Mountain Laws and Peoples: Moving Towards Sustainable Development and Recognition of Community-Based Property Rights

A General Overview of Mountain Laws and Policies with Insights from the Mountain Forum's Electronic Conference on Mountain Policy and Law

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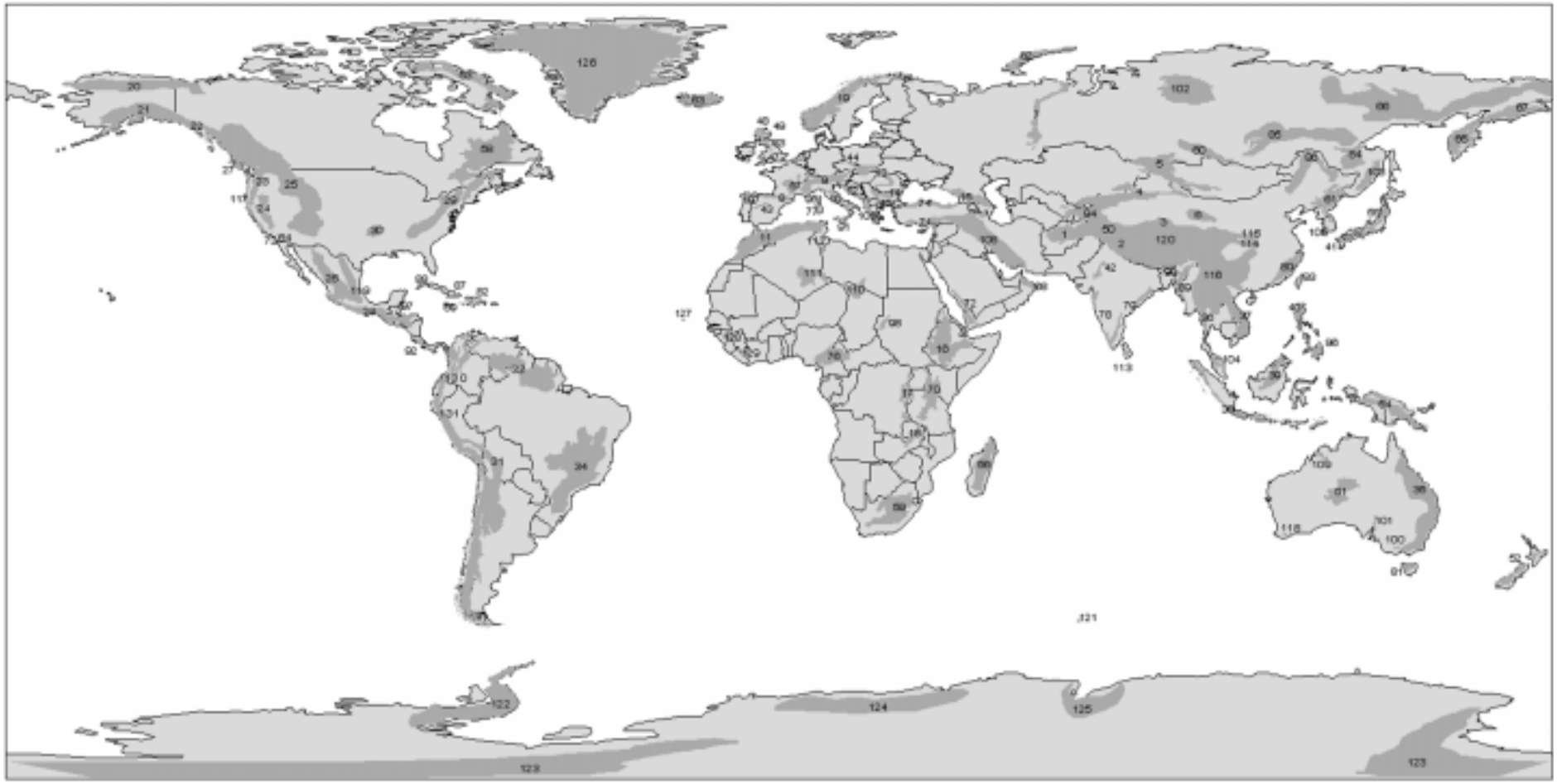

MATHEW SHERALD, TMI GIS LAB, 1998

Mountain Ranges of the World

Number	Mountain Range
1	Hindu Kush
2	Himalayas
3	Kunlun Mountains
4	Tien Shan
5	Altai Mountains
6	Qilian Shan
7	Ural
8	Pyrenees
9	Alps
10	Apennines
11	Atlas Mountains
12	Dinaric Alps
13	Carpathians
14	Balkan Mountains
15	Caucasus Mountains
16	Ethiopian Highlands
17	Mitumbar Mountains
18	Mutchinga Mountains
19	Kjollen Range
20	Brooks Range
21	Alaska Range
22	Coast Mountains
23	Cascade Range
24	Sierra Nevada Range
25	Rocky Mountains
26	Sierra Madre Occidental
27	Vancouver Island
28	Sierral Madre Del Sur
29	Appalachian Mountains
30	Ozarks
31	Dry Andes (Antiplano)
32	Jura Mountains
33	Guiana Highlands

Number	Mountain Range
34	Brazilian Highlands
35	Great Dividing Range
36	Dawna Range
37	Truong Son Range
38	Pegunungan Barisan
39	Pegunungan Iran
40	Central Cordillera
41	Kyushu-sanchi
42	Aravalli Range
43	Sierra de Gredos
44	Sudetes
45	Rhodope
46	Wicklow Mountains
47	Cambrian Mountains
48	Northwest Highlands
49	Grampian Mountains
50	Karakoram
51	Macdonnell Ranges
52	Southern Alps
53	Baffin Island
54	Pegunungan Maoke
55	Japan Alps
56	Madagascar
57	Massif Central
58	Laurentides
59	Drakensberg
60	Sayan
61	Chang-pai Shan
62	Novaya Zemlya
63	Iceland
64	San Bernandino Mountains
65	Kamchatka
66	Chersky Range

Number	Mountain Range
67	Koryak Range
68	Jabal Akhdar
69	Jamaica
70	Eastern African Highlands
71	Taurus Mountains
72	Asir
73	San Gabriel Mountains
74	Pontic Mountains
75	Sierra Madre
76	Adamawa Mountains
77	Sardinia
78	Western Ghats
79	Eastern Ghats
80	Wuyi Shan
81	Tasmania
82	Cordillera Central
83	Pennine Chain
84	Khrebet Dussye Alin
85	Yablonovyy Khrebet
86	Great Khingan Range
87	Sierra Maestra
88	Pinar Del Rio
89	Arakan Yoma Range
90	Khasi Naga Hills
91	Sicily
92	Cordillera de Talmanca
93	Taiwan
94	Pamirs
95	Corsica
96	Mindanao
97	Maya Mountains
98	Jebel Marra
100	Otway Ranges

Number	Mountain Range
101	Flinders Ranges
102	Gory Putorana
103	Sikote-Alin Range
104	Cameron Highlands
105	South Korea
106	Pindhos
107	Cordillera Cantabrica
108	Zagros Mountains
109	Kimberly Plateau
110	Tibesti
111	Ahaggar
112	Matmata Mountains
113	Sri Lanka
114	Min Shan
115	Tsinling Shan
116	Ningling Shan, Bayan Har, Dalou Shan
117	Coastal Range
118	Stirling Range
119	Sierra Madre Oriental
120	Plateau of Tibet
121	Heard Island
122	Antarctic Peninsula
123	Transantarctic Mountains
124	Queen Maud Land
125	Enderby Land
126	Greenland
127	Cape Verde
128	Fouta Djallom
129	Nimba
130	Humid Andes (Paramo)
131	Semi-humid Andes (Jalca)

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Foreword

MOUNTAIN PEOPLES, many with thousands of years of experience living and working in their rugged environments, are overlooked stewards of fragile landscapes that support over ten percent of the Earth's population, and protect the watersheds that ensure freshwater for more than half of humanity. The high variability of mountain ecosystems makes them home to irreplaceable global treasures of biological diversity—a diversity that is protected by mountain communities whose traditional lifestyles depend on intimate knowledge and sustainable use of their natural environment.

Especially in developing countries, however, there is a marked "vertical gradient of poverty" in mountains, that makes mountains home to some of the poorest people in the world. Their poverty is increasing in most places, as development investments either ignore or exploit them. Mountain tourism now accounts for almost one-fifth of global tourism revenues, or about US $70–90 billion annually; yet mountain communities share little of the profits. Nor do mountain communities normally participate in decisions to grant timber licenses to log the remaining 25% of the world's forests that grow in upland areas—forests on which mountain communities often depend for their very survival. They have minimal access to legal mechanisms for gaining recognition of their community-based property rights, or to education, health care, markets, and especially, decision-making power. Yet few technologies, policies, or laws exist to promote sustainable development for mountain peoples, or to protect the natural resources on which their future—and all of ours—depends.

In a few places, nevertheless, there are hopeful signs. Downstream communities are learning that investing in watershed protection provides direct economic benefits, as well as ensuring environmental services such as clean water. Sustainable revenues from ecotourism depend on participation of mountain peoples in continued conservation. Such impacts, documented in a previous Mountain Forum report, *Investing in Mountains,* have led to the development of special laws and policies designed to safeguard mountain environments and cultures.

It is in this context that this ambitious report was undertaken. Through a unique partnership of the Mountain Forum, The Mountain Institute and the Center for International Environmental Law (CIEL), we have undertaken a first-ever exploration of the reality—and the potential—of law and policy to address the special and urgent issues facing mountain peoples and ecosystems. Using the Mountain Forum's 1997 electronic conference on "Mountain Policy and Law" as a starting point, the report systematically identifies and analyzes laws and policies that exist in countries and regions throughout the world. The resulting report on *Mountain Laws and Peoples: Moving Towards Sustainable Development and Recognition of Community-based Property Rights* is the only compilation on this subject. Its recommendations for action at international, national, and local levels are expected to be a major contribution to policy makers and pragmatists alike.

The Mountain Forum is a global network of people and organizations working toward equitable and ecologically sustainable development. The Mountain Institute works through local staff and partners in the Andes, Appalachians, and Himalayan mountain ranges to strengthen mountain communities, to conserve their natural resources and cultural heritage while improving their livelihoods. The CIEL draws on the energy and experience of the public interest environmental law movement to develop and strengthen environmental law, policy, and management throughout the world. Together, we are pleased to present this report which we hope will contribute to forging a common consensus for action as we approach the United Nations International Year of Mountains in 2002.

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Executive Summary

LAWS AND POLICIES concerning the well being of mountain peoples and the conservation and sustainable development of mountain peoples and ecosystems are relatively small in number. Yet mountain areas are some of the most important regions in the world and are environmentally, culturally, and economically fragile. Using the Mountain Forum's electronic conference on Mountain Policy and Law as a starting point, this report explores the role of law and policy in addressing special characteristics of mountain peoples and ecosystems. It identifies and analyzes existing laws and policies at the international, national, and local arenas, and makes recommendations.

Law and policy have been identified in surveys and studies as among the most important factors in the health of mountain communities and ecosystems, although their effect can be either positive or negative. In order to promote rather than undermine conservation and sustainable development, effective legal and policy instruments need to address the specific realities of mountain domains and should be based on a principle of subsidiarity. This means allowing natural resource management decisions to be made at the most appropriate local level. It likewise requires meaningful recognition of the special roles and potentials of local people directly dependent on mountain resources, sustained support for community-based management strategies, and ensuring that legal and policy instruments at different levels are mutually reinforcing.

Applying laws and policies that were enacted with lowland environments in mind to mountain areas can have disastrous effects. Developing mountain-specific approaches requires an understanding of what characteristics of mountains are unique. These characteristics include economic and legal marginalization, isolation, transboundary location, diversity of livelihood strategies, cultural diversity, and environmental sensitivity and diversity.

The need for mountain-specific legal approaches is bolstered by related trends towards community-based management and control of natural resources. The "Mountain Agenda" developed at the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro helped fuel this growing recognition of the need for a new paradigm in mountain resource management. This new paradigm calls for ensuring that mountain communities are able to participate fully in decision-making on the use of natural resources they directly depend on for their lives and their livelihoods. A key component will entail the legal recognition of community-based property rights and the devolution of management authority to mountain communities, with government maintaining monitoring and regional coordination powers.

