGEMENT REGULATION 2048, supra note 212, at nos. 22, 32.
278. Id. at no. 38. This provision, of course, acknowledges that conservation areas can be managed by nongovernmental organizations. See supra notes 197-98 and accompanying text.
279. DRAFT CONSERVATION AREA MANAGEMENT REGULATION 2048, supra note 212 at nos. 36, 38. Although the Makalu-Barun joint operating agreement ensures that government employees are available to exercise the state's enforcement and adjudicatory powers, the draft regulations purport to delegate adjudicatory authority to nongovernmental employees. As in the case of the Annapurna Conservation Area, such a delegation raises serious legal and political accountability problems. It also is not necessary in the Makalu-Barun setting, where fully empowered government employees are present. See supra note 265 and accompanying text.
280. User group committees are created at the village, sector, or household levels, with "users" choosing the members from among themselves. CONSERVATION AREA MANAGEMENT REGULATION 2048 at nos. 12, 13. The UGC's are responsible for "effective implementation of the management programs concerning sustainable development of natural areas." Id. at no. 12. Among other things, the UGC's are ostensibly empowered to regulate timber harvesting, to issue permits or licenses for natural resource use, to implement regulatory guidelines, and to set grazing levels. Id. at no. 15(c), (d), (f), and (h).
281. Id. at nos. 14, 18.
282. Id. at no. 21.
283. Id. at no. 22.
284. Id. at no. 26.
285. Id. at no. 19(i), (ii). Under this proposed regulation, local UGC's can collect resource use fees, such as grazing and permitting fees. Forty percent of the proceeds must be expended for forest maintenance and restoration, and another forty percent is available for community development.
286. Id. at no. 19(iii).
central power may be a necessary limitation on local involvement to ensure environmental protection.

The proposed regulations, however, do not explicitly link conservation area management with management of the adjacent national park. According to the draft regulations, the conservation area is to be managed under a “sustainable development” standard,\(^{287}\) while the adjacent national park lands are managed under a strict preservationist standard.\(^{288}\) Although “sustainable development” implies environmentally sensitive management, it does not necessarily preclude activities, such as timber harvesting in sensitive wildlife habitat next to national park lands, that are incompatible with park management policies. In other words, the regulations do not treat the joint national park-conservation area designation as an integrated ecosystem or ecological entity. This is clearly contrary to the intent underlying the original designation.

Despite potential problems, the Makalu-Barun National Park and Conservation Area designation represents a truly innovative approach to nature conservation in ecologically sensitive yet historically populated regions. The partnership between the Mountain Institute and the Department of National Parks and Wildlife Conservation combines the financial and technical resources of a foreign NGO with the legitimacy of direct governmental involvement. This partnership thus avoids difficult jurisdictional issues. Furthermore, by involving government employees in the local management efforts, the project should provide Nepalese officials with important resource management experience.

The Makalu-Barun experiment may provide the developing world with a useful model for integrating biodiversity conservation and sustainable development. The success of this model depends on the fulfillment of two critical contingencies. First, the proposed regulations must be revised to require coordinated ecosystem-based management of the adjacent national park and conservation area lands. Second, the local UGC concept must be rendered operational without jeopardizing environmental goals. Of course, the acid test will come once construction begins on the Arun III project with its attendant environmental and developmental pressures. If the Makalu-Barun model successfully withstands these pressures and ensures the ecological and cultural integrity of the region, then it will have proven successful.

\(^{287}\) Id. at nos. 12, 28.
PRESERVING NEPAL'S NATIONAL PARKS

V
BUFFER ZONE MANAGEMENT: EXTENDING BOUNDARIES WHILE ADDRESSING LOCAL NEEDS

Even following adoption of the conservation area designation, Nepal's national parks confront serious environmental problems. As part of larger ecosystems, national parks are subject to developmental and other pressures emanating from adjacent human settlements. In 1993, to address these perimeter development problems, Nepal adopted the Fourth Amendment to the National Parks and Wildlife Conservation Act. This Amendment authorizes the creation of buffer zones adjacent to existing parks. The legislation was designed primarily to address Royal Chitwan National Park's severe boundary problems. Therefore, buffer zones ordinarily will entail much smaller designations than conservation areas. The buffer zone designation can also be employed strategically to address specific perimeter environmental problems.

A. The Statutory Structure: Regulation and Incentives

The Fourth Amendment is quite simple in design. The government, acting through the Department of National Parks and Wildlife Conservation, is given authority to designate and regulate buffer zones on lands adjacent to existing parks and wildlife reserves. A buffer zone is defined as a designated "area surrounding a national park or reserve . . . to provide for the use of forest resources on a regular and beneficial basis for the local people." Thus, the amendment effectively extends the government’s management authority beyond park boundaries.

However, the amendment also incorporates contemporary principles of local participation and sustainable development to promote responsible management of adjacent forests. In keeping with these principles, the amendment prohibits the government from using a buffer zone designation to seize ownership of private land. At the

289. Interview with Biswa N. Upreti, supra note 66. See supra notes 117-18 and accompanying text.
290. National Parks and Wildlife Conservation (Fourth Amendment) Act 2049 § 3(a) (1993), 43 Nepal Gazette, No. 15 (Extraordinary). The buffer zone designation is accomplished administratively through notification in the Nepal Gazette. Before publication in the Nepal Gazette, however, the designation process includes an initial recommendation by the park warden, and then review within the Department itself, the Ministry of Forests and Soil Conservation, and the Cabinet. In other words, the designation process is likely to involve political as well as ecological considerations.
291. Id. § 2. For further discussion of the buffer zone concept, see NEPAL & WEBER, supra note 11, at 89-90.
same time, the amendment provides the park warden with the authority and the tools needed for a more cooperative management approach. Once an area is designated as a buffer zone, the park warden becomes responsible for managing the area’s forest resources. The warden may create User Group Committees (UGC’s) to promote local participation in forest management decisions. Moreover, the amendment provides that thirty to fifty percent of the funds (30/50 funds) generated from park revenues may be expended for local community development.

Clearly, the buffer zone legislation represents a further shift away from the central regulatory model that has characterized national park management in Nepal. Buffer zone management, by connecting preservation with community development, will require the Department to embrace a model of local participation in resource management decisions. A critical question, though, is whether the incentives included in the amendment—namely the creation of UGC’s and dispersal of 30/50 funds for community development—are sufficient to induce responsible local resource management on lands adjacent to the national parks. The UGC provision provides an opportunity for local participation in managing buffer zone resources, and perhaps also forest resources located within the parks. By returning the 30/50 funds to local villages for community development, the legislation attempts to forge a clear link between preservation and development in a manner that convinces local residents to support resource protection efforts. Whether the statute can achieve these lofty goals may well depend on how government officials interpret and implement its provisions.

In its generality, the buffer zone management amendment leaves several important legal and policy issues unanswered. The central issues involve the buffer zone designation process, the scope of buffer

293. Id. His Majesty’s Government can either vest ownership of the buffer zone area with the Department of National Parks and Conservation or leave management responsibility with the Department of Forestry. Id. § 3(a)(1). Under the legislation, it is clear that public forest lands adjacent to parks may be included in a buffer zone designation. Id. § 3. If public forest lands currently administered by the Department of Forestry are included in a buffer zone designation, then the Department of National Parks and Wildlife Conservation must either assume “ownership” of the land, or it must be left under the aegis of forestry officials. In any event, upon a buffer zone designation, the park warden becomes statutorily responsible for managing these lands. Id. § 3(b).

294. Id. § 16(c). According to the statutory language, the warden’s authority to create a UGC is not limited to buffer zone areas; it also extends to existing national parks, wildlife reserves, and conservation areas.

295. Id. § 25(a). The dispersal of 30/50 funds earned by the national parks is not dependent upon the creation of a buffer zone; these funds are potentially available to all parks throughout the system, regardless of whether a buffer zone has been created. However, numerous questions regarding distribution of these funds have yet to be resolved. See infra part V.E.
zone management authority, the role of the UGC's, and dispersal of the 30/50 funds. Each of these issues should be addressed by the Department in implementing regulations. To be successful, the regulations should be crafted to ensure some uniformity while accommodating diverse local interests.\(^{296}\) Indeed, how the Department resolves these issues will have critical ramifications for its most pressing transboundary resource problems and for the transition from a central regulatory preservation model to one based on local involvement and sustainable development.