Realizing this paradigm will require a matrix of mutually supporting laws and policies at the international, national, and local levels. International law and policy can be used as an important starting point to strengthen conservation and sustainable development of mountain areas. This report explains the important distinction between soft and hard law, and identifies the need for specific, binding instruments that focus directly on mountain communities, without losing sight of their broader contexts. Drawing a sharp legal line differentiating mountain areas from their surroundings may in some cases be impractical and inadvisable.

Equitable, cost-effective conservation often relies on voluntary, self-interested mechanisms, such as community user group codes of conduct, traditional tenure systems, and community-based enforcement. These approaches can help prevent illegal harvesting of resources, establish effective and long-term sustainable use strategies, and prevent property rights from being arbitrarily transferred to commercial developers who might disrupt the fragile ecosystems found in mountain regions.

National laws and policies remain key. The national laws of France and Austria, for example, single out mountains for their unique characteristics, leading to mountain-specific responses. At the same time they are comprehensive, helping to weave together separate elements of economy and ecology, and conservation and sustainable development. National laws also provide a means of translating broad international commitments into effective local implementation.

But international and national efforts will likely prove ineffective, and may be destructive, without local input and implementation. National policies often exploit mountain resources without adequately listening to local voices and ensuring beneficial returns to the communities most directly affected. Promoting conservation and sustainable development of mountain ecosystems requires that decision-makers work together with local communities to ensure that the laws and policies are appropriate.

Mountain regions also lack access to appropriate technologies. This severely limits their economic growth and the ability to respond to opportunities for the improved management and use of natural resources through, for example, eco-tourism or the maintenance of biodiversity. Insufficient resources, knowledge and political commitment will hamper, and in some cases prevent, the local implementation and enforcement of appropriate laws and policies.

JOHAN REINHARD

Quechua women on pilgrimage to Qoyllur Riti festival near Cuzco, Peru.

Introduction

VARIOUS LEGAL AND POLICY instruments related to the exploitation, conservation and sustainable development of natural resources already exist. Few of these instruments focus directly on mountain peoples and ecosystems. At the same time, a number of important factors make mountain peoples and ecosystems unique and require that specific legal and policy tools be developed, applied and monitored.

A global blueprint for the sustainable development of mountain resources, the "Mountain Agenda/Chapter 13," was ratified during the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro. Chapter 13 of Agenda 21 drew specific attention to the challenges and opportunities confronting mountain peoples and ecosystems, and identified priority areas for action. The UN Economic and Social Council (ECOSOC) subsequently recognized that "mountains represented an essential component for the global life-support system and [are] essential to the survival of the global ecosystem." To represent the importance of mountains in our ecosystem, the United Nations has declared the year 2002 as the International Year of Mountains (ECOSOC 1998b).

Agenda 21 and subsequent documents, including the Commission on Sustainable Development (UNCSD) progress reports, and the ECOSOC resolution of July 1997, identify the importance of law in the promotion of mountain conservation and development. The 1997 Report of the Food and Agriculture Organization Task Manager on Chapter 13 of Agenda 21, for example, cites "the need for new or reinforced legal mechanisms (charters, conventions, national legislation, etc.) to protect fragile mountain ecosystems and promote sustainable development in mountain regions" (FAO 1997).

During the spring of 1997, the Mountain Forum hosted an e-mail conference on mountain law and policy. The conference was part of a series of "virtual" meetings hosted by the Mountain Forum in support of the "Mountain Agenda/Chapter 13." The high level of participation throughout reflects keen interest in the topic and highlights the importance of effectively addressing the issues discussed.

This report builds on the electronic conference. It provides:

- an overview of the conference discussions;
- details regarding specific characteristics of mountains that are relevant to law and policy;
- an exploration of existing and prospective legal and policy mechanisms at international, national and local levels for promoting the well-being, integrity, and productivity of mountain peoples, including the conservation and sustainable management of mountain ecosystems;
- an identification and analysis of theoretical and procedural gaps; and,
- a list of legal and policy recommendations for the more effective promotion of the Mountain Agenda/ Chapter 13.

The Role of Law and Policy

LAW HAS AN IMPORTANT, but by no means exclusive, role to play in promoting and securing the civil, political, economic, cultural and environmental rights of affected groups, and in ensuring that the benefits and burdens of development are equitably distributed. The absence of specific laws and policies for addressing the unique human and bio-geographical characteristics of mountain areas occurs in the context of the broader failure of nation states to develop appropriate domestic and international legal frameworks for human rights and community-based management of renewable natural resources.[2] Indeed, the conservation, sustainable development and environmental protection of forests and other natural resources has for too long been characterized by the failure of governments to foster appropriate and equitable local incentives, legal and otherwise, for sustainable development (see e.g., Lynch and Talbott 1995, Pimbert and Pretty 1995).

[2]Rights of association, access to justice, access to information and freedom of expression, are considered particularly critical for the success of national human rights and environmental movements.

Simply stated, law and policy can either undermine or promote conservation and sustainable development. A study by The Mountain Institute (TMI) of innovative mechanisms for financing conservation and sustainable development in mountainous regions around the world, found that legal, regulatory and enforcement structures are important contributing factors. Indeed, no other contributing factors were as consistently identified (Preston 1997). In one example, Nepal's Community Forest Directives 2052 (1995) shifted legal authority from the central government to local communities as part of a strategy for promoting the sustainable management of mountain woodlands that were previously suffering from accelerated depletion and degradation. Sixty-seven percent of nearly 1,000 respondents to a recent survey of non-governmental organizations (NGOs) working on mountain issues felt that "political decisions and legal prescriptions (or their absence or inability to enforce) are principally responsible for environmental degradation in mountain regions." The next most important causes cited were developers/road construction (43 percent) and tourists (33 percent) (Price 1998).

The importance of legal strategies for promoting the well-being of mountain peoples and ecosystems points to the need for a new paradigm in natural resource management that is premised on a principle of subsidiarity. Innovative and integrated legal and policy agendas must reflect a "mountain perspective" that brings together government, businesses, local communities, and mainstream societies in a comprehensive, democratic and equity-driven process. At minimum, this approach should enable communities to participate in official decision-making processes concerning the use of natural resources they directly depend on for their lives and their livelihoods. The goal in many instances should be to foster state/local community partnerships that may also involve other actors such as NGOs and commercial enterprises.

A horizontal and vertical matrix of mutually supportive law and policy relationships extending from the local to national, regional and international spheres is needed to promote the well-being of mountain peoples and ecosystems. International and national initiatives can learn much from local efforts that are already underway, and local initiatives can draw support from positive developments underway on the international and national scenes. Some international instruments, such as the 1992 UNCED Forest Principles or the Convention on Biological Diversity for example, may appear as abstract global pronouncements with little connection to underlying realities. Local management agreements linked to the aims of international texts such as these, however, can create more authoritative legal mechanisms for promoting the well-being of mountain peoples and the sustainable development of mountain ecosystems.

Participants in the Mountain Forum's electronic conference on "Mountain Policy and Law" indicated that the most promising initiatives are those in which national governments defer to local communities in setting up and executing environmental and developmental projects. Quite often local populations have developed their knowledge of mountain ecosystems over long periods of time (Byers and Preston 1997); much of this knowledge is a priceless intellectual resource. The participants largely agreed that the role of central governments should be to recognize the value of local knowledge and encourage, facilitate, support and help coordinate local initiatives by mountain peoples.

Legal strategies will inevitably vary depending on each nation's unique history, cultures and environments, but common themes can be identified. Rather than being active participants in project design and implementation, for example, there is widespread sentiment that national governments should let communities take responsibility for identifying their own solutions to challenges affecting their development (Hughey 1997). Oftentimes, of course, the application of these solutions will require external technical assistance for schools, health care, agroforestry and support for enterprise development and communications.

As defined by participants, "development" in the context of mountains and law should focus specifically upon enhancement of the welfare of human communities. Participants felt that any developmental processes or activities leading to a reduction of the quality of life in mountain communities could not contribute to real development, even where such activity is conducted under the objective of economic progress. Inequitable strategies that benefit certain populations at the expense of communities whose way of life is impoverished, constitute "maldevelopment" (Senanayake 1997a). Under a new developmental paradigm it could be legally required, for example, that the well-being of mountain peoples living in areas where mining, logging, road building or other activities are planned be of foremost concern in project design and implementation. A stronger form of this approach might be to prohibit external development interventions in all traditionally occupied mountain areas unless the local populations have a meaningful role in the design of the intervention, are assured proportionate benefits, and provide their prior informed consent.

International actors likewise need to deepen their understanding of the conditions and contexts of mountain peoples and ecosystems. Indeed, the global development agenda needs to recognize and incorporate different worldviews arising out of Southern and Northern nations, as well as those coming from traditionally marginalized communities within both developing and industrialized countries. Effective legal and policy strategies must therefore:

- address the specific ecological, economic, and cultural realities of mountain domains;
- promote the well-being of people directly dependent on mountain resources;
- foster community-based strategies for mountain conservation and sustainable development; and
- consist of mutually reinforcing mechanisms at different levels (see Figure 1).

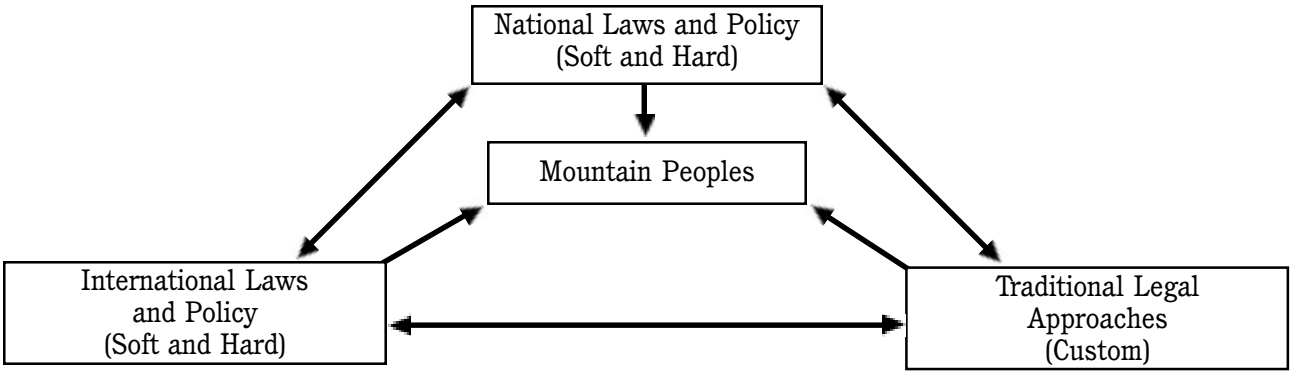

Figure 1. Mutually Reinforcing Levels of Law and Policy.

Legal Recognition of Community-Based Property Rights and Management

SOME LAW AND POLICY MAKERS place greater emphasis on conservation than on sustainable development and they may be troubled by the emphasis this report gives to community-based property rights and management. This emphasis is based on growing evidence of the failure of exclusive state-management paradigms in mountain areas and elsewhere. It also reflects a conviction that all humans, by virtue of being human as well as being citizens, have a fundamental right to participate in official decisions and policies that directly impact on their lives and livelihoods. Community-based management, including the legal recognition of community-based property rights, is not a panacea for all the problems confronting mountain peoples and ecosystems. But especially in the majority world, i.e. in developing countries, it is essential for ensuring that local communities have legal incentives to participate as full-fledged citizens in efforts to conserve, protect and sustainably develop mountain ecosystems.

The best governmental response to promote sustainable management of mountain ecosystems in many, if not most, mountain regions in the majority world would be to officially recognize and delineate the perimeters of existing traditional systems, particularly in areas where mountain communities have a demonstrable concern for equity and the environment and a desire to manage natural resources sustainably. When modern science meets local cultures, there are often serious differences in approach to the management of natural resources. Nevertheless, legal recognition of community-based property rights or the devolution of power to local people, and their concomitant awareness of their responsibilities, can be a powerful stimulus for facilitating sustainable resource utilization (Metz 1997). Devolution should be accompanied by an official commitment to strengthen local institutions through education and the creation of legal mechanisms to support people's participation in the design and implementation of local laws. Such community-based and community-focused approaches will promote the practical application of sound international and national initiatives at local levels.

International law already provides a basis for the recognition and protection of community-based property rights, at least insofar as indigenous and tribal peoples are concerned.[3] As such, the legal recognition of indigenous community-based tenure systems need not be contingent on formal grants or documents from national or local governments, although official government support is obviously something to be welcomed.

The legal recognition and delineation of community-based tenure systems would, in effect, repeal or override existing national laws and policies that in many countries are rooted in colonial legacies and influences, and promote "open access" to mountain ecosystems. This recognition, in turn, can help discourage in-migration, as well as illegal extraction and over-exploitation. It would put outside commercial entrepreneurs on notice that legal rights to extract natural resources within areas covered by community-based property rights are subject to community approval and profit sharing. Perhaps most important, recognition of community-based tenure rights would align national governments with—and officially tap the energies of—mountain-based communities that have resisted migration and unsustainable, externally supported extraction activities within their territories. It would also give an official imprimatur to ongoing local efforts to protect and conserve mountain ecosystems.

[3]The leading international human rights instrument calling for recognition of indigenous territorial rights is the International Labor Organization's 1989 Convention No. 169 Concerning Indigenous and Tribal Peoples in Independent Countries. Article 13 of the Convention specifies that references in it to land "shall include the concept of territories, which covers the total environment of the areas which the people concerned occupy or otherwise use." Article 14 mandates recognition of the rights of indigenous peoples to own and possess their traditional territories. Additional support in international law for recognition of the community-based tenurial systems can be found in the United Nations Covenants on Civil and Political Rights and Economic, Social and Cultural Rights, as well as the International Court of Justice's *Western Sahara (Advisory Opinion)* ICJ Reports (1975), p. 39. The Australian High Court case, *Mabo* v. *Queensland*, 107 A.L.R. (1992), constitutes a landmark decision at the national level; it rectifies the longstanding practice of denying land and other resource rights to indigenous communities, based on the theory of *territorium nullius*. See McGinley 1993. For additional background on indigenous rights in international law see Wiessner 1999, Maggio 1998, Anaya 1996, Reisman 1995, Posey 1995, Plant 1991.

Specific Characteristics of Mountain Ecosystems Relevant to Law and Policy

THE CONSERVATION, PROTECTION and sustainable management of mountain ecosystems require that participants in decision-making processes on international and national levels work together with local partners to ensure that laws and policies are appropriate for local situations. One of the recurrent themes raised in the Mountain Forum's electronic conference on mountains and law was the need to focus on local-level implementation ("where macro meets micro"). Policy and legal instruments are typically ineffective if applied in isolation from other relevant factors, especially those on the ground, which is the only place where success can be measured.

The distinct characteristics of mountain environments require law and policy-makers to design integrated, comprehensive mechanisms directed specifically at sustainable mountain management. Law and policy-makers however, are typically far removed from rural peoples and environments, including mountain peoples and ecosystems. As such, they usually do not have the same interests, perspectives or priorities as local people dependent upon ecologically unique mountain locales. They also frequently assume that laws, policies and projects applied in lowland ecosystems can be successfully transplanted to mountain regions, the overemphasis on promoting and documenting individual property rights being an obvious example.

The unique combination of geophysical attributes of slope, altitude and climate play a defining role in shaping a mountain range's cultural and biological features. The same characteristics that provide mountain communities with the challenges of poverty, inaccessibility, diversity, and fragility also constitute a nexus of common interests (Figure 2). An extraordinary commonality among mountain communities transcends the South-North divide. Mountain peoples from Switzerland to Nepal to Bolivia list among their highest priorities the maintenance of their cultural integrity, higher value added for the products produced in mountain areas for lowland consumption, and regulation of the influx of commercial entrepreneurs and tourists in places considered to be the home or sacred sites of mountain peoples (e.g., Godde 1999, Preston 1997, Mountain Forum 1995, The Mountain Institute 1998).

Although generalizations are fraught with risk, they are often an essential starting point in any useful analysis. In general, the unique characteristics of mountain peoples and ecosystems include economic and legal marginalization, isolation, transboundary location, diversity of livelihood strategies, cultural diversity, and environmental sensitivity and diversity.

Economic and Legal Marginalization

Mountain communities from the North American Appalachians to the highlands of southwestern China share a high incidence of poverty. People who live in mountainous regions often have lower food intake and productive capacities. This is due to, among other things, low soil fertility, shorter vegetation periods, smaller plots of arable land size, climatic vagaries, and higher caloric requirements related to lower oxygen content in the air.

Of course, not all mountain peoples are poor. There are a growing number of affluent individuals and communities in some mountain areas, especially in western Europe and in the North American Rocky Mountains. But

Figure 2. Mountain Characteristics Relevant to Law and Policy

most mountain peoples subsist on the edge of survival, struggling day to day to meet basic human needs for food and fuel. Of the 592 counties listed as poor under China's national poverty elimination program, for example, 496 are in mountainous areas (Shuncheng 1998). Parts of the Tibetan Plateau, Peru and Bolivia experience chronic food deficits due to an inability of highland communities to produce enough grain and other crops.

The reasons for economic impoverishment of mountain communities are complex and varied. Among them is the tendency of national governments to accord lower priority to the economic and development interests of mountain communities, despite their greater need. Mountain areas are usually considered to be peripheral and less productive than other areas of the national territory. Yet at the same time, national governments bestow legal favors on outside business and political interests that covet mountain resources, such as water and minerals, but have little or no interest in the well-being of mountain peoples and ecosystems. Although local employment opportunities are sometimes generated by outside interests, economic patterns in mountain areas are largely characterized by net outflows of timber (Butt and Price 2000), minerals, water, and other resources with marginal beneficial return flows. This one-way extractive pattern is typical in mountain areas designated by national law as publicly owned resources, especially when governments unilaterally grant legal concessions to outside interests to extract resources.

Isolation

Physical isolation from more populated and economically better off lowland areas inhibits mountain communities from participating in mainstream socio-economic activities or having access to benefits available in lowland societies. Geophysical barriers make it more difficult for mountain peoples to organize and coordinate range-wide strategies. Mountain communities on different slopes of the same mountain range often experience major difficulties in meeting regularly. Physical isolation and related conditions of inaccessibility can also severely limit local capacities to develop collective positions. Geographical isolation likewise limits opportunities for mountain peoples to make their voices heard in distant capitals.

At the same time, the history of collective participation and management evident in many mountainous areas suggests that isolation has merely limited the scale of collective action to immediate environments and valleys. Furthermore, improvements in telecommunications technologies are helping mitigate the challenges posed by isolation, particularly when mutual understanding of languages is not a problem.

Transboundary Location

Mountain ranges often form the legal frontiers between nation-states. As a result, many mountain peoples and ecosystems are divided along arbitrary boundaries. This further complicates the efforts of mountain peoples to join forces and promote common political and legal agendas. This obstacle also provides potential opportunities to foster international cooperation through cross-boundary efforts to conserve and sustainably develop shared mountain ecosystems.

Diversity of Livelihood Strategies

Communities in mountain ecosystems rely on small-scale production systems, resulting in higher production costs. Small-scale agroforestry, the production of non-timber forest products, pastoralism, and more recently ecotourism, are common livelihood patterns in many mountain areas. Pressures to diversify livelihood strategies in a high-hazard, fragile mountain environment are great, and many mountain communities utilize a variety of micro-economic niches up and down mountain slopes.[4]

Agricultural development strategies and other policy instruments concerned with economic development have almost uniformly failed to take the diversity of mountain livelihoods into account. A study conducted in China observed that it was "impossible to eliminate poverty through increasing agricultural crops in . . . poor mountainous areas" (Shuncheng 1998). The 1995 Intergovernmental Consultation Concerning the Sustainable Development of Mountains in Latin America in Lima, Peru framed the problem of mountain development principally in terms of the clash of two different systems of production and development (Mujica and Rueda 1995).

Certain forms of agriculture can be counterproductive in niche environments, such as erosion-prone mountain slopes. Large-scale agricultural, logging and other natural resource exploitation strategies, which may be successful in lowland areas, are often inappropriate and unsuitable for the peculiar confluence of climatic variability, altitude, and slope that define mountain environments. Monocultural plantation-style agriculture may cause irretrievable long-term damage to watersheds on erosive slopes and other upland niche environments. Such production systems are among the greatest causes of depletion of biodiversity worldwide (Senanayake 1997a).

Rather than stressing modern western production-focused models as the vehicle for progress, upland development should take place in the context of the existing worldview and structures of mountain communities, including their reliance on a diversity of crop species and ecological niches. The characteristic appearance of mountain landscapes is often an expression of the long-term relationship and husbandry of local communities toward their environment. Examples include the walled fields and pastures of upland Britain, the rice terraces of northern Luzon in the Philippines and Sulawesi in Indonesia, and the highland gardens of Papua New Guinea and Sri Lanka.

[4] For excellent case studies on the management of agricultural and forest resources in diverse mountain environments by long-term occupant communities in Japan, Switzerland and Nepal, see Ostrom 1990.

Cultural Diversity

Cultural values and other norms, many of which are based on centuries of adaptation, hold a central place in the lives of traditional mountain communities. These patterns and forms of social organization are typically unique. For example, in contrast to their lowland counterparts, in traditional mountain cultures, women often retain a high level of responsibility and control over natural resources and over finances derived from the exchange or sale of goods and services. In many traditional mountain communities, women are also the primary stewards of indigenous knowledge and natural resource management.

Indigenous and other long-term occupants of mountain ecosystems often possess invaluable knowledge regarding the sustainable utilization and conservation of local resources, including agricultural and silvicultural practices. This local knowledge is derived from their direct and immediate experience in maintaining the integrity of the natural environment where they live. Local people are better situated to control, manage and monitor natural resources due to their close proximity. When mountain peoples are forced to abandon their homelands, humanity as a whole is deprived of invaluable site-specific cultural practices and knowledge, much of it learned the hard way over long periods of time. Religious taboos and normative barriers, such as closed seasons on planting or hunting that have controlled unhindered resource exploitation and ensured local survival, will likewise be lost.

Not all traditional practices or attitudes, of course, may be appropriate for the conservation and sustainable management of mountain resources or for promoting equity. The caste system in rural South Asia, and social restrictions on women's roles in making decisions about development priorities and benefits in many parts of the world, have negative socio-economic and conservation effects (Banskota 1997 and Senanayake 1997b). Some local traditions have also already been undermined or displaced from their original religious or ethical roots due to modern inroads. Removed from their historical context and operational conditions, such structures may actually thwart efforts to promote conservation and sustainable development.

Environmental Sensitivity and Diversity

The fragility of mountain environments has been well documented (Harrison and Price 1997). Grazing was halted more than 50 years ago in parts of the western United States. Yet soil erosion and other environmental degradation have continued unabated as a result of the catastrophic imbalances created by unsustainable grazing on fragile land resources (Kunkle 1997).

The peculiar geological, altitudinal and climatic factors of mountain regions also contribute to the uniqueness of their ecosystems, including the phenomena of biological isolationism and high degrees of endemism. Many mountain regions, such as the Appalachians in the eastern United States, the Ghats in India, the Carpathians in Central Europe, and the East African highlands are biodiversity-rich islands surrounded by massive lowland seas. These mountain biomes are often the last refuge of endangered species of plants, insects and animals that have been eradicated elsewhere or constitute the remaining habitat of important relict species from ancient eras which are now restricted to specific peaks or micro-climates within a massif.

Increasing evidence of global climatic change due to anthropogenic activities suggests further threats to the viability of fragile mountain ecosystems and the biodiversity that they sustain. The deterioration of the mountain ecosystem jeopardizes not only the long-term welfare of mountain peoples and communities, but also lowland populations that depend upon stable water flows and other mountain-based resources. The Climate Change Convention and Kyoto Protocol seek to mitigate global warming by controlling greenhouse gas emissions. These instruments, however, do not directly address potentially catastrophic mountain-specific problems such as accelerated glacier melting that could cause glacial lakes to overflow and result in lowland flooding, and the effect of shifting climate belts on rare upland flora and fauna and their biomes (Bahadur 1997).

Although many of the specific problems and characteristics of mountain ecosystems also exist in other bio-geographical zones, the challenges of poverty, isolation, diversity, and environmental sensitivity are deeply entrenched and mutually reinforcing in mountain areas to a degree that may not be found elsewhere. Legal and policy mechanisms must respond to these challenges by:

- increasing access to financial resources necessary to implement any law or service,
- devoting required additional resources (including time) to understand the unique problems and opportunities confronting mountain peoples and ecosystems;
- becoming highly area-specific through careful research and community participation; and,
- recognizing the small margin for error in mountain conservation and sustainable management strategies.