**B. The Designation Process: Ecosystems and Boundaries**

The buffer zone management legislation does not enumerate the criteria to be used to determine the location, size, and scope of buffer zones. Even the term "buffer zone" is not clearly defined.\(^{297}\) Most authorities, however, agree that a "buffer zone" consists of peripheral lands bordering a protected area that are subject to special land use controls.\(^{298}\) Under these controls, only activities compatible with the management objectives of the protected area are permitted, but not all local productive activities are outlawed.\(^{299}\) Nothing in the statute's language or legislative history indicates that buffer zone lands must be immediately adjacent to the park, nor are there any distance or size limitations on buffer zone designations. However, the designations are subject to political review before publication in the Nepal Ga-

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296. The particularly sensitive aspects of buffer zone management (including designation criteria, management standards, the UGC framework, and 30/50 fund management) should be governed by uniform, national regulations. With this approach, the Department can insulate itself from allegations of arbitrariness and provide its wardens with some political protection when implementing the legislation in individual parks.

297. See supra note 291 and accompanying text.

298. Buffer zone designations inside park boundaries do not seem to be authorized. In Sagarmatha National Park, for example, the Department probably cannot designate buffer zones on park lands surrounding the Sherpa villages. Although the legislation does not expressly prohibit internal buffer zones, the statutory language defines a buffer zone in terms of lands "surrounding" national parks. See supra note 291 and accompanying text. Furthermore, buffer zone designations within the park's boundaries would serve no practical purpose. Under the original National Parks and Wildlife Conservation Act, the Department enjoys regulatory authority over all non-private lands located within the park; thus, the creation of a buffer zone inside the park would not enhance the Department's authority. See supra notes 42-50 and accompanying text. Further, because the legislation does not link the UGC concept and 30/50 funds with the designation of a buffer zone, park officials may extend these inducements to the villages inside the park without designating a buffer zone.

Moreover, the creation of buffer zones inside park boundaries could have serious adverse ramifications in the Terai region. Adjacent villagers might then argue that buffer zones should be established inside Royal Chitwan and other Terai parks to allow access to forest resources, since none are available on the depleted lands outside the parks. See supra note 86.

Thus, size and distance determinations must take account of local sensitivities, as well as the practical limits of the Department's financial and technical resources.

In Royal Chitwan National Park, the Department could invoke its statutory authority to include the remaining public forest lands in a designated buffer zone. This would provide the warden an opportunity to regenerate a productive forest that could serve local needs and reduce unlawful incursions into the park. Although the warden's power does not extend to private property, he could prohibit the nearby tourist lodges from gathering firewood on public forest lands, thus reducing pressure on the forests and encouraging the lodges to shift to kerosene to meet visitor needs. Because the remaining forest provides the only secure migratory corridor from the park, the warden also could use his buffer zone management powers to ensure the security of this important route. Where the buffer zone lands are so badly depleted that they cannot meet local needs, the 30/50 funds should be used to subsidize community development of alternative energy sources to offset the demand for forest resources.

In Sagarmatha National Park, the Department could designate forest lands located in the Lukla corridor as a buffer zone. This would enable park officials to address the forest management problems that are surfacing within the corridor. Many of these problems have resulted from the strict forest access limitations imposed inside the park. Designating the Lukla corridor as a buffer zone would also provide park officials with an opportunity to regulate indirectly the area's lodges. Currently, a growing number of lodges are being er-

300. See supra note 290.
301. This would include the riparian zones on the bordering rivers. See NEPAL & WEBER, supra note 11, at 101-06.
302. Although a successful reforestation program would eventually relieve pressures on park lands, it does not address the question of how local resource needs are to be met during the interim. Given the region's endemic poverty, there is little opportunity to shift to alternative energy sources, such as kerosene. One knowledgeable observer has suggested opening perimeter park lands temporarily to local residents to enable them to meet their forest resource needs. See Uday Sharma, supra note 78, at 141. Given the extensive perimeter population pressures, however, once this precedent was established, it might prove impossible to close the park to local access. Moreover, such an approach would stand the buffer zone concept on its head: buffer zones are intended to protect park borders from incursions, not open them to resource exploitation.
303. Given the relative prosperity of most tourists visiting the area, it is not unrealistic to compel the tourist lodges to shift to kerosene to meet their energy needs. Whereas impoverished local villagers could not afford such a shift, the lodges could pass the cost on to their guests. Besides, because meeting the needs of most Westerners requires an inordinate quantity of wood compared to the amount consumed by Nepalis, a kerosene requirement could significantly reduce pressure on the local forests. See supra notes 156-58, 163-64 and accompanying text.
304. See supra notes 147-54, 161-62 and accompanying text.
ected haphazardly throughout the corridor. Because the lodges are located on private property, park officials cannot directly regulate them. Under the buffer zone authority, however, the warden could control access to forest resources such as firewood and construction timbers. He could either stop additional construction by denying further access entirely, or condition access on compliance with stipulated construction standards and alternative energy consumption requirements.

The buffer zone legislation contains no criteria specifying either the size or location of potential buffer zones on public forest lands outside park boundaries. Because the buffer zone concept is designed to protect park lands and resources from harmful activities, the selection criteria should reflect the fact that national parks are parts of larger ecosystems. Given the Department’s commitment to protecting biological diversity, buffer zone designation criteria should incorporate principles of conservation biology. Thus, buffer zone designation criteria should include habitat requirements, migratory corridors, ecotone or transition zone areas, and special consideration for endangered species. Because buffer zone designations will inevitably impact adjacent communities, the selection criteria should also include consideration of social, economic, and political factors. Key considerations include: (1) the effectiveness of buffer zone management at protecting the core park area; (2) the degree of community support for the buffer zone; and (3) the availability of alternative resources and economic opportunities for local residents.

The designation process is itself an important aspect of buffer zone management. A nonacrimonious designation process can establish the foundation for cooperative management of buffer zone lands. Although the statute contemplates substantial local participation in managing the area, there is no provision for local involvement in the designation process; the central government is given sole authority to designate buffer zones on lands surrounding national parks. Given the delicate relations between park authorities and many communities located near Nepal’s national parks, a more effective approach would require park wardens to consult with local villages before designating

305. See supra note 172 and accompanying text.
306. See BEGINNING WITH BUFFER ZONE FOR BIODIVERSITY, supra note 172.
307. Indeed, the Department is evidently prepared to use conservation biology principles as buffer zone designation criteria. See LHAKPA SHERPA, PROTECTED AREA BUFFER ZONE: GUIDELINES FOR BUFFER ZONE IDENTIFICATION (Working Paper No. 1, 1993) (on file with author).
a buffer zone. Wardens also could be required to provide a written statement of reasons for their recommendations. This statement, with its summary of local resource management problems, could then serve as a guide for UGC's responsible for managing the area. Such an approach would be consistent with the buffer zone legislation's cooperative spirit.

C. Buffer Zone Management: A Nonimpairment Standard?

The governing buffer zone legislation does not establish clear management standards. Beyond acknowledging that forest resources are available for local use, the legislation gives park wardens little guidance for managing the designated lands. Because buffer zone designations are intended to preserve park ecosystems, management standards should be created that give priority to protecting park resources from damage. The Department should design zoning and other land use limitations to ensure that buffer zone activities are compatible with park management goals.

An appropriate management standard would be a “nonimpairment” requirement. A “nonimpairment” standard would prohibit any activities on adjacent public forest lands that harm a park’s resources or ecological integrity. Such a standard would be consistent with the preservationist tenor of the organic legislation. A less rigorous interpretation of the Department’s buffer zone management responsibilities would effectively negate the very concept of a buffer zone.

Although activities on adjacent private lands can harm park resources, the Department’s buffer zone management authority only extends to adjacent public forest lands. Park officials can neither condemn private land within designated buffer zones, nor directly regulate its use. However, by using their buffer zone management authority to restrict or limit access to public forest resources within the zone, park officials can indirectly influence private landowner decisions. In the Lukla corridor outside Sagarmatha National Park, for example, park officials could effectively regulate the construction and operation of tourist lodges by limiting the cutting of timbers and firewood. This would also enable park officials to address the complex issues involved in tourism infrastructure development, which is pro-

311. Hales, supra note 10, at 142.
ceeding without regard for impacts on park ecological or aesthetic resources.\textsuperscript{312}

\textbf{D. User Group Committees: Local Participation in Resource Management}

Because they provide a vehicle for local involvement in forest use policy, the UGC's are an important aspect of buffer zone management.\textsuperscript{313} And since park wardens can establish local UGC's even in the absence of a buffer zone designation, the UGC concept will become increasingly important to park managers as they seek improved relations with neighboring villages. However, like buffer zone management, the UGC concept is poorly defined by the legislation. Regulations are needed to address critical issues, including the selection and composition of UGC's, the scope of their power, and the park warden's role within the UGC's. How these issues are resolved will effectively determine the relative priority that park resource protection will enjoy in relationship to the interests of local villagers.

The buffer zone legislation apparently gives the Department authority to define UGC membership criteria and selection processes.\textsuperscript{314} The Department should specify some general representational requirements. To ensure comprehensive local participation, the Department should establish standards providing for representation of all affected villages and impacted ethnic groups. Because women are traditionally involved in harvesting forest resources like firewood and thatch, yet not ordinarily involved in village governance, the Department may need to provide explicitly for their participation on local UGC's. Furthermore, the Department may find it prudent to include key local political leaders, such as Village Development Chairs, in the UGC membership. Otherwise, because buffer zone management is designed to promote harmonious park-community relationships, villages generally should have the authority to decide for themselves, through their own processes, who should serve on the UGC's.\textsuperscript{315}

\begin{itemize}
\item \textsuperscript{312} See \textit{supra} notes 159-64, 171-75 and accompanying text for further development of this point.
\item \textsuperscript{313} National Parks and Wildlife Conservation (Fourth Amendment) Act 2049 § 16(c) (1993), 43 Nepal Gazette, No. 15 (Extraordinary).
\item \textsuperscript{314} \textit{Id.} § 5(2).
\item \textsuperscript{315} Some commentators warn against creating new governmental structures where existing ones could be employed to address natural resource management problems. See Jeffrey A. McNeely, \textit{Protected Areas and Human Ecology: How National Parks Can Contribute to Sustaining Society in the Twenty-First Century}, \textit{in Conservation for the Twenty-First Century, supra} note 9, at 156. Although Nepal's community forestry program has established local forest management committees in most regions, it is evident that these committees are not responsibly managing forest resources outside many national parks. See \textit{supra} notes 172-75. It may therefore be necessary to replace these committees with new UGC's, particularly since the existing committees may resent the new presence of
\end{itemize}
Given the delicacy of relations between park authorities and local communities in most national park areas, successful buffer zone management will require that clearly defined management standards govern the UGC's. The existing legislation gives the UGC's little guidance regarding appropriate resource management in buffer zone areas. As noted earlier, the Department should therefore establish a universal "nonimpairment" management standard that gives unambiguous priority to protecting park resources in buffer zone areas. In addition, park wardens should be required to identify critical resource issues in the buffer zone designation proposal. This two-pronged approach would give UGC's clear guidance for making local resource management decisions. It should also insulate park officials from charges of arbitrariness if the government must intervene in a UGC decision.

Another critical question is whether the park warden should retain a veto power over the UGC's management of buffer zone areas. Although vesting the warden with a veto power could exacerbate tensions with adjacent villages, the risk of not granting the warden this power is even greater. It remains unclear whether the creation of UGC's and the return of 30/50 funds will induce villagers to reconcile their interests with the park's welfare. Since the statute makes the warden responsible for buffer zone management, the warden is in the best position to evaluate the cumulative environmental impacts of numerous local resource decisions. Thus, the warden should retain a veto power to ensure consistency and to protect against UGC mismanagement. The warden, however, should only exercise that veto power as a last resort, and then only when the UGC's action jeopardizes resource management goals. Moreover, to ensure against arbitrary exercise of the veto power, the warden should be required to 

the park warden and the emphasis on park resource protection. To promote its conservation agenda as well as local involvement, the Annapurna Conservation Area Project has successfully created new Conservation and Development Committees, rather than relying upon the existing community forestry committees. This is proof that new organizational structures can be successfully established. See supra note 205 and accompanying text.

316. Under the legislation, the UGC is responsible for managing "fallen trees, dry wood, firewood and grass in a national park, reserve, conservation area or buffer zone." National Parks and Wildlife Conservation (Fourth Amendment) Act 2049 § 5(1) (1993), 43 Nepal Gazette, No. 15 (Extraordinary). The statute also allows the Department to prescribe "other rights and duties of the new user group committee." Id. § 5(2).

317. See supra part V.C.

318. See supra note 309 and surrounding text.

319. Indeed, Nepal's buffer zone legislation was conceived because local villages were mismanaging adjacent forest lands and putting park resources at risk. See supra notes 116-18, 172-75 and accompanying text.

explain a veto decision and perhaps to suggest alternative management options.

E. Thirty/Fifty Funds: Introducing Financial Incentives

Until recently, all park-generated resources have been returned to Nepal's central treasury, often leaving adjacent villages to wonder what benefit they derive from a park's presence. The buffer zone legislation, however, now provides for the return of thirty to fifty percent of national park entrance fees and other park revenues (30/50 funds) to local communities for development purposes. The only explicit limitation on disbursement of the 30/50 funds is the requirement that expenditures be coordinated with local agencies. The 30/50 fund provision does not even link fund dispersal to a buffer zone designation. Communities that are not located within a designated buffer zone and that do not have an established UGC are therefore potentially eligible for the 30/50 funds. As a practical matter, any village directly impacted by park resource protection policies should be eligible to receive 30/50 funds. Thus, the numerous villages perched on the perimeter of Royal Chitwan National Park should be eligible for 30/50 development funds, as should villages like Namche that are located within a park's boundaries. These funds, however, should not be disbursed to villages that are not affected by park resource management policies.

The 30/50 funds are clearly designed to induce responsible resource management sensitive to park ecosystems. To reflect this intent, the funds should be used to reward villages that adopt and pursue ecologically sensitive forest management practices. Absent this direct financial incentive, local UGC's or villages will be reluctant to impose meaningful restraints on current forest use practices. Combined with meaningful UGC participation, the appropriation of 30/50 funds may provide the Department with a means of securing local cooperation through incentives rather than coercive regulations.

321. Since its inception, however, the Annapurna Conservation Area project has had authority to charge entry fees that are to be returned to local villages for conservation and development purposes. See supra note 195 and accompanying text.


324. Id. This statutory reference to "local agencies" is ambiguous; it is unclear whether it refers to established Village Development Committees, district administrative offices, the contemplated UGC's, or some other entity, perhaps even a nongovernmental organization.
The Department has the flexibility to use the 30/50 funds to address its most serious buffer zone management problems. The buffer zone legislation does not require that funds be returned to the area where the revenues were earned. Thus, the Department can collect the funds from a park in one area and distribute them to a village in a completely unrelated area. This flexibility, however, makes it imperative that the Department establish clear standards and processes governing disbursement of the 30/50 funds. The Department must avoid any hint of favoritism or arbitrariness.

Already the most heavily visited national parks, which generate most of the entrance fee and trekking permit revenues, are arguing that the 30/50 funds should be disbursed based on where the funds are generated. This because these parks also are among those facing the most critical perimeter management problems, such an approach would not necessarily undermine the intent of the legislation. However, this approach would not ensure that the 30/50 funds would be consistently used to address the Department’s most serious buffer zone problems.

A possible solution would be to establish a 30/50 Fund Oversight Committee. This committee could evaluate the effectiveness of proposed buffer zone management schemes and the seriousness of the threat from local forest consumption practices, and then apportion the funds accordingly. In addition to Department representatives, such a committee should include recognized natural resource and community development experts to ensure neutrality in apportioning the funds. Under this system, the park wardens should be responsible for transmitting funding requests from local villages or UGC’s, including the warden’s own evaluation of the funding request.

If a funding program based on the merits of village (or UGC) accomplishments can be implemented, then the 30/50 funding provision will have succeeded in linking park protection with economic development. The achievement of this nexus should significantly improve park-village relations. Whether the 30/50 funds will cause villages and local UGC’s to revise harmful forest consumption practices remains to be seen. Absent a discernible connection between environmentally appropriate resource management practices and the fi-

325. Interview with Ramprit Yadav, supra note 94. See also BUFFER ZONE FOR BIODIVERSITY, supra note 172, at 8.

326. Between them, Royal Chitwan and Sagarmatha national parks are two of the most heavily visited parks; both parks also confront a bewildering array of perimeter resource management problems. See supra notes 94-107, 171-75 and accompanying text.