International Law and Policies

Law and Policy Distinguished

POLICY TENDS TO BE GENERAL, aspirational and normative in nature. Unlike law, policy is generally non-binding and legally unenforceable. Policy statements, however, can lay the foundations for the articulation and further elaboration of norms, which may eventually crystallize into legal rules and principles. In contrast with policy, law generally embodies more specific standards that are legally binding upon the parties concerned. The breach of a policy is followed at most by moral reprimand or peer pressure. Sanctions or other enforceable measures can—at least theoretically—remedy violation of a law (Kratochwil 1989).

International policy instruments are generally non-binding expressions of intent or guidelines for proposed future national and international action. Examples include Agenda 21 and the UNCED Non-Legally Binding Authoritative Statement of Forest Principles. These broad and often unspecific statements—strong rhetoric notwithstanding—are important first steps but require further elaboration for implementation at the national and local levels. As one participant to the electronic conference observed, "[o]nce a policy framework is in place, other mechanisms such as legal provisions, institutional arrangements, incentive structures, and support systems can be developed because it is the overall policy which guides the creation of other arrangements" (Jodha 1997).

Global dialogue helps establish basic levels of internationally accepted best practices and generates peer pressure among governments to take actions specified in international instruments. International conferences, such as the 1992 United Nations Conference on Environment and Development, and other fora for creating international policies, contribute to the evolution of a common agenda among national governments. They also are increasingly serving as important vehicles for NGO participation in the formation of international norms and the dissemination of information. For example, NGOs played a major role in shaping the debate and catalyzing support for the drafting of the recently signed Landmines Convention.

In addition to the increasingly indispensable role of non-state actors, such as NGOs supportive of mountain populations and ecosystems, in creating international law and policy, another promising development is transboundary collaboration between neighboring states. Both mountain and lowland communities can derive benefits from cross-border collaboration. These benefits include cross-border tourism, cooperative efforts in conservation education and training, shared approaches to control of poaching, forest fires, movement of contraband and of livestock diseases, and recognition of mutual interests in improving the economic conditions of the local populations on both sides of mountain border areas (Davis 1997) (See Box 1, "Informal Transboundary Initiative," below).

Box 1: Informal Transboundary Initiative

One promising example of the transboundary approach is a joint initiative of Nepal and the Tibet Autonomous Region in China for managing the Mount Everest ecosystem. Although there is a treaty of cooperation and friendship between the two countries, this initiative was undertaken by extra-legal transboundary cooperation generated through the informal activities of an international NGO. "This transboundary collaboration is a bottom-up project, which is bound to gain strength over the years. Conservation workers on both sides are determined to link hands around Mount Everest despite the language barrier, the political boundaries and bureaucracies." *Source: Davis 1997 and Preston 1997*

Hard Law Instruments

TREATIES AND OTHER INTERNATIONAL conventions are binding upon states that sign and ratify them, and along with what is understood to be customary international law among nation states, are considered to be "hard law" (Brownlie, 1990; Brownlie, 1970). Enforcement however, is particularly problematic for many international law instruments and norms, because there is often no clear enforcement mechanism. In theory, parties to a treaty or convention can prescribe compliance by other parties through arbitration, an action before the International

Court of Justice or by using other institutionalized dispute resolution mechanisms.

The following hard-law treaties or conventions have an important role to play in efforts to ensure the conservation and sustainable development of mountain ecosystems. Most of these conventions are "framework" conventions. As such, they lay out objectives, overall obligations and rights of the parties, and general parameters. Framework conventions rely upon protocols and other supplementary instruments to regulate the parties' activities with regard to specific aspects of the instrument.

The following compilations do not include every law, treaty or convention that is relevant to mountain peoples and ecosystems. Indeed, with the exception of the Alpine Convention and the Strasbourg Resolution, none of the international treaties listed below are concerned exclusively with mountain issues. For example, the Convention on Biological Diversity (CBD), the United Nations Framework Convention on Climate (UNFCCC), and the Desertification Convention (DC), all seek multilateral solutions to problems affecting the general global environment. These conventions could be enhanced to provide stronger normative protections for mountain issues through the addition of protocols focusing on mountain-specific concerns relating to biodiversity, climate change, desertification and other important issues.

Convention on Biological Diversity, 1992, 31 ILM 818 (1992), in force 1995.

Given the importance of mountains as elevated islands of high biodiversity, this is a crucial document. At the Fourth Meeting of the Conference of the Parties (COP) to the Convention on Biological Diversity, held in Bratislava in 1998, mountain ecosystems were listed as an item for "in-depth consideration" in the Programme for Work for the Seventh COP to be held in 2004. Article 8(j) of the Convention, meanwhile, mandates protection of the traditional knowledge, innovations and practices of indigenous and other local communities.

United Nations Framework Convention on Climate Change, 1992, 31 ILM 849 (1992), in force.

Signed at the UNCED, the Convention on Climate Change (CCC) provides a normative framework for addressing the complex processes that are causing global warming and other climatic changes. The CCC attempts to balance two seemingly incompatible goals: 1) the need for industrialized countries to reduce human-induced greenhouse gas emissions; and 2) the equally compelling priority of developing countries to achieve socio-economic development either through accelerated use of forest products and fossil fuels, or through the transfer from industrialized countries of clean production-focused financial and technical resources. The CCC has been supplemented by the Kyoto Protocol (FCCC/CP/1997/L.7/Add.1) of 1997, which sets specific greenhouse gas emissions reduction targets for countries. This latter accord has not yet entered into force.

The CCC addresses the general effects of global warming on the global environment as a whole. It offers minimal guidance for tackling the unique and possibly devastating consequences of climate change for mountain habitats and their human communities. By recognizing that human activities have increased greenhouse gases and are adversely affecting natural ecosystems, the CCC does provides a normative starting point for recognizing the impact on mountain environments. In addition, the CCC notes the special vulnerability of specific biomes, including "fragile mountain ecosystems" (Preamble, para. 19). The potentially catastrophic effects of climate change on mountain habitats have only recently become a topic of wider discussion, with specific focus on glacial melting, watersheds and rare endemic floral and faunal species.

International Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, 33 ILM 1332 (1994), in force.

The Desertification Convention (DC) was the first accord that was proposed at the UNCED to be a legally binding treaty (See par. 12.40, Agenda 21, Chap. 12). It is one of the more progressive international law instruments. The DC does not expressly mention mountain ecosystems, but its preamble indirectly acknowledges the consequences of desertification and drought in the countries of the Transcaucus and Central Asia, regions that contain high dry mountain ecosystems.

Despite the absence of specific language on mountains, the DC has potential to contribute to the sustainable management of dry mountain ecosystems and the human communities residing in these areas. The DC recognizes that participation and the recognition of rights and interests of local communities are essential requirements for the environmental protection and sustainable development of areas experiencing drought or desertification.[5] In particular, Article 16 (d) expressly calls for adequate protection of local and traditional knowledge and for appropriate returns from the benefits derived from the use of such knowledge "on an equitable basis and mutually agreed terms to the local populations concerned." The emphasis in the DC on local communities hopefully reflects emerging acceptance of new normative standards in international law. Indeed, the DC could serve as the legal basis for national and regional regimes in dry mountain areas that facilitate equitable utilization of mountain resources through strengthening and supporting the quality of life of mountain communities.

Convention on the Protection of the World Cultural and Natural Heritage, 1972, 27 UST 40, 11 ILM 1358 (1972), in force.

The World Heritage Convention (WHC) establishes a normative regime for protecting, through international coop-

[5] See, e.g., Article 5 (d), Article 10 (2), and Article 16 (g).

eration, "cultural and natural heritage of outstanding universal value." The preamble to the WHC recognizes that cultural and natural heritage is under increasing threat not only from traditional forces such as aging, weathering and erosion, but also from "changing social and economic conditions."

The WHC states that protection of cultural and natural heritage is often inadequate at the national level because of the scale of protection required and the lack of scientific, technological and economic resources in many countries. The WHC implies an international obligation of all states to provide "collective assistance" to individual states to protect outstanding examples of this heritage for the benefit of all people. At the same time, the convention accords full respect to the sovereignty of countries where particular examples of cultural or natural heritage are located.

Article 11 of the WHC authorizes nation states to submit to the WHC Committee (which is under the auspices of the United Nations Educational, Scientific and Cultural Organization (UNESCO)), a list of examples of their cultural and natural heritage that they seek to include for protection under the Convention. Article 2 deals with "natural heritage" and is particularly important for conserving mountain areas; it refers to inclusion of "geological and physiographical formations" and "natural sites and precisely delineated areas." More than forty mountain areas around the world are on the World Heritage list, including the Virunga National Park (Democratic Republic of Congo), Mount Kenya (Kenya), Simen National Park (Ethiopia), the Pirin National Park (Bulgaria), and Yosemite National Park (USA). Inclusion of a site on the WHC list only signifies that the place is of such outstanding importance that the country desires international recognition for protection purposes. Listing does not guarantee that the particular site will be protected from further natural or human-related degradation. Nor are many important sites likely to be listed. Political, military or economic considerations may cause a government not to list some important mountain areas.

The discretionary nature of the WHC's process for listing sites, and the fact that inclusion under the convention is in many instances only a designation that a site is "outstanding," inhibits the capacity of the WHC to establish a necessary normative or substantive framework for effectively protecting mountain ranges.

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) 21 ILM 1085 (1973), in force.

The Convention on International Trade in Endangered Species (CITES) is limited to the regulation of international commercial trade of wild flora, fauna and their derivative parts, as a means for protecting endangered species from extinction. Mountain biomes are in many cases the principal or sole habitat of rare and endemic species, or of relict species which due to climatic or human factors are reduced to particular upland ranges or even single massifs. Given its focus on protecting these types of flora and fauna through sustainable trade, CITES should provide a solid legal basis for conserving many mountain species.

CITES has achieved measured success in protecting certain species, as exemplified by the 1989 decision of the CITES conference of the parties (COP) to list the African elephant on the convention's Appendix I, thereby prohibiting the international commercial trade in African elephant ivory.[6] The convention, however, does not address other factors that are equally threatening to the survival of species. These forces include local harvesting for domestic subsistence and commercial purposes, such as the widespread bushmeat trade within many African and South American countries (Bowen-Jones 1999, Wilke et al. 1998). CITES also does not address the growing problem of resource conflicts between expanding human populations and wildlife over remaining habitats (Parker and Graham 1989). For many endangered species in mountain areas, as well as in other biomes, habitat destruction is as serious a threat to long-term survival as is over-exploitation for international commercial trade. Because CITES focuses on species and not the ecosystems they inhabit, it offers little in terms of legal tools for conserving mountain biomes.

Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs), 33 ILM 1197 (1994).

Negotiated in the Uruguay Round of the General Agreement on Tariffs and Trade (GATT), the TRIPS Agreement is the most important international legal instrument on intellectual property rights. It sets minimum standards for national protection of intellectual property rights and establishes procedures and remedies for their enforcement. Its enforcement measures—including the potential for trade sanctions against non-complying World Trade Organization (WTO) members—are unprecedented in the field of international intellectual property rights.

The TRIPs Agreement states that all countries must either issue patents for plants or implement an "effective *sui generis*" system that would, among other things, recognize the rights of local farmers to their traditional seed varieties, including the right to trade them. This exception exists because many countries—on economic, legal or ethical grounds—rejected the United States Government's demand for patenting of plants and animals (Downes 1997). How to implement the *sui generis* exception, however, is unclear and remains a matter of great contention.

International Union for the Protection of New Varieties of Plants (UPOV), 1961 (amended in 1972, 1978 and 1991).

Related to the TRIPs Agreement is the International Union for the Protection of New Varieties of Plants or UPOV. The

[6] At the tenth COP in 1997, an amendment to the Appendix I ("endangered") listing, transferred elephant populations in Botswana, Namibia and Zimbabwe to Appendix II ("threatened"). This re-listing permits a very limited regulated commercial trade in ivory derived exclusively from elephants in these countries.

acronym is derived from the French name of the organization: *Union internationale pour la protection des obtentions vegetales.* UPOV is an intergovernmental organization that works closely with the World Intellectual Property Office (WIPO). UPOV was created by the International Convention for the Protection of New Varieties of Plants in 1961 to protect new plant varieties and the interests of breeders and innovators. The convention has since been amended three times. The most recent amendment in 1991 came into force in 1998. As of year-end 1999, only forty-four countries have ratified the UPOV Convention, and ratification is divided between the 1978 and 1991 amended conventions.

UPOV grants exclusive private rights called plant breeders' rights (PBRs)—a form of intellectual property rights—to innovators of new plant varieties. PBRs are granted if plant varieties meet the specified criteria of *distinctiveness, uniformity, stability* and *novelty*.

UPOV is relevant for mountain communities that conserve and breed plant genetic resources. These communities need to be aware that PBRs can be attached to local plant varieties, thereby usurping the rights of local farmers and small-scale breeders. UPOV largely protects interests of seed corporations, often at the cost of small indigenous farmers. Mountain communities should be careful to ensure that varieties developed by them are not coveted and privatized by commercial breeders.

ILO Convention No.169 Concerning Indigenous and Tribal Peoples in Independent Countries, 1989, 28 ILM 1077 (1990), in force.

ILO Convention No.169 is the leading international human rights instrument calling for recognition of indigenous territorial rights. Article 13 specifies that references in the Convention to land "shall include the concept of territories, which covers the total environment of the areas which the people concerned occupy or otherwise use." Article 14 mandates recognition of the rights of indigenous peoples to own and possess their traditional territories. Article 15 adds that "The rights of the peoples concerned to the natural resources pertaining to their lands shall be specially safeguarded. These rights include the rights of these peoples to participate in the use, management and conservation of these resources." ILO members are legally obligated under Article 19 of the organization's founding charter to implement the convention. Article 19, however, has yet to be effectively enforced.

Convention on the Protection of the Alps, 1991, 31 ILM 767 (1992), in force 1995.

A prime example of transboundary collaboration, the convention is a comprehensive, regional agreement for the protection and sustainable development of the Alpine areas of seven European countries. It avoids division along national lines and treats the Alps as a "uniform geographical area within Europe." The characterization of a mountain range as an international region to be protected and developed is legally unprecedented; the Alps is the first mountain range to be covered in its entirety under an international instrument.

The Alpine Convention is also notable for its attempt to construct a political framework in which tradition and the modern world can find common ground, within an "anthropologically shaped cultural landscape." It provides for incorporation into the broader national and regional land use plans of traditional farming and silvicultural practices in order to preserve the ecological soundness of the Alps. Under the convention, Alpine states are obligated to take appropriate measures to respect, preserve and promote the social and cultural identity of the population living in the region.

The convention requires Parties to pursue a comprehensive policy of protection and preservation and commits them to trans-frontier cooperation. These general obligations are to be implemented through protocols on mountain agriculture, land use planning, mountain forests, leisure activities, protection of nature and landscape management, population and culture, prevention of air pollution, etc. The protocols on economic development address the desires of local Alpine governments to promote attractive living areas as well as conservation (Messerli 1999).

European (Aarhus) Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (1998), not yet in force.

The Aarhus Convention grows out of an international process to define the concept of public participation in the context of sustainable development. The three principles of the Convention, broadly stated, are: 1) the public should have access to environmental information, with limited, explicit exceptions (the principle of access to information); 2) the public should have a right to participate and have that participation taken into account in environmental decision-making processes (the principle of access to decision-making); and, 3) the public should ultimately have access to an independent and impartial review process, capable of binding public authorities, to allege their rights have been infringed (the principle of access to justice). The Convention is the first time that States have agreed on the minimum content of these principles and established their minimum procedural elements in a single, legally binding international agreement.

The Convention creates domestic obligations for ratifying European states. The majority of the provisions are not addressed to international organizations (other than possibly the European Union). Rather, they are addressed to the public authorities of national governments. At the same time, the Convention requires each Party to "promote the application of the principles of this Convention in international environmental decision-making processes and within the framework of international organizations in matters relating to the environment."

Soft Law Instruments

DURING THE PAST HALF-CENTURY new legal norms have been shaped and promoted by a range of instruments that do not fall into traditional international law categories of treaties and conventions or custom. Soft law instruments can herald and help shape the development of new normative standards for appropriate and wise conduct. The legal status of these instruments has been a major subject of discussion among international law scholars, one of whom has described soft law as ". . . either not yet or not only law" (Dupuy 1991).

Many soft law instruments are a product of meetings organized under the auspices of international organizations, such as UNCED in 1992, the World Conference on Human Rights in Vienna in 1993, the World Summit for Social Development in Copenhagen in 1995, and the Fourth World Conference on Women in Beijing in 1995. Additionally, NGOs and other non-state actors have already played a significant role in the creation of soft law instruments. Examples include the Forest Stewardship Council's Principles and Criteria for Natural Forest Management, the Charter of Indigenous-Tribal Peoples of the Tropical Forests, and the SUDEMA Declaration. Although water is a critical resource in mountain areas, no relevant soft law documents were identified during the preparation of this report. That should not imply that none exist but rather that this a potential gap in law and policy instruments that are relevant to the conservation of mountains.

Soft law represents a blurring between what has been traditionally understood as "law" and "policy." Soft law instruments such as declarations, resolutions, and codes of conduct are a weaker expression of the norm-creating process than binding hard law instruments such as treaties. Soft law often reflects the early seminal stage in the creation of a new international legal norm. A norm identified only in a soft law instrument may not be legally enforceable by itself, but it may ultimately acquire some degree of legal efficacy. In many respects, law-making processes are fundamentally political. Soft law instruments reflect this and their creation is an important component that should be considered in the development of norms and advocacy strategies.

There is an array of soft law instruments that promote the sustainable management of mountain peoples and ecosystems. Some explicitly address mountain issues while others do so only implicitly. The more prominent soft law instruments include:

The Mountain Agenda: Chapter 13 of Agenda 21 "Managing Fragile Ecosystems: Sustainable Mountain Development," A/CONF.151/26, 13 August 1992.

Several chapters of Agenda 21 of the 1992 UNCED are relevant to mountain peoples and ecosystems. The most important is Chapter 13. It draws attention to mountains as distinct ecosystems that merit special attention within the broader dialogue on sustainable development. Chapter 13 identified priority areas for action and urged "interested Governments" to prepare and implement comprehensive national and local mountain development programs. As with Agenda 21 as a whole, implementation of Chapter 13 has been highly variable, and most countries have yet to create comprehensive mountain development plans.

International NGO Consultation on the Mountain Agenda, Lima, Peru, February 1995.

The International NGO Consultation on the Mountain Agenda was attended by representatives of over 120 NGOs working on mountain issues. During the Consultation priorities for implementing the Mountain Agenda were identified, and the Mountain Forum—a coalition of NGOs and other partners interested in promoting sustainable development of mountain areas, developing mutual support, and disseminating information—was established. The Consultation identified nine key thematic areas affecting the lives of mountain peoples: Cultural diversity, Sustainable development, Production systems and alternative livelihoods, Local energy demand and supply in mountains, Tourism, Sacred, spiritual, and symbolic significance of mountains, Water towers, Mountain biodiversity, and Climate change and natural hazards.

Recommendations for addressing the specific concerns of mountain communities were drafted during the consultation. They included respecting and documenting indigenous knowledge, conserving mountain biodiversity, developing alternative livelihoods for mountain peoples, respecting the sacred values attached to mountain areas, educating lowland communities about mountain specifics, increasing decentralization and democracy in the governance of mountain areas, developing new land-use and tenure classifications, and conducting both environmental and cultural impact assessments, especially with respect to tourism.

European Inter-Governmental Consultation on Sustainable Mountain Development, Trento, Italy, 7–11 October 1996.

Twenty European countries and the European Commission endorsed a document titled "Sustainable Mountain Development in Europe," during the Second Session of the European Inter-governmental Consultation on Sustainable Mountain Development, held in Trento, Italy. This session followed one held in Aviemore, Scotland in April 1996.

The document recognized the cultural and economic diversity of mountain peoples in Europe. It addressed a range of issues from migration and unemployment, to sustainable development, energy and forests. It stressed the urgency of promoting economic development and poverty elimination in mountain areas and recommended that "access to resources, education, health care, telecommunications and economic opportunities should at least be equal to lowland and urban areas if young people are expected

to remain in mountain communities." It also emphasized, among other concerns, the probable effects that climate change will likely have on mountain areas. The document's analysis of mountain conditions, and the proposed recommendations are European-specific, for instance, "develop information systems for European mountains, and promote an integrated policy framework for mountains in Europe;" the principles, however, are applicable to other mountain communities around the world.

The European NGO Consultation on Sustainable Mountain Development: Recommendations of NGOs and Mountain Populations to Governments and to the European Union, Toulouse, France, July 1996.

During the European NGO Consultation on Sustainable Mountain Development a detailed list of recommendations was developed. The list included supporting multidisciplinary research in mountain areas, developing a European Charter for Mountain Tourism, and undertaking land management strategies for maintaining viable populations in mountain areas. Some unusual recommendations were also made, such as reducing "the nuisance caused by air traffic over and through the mountains to a level that is bearable to inhabitants and the environment." The consultation also addressed issues related to forests, agriculture, and planning and infrastructure.

Final Declaration, European Convention of Euromontana, Ljubljana, October 1998.

The Final Declaration lamented that economic expansion often bypasses, and adversely affects rural communities, including mountain peoples. It stressed the need for sustainability and balance in developing policies, and issued an alert that "If these tendencies become accentuated, the entire European society will suffer a cultural, economical, environmental loss and serious diminution of food variety."

The Declaration makes very specific suggestions related to economic, agricultural and income-generating activities of mountain peoples. It calls "upon all the mountain populations of Europe to mobilize, to work for sustainable development in their mountain regions, and to obtain a fair recognition of their essential function in society."

"The Kathmandu Declaration on Mountain Activities," International Union of Alpinist Associations (UIAA) 44th General Assembly, 16 October 1982.

At the conclusion of the first ever UIAA meeting in Asia, delegates from twenty-six nations resolved to adopt ten principles and guidelines as a program for action. These were included in Articles of Declaration averring, among other things, that: "There is an urgent need for effective protection of the mountain environment and landscape;" "The cultural heritage and dignity of the local population are inviolable;" and "The use of appropriate technology for energy needs and proper disposal of waste in the mountain areas are matters of immediate concern."

"Guidelines for Mountain Protected Areas," IUCN Commission on National Parks and Protected Areas. Synthesized and edited by Duncan Poore 1992.

The Guidelines for Mountain Protected Areas are the product of a conference among scientists, managers and other interested parties held in 1991 in Volcanoes National Park, Hawaii. The conference was sponsored by the International Union for the Conservation of Nature and Natural Resources (IUCN) and the East-West Center as a means for developing a normative framework for conserving mountain resources. The Guidelines are not designed to be legally binding. They are a general set of recommendations designed for use by individual countries in developing national policies tailored to specific conditions in mountain regions. They include provisions for ensuring that governments provide for the participation of local mountain communities in the development of national conservation policies.

The Guidelines also cover a broad range of other topics including: addressing the protection and management of trans-frontier mountain areas; water and soil conservation; land tenure and land utilization; grazing, harvesting and other resource utilization and exploitation practices; and meeting the cultural and economic needs of communities in mountain protected areas. The Guidelines likewise established a set of recommendations for dealing with the impacts of global climate change on mountain ecosystems.

"Ecological Guidelines for Balanced Land Use, Conservation and Development in High Mountains," UNEP-IUCN-WWF 1979 by R.F. Dasmann and D. Poore.

Commissioned by the United Nations Environment Programme (UNEP) and prepared in collaboration with the IUCN, this document is intended to foster ecologically sound development of mountain resources. Besides providing guidelines for ecologically appropriate development programs, it urges that any new laws or regulations include an environmental impact assessment.

African Mountains and Highlands Declaration of Antananarivo, International Workshop of the African Mountains Association, held in Antananarivo, Madagascar, 26 May–1 June 1997.

The declaration is an articulation by NGOs of major socioeconomic and environmental issues affecting African mountain ecosystems. It provides very general policy recommendations, including: 1) more sustainable mountain development, 2) action oriented mountain research, 3) inter-institutional communication and collaboration, and 4) paying special attention to Madagascar, the site of the conference.

Charter for the Protection of the Pyrenees, Conseil International Associatif pour la Protection des Pyrénées (CIAPP) 1995.