327. Consistent with the legislation’s philosophy of local involvement, the committee also should include local representatives, who might be appointed on a rotating basis to ensure geographic representation, and who should be precluded from participating in deliberations concerning proposals from their own villages.
nancial rewards derived from the 30/50 funds, the villages may not come to regard park protection as an economically expedient choice. But if the Department can establish a connection between responsible UGC forest management, receipt of the 30/50 funds, and environmentally sensitive community development projects, then it will have taken a major step toward integrating park resource management goals with local community needs. The buffer zone legislation thus provides Nepal's park officials with a unique opportunity to move beyond traditional central regulatory strategies.

VI
IDENTIFYING THE PROBLEMS AHEAD

In just twenty years, Nepal's nature conservation policies have undergone a major transformation. The nation's fundamental commitment to nature conservation has not diminished, but its conservation laws and policies have been modified to enlist local support for its preservation effort. Nepal's original national park legislation was built on principles of wilderness preservation, inviolate boundaries, and central regulatory control. But due to lack of funding, technical expertise, and local support, this regulatory scheme proved inadequate, and it was never fully enforced. This original legislation has now been supplemented with provisions based on notions of ecosystem protection, permeable boundaries, and local involvement in resource decisions. Moreover, the government has joined forces with NGO's to link Nepal's conservation efforts with sustainable development. These strategic shifts have allowed Nepal to begin pursuing a progressive conservation policy based on contemporary biodiversity principles and community-based management strategies.

However, these innovative strategies have created several significant new problems that need to be addressed. First, difficult questions of jurisdictional authority and political accountability arise from the enhanced administrative role that NGO's have assumed in park management. Second, Nepal has not yet determined precisely how much
power villagers should have in setting the local conservation agenda. Third, implementation of the community-based conservation programs will require better coordination among various governmental units. Finally, Nepal must seek internal sources of financial support in order to meet its conservation responsibilities, to address local economic concerns, and to protect itself from undue foreign influence.

A. Jurisdictional Authority

In protected areas where the government has enlisted the assistance of NGO's to manage the region, Nepal must resolve the issue of jurisdictional power. This problem is most acute in the Annapurna Conservation Area, where the government has transferred administrative responsibility for the region to the King Mahendra Trust. Notwithstanding its commitment to community-based conservation, the Trust has requested that it be granted law enforcement and judicial review authority. But the government, appropriately concerned about the lack of political accountability, has been reluctant to transfer these sovereign powers to an NGO.329

Two possible solutions to this problem are evident. In the Makalu-Barun region, a joint management agreement between the Department and its NGO partner apparently resolved a similar jurisdictional problem. This joint management agreement leaves law enforcement and judicial review powers exclusively in the hands of government personnel.330 A similar arrangement might work in the Annapurna region. Alternatively, Trust employees might be officially deputized and given carefully defined powers subject to ongoing governmental oversight. In any event, the government should not lightly relinquish its sovereign authority to a nongovernmental entity. This is particularly true where the government has endorsed democratic principles of community participation in resource management decisions.

B. National Versus Local Power

Now that democracy has arrived in Nepal, national conservation efforts will require local support. This new reality is already being acknowledged in the innovative Annapurna and Makalu-Barun projects. Proponents of both these proposals sought extensive local input before designating final boundaries or issuing management policies. Both projects also provide for ongoing local participation in re-

329. See supra notes 212-20 and accompanying text.
330. See supra notes 263-67 and accompanying text. Significantly, the King Mahendra Trust, which administers the Annapurna Conservation Area, is an indigenous NGO staffed primarily by Nepalis, and thus may not cause as much concern politically as the foreign-based Mountain Institute, which administers the Makalu-Barun region with a mixed foreign and native staff.
PRESERVING NEPAL'S NATIONAL PARKS

The recent buffer zone management legislation likewise recognizes the need to obtain local support. The UGC and local revenue-sharing provisions are designed to secure local support for preservation initiatives.

However, a community involvement policy does not require jetisoning Nepal's traditional central regulatory system in favor of local control over resource decisions. Today's protected area management problems differ significantly from earlier conservation problems, and most villagers lack any frame of reference for addressing issues such as overpopulation and unprecedented tourist visitation numbers. Although local knowledge often provides critical insights in assessing the available conservation options, appropriate solutions may require more expertise than traditional institutions can offer. Most of Nepal's protected areas also face problems related to the aggregate environmental impacts of scattered local resource decisions. Given the myriad sources contributing to this cumulative effects problem, central oversight is necessary to identify and mitigate these aggregate impacts. Moreover, modest financial incentives, like the Annapurna entry fee and 30/50 buffer zone funds, are not likely to produce wholesale changes in local attitudes toward park protection. The national government, therefore, should not transfer ultimate decision-making power from park officials to local residents.

Although some degree of central regulatory control is an essential component in national park management, local residents must still be integrated into the conservation effort. As a matter of basic fairness, residents should have the opportunity to participate in management decisions where a protected lands designation is likely to impact local access to subsistence resources. Local villagers are also an invaluable resource for conservation efforts, because they offer centuries of experience with local environmental conditions and patterns of

331. See supra notes 204-06, 257-58 and accompanying text.
332. See supra notes 313-27 and accompanying text.
333. See PARKS FOR LIFE, supra note 12, at 8 (explaining that “community involvement does not mean opening national parks to all comers”).
334. Beyond these obvious financial incentives, Nepalese officials would be well-advised to promote policies enabling local residents to benefit economically from the tourism revenues that usually accompany establishment of a national park, thus creating another clear linkage between the government's conservation initiatives and local economic well-being. Although residents already are benefiting from tourism in the Everest and Annapurna regions, this is not the case in Royal Chitwan. See supra notes 97-99 and accompanying text. See also PARKS FOR LIFE, supra note 12, at 39 (calling for policies encouraging local “active participation in tourism associated with protected areas”).
335. Indeed, early evidence from the Annapurna project indicates that villagers are inclined to use entry fee funds for traditional development projects rather than conservation-oriented projects. See supra note 209. See also infra notes 353-55 and accompanying text, arguing that these financial incentives should be increased.
Moreover, because the Nepalese government lacks the resources to enforce fully its central regulatory system, a successful conservation effort is virtually dependent on local support. Whether through UGC's or similar existing institutions, the government should design structures and processes that give villagers a recognized role in conservation policy. Of course, Nepal's widely varying ethnic and cultural traditions will require diverse management approaches to promote local involvement in resource policy decisions. In sum, the national government's commitment to preservation must be balanced with local interests, and that balance is best achieved by blending central regulatory oversight with local participation opportunities.

C. Intergovernmental Coordination

As Nepal moves into this new era of community-based conservation, lack of intergovernmental coordination continues to hamper its nature preservation efforts. Although the Department of National Parks and Wildlife Conservation is responsible for the nation's parks, other government agencies have related responsibilities that directly impact park management policies. The actions of these overlapping agencies can limit the Department's authority to implement nature conservation strategies.

The Ministry of Tourism, for example, often pursues policies that directly conflict with the Department's conservation efforts. The Ministry has sole responsibility for regulating visitor numbers, and it is empowered to open new areas to tourism. Even though escalating tourist numbers are placing intense environmental pressures on several parks, Department officials have little influence over visitor numbers, route selection, or travel dates. Similarly, the Department has no power to raise trekking permit fees to generate revenues for community-based conservation efforts. A serious commitment to inter-

336. See Brower, supra note 131, at 173-74.
337. At the very minimum, villagers should be provided notice when major regulatory changes are contemplated.
339. See Hough & Sherpa, supra note 200 (discussing "basic needs" and "bottom up" approaches to nature conservation).
341. See supra note 53 and accompanying text. See also supra note 328, describing the Ministry's approval of a major resort in Royal Bardia National Park despite the Department's objection.
343. See id. at 44. In addition, some of the revenue derived from trekking fees might be usefully invested to educate Western trekkers about their environmental and cultural
agency coordination sensitive to today's conservation needs could resolve most of these problems.

The Department also finds itself at odds with the Army. Under present arrangements, the Army enforces conservation laws within the national parks. This means large numbers of soldiers are stationed throughout the park system. The annual cost of maintaining these soldiers quickly drains the Department's meager budget. In some locations, a continued military presence may be necessary to enforce poaching and related laws, but most of the funds now used to support the Army could be more profitably invested elsewhere. The Department could apply these savings to resource management programs and community involvement initiatives.