Some of the major challenges in industrialized countries to the sustainable development of mountain ecosystems are highlighted in the Charter. They include: out-migration of mountain people to lowland urban areas; abandonment of traditional pastoral, agricultural and silvicultural practices that are appropriate in mountain locales and give mountain landscapes a unique character; recent in-migration of tourist and leisure industries; and accelerated construction of roads and other large-scale infrastructure projects. As a policy statement, the Charter is not prescriptive. Rather it provides a common agenda for governments to follow. The Charter closes by warning that "declarations of intent are not enough. We must continue dialogue with all our partners to determine the new criteria and rules which will be able to guide a sustainable mountain economy and to define how to measure correctly the costs and benefits of such an economy."

Un Mémorandum Français sur la Politique Européenne de la Montagne. France. 13/7/1996–1453. La République Française.

A *Memo on European Policy on Mountains* prepared by the French Government in 1996 promotes national integration of mountain policies within European Union state programs and on an EU-wide basis. The Memo stresses the need to maintain mountain agriculture. It recognizes the importance of creating special designations for "mountain quality products" to enhance their marketing image. According to the memo, the ultimate goal of European mountain policy should be to allow local populations and their elected officials to acquire ownership over their development in order to establish parity of revenues and living standards between mountain areas and other regions while respecting mountain cultural identity.

The Sustainable Development of the Mountain Areas of Asia (SUDEMA) Call to Action, Kathmandu, 1994.

The SUDEMA Call to Action was adopted in December 1994 at a Conference organized by the International Centre for Integrated Mountain Development (ICIMOD) in Kathmandu, Nepal. It stresses the urgency of improving the livelihoods and environment of mountain peoples, and identifies key areas for accelerating the sustainable development of mountain areas. It identifies poverty eradication, sustainable natural resource management, gender-balanced decision-making, and preservation of cultural heritage as priorities. It also emphasizes the need for integrating indigenous knowledge in mountain development processes.

Addressing the lack of any cohesive institutional focus for promoting sustainable development in mountain areas, the Call to Action proposes the establishment of National Mountain Task Forces/Commissions. These proposed entities would be primarily responsible for developing comprehensive National Plans of Action for Mountain Areas. The Plans are to address promoting more effective collaboration among mountain nations in Asia through the establishment of an Association of Asian Mountain and Upland Institutions, capacity-building through education and human resource development, and improving opportunities for financing development in mountain areas.

Intergovernmental Consultation Concerning the Sustainable Development of Mountains in Latin America, Lima, Peru, August 1995.

At the invitation of the Food and Agriculture Organization (FAO), representatives of eleven Latin American governments gathered to identify challenges and develop strategies for the implementation of Chapter 13 of Agenda 21. The Consultation is considered particularly significant in its articulation of the special concerns of developing countries with mountain resources.

The first priority identified during the Consultation was the need to address conflicts that hinder efforts to promote sustainable development in the mountains of Latin America. In that regard, the Consultation concluded "the state must assume the critical role of acting as a mediator (advocating conciliation) promoting social equity, and the basic component of sustainability, among others." It emphasized the need to foster consolidation and collaboration among the countries of Latin America, "with the idea of uniting toward the achievement of one common goal/end." The Consultation also called on developed (minority world) countries to "assume in proportion to their responsibility, the goal of mitigation of so-called global environmental liabilities . . . , which particularly affect sensitive areas, or extremely sensitive areas, such as mountains."

The importance of involving local people and communities and municipalities in the management of mountain areas was emphasized during the Consultation, as was the role of civil society. Recommendations included the development of information technologies for disseminating knowledge, such as geographic information, for mountain areas of Latin America.

Some soft law instruments are not mountain-specific but are relevant to mountain peoples and ecosystems. Some of the more important and prominent instruments include:

World Charter for Nature, UN GA Res 37/722, ILM 455 (1982).

The World Charter for Nature stresses the need to conserve natural resources, and highlights concepts of recycling, waste minimization, restrained consumption, environmental assessment and responsible behavior. The Charter's universal relevance is evident in its prescription

that: "All persons, in accordance with their national legislation, shall have the opportunity to participate, individually or with others, in the formulation of decisions of direct concern to their environment, and shall have access to means of redress when their environment has suffered damage or degradation."

The Charter articulates the intrinsic value of nature, irrespective of its utility to humans. It emphasizes the link between human civilization and nature. The Charter also reflects the beliefs of indigenous and other rural communities who live in harmony with their natural environments. Mountain peoples—because of their intimate relationship with nature, and the unique attributes of their regions—might find support in the Charter's recommendation in Article 3 that "All areas of the earth, both land and sea, shall be subject to these principles of conservation; special protection shall be given to unique areas, to representative samples of all the different types of ecosystems and to the habitat of rare or endangered species."

International Undertaking on Plant Genetic Resources, 1983 (amended in 1989 and 1991).

The International Undertaking on Plant Genetic Resources was adopted at a Food and Agricultural Organization conference in 1983. It was developed with the aim of establishing international norms for the distribution and utilization of plant genetic resources, particularly those of economic and social importance. Subsequent interpretations and revisions to the original Undertaking were annexed as the 1989 and 1991 Resolutions.

The 1991 Resolution reversed the original founding principle that plant genetic resources are the common heritage of mankind. In its place, a new principle that holds plant genetic resources as the sovereign property of nations was adopted. The principle of Farmers' Rights, which recognizes the role of farmers as breeders and innovators, was also adopted. Procedures for defining and enforcing the rights of farmers, however, have yet to be developed. Moreover, the concept of Farmers' Rights is limited to ascertaining the monetary value of farmers' contributions. The 1991 Resolution mentions the creation of an international fund that would monitor benefit sharing, but there are concerns that this would divest indigenous farmers of authority and control, rather than foster equitable sharing of benefits.

Though the Undertaking is amorphous and not legally enforceable, its importance as an international guideline-establishing document should not be undermined. Mountain peoples, in collaboration with national and international NGOs could use, and where necessary adapt, principles of the Undertaking to meet their special needs. In that regard, the twenty-seventh session of the FAO Conference in 1993 acknowledged the need to reconcile the goals of the Undertaking with those of the CBD. It also acknowledged the need to regulate access to germplasm collections concentrated in minority world nations, i.e. developed countries.

Global Plan of Action and Leipzig Declaration of the International Technical Conference on Plant Genetic Resources, Leipzig, Germany, 17–23 June 1996.

The *Leipzig Declaration* and the *Global Plan of Action* were agreed to during the Fourth International Technical Conference for Plant Genetic Resources, convened by the Food and Agriculture Organization. The primary aim of the Leipzig Declaration is to promote the conservation and sustainable utilization of plant genetic resources, and to ensure that benefits arising from their use are equitably shared. The Declaration recognizes nations' sovereign rights over their plant genetic resources for food and agriculture, and also acknowledges the roles played by farmers, plant breeders, and indigenous and local communities, in conserving and improving these resources. While the Leipzig Declaration is a list of objectives and ideals, the Global Plan of Action is a blueprint for achieving them.

Strasbourg Resolution 4: Adapting the management of mountain forests to new environmental conditions. Ministerial Conference on the Protection of Forests in Europe (1990).

Signed by 24 European countries and the European Union, the resolution recognizes the political, environmental, socio-economic, cultural, and scientific importance of mountain forests and calls for developing a coordinated European Mountain Forest Action Plan to serve as a framework for cooperation on and implementation of specific national actions. Common objectives include sustainable management and development, promotion of multifunctionality and compensation for management constraints, reinforcement of knowledge (ecological and socio-economic), prevention of risks, protection of natural resources and conservation of biodiversity, and implementation of international commitments. Common actions called for in the resolution include training and research programs and the elaboration of a code of conduct for the conservation of biodiversity (Zingari 1999).

Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests, 1992, 31 ILM 881 (1992).

This oddly titled instrument reflects the difficulty of developing international legal norms concerning forest resources. The statement is a potpourri of competing and often conflicting principles. Sections potentially supportive of mountain peoples include 5(a) which avers that "National forest policies should recognize and duly support the identity, culture and the rights of indigenous people their communities and other communities and forest dwellers" and 5(b) which calls for "the full participation of women in all aspects" of forest management. The statement also

asserts in section 12(d) that "Appropriate indigenous capacity and local knowledge regarding the conservation and sustainable development of forests should . . . be recognized, respected, recorded, developed and, as appropriate, introduced in the implementation of programmes."

Forest Stewardship Council's Principles and Criteria (1999).

The Forest Stewardship Council (FSC) is a voluntary organization comprised of environmental NGOs and private businesses. It was established to promote the sustainable use of forest resources pursuant to a global standard of ten recognized principles. The FSC manifests a belief that consumers want to make more informed and environmentally friendly purchases of forest products. As such, the FSC accredits organizations that have demonstrated capacity to certify whether or not forest products have been harvested in compliance with its ten principles. This certification system ensures an independent evaluation of a forest company's practices.

Principle 3 provides that "The legal and customary rights of indigenous peoples to own, use and manage their lands, territories and resources shall be recognized and protected." Principle 6 requires that "Forest management shall conserve biodiversity and its associated values, water resources, soils and unique and fragile ecosystems and landscapes and, by so doing, maintain the ecological functions and integrity of the forests."

Draft United Nations Declaration on the Rights of Indigenous Peoples, 34 ILM 541 (1985).

The Draft Declaration was adopted by representatives of indigenous peoples and organizations meeting in Geneva, Switzerland in preparation for a meeting of the United Nations Working Group on Indigenous Populations. It avers that "All indigenous nations and peoples have the rights to self-determination, by virtue of which they have the right to whatever degree of autonomy or self-government they choose." It likewise asserts that "Indigenous nations and peoples are entitled to permanent control and enjoyment of their aboriginal ancestral-historical territories."

Proposed American Declaration on the Rights of Indigenous Populations OEA/Ser.K/XVI RECIDIN/doc.4/99 (1999 draft in progress).

The Organization of American States (OAS) is formally considering the adoption of an American Declaration on the Rights of Indigenous Populations. A draft of the proposed declaration was considered by the OAS General Assembly in 1999 and a Working Group has been constituted to continue developing the draft.

The official draft now under consideration recognizes that "the control and use of land, territories, resources, bodies of water and coastal areas are a necessary condition for the survival, social organization, development and the individual and collective well-being" of indigenous peoples. It also declares that "Indigenous peoples have the right to legal recognition of . . . territories and property."

Draft Declaration of Principles on Human Rights and the Environment (1994).

This Draft Declaration is the first international instrument that comprehensively addresses the linkage between human rights and the environment. It was composed in Geneva by an international group of experts invited by the Sierra Club Legal Defense Fund on behalf of the UN Special Rapporteur on Human Rights and the Environment. The declaration reaffirms that accepted environmental and human rights principles include the right of each person to a secure, healthy and ecologically sound environment. It highlights the environmental dimensions of legally recognized human rights such as the right to life, health and culture. It also describes procedural rights, such as the right to participation, that are necessary for the realization of substantive human and environmental rights.

National (Domestic) Laws and Policies

IN THE CONTEMPORARY INTERNATIONAL ORDER, legal authority still rests largely with nation-states. While international laws and policies directed at promoting the well-being of mountain peoples and ecosystems can provide useful tools for setting global standards and addressing the transboundary nature of some mountain ranges, national legislation is usually much more effective for addressing domestic issues within particular countries (Gabelnick et al. 1997). One important reason is that national laws and policies are typically more reflective of unique historical, cultural and environmental factors.

National governments have the responsibility of enacting and implementing domestic laws and policies. This is a major task. Besides responding to the demands and expectations of domestic constituencies, national regimes often must adapt and concretize amorphous expressions in international law to fit the specific political, geophysical and financial circumstances within their national territories (Gabelnick et al. 1997).

National (and state) laws and policies can be used to support mountain communities, for instance, by providing them with incentives and insuring them against some political and financial risks. National laws can likewise establish broad standards and processes for promoting sustainable development while according local communities flexibility to design and implement strategies for meeting the standards. These standards and processes can be blended with regional and local concerns to create more efficient and appropriate regulatory and incentive structures. A mixture of legally enforceable and voluntary mechanisms, for example, might be the most cost-effective framework for facilitating conservation goals (Jain 1997a). Governments can also allocate funds to encourage and promote resource management strategies that are more regionally and locally appropriate. One legal option is to blend protected and multiple use areas such as the Makalu-Barun National Park and Conservation Area in Nepal (Keiter 1999).