The Department's relationship with Department of Forestry officials and with community development officers also should be reviewed. National nature preservation goals should be coordinated with community forestry and development projects. One approach would be to require the responsible agencies to prepare an environmental impact assessment before initiating major new projects. This would provide Department officials an opportunity to advise sister agencies of park resource management objectives and to propose mitigation measures.

In short, unless the Department makes major changes in its relationships with other government agencies, it will continue to lack both the authority and financial resources necessary to accomplish its progressive conservation agenda.

D. Inadequate Financial Resources

Despite substantial international assistance, Nepal's preservation efforts continue to suffer from a chronic lack of financial and technical resources. The Department of National Parks and Wildlife Conservation simply does not have the funds to meet its central oversight obligations or to underwrite its new conservation strategies. Department personnel, often poorly trained and supported, lack the

responsible for traveling in rural areas. PARKS FOR LIFE, supra note 12, at 39-40. The Annapurna Conservation Area Project is already doing this. See Bunting et al., supra note 178, at 171.

344. 1993 NEPAL ENVIRONMENTAL ACTION PLAN, supra note 4, at 38. Moreover, the soldiers, who are usually not trained for park protection responsibilities, regularly exacerbate tensions with local villagers, often undermining any semblance of harmonious park-community relations. See supra notes 87, 150 and accompanying text.

345. See id. at 38-40.

346. See OUR COMMON FUTURE, supra note 9, at 349 (proposing legal principles for environmental protection and sustainable development).

347. 1993 NEPAL ENVIRONMENTAL ACTION PLAN, supra note 4, at 39.

348. Id.
fundamental resources necessary to measure environmental deterioration or to implement basic laws and policies. There is little assurance that the Department will be able to provide park managers with the training necessary to pursue new cooperative buffer zone management initiatives.

Moreover, the Department has been unable to provide either funding or training to villagers interested in capitalizing directly on increased tourism. The Department is therefore missing an important opportunity to connect park resource protection with new economic opportunities. In addition, the Department has been unable to compensate villagers for wildlife crop damage, a perpetual sore point in park-community relations.

To meet its multifaceted contemporary management responsibilities, and to enlist local residents in conservation partnerships, the Department must secure additional sources of revenue. One promising option is to increase park entry and trekking fees. Some of the revenue could be returned to the Department, while some could be channeled to local villages through the 30/50 funds. Additional funds also could become available if the military's role in national park management were reduced.

Unless Nepal finds a means of generating funds internally, it must continue to rely heavily on foreign donors and NGO assistance in its nature conservation efforts. This dependent arrangement inevitably reduces both government initiative and managerial flexibility. National conservation policies and priorities can be essentially dictated by the funding sources—an arrangement that runs contrary to princi-

349. One particularly pressing problem is the need to prepare and update park general management plans. Id. at 41.

350. See Buffer Zone for Biodiversity, supra note 172, at 6; Maskey & Yonzon, supra note 309, at 5 (suggesting that training in community forestry will be important for successful buffer zone management).

351. In contrast, the NGO-administered Annapurna Conservation Area Project has devoted considerable effort to seeing that local residents are involved in the burgeoning tourism economy and that they are trained to offer comfortable, environmentally appropriate services. See supra note 204 and accompanying text. Admittedly, without government support, the Khumbu Sherpas have capitalized on the Sagarmatha National Park tourist trade, but their efforts also are taking a noticeable environmental toll. See supra notes 159-64 and accompanying text. There is no evidence that local residents have benefited directly from tourism activities at Royal Chitwan National Park. See supra notes 97-99 and accompanying text.

352. See supra notes 102-07 and accompanying text.

353. As noted, park entry and trekking fees are quite low; an increase in fees may decrease the number of tourists, but could increase overall revenue. Wells, supra note 155, at 455; 1993 Nepal Environmental Action Plan, supra note 4, at 44-45. Recently, the government imposed a $700 entry fee for access to the newly opened Mustang region, and there has been sufficient trekking interest that Ministry of Tourism officials have tripled the number of entry permits available. See supra note 223 and accompanying text.

354. See supra note 344 and accompanying text.
pies of local control and accountability. Additionally, national parks that are supported only by foreign NGO’s and visitors may not have sufficient popular support to survive over the long term.\footnote{355}

**CONSERVATION LESSONS FOR THE DEVELOPING WORLD**

As Nepal’s approach to nature conservation has evolved over the past two decades, similar changes have occurred in international nature conservation philosophy. It is now clear that the traditional North American wilderness preservation model is not fully transferable to the developing world.\footnote{356} Advances in scientific understanding, particularly involving species preservation and ecosystem dynamics, confirm that successful conservation efforts must focus on regional ecosystems—a scale that dwarfs most conventional national park designations and shifts the emphasis in preservation from visually spectacular resources to biodiversity conservation.\footnote{357}

Moreover, an effective preservation policy must reconcile conservation goals with the needs of indigenous populations. There are few locations, even in the world’s most remote mountain ranges, where people have not established a ubiquitous presence. These inhabitants, who often derive their sustenance from local forests and rangelands, are very much a part of the natural setting, and modern conservation efforts must provide for their involvement and address their needs.\footnote{358}

In other words, effective preservation requires much more than simply setting unique areas aside as national parks and protecting them from indigenous residents.

\footnote{355. See McNeely, supra note 60, at 154.}
\footnote{356. See Hales, supra note 10; Steven R. Brechin et al., Resident Peoples and Protected Areas: A Framework for Inquiry, in Resident Peoples and National Parks, supra note 9, at 16-19 (questioning what happens to parks when tourists no longer come); Phyliss B. Jackson, National Parks and Indigenous Peoples, 4 COLO. J. INT’L ENVTL. L. & POL’Y 502, 503-06 (1993).}
\footnote{357. Our Common Future, supra note 9, at 147-67. At the much-publicized 1992 Rio Summit, the world’s leaders endorsed the International Biodiversity Convention, which commits the international community to conserve the world’s biological resources consistent with principles of national sovereignty. See Melinda Chandler, The Biodiversity Convention: Selected Issues of Interest to the International Lawyer, 14 COLO. J. INT’L ENVTL. L. & POL’Y 141 (1993). See also Parks for Life, supra note 12, at 6 (noting the Global Biodiversity Strategy Initiative sponsored by the World Resource Institute, IUCN, and UNEP); His Majesty’s Government of Nepal-United Nations Development Program, Biodiversity Conservation in Nepal: A Global Environmental Facility (GEF) Project (May 1993) (providing grant funds to promote biodiversity conservation in the Makalu-Barun region).}
\footnote{358. See generally Parks for Life, supra note 12, at 35 (emphasizing the importance of community relationships with protected areas); Culture and Conservation: The Human Dimension in Environmental Planning (Jeffrey A. McNeely & David Pitt eds., 1985) (arguing for a cultural dimension in environmental planning).}
Nepal’s laws and policies mirror this evolution in conservation philosophy, and thus provide models that might be adapted elsewhere. With incorporation of the conservation area and buffer zone concepts into its legal lexicon, Nepal has reoriented its conservation strategy to promote ecosystem-level preservation and clear linkages between conservation and local interests. Nepal’s recent experimentation with conservation area designations in the Annapurna and Makalu-Barun regions suggests that an ecosystem approach to conservation is possible even in the heavily populated areas of the developing world. As Nepal is learning, an array of complementary strategies can be employed to ensure popular support for expansive conservation initiatives, including buffer zone designations. These strategies include local participation in resource decisions, recoupment and local distribution of revenues from tourism, and linkages between preservation and sustainable community development opportunities. However, to deploy these strategies successfully, Nepal’s experience indicates that a national conservation agenda is best pursued within a central regulatory framework that can be adapted to diverse local settings.

In the developing world, hard-pressed national governments are often reluctant to make a major commitment to nature conservation. NGO’s and foreign donors are therefore now playing a major role in conservation efforts. These organizations often provide the critical international impetus to initiate conservation projects as well as much-needed financial resources and technical skills. Nepal has, however, carried this relationship one step further by enlisting NGO’s in unique conservation partnerships. A carefully conceived government-NGO partnership can dramatically increase the scope of national conservation efforts, while bringing a managerial flexibility to the effort that government agencies often lack. Well-financed NGO’s may also be in a better position than government agencies to link conservation programs with sustainable development initiatives and to secure the nec-

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359. See Parks for Life, supra note 12, at 8-9 (asserting that protected areas “need to be part of broader regional approaches to land management”). See also IUCN — The World Conservation Union, Commission on National Parks and Protected Areas, Guidelines for Mountain Protected Areas (Duncan Poore ed., 1992).

360. When possible, existing local institutions should be enlisted in the conservation effort. If compatible and functional local institutions (such as village resource management committees) already exist, park officials should attempt to involve these bodies in an integrated preservation effort. This involvement can also be used to strengthen local institutions. McNeely, supra note 315, at 156. If such institutions do not already exist, then they must be created, as is the case with the UGC’s that Nepal is using for buffer zone management purposes. See supra part V.D.

361. See generally Parks for Life, supra note 12, at 25–54 (outlining detailed recommendations for strengthening protected area management, particularly in the developing world).

362. See Our Common Future, supra note 9, at 319, 326-29. See also Parks for Life, supra note 12, at 10.
Preserving Nepal's National Parks

But without appropriate constraints, as Nepal is realizing, a politically unaccountable NGO may exercise arbitrary legal authority over protected-area residents. The threat of capricious management could undermine local support and cooperation in the conservation effort. Thus, jurisdictional authority, including law enforcement and judicial powers, should be clearly defined, and political accountability mechanisms should be incorporated into the partnership arrangement.

With the pace of landscape change accelerating throughout the world, nature conservation efforts have acquired a new urgency. As environmental degradation mounts, the world’s natural heritage is disappearing at an unprecedented rate. In the developing world, explosive population growth and tourism pressures are exacting a heavy toll on many national parks and the lands surrounding them. To reverse these trends, a new conservation paradigm is now emerging—one that addresses the human as well as biological dimensions of nature conservation.

Drawing upon Nepal’s growing experience with this new nature conservation paradigm, a rudimentary legal framework for implementing a progressive preservation agenda can now be identified. The essential elements include: (1) ecosystem-level protective designations; (2) opportunities for local participation in resource decisions; (3) sustainable local economic benefits derived from the preservation effort; and (4) the circumscribed involvement of NGO’s in national conservation efforts. If this framework can be adapted to other cultural contexts, new and more effective conservation models should evolve to preserve the world’s vanishing natural legacy.

The real test of these new legal designations and relationships will be whether they make a meaningful difference in park resource protection and local support for conservation efforts. So far in Nepal, the early returns in the Annapurna and Makalu-Barun regions are encouraging, though difficult jurisdictional and related issues still must be resolved. If Nepal can also strategically employ its buffer zone designation authority and enlist local user groups in meaningful conservation partnerships near its other parks, it should be able to elevate its conservation agenda to yet another level. Beyond Nepal, the challenge is to devise similar laws that will integrate national conservation

363. See supra notes 182-86 and accompanying text. See also Parks for Life, supra note 12, at 9-10, arguing for increased protected-area funding through balanced financial support for community development.
364. See supra notes 212-20, 263-67 and accompanying text.
365. See also Parks for Life, supra note 12, at 32-33 (outlining specific national legal strategies to strengthen protected area designations).
objectives with local involvement opportunities to forge a mutual commitment to ecosystem preservation.
APPENDIX A
NEPAL'S NATIONAL PARKS AND RESERVES*

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Date Established</th>
<th>Size (sq. km.)</th>
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<td>Khaptad NP</td>
<td>Far-west Hills</td>
<td>1976</td>
<td>155</td>
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<tr>
<td>Langtang NP</td>
<td>Central Himalaya</td>
<td>1976</td>
<td>1710</td>
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<td>Royal Bardia NP</td>
<td>Mid-west Terai</td>
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<td>Central Terai</td>
<td>1973</td>
<td>932</td>
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<td>Rara NP</td>
<td>Mid-west Himalaya</td>
<td>1976</td>
<td>106</td>
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<td>Eastern Himalaya</td>
<td>1976</td>
<td>1148</td>
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<td>Mid-west Himalaya</td>
<td>1984</td>
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<td>Annapurna CA</td>
<td>Western Himalaya</td>
<td>1988</td>
<td>7600**</td>
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Total Area: 20,843 sq. km.

* Abbreviations are National Park (NP), Conservation Area (CA), Wildlife Reserve (WR), and Hunting Reserve (HR).
** This figure includes 4200 square kilometers in the recently added Mustang region.
APPENDIX B
NEPAL'S NATIONAL PARKS AND PROTECTED AREAS

Legend
- Himalayas
- Tibetan Plateau
- Midlands
- Mahabharat Lekah and Siwalik Foothills
- Terai
PRESERVING NEPAL'S NATIONAL PARKS

APPENDIX C

NATIONAL PARKS AND WILDLIFE CONSERVATION ACT OF 1973
(AMENDED)
(SELECTED PROVISIONS)

Preamble

Whereas it is expedient to make arrangements for national parks, protect wildlife and their habitat, control hunting, protect, conserve, develop, and make proper arrangements for and use, places which are of special importance from the viewpoint of natural beauty in order to maintain the etiquette and welfare of the public, now therefore, His Majesty King Birendra Bir Bikram Shah Dev has enacted this law on the advice and with the approval of the National Panchayat.

1. Short Title, Extent, and Commencement

(1) This law may be called the National Parks and Wildlife Conservation Act of 1973.

(2) It shall be applicable throughout the Kingdom of Nepal.

(3) It shall come into force on such date as may be prescribed by His Majesty's Government by notification in the NEPAL RAJAPATRA (Gazette).

2. Definitions

Unless otherwise meant with reference to the subject or context in this law:

(a) "National Park" means an area reserved for the protection, management, and use of wildlife, vegetation, and landscape, along with the natural environment.

(b) "Regulated Natural Reserve" means an area which is of importance from the ecological viewpoint or otherwise, and is reserved for scientific studies.

(c) "Wildlife Reserve" means an area reserved for the protection and management of wildlife resources and their habitat.

(d) "Hunting Reserve" means an area reserved for the management of wildlife resources for the purpose of allowing hunters to hunt them.

(e) "Reserve" means a regulated natural reserve, wildlife reserve, and hunting reserve.

(e1) "Conservation Area" means the area to be managed according to the integrated plan for the conservation of the natural environment and the balanced use of natural resources.
(f) "Wildlife" means mammals, birds, reptiles, fish, amphibians, and insects of any kind other than domestic ones, including the eggs of oviparous creatures.

(g) "Arms" means any type of gun, pistol, or other firearm, as well as bow and arrow, spear, trap, snare, booby trap, catapult, or any other weapon that causes injury.

(h) "Hunting" means the act of chasing, capturing, torturing or killing any wild animal or bird by any means or of attempting to do so, or of extracting any part of its body or of exterminating it or of taking out, destroying its eggs, or of taking out, destroying, or disturbing its nest.

(i) "Trophy" means the living or dead body of any wild animal or bird, or any such part thereof as can be identified.

(j) "Appropriate Officer" means an officer designated by His Majesty's Government by notification in the NEPAL RAJAPATRA.

(k) "Prescribed" or "as prescribed" means prescribed or in the manner prescribed in the rules framed under this Act.

3. **Power of HMG to Declare National Parks, Reserves, or Conservation Areas**

(1) HMG may, if it so deems necessary, declare any area as a national park or preserve or conservation area by notification in the NEPAL RAJAPATRA by indicating the boundaries thereof.

(2) HMG may, by notification in the NEPAL RAJAPATRA, abandon, or transfer the ownership, or alter the boundaries of any area which has once been declared a national park, preserve, or conservation area.

4. **Restrictions on Entry into National Parks**

(1) No person shall be allowed to enter into a national park or reserve without obtaining an admission card in the prescribed form, or the written permission of the appropriate officer.

(2) Provided that this sub-section shall not apply to government employees who are on deputation, or to persons who have obtained entry permits from the concerned national park or reserve.
The form and design of the admission cards mentioned in sub-section (1), fees payable for them, and other conditions shall be as prescribed.