Although national governments may formally adopt the overall objective of sustainable development, ratify specific international environmental agreements, and even enact implementing legislation, actual implementation is all too often poor or completely lacking. One reason for this is the "complete divorce between what's written in the laws and regulations and the way local governments implement them. Local authorities often do not know nor understand the laws they are supposed to implement" (Justicia 1997). Lack of knowledge, insufficient resources, or a simple lack of political will frequently precludes the enforcement of otherwise good laws.

A major challenge is for mountain communities to gain interest and support for their objectives and projects from local, state and national government officials. One possible strategy for gaining government support is to demonstrate the success of projects that can be replicated in other areas (Recharte 1997). When evaluating the impact of laws and policies, it is also often important to look at the actions of NGOs, community groups and other private actors. Local community implementation and monitoring of compliance has great potential, as the sustainable management of fragile mountain ecosystems requires a thorough knowledge of ecosystem processes and land use history. Public interest lawyers and other civil society advocates can sometimes play a key role in ensuring implementation by filing cases in courts and otherwise bringing public pressure on recalcitrant governments.

A summary listing of some national and sub-national laws and policies follow. The list does not include every important national law and policy related to mountains. Rather it is intended to provide a representative sampling. As with their international counterparts, many national laws and policies do not specifically address mountain peoples and ecosystems but are nevertheless significant for addressing mountain issues.

Austria

Austria has the highest proportion in the European Union of agriculture and forestry activities in hill and mountain areas. In a 1996 Ministry of Agriculture and Forestry Memorandum on Mountain and Hill Farming and Forestry in Europe, the Government of Austria declared that preserving mountain farming and forestry is a top priority for

Austria. The present Austrian policy of *Bergbauernsonderprogramm* entails direct payments to farmers, depending on the severity of natural handicaps affecting their farms and income levels. Reviews of EU agricultural policy, however, indicate that existing policies and structures do not offer satisfactory solutions to mountain area problems. The need for a socially equitable and ecologically responsible policy for preserving small-scale farming is recognized.

The current Austrian program echoes the French one (summarized below). It attempts to mitigate the socio-economic constraints that mountain peoples often suffer due to topography, climate and other factors such as distance from markets. Natural constraints limit potentials for rationalizing and maximizing agricultural production. Revolutionary technological advances over the past fifty years have further widened the gap between more favored lowland areas and mountain areas, leaving mountain farm incomes lagging and threatening the existence of mountain life.

Austria's mountain policy recognizes a diversity of interests in mountain resources, including leisure, natural resource extraction, farming, and forestry. Consequently, it calls for a multi-sectoral approach. For EU States, this means "unity without uniformity" and a re-orientation of the CAP (compensatory allowances for mountain and hill farming). It also calls for an EU aid policy to ensure that mountain farmers have greater flexibility in managing smaller, marginal farms so that they can make an adequate living.

Bulgaria

Over a third of Bulgaria's land area is mountainous and over half of these regions are state owned. In 1996 the Parliament of Bulgaria approved a law on the development of mountain areas. It establishes a national policy concerning mountain development and calls for the creation of supportive institutions, including an Association of Mountain Communities. The law also promotes economic activities in mountain areas. Mountain populations are to benefit from a preferential regime regarding natural resource use, including a reduced tax on water use commensurate with the role of specific mountain communities in protecting national water supplies. Subsidies to be determined by the National Council of Mountain Regions in accord with the Committee of Forests and the Ministry of Agriculture are likewise to be provided for afforestation efforts, for following sustainable forest management plans, for creating stands of valuable trees including chestnut and cherry, and for forest management which reduces erosion or protects water catchments.

The law also encourages the adoption of effective measures to counter floods and avalanches, limits the areas available for second homes and tourist sites, and provides tax reductions for companies whose principal activities are carried out in the mountains. It places a prohibition on forest cutting in important water catchment areas. The State, meanwhile, is to allow free use of its property for the creation of microenterprises based on mushroom drying, medicinal herbs, forest fruits, pine-cone drying, wood residue recycling, conifer nurseries, extraction of volatile oils, balsamic resin and charcoal extraction.

Canada

A Working Group of representatives of the territorial government, NGOs, and local community elders developed the Northwest Territories Traditional Knowledge Policy, which is a set of guidelines for incorporating traditional knowledge in official decision-making and programming. The policy does not consider intellectual property rights in isolation or only in terms of wildlife preservation. The policy also applies to the Departments of Education, Renewable Resources, Justice, and others. The result is a holistic, cross-sectoral application of the traditional worldview of local communities to the workings of a regional government. Although this concept of cross-sectorally applying indigenous knowledge was included in the Convention on Biological Diversity and Agenda 21, no government other than that of Canada's Northwest Territories has created explicit policies on the subject (Davis and Ebbe 1993).

France

The National Mountain Law for France of 1996 acknowledges—belatedly—that mountains constitute unique geographic, economic, and social phenomena that require specific policies for development and protection. This law also recognizes the difficulties faced by mountain communities. These include limitations on land use and increases in the costs of labor due to altitude and climatic conditions that create shorter growing seasons, as well as steep slopes that render mechanization impossible or practical only through the use of expensive special equipment. Due to these mountain-specific conditions, the law provides for special compensation to people living in the country's mountain regions. This compensation represents 75% of all compensation given to disadvantaged zones in France. Given the great variability in mountain conditions, the compensation is adjusted for slope, altitude, and climate.

Under the French law, each mountain zone and adjacent areas form a single geographic, economic and social entity constituting a massif that is delineated by decree. The law establishes a National Council of Mountains presided over by the Prime Minister, which includes representatives from the European Parliament and national organizations representing mountain peoples from each massif. Unfortunately, the National Mountain Law was enacted after many ghost towns used only by seasonal tourists for winter sports were already built, and local farmers had already relocated to higher, more remote mountain areas or moved to lowland areas (Messerli 1999).

India

See Box 2, "Risks Associated with Devolution of Power," on next page.

Box 2: Risks Associated with Devolution of Power

Devolution of power to local communities is generally believed to be a good idea. Among other things, it often enhances local incentives for sustainable natural resource management. There are risks, however, in legally transferring powers of planning, implementation, and administration from central authorities to local government units.

The Ladakh Autonomous Hill Development Council Act of 1995 (LAHDCA), which was passed by the central government, resulted in a devolution of power that for several reasons did not have the desired effect. The LAHDCA limited the independence of the local councils by requiring approval of plans and budgets by the State government, while the Central government controls most external funding. At the same time, the council's representation reflected an urban, elite stratum that institutionalized divisions between Buddhists and Muslims while failing to address adequately other important differences, such as gender, age, occupation, and class. This compromised the council's overall effectiveness in promoting social equity and sustainable resource use. The LAHDCA experience highlights the special challenges posed by a diverse local population and the risk of continued domination by local elites.

Devolution strategies need to be carried out equitably and with due concern for differentiation within targeted populations. As with transboundary challenges, community-based natural resource management strategies present an opportunity to bring different groups together around common issues of concern, but only if handled with care and with significant investment of time and resources in a participatory process.

Editor's summary of "Thoughts on the Ladakh Autonomous Hill Development Council Act of 1995," taken from an email submission to the electronic conference (van Beek 1997) and subsequent personal communication (van Beek 1999).

Italy

The Constitution of Italy includes a separate clause on mountain areas. The Law on the Development of Highlands (Law 1102 of 1971) is the implementing mechanism. It emphasizes the importance of mountain and upland protection and mandates the efficient use of their resources and landscapes. It also provides for the establishment of Upland Development Authorities that provide local communities with fora for shaping their own development policies and support for more democratic self-administration. Mountainous provinces in Italy (D'Aosta and Boltzano (Upper Adige-Trentino)) have special status and more independent roles in economic and social development. See also Box 3.

Japan

Japan's 1994 Basic Environment Plan notes that mountains are characterized by a relatively low degree of human interference and describes them as the skeletal framework for the entire ecosystem of Japan. The law also states that population decreases and aging of the remaining populations impairs the environmental conservation capacities of mountain areas. The emphasis of the plan is on mountains as unspoiled areas. It calls for conservation of mountains through the creation and restoration of protected areas. The mountain chapter of Japan's National Action Plan for Agenda 21, by contrast, focuses mainly on forestry policy, although it also includes a general commitment to improving infrastructure in mountain areas.

Nepal

The Community Forestry Regulations in Nepal provide a useful example of the devolution of rights, responsibilities, and benefits to local forest user groups (FUGS). The aim is to promote conservation and sustainable development in ecologically sensitive highland environments. Recognizing the role of women as the main actors and effective managers of forest resources, the regulations mandate greater gender equity in representation, decision-making, and benefits (Joshi 1997).

Philippines

Like many nations with large mountain ecosystems, the Philippines has no mountain-specific national laws. But it does have an array of laws that affect mountain resources and peoples. In 1975 the martial law regime of President Ferdinand E. Marcos decreed that all areas above 18 degrees in slope were to be classified as public forestland. The decree was ostensibly based on an unsubstantiated "scientific" theory that approximately 40% of the national landmass should be forested and that upland areas are best suited for this purpose. Most of the nation's indigenous peoples, including many mountain-dwelling peoples in the Gran Cordillera of northern Luzon, were adversely affected by the decree. During the 1970s and early 1980s many ancestral domains in mountain areas were overlaid with large commercial timber concessions granted to outsiders friendly to the martial law regime.

After Corazon Aquino became president in 1986, the Philippine Department of Environment and Natural Resources (DENR) became more responsive to upland communities, including indigenous peoples. The DENR began delineating the perimeters of ancestral domain claims in the early 1990s, and a large-scale community-based forest management program was launched. By June 30, 1998, over eight percent of the country's total land mass, or over 2.5 million hectares, including many mountain areas, was officially covered by Certificates of Ancestral Domain Claims, and even more areas were covered by different types of tenure instruments under various community forestry programs.

Legislative efforts to convert the ancestral claims into ancestral titles received a big boost in 1997 when the Philippines Congress passed the Indigenous Peoples' Rights Act (IPRA). The new DENR administration under President Joseph Estrada, who became president on June 30, 1998, has been much less supportive of efforts to gain legal recognition of ancestral-domain rights and to promote community-based forestry. A constitutional challenge to IPRA, supported by a powerful mining industry, is now pending before the Philippine Supreme Court.

Russia

The Parliament of the Republic of Northern Ossetia-Alania approved a Law on Mountain Territories on 30 December 1998. The law covers all aspects of sustainable development in the small mountainous republic in the northern Caucasus, including taxation, ownership, and protection of historical, cultural and architectural resources. It also includes articles on the definitions of mountain territories and their legal boundaries, local communities' rights, state responsibilities, etc. A post-Soviet creation, the law emphasizes centralized development but is nevertheless noteworthy as the first law of its kind in the Commonwealth of Independent States.

South Africa

South Africa is a water-scarce country and the availability of water constitutes a key factor in the quality of life. About 20% of South Africa's land surface may be termed mountainous. Important mountain catchment areas encompass approximately 10% of the land surface and yield over half of the total annual runoff.

The State owns about 15% of the important catchment areas; the remainder is either individually or communally owned. One of the principal reasons for the enactment of the Mountain Catchment Areas Act (MCAA) of 1970 was to provide a legal mechanism for regulating land use in privately owned mountain catchments. But the MCAA only covers about 6% of privately owned catchments. It also does not delineate the characteristics of a mountain catchment area, and merely states that such areas are defined simply as any area declared by the Minister of Environment Affairs to be a mountain catchment area. South Africa's Forestry handbook also describes mountain areas narrowly in terms of their water catchment functions, i.e., as an area of "mountainous or elevated, usually broken terrain of insignificant agricultural potential, where natural precipitation is sufficient to produce surface or subsurface water yields that contribute significantly to national, regional or local water supplies" (Rabie et al. 1992). This law provides a good example of the way mountain laws and policies have traditionally benefited the lowland, mainstream economy, and specifically the large export-oriented, elite-owned farms that depend on water from mountain areas.

Most important mountains and mountain catchments (excluding for instance nature reserves) are subject to legal regulation under the Conservation of Agricultural Resources Act (CARA) of 1983. The underlying aim of CARA is to promote food production. The management of many mountain areas, which are rich in biodiversity and important as water sources, therefore, is often in conflict with conservation goals.

South Africa has no comprehensive legislation dealing specifically with conservation and sustainable management of mountains. Rather it has numerous laws covering a broad array of subject matters that do not directly address mountain specificities. These laws include the Water Act, the 1984 Forest Act, the 1983 Conservation of Agricultural Resources Act, and the National Parks Act. South African law also has not yet addressed mountain-specific issues related to mountain dwelling populations (which are primarily from the non-white majority) or important remnant biodiversity-rich habitat zones remaining in its mountain areas. Recognizing this deficiency, South Africa's country report to the UNCSD noted the "need to harmonize legislative policies and formulate new mountain-specific legislation" (South Africa Country Profile 1997).

Switzerland

Some local Swiss regulations on pasture uses date back to the fifteenth century AD and are still valid today (Messerli 1999). The "Federal Law on Assistance Regarding Investments in Mountain Areas," or Swiss Mountain Law of 1974, revised in 1998, aims to improve mountain conditions through investments in infrastructure, equipment projects, and land acquisition intended for industry, crafts and trades. It also seeks to offer subsidies for community development projects, especially those concerning communications, roads, water pipes and treatment, refuse disposal, schools, professional training, leisure, public health, culture, and sports. Subsidies for acquisition of land rights to support crafts and trades are given exclusively to municipalities and local NGOs.

The Swiss law is directed at the domestic "regional" level, which is defined as a group of municipalities closely tied geographically and economically. Regions are to be delineated according to cultural affinities and to be in line with regional planning. A region's demographic evolution, long-term economic capacities, and collective infrastructure are the main criteria for determining whether its development will be encouraged and assisted.

Ukraine

The Law on the Status of Mountains and Human Settlements of 1995 seeks to protect the material security of vulnerable mountain populations by ensuring the social and economic development of mountain settlements. The law calls for provision of subsidies and loans from the central government, as well as technical and financial assistance for agricultural, social, industrial and social infrastructure development. Unfortunately, adverse economic conditions have so far precluded implementation (Zakrevsky 1997).

United States

The *Zuni Resource Development Plan* (ZRDP) of 1992 is a rare example of an indigenous community using national law to take responsibility, build capacity, and empower itself through rehabilitation and sustainable management of its traditional resource base. A case against the US Government for mismanagement of Zuni land was settled out of court in return for the enactment of the Zuni Land Conservation Act of 1990. The Act established the Zuni Indian Resource Development Fund to finance a resource development plan and its implementation throughout the Zuni Reservation, which is located at altitudes between 6,100 and 7,800 feet.

Written in the format of the United Nations Agenda 21 document, the ZRDP provides for comprehensive natural resource management and building the capacity of local institutions. The project literature notes that in the absence of "adequate training or capacity building, it will be very difficult to maintain an authentically 'Zuni-based' program capable of handling twenty-first century challenges." The Zuni Cultural Resources Advisory Team, made up of respected elders of the religious community, are consulted regarding the significance of plants, animals, or locations, and the Zuni Heritage and Historic Preservation Office provides input on protection of cultural resources (Enote 1997).

TMI ARCHIVES

Shepherds in Makalu-Barun National Park, Nepal.

Community-Based Legal Approaches

THE RELATIONSHIP OF MOUNTAIN COMMUNITIES to their local environments is typically extensive and intimate. In the Caucasus, for example, mountain peoples often refer to the "the law of the mountains," an expression which refers to the legal, ethical and religious norms and lifestyles of indigenous mountain peoples (Badenkov 1999).

There is an array of traditional and new community-based legal approaches for addressing problems and gaps in formal legislation and other mechanisms created by national and international legal systems. This section categorizes and provides brief insights to a small number of them. Many of these approaches build on local knowledge. All of them reflect normative standards that derive their fundamental legitimacy from local communities directly dependent on mountain resources, not from the legal systems of the nations where they are located. Some are traditional. Others are more recent responses to problems and opportunities.

An important challenge is to design appropriate interfaces between national and community-based legal norms. The nature of these interfaces will obviously vary depending on the locale and the objectives. But the fundamental principle should be to recognize, respect and support community-based legal approaches that foster equity, conservation and sustainable development.

Traditional Sanctions

Many mountain communities have responded to environmental threats by developing strategies for constraining unsustainable activities. Traditional sanctions in mountain communities are often based on centuries of local ecosystem knowledge. Such sanctions can be reinforced when they are supported by national governments or undermined when national governments ignore or override them.

One of the best known examples of traditional sanctions is the Sherpa custom of *shing-i-nawa*, or forest guards, where several men from a village are elected to protect the forest. The *shing-i-nawa* also have the power to prevent cutting of protected forests, determine where trees may be cut, inspect firewood stocks in people's houses, and levy appropriate fines for transgressions. Their power is reinforced by annual celebrations where the fines are paid and the perpetrators are subjected to good-natured ridicule by their peers (von Furer-Haimendorf 1964). This mechanism worked for many years in the Khumbu region around Sagarmatha (Mt. Everest) in Nepal to prevent unrestricted felling which would threaten the community (McNeely 1995).

A long-standing practice in eastern Bhutan, *ridam* is the annual prohibition on entering or using a designated mountain forest from mid-August to mid-October. Its positive effects are both ecological (by protecting young wildlife and plants during the late monsoon-growing season) and socio-economic (by focusing attention on important agricultural activities). There are two powerful motivations behind the observance of *ridam*: peer pressure within the community and the Buddhist belief that the acts of this life will be rewarded or punished in the next. In some areas, this tradition has broken down over recent years with the introduction of a forest department permit system that provides legal access to locals and strangers alike. Village leaders are anxious to reinstate *ridam* (Messerschmidt 1999).

Rahui refers to the traditional Maori practice of restricting access to essential natural resources when they are being damaged or falling below sustainable levels. For example, prohibitions on killing an economically valued bird species are set during breeding season or when its population seems to be declining. *Rahui* are imposed for a given period of time—perhaps one to two years —to allow resources to build back to sustainable levels. *Rahui* can be established by a verbal notification or by a marker, such as a rock, scrap of cloth, bunch of fern or lock of hair and can be lifted only by those authorized to do so. Maori tribal elders are working with the Department of Conservation to reinstate customary use of traditional resources complementary to government laws. They are also using *rahui* among their own people with respect to certain protected species, such as wood pigeons, and to waterways (Smith 1998).

Traditional Tenure Systems

For some mountain peoples, traditional community-based property rights systems provide, among other things, an

experience-based framework for conserving and sustainably developing mountain resources. A prohibition against selling property rights to outsiders is one common example that can be found among villagers in Upper Mustang Valley of Nepal, the Hunza Valley in Pakistan, and in the Gran Cordillera mountains of the Philippines. In the Italian Alps "*maso*" tenure rules traditionally forbid the division of rural land holdings into pieces that are smaller than the minimum needed to ensure the prosperity of a family (Brandolini 1997). This kind of restraint is often key to avoiding situations such as in the Kalam Valley of Pakistan where alienation of traditional property to outside hoteliers and other commercial actors has disrupted the fragile ecology (Sharma 1997).

Other environmentally friendly aspects of traditional tenure systems include obligations to leave land fallow, prevent overgrazing and erosion, protect watersheds, and undertaking other conservation measures. These traditional systems, however, are often ignored and weakened by national laws, as well as outside economic interests and some environmentalists who cling to the belief that any human activity is bad for conservation.

Community-Based Enforcement

In some cases, community-based initiatives are key to enforcing national and state environmental laws. In the Philippines, local communities with support from an environmental NGO blocked four of five illegal logging exits out of Mt. Isarog in the Bikol region of southeastern Luzon. There is no explicit national law or policy to support their actions but the responsible government agencies have been unable or unwilling to enforce legal prohibitions on unauthorized logging. Another promising example is the Chipko movement that developed in the Garhwal Hills at the base of the Himalayas in India. Local women's groups physically protected trees from logging interests in a move that not only protected their health and livelihoods, but has also left a legacy of effective, dynamic community groups operating in other areas of development and conservation.

Codes of Conduct by Community Groups

Codes of conduct include mutually agreed upon guidelines that are developed by local populations or user groups. The llama operators' code of responsible behavior in mountain trekking expeditions in Peru's Huascarán National Park is an example (Cerdán 1997). In Sikkim, India there are two codes of conduct designed by communities at the base of tourist trekking trails, one for tour operators and one for clients (Jain 1997b). Local people interested in tourism planning for the upland area east of Glacier National Park, Canada formed the Revelstoke Tourism Action Committee in April 1995. One year after its formation, the committee developed a code of ethics governing the promotion of tourism. This code emphasizes cooperation, sustainable development, concerns of the local community, and conservation of the environment (Feick 1998).

Community-Based Enterprises

Community management of mountain resources, including the rights to the timber market and tourism revenues, can promote economic productivity and efficiency. Even more important—revenues from community-based enterprises are often more likely to be reinvested in the local communities where the money was generated for public goods like schools, roads, water storage, and electricity.

Pingzhang community and Yizi community in Yunnan, China are both characterized by low population density, high dependence on rich forest resources (fuelwood for cooking and tobacco drying, timber for house building, wild fungi for marketing, and humus for animal mulch and fertilizer). In Pingzhang community, village leaders and farmers eagerly participate in sustainable timber harvesting and they lobby for permanent cutting levels to be assigned. The community has the rights to the timber market, and can choose which commercial timber companies they sell to. Since 1989, Pingzhang has built a primary school, roads, more than 900 mini-water storage units, and established drinking water facilities and electricity in some villages. By contrast, in the Yizi community, farmers only receive income from felling or road building. The right of decision on timber sales is not controlled at the community level, but at the township level; one stage removed. As economic benefits do not enter the community directly, villagers do not want to cut trees. They lose out in two ways: lack of participation and loss of potential benefits such as income for quality of life improvements. The different dynamics within these two communities demonstrate the importance of community self-determination for forest management (Lai 1999).

The Makalu-Barun National Park in eastern Nepal and the Annapurna Conservation Area Project (ACAP) in central Nepal offer examples of how local communities can play a dynamic role in preserving forest resources based on flexible, multiple land-use approaches. Today ACAP has expanded beyond agricultural and forestry-related work to include fodder plantations, education and tourism programs, health clinics, drinking water systems, and carpet and basket weaving cooperatives. Surrounding forests have been zoned for multiple purposes for community use and/or restoration based on systems of collective management which villagers practiced before forests were nationalized in the 1950s (Denniston 1993).

Waste management is a critical aspect of tourist management that affects health and the aesthetic value of a destination. Cooperative action and appropriate infrastructure are helpful in waste management efforts. Waste deteriorates very slowly at high altitudes, and therefore much of the waste generated in the mountains should simply be carried out. In the vicinity of Mount Everest the Sagarmatha Pollution Control Committee shows how "well-coordinated local initiatives, local institutional systems for environmental care can be developed" to combat the problems of tourist waste management (Sharma 1998). Within one year, this NGO collected nearly 200 tons of garbage in addition to 719 gas and oxygen cylinders and 603 kilograms of batteries (ibid).

Another encouraging example of how local and national level policies can interface with a sensitivity of the specific advantages of mountain environments and judicial use of natural resources comes from the northern parts of the Hengduan mountains. Near the towns of Ganze in Sichuan and Diqing in Yunnan, indigenous Tibetan communities collect the matsutak mushroom from locally managed forests. Considered a delicacy in Japan, for which there is a ready export market, the mushrooms fetch local communities a high price (Bandhyopadhyay 1992).

Sacred Traditions and Environmental Conservation

Many of the world's religions imbue mountains with sacred connotations (Bernbaum 1998; Moussouris 1998). Spiritual and religious values are also important forces for conservation and traditional stewardship of mountain environments. Belief in the power of mountains comes from the perception of them as dwelling places of deities who often are considered to be protectors of local communities. The Sherpa people of Khumbu in Nepal, for example, view the craggy, fortress like peak of Khumbila as the seat of the warrior god who watches over their homeland and protects their yaks. Reforestation efforts have been successful in Badrinath, the major Hindu pilgrimage shrine in the Indian Himalayas. The G.B. Pant Institute of Himalayan Environment and Development, in collaboration with the Head Priest of the temple, encouraged pilgrims to plant saplings on the hill slopes as an act of religious devotion. There was a great rush, and 20,000 seedlings were planted (Bernbaum 1996).

Maori *wahi tapu* refers to culturally sacred sites. Literally translated as 'window to the past,' it provides the Maori with genealogical links to their cosmological origins. These sites include burial grounds and caves, battlefields, and certain mountains. While a number of legislative acts affect *wahi tapu*, two have been seen to be most effective: the Resource Management Act 1991 and the revised Historic Places Act 1989. The Resource Management Act permits a tribal leader, with