5. Actions Prohibited Within National Parks or Reserves

No person shall take the following actions within a national park or reserve without the written permission of the appropriate officer:

(a) Hunt wildlife;
(b) Construct or possess houses, shelters, or any other structures with any material;
(c) Occupy, clear, reclaim, or cultivate any part, or grow or harvest any crop;
(d) Graze any domesticated animal or bird, or feed water to it;
(e) Clear, fell, remove, or block trees, plants, bushes or any other forest product, or do anything to render any forest product dry, or set it on fire, or otherwise harm or damage it;
(f) Excavate mines or stones, or remove any mineral, stone, boulder, earth or any similar material;
(g) Cause loss or damage to forest products, wildlife, birds, or to any forest land;
(h) Carry arms, ammunition or poison personally, or use the same;
(i) Persons other than government employees on deputation, or visitors using public paths within the national park or reserve shall not take with them any domesticated or any other kind of animal or trophy;
(j) Block or divert any river or stream flowing through a national park or reserve or any other source of water contained therein, or use any harmful or explosive materials therein.

6. Maintenance of Services Within National Parks or Reserves

(1) His Majesty's Government may, in the supreme interests of the national parks or reserves, make arrangements for operating hotels, lodges, public transport services or similar other services or facilities directly, or else grant contracts thereof on the basis of the prescribed procedure.

(2) No person shall be entitled to operate services or facilities of any kind within the national park or reserve unless he has concluded a contract under sub-section (1).
9. Personal Liability for Entry into National Park or Reserve
   (1) Any person may enter into any national park or reserve under his own liability.
   (2) In case any person dies or sustains any loss, damage, or injury within a national park or reserve, His Majesty's Government shall not be liable to pay any compensation in consideration of such death, loss, damage, or injury.

10. Protected Wildlife
    Wildlife mentioned in Schedule 1 of this act shall be deemed to be protected wildlife whose hunting has been prohibited. Provided that:
    (a) Mad or wild elephants, habitually man-eating tigers, and wild animals which suffer from diseases or have become disabled so that they cannot survive may be killed or captured on the orders of the prescribed officer.
    (b) In case it is deemed necessary to kill wild animals which come out of the forest area and cause considerable loss to human beings or to domestic birds and animals, they may be killed, captured or chased on the orders of the prescribed officer.

11. Prohibition to Hunt without License
   (1) No person shall be permitted to hunt wildlife without obtaining a license. Provided that no license need be obtained for hunting prescribed wild animals and birds.

12. Fixation of Annual Quota for Hunting

13. Power of His Majesty's Government to Revoke Licenses

14. Period During Which Hunting May Be Prohibited

15. License for Collection of Samples

16. Management of National Parks or Reserves
    The prescribed officer may, if he so deems necessary for the proper management of a national park or reserve, hunt or remove any natural product, or perform any other necessary function inside the national park or reserve.

16A. Forest Products or Other Services May Be Made Available
The prescribed officer may make available prescribed forest products or other services on payment of the prescribed fees inside national parks or reserves.

16B. Conservation Area Management

His Majesty's Government may, by notification in the NEPAL RAJAPATRA, entrust the management of any conservation area declared under sub-section 1 of Section 3 to any institution established with the objective of conservation of nature and natural wealth for the period prescribed in the notification.

17. Trophies Must be Produced to the Licensing Authority

18. Prohibition Against Possessing Trophies without Certificate

19. Prohibition Against Selling, Supplying or Dealing in Trophies without License

20. Recommendations to be Obtained for Export or Import of Trophies

21. Necessary Action May Be Taken in Self-Defense

   (1) In case any person is left with no alternative but to use arms or take any other measures against the actual and sudden attack of any wild animal to save his live or that of any other person or domesticated animal, he may do so, and in case any wild animal is killed or wounded in the process, he shall not be deemed to have committed any offense punishable under this act.

   (2) In case any wild animal is killed or wounded in circumstances mentioned in sub-section (1), the prescribed officer shall be notified accordingly within 24 hours after such event, excluding the time required for the journey.

   (3) The privileges mentioned in sub-section (1) shall not be granted to persons who are found to be acting in contravention of this act or the rules framed hereunder.

22. Prohibition Against Damaging Boundary Markers

23. Power to Inspect and Search
In case there is reason to believe that any person has taken any action in contravention of this act, and in case it becomes necessary to secure evidence or proof of such action, or to arrest him, the prescribed officer may, after securing a warrant from the prescribed authority, enter into and search at any time the house, compound, land or vehicle of any type belonging to such person. Provided that, in case the prescribed officer feels that it may take some time to obtain a warrant for entering into and searching any house, compound, land or vehicle and that the offender is likely to abscond or suppress evidence of his offense during such time, he may, after preparing written records accordingly, enter into and search such house, compound, land or vehicle at any time.

Explanation: Officers below the rank specified in Section 30 shall not be empowered to enter into any house, compound, land or vehicle without a warrant under this act.

24. Power to Arrest Without Warrant

(1) In case there is reason to believe that any person who has committed offenses punishable under this act is likely to abscond, the empowered officer may arrest him without a warrant. The person arrested in this matter shall be produced for legal action before the authority hearing cases within 24 hours, excluding the time required for the journey.

(2) In case any offender, or any of his accomplices, resort to violence in an attempt to free him or prevent his arrest, or in case of escapes while being arrested, or after he is arrested by the appropriate officer under sub-section (1), or in case the life of the person making the arrest appears to be in danger, or in case he has no alternative but to resort to the use of arms, he may open fire, aiming as far as possible below the knee, and if any person dies as a result of such firing, it shall not be deemed to be an offense.

25. Reward

(1) Any person who furnishes information about a poacher who kills or injures rhinoceros, tiger, or musk-deer leading to his arrest may be rewarded with a sum not exceeding Rs. 5,000.

26. Penalties
Any person who keeps rhinoceros horn or musk-pods in his possession in an unlawful manner with the intention of selling them, or sells, purchases, transfers, or acquires rhinoceros horn or musk-pods, shall be punished with a fine ranging between Rs. 5,000 and Rs. 25,000, or with imprisonment for a term ranging between one year and five years or with both, according to the quantity thereof.

27. Penalties For Accomplices

28. Power to Confiscate

29. His Majesty's Government to be Plaintiff

All cases filed under this act shall be prosecuted with His Majesty's Government as plaintiff.

30. Investigation and Filing of Cases

31. Power to Hear Cases

(1) The power to hear and dispose of cases under this act shall be vested in the prescribed court or authority.

(2) While disposing of cases under sub-section (1), the prescribed court or authority shall follow the same procedure as is adopted by a court with original jurisdiction.

(3) An appeal may be filed before the Appeal Court against the decision made or order issued by the court or authority prescribed under sub-section (1) within 35 days after such decision is made or order issued.

32. Power of His Majesty's Government to Amend Schedules

His Majesty's Government may, by notification in the NEPAL RAJAPATRA, make amendments in the Schedules to this act.

33. Power to Frame Rules

His Majesty's Government may frame rules for the purpose of implementing the objectives of this act.

34. Repeal and Saving

Schedule 1 (Protected Wildlife)

In this Schedule, the following species are listed as protected wildlife under section 10: Assamese red monkey, scaly anteater, wolf, Himalayan brown bear, red panda, striped hyena, leopard cat, lynx, clouded leopard, tiger, snow leopard, wild elephant, rhinoceros, small boar, musk-deer, swamp deer, bison, yak, nak, wild buffalo, Nayan Chiru, black buck, four-horned antelope, black stork, white stork,
Sarus crane, Chir pheasant, Impeyan pheasant, crimson-horned pheasant, python, [and others] . . . .

History

The National Parks and Wildlife Conservation Act was first promulgated on March 11, 1972. NEPAL RAJAPATRA, Vol. 22, No. 55 (Extraordinary). It has since been amended three times: October 6, 1974 (NEPAL RAJAPATRA, Vol. 24, No. 28 (Extraordinary); December 23, 1982 (NEPAL RAJAPATRA, Vol. 32, No. 41 (Extraordinary)); and September 27, 1989 (NEPAL RAJAPATRA, Vol. 39, No. 33 (Extraordinary)).
APPENDIX D

FOURTH AMENDMENT TO THE NATIONAL PARKS AND WILDLIFE CONSERVATION ACT (1993) (BUFFER ZONE MANAGEMENT ACT)

Preamble: Whereas it is necessary to amend the National Parks and Wildlife Conservation Act of 1973, this Act has been enacted by the Parliament on the occasion of this 22nd year (1993) of the reign of His Majesty King Birendra Bir Bikram Shah Dev.

1. Short Title and Commencement
   (1) This Act may be called the National Parks and Wildlife Conservation Act (Fourth Amendment) of 1973.
   (2) It shall come into force immediately.

2. Amendment to Section 2 of the Original Act
   Add the following new subsections:
   (1) “Buffer zone” means the area surrounding a national park or reserve as defined by Section 3a herein, to provide for the use of forest resources on a regular and beneficial basis for the local people.
   (2) “Warden” means a person appointed by His Majesty’s Government for the conservation and management of a national park, reserve, conservation area, or buffer zone.

3. Amendment to Section 3 of the Original Act
   After section 3, add the following new sections:

3a. Buffer Zone Area May Be Declared
   (1) His Majesty’s Government may declare any area surrounding a national park or reserve as a buffer zone by notification in the Gazette (NEPAL RAJAPATRA) by indicating the boundaries thereof.
   (2) When a buffer zone is declared in accordance with subsection (1), His Majesty’s Government may either leave or transfer ownership of the area or change the boundary by publishing in the Gazette.

3b. Management and Conservation of the Buffer Zone Area
   Management and conservation activities in the buffer zone area shall be done by the Warden, provided that the management and conservation of this area shall not have any effect on the land ownership of local people.
3c. **Compensation Shall Be Given**
If any local inhabitant's house or land located within a buffer zone, either following a flood or landslide, shall be moved within the existing natural boundary of a national park or reserve and if such inhabitant's house is removed, on the recommendation of the User Group Committee formed in accordance with Section 16c, reasonable compensation shall be given to such person from the amount allocated in accordance with Section 25a for local community development.

4. **Amendment to Section 6 of the Original Act**
Instead of the words "national park or reserve" mentioned in Section 6 of the Original Act, the words "national park, reserve or conservation area" shall be inserted.

5. **Amendment to Section 16 of the Original Act**
After section 16b, add the following new section:

16c. **User Group Committee**

(1) For the management of fallen trees, dry wood, firewood and grass in a national park, reserve, conservation area or buffer zone, the warden, in coordination with the local agency, may form a user group committee.

(2) Other rights and duties of the user group committee shall be as prescribed.

6. **Amendment to Section 22 of the Original Act**
Instead of the words "national park or reserve" mentioned in section 22 of the Original Act, the words "national park, reserve, conservation area, and buffer zone" shall be inserted.

7. **Amendment to Section 25 of the Original Act**
Replace Section 25(1) of the Original Act with the following new subsection:

25(1) Any person who furnishes information about a poacher who kills or injures rhinoceros, tiger, elephant, musk deer, clouded leopard, snow leopard or gour that leads to an arrest may be rewarded up to Rs. 50,000 in cash, and any person who furnishes information about a poacher who kills, or injures protected wildlife other than mentioned above, which leads to an arrest may be rewarded up to Rs. 25,000 in cash.

8. **Amendment to Section 25 of the Original Act**
After Section 25, add the following new section:

25a. **Expenditures for local development**
From 30 to 50 percent of the amount earned by the national parks, reserves or conservation areas may be
expended, in coordination with the local agency, for community development of the local people.

9. Amendment to Section 26 of the Original Act
Replace Sections 26(1) and (2) of the Original Act with the following new subsections:

(1) Any person who, in an unlawful manner, kills, injures, purchases, sells or transfers rhinoceros, tiger, elephant, musk deer, clouded leopard, snow leopard or gour and who keeps, purchases or sells rhinoceros horn or musk-pods, fur of the snow leopard and trophies of other protected wildlife, shall be punished with a fine ranging between Rs. 50,000 and Rs. 100,000 or with imprisonment for a term ranging between five years and fifteen years or with both.

(2) Any person who kills or injures other protected wildlife, other than those mentioned in subsection (1) shall be punished with a fine ranging between Rs. 40,000 and Rs. 75,000 or with imprisonment for a term ranging between one year and ten years or with both.

Preamble: Whereas it is expedient to establish the King Mahendra Nature Conservation Trust for the purpose of conserving and managing nature and natural resources, now therefore, His Majesty King Birendra Bir Bikram Shah Dev has enacted this Act on the advice and with the approval of the National Panchayat.

1. Short Title and Commencement
   (1) This Act may be called the King Mahendra Nature Conservation Trust Act, 1982.
   (2) It shall come into force at once.

2. Definitions
   Unless otherwise meant with reference to the subject or context in this Act:
   (a) “Trust” means the King Mahendra Nature Conservation Trust established under Section 3.
   (b) “Board” means the Board of Directors formed under Section 5.
   (c) “Chairman” means the Chairman of the Trust.
   (d) “Member” and “Member-Secretary” mean members of the Trust.
   (e) “Prescribed” or “as prescribed” means prescribed or in the manner prescribed in bye-rules framed under this act.

3. Establishment of the Trust
   (1) There shall be established a trust called the King Mahendra Nature Conservation Trust.
   (2) The Trust shall be an autonomous and corporate body with perpetual succession.
   (3) The Trust shall have a separate seal of its own for the purpose of all its functions and operations.
   (4) The Trust may acquire, use, dispose of, or otherwise manage movable or immovable property as an individual.
   (5) The Trust may sue or be sued in its own name like an individual.

4. Patron
   His Majesty shall be the patron of the Trust.

5. Formation of the Board of Directors
   A Board of Directors consisting of the following members shall be formed to manage and supervise all functions and operations of the Trust:
   (a) A person nominated by the Patron ............Chairman.
PRESERVING NEPAL'S NATIONAL PARKS

(b) Three persons nominated by the Chairman from among the Secretaries of His Majesty’s Government ... Member.

(c) Three persons nominated by the Chairman from among the representatives of Departments of His Majesty’s Government, or of governmental or non-governmental agencies ........................................ Member.

(d) Four persons nominated by the Chairman from among representatives of international agencies, or internationally-reputed persons ..................... Member.

(e) Three persons who are deemed by the Chairman to be qualified to become members of the Trust ...... Member.

(f) One person nominated by the Chairman ...... Member-secretary.

6. Term

(1) The term of the Chairman and members shall be five years.

(2) The Chairman and members may be renominated under Section 5 on the expiry of their term.

... (5) Any member who fails to discharge his duties smoothly may be removed by the Chairman at any time.

7. Remuneration

The remuneration, allowances and other facilities to be received by the Chairman, members or other office-bearers shall be as prescribed.

8. Meetings of the Board

(1) The Member-secretary shall convene meetings in accordance with the direction of the Chairman after prescribing the date, venue and agenda. Meetings shall be presided over by the Chairman, and, in his absence, by a member nominated by the members from among themselves.

... 9. Functions and Duties of the Trust

The functions and duties of the Trust shall be as follows:

(a) Conserve, promote and manage wildlife and other natural resources.

(b) Make necessary arrangements for the development of National Parks and Reserves.

(c) Undertake scientific studies on, and conduct research in, wildlife and other natural resources.

10. Powers of the Trust

The powers of the Trust shall be as follows:
(a) To obtain cash, in-kind, or other assistance from national or international organizations, institutions and other sources.

(b) To maintain contacts with foreign institutions and international associations and institutions connected with wildlife and other natural resources.

(c) To collect or arrange for the collection of donations through foreign institutions or international associations and institutions.

(d) To perform any other function in the interests of the Trust.

11. **Power to Form Subcommittees**

12. **Trust**

   (1) There shall be the following amounts in the Trust:

   (a) Amounts provided by His Majesty's Government.

   (b) Amounts received from national or international associations or institutions.

   (c) Amounts received from other sources.

13. **Accounts and Audit**

14. **Authority to Hear Cases**

   The power to take original action on and dispose of cases filed under this act, or those in which the Trust is a plaintiff or defendant, shall be vested in the Appeal Court.

15. **Delegation of Powers**

   The Board may delegate all or some of its powers to the Chairman, members, subcommittees, or any officer-holder of the Trust.

16. **Power to Frame Rules**

   His Majesty's Government may frame necessary rules in consultation with the Board in order to implement the objectives of this act.

17. **Power to Frame Bye-Rules**

   The Trust may frame necessary bye-rules without prejudice to this act and the rules framed hereunder. Such bye-rules shall be effective only after they are approved by His Majesty's Government.

18. **Contact with His Majesty's Government**

   In case the Trust is required to maintain contacts with His Majesty's Government, it shall do so through the National Parks
and Wildlife Conservation Department of the Ministry of Forests and Soil Conservation.

32 Nepal Rajapatra, No. 31 (Nov. 22, 1982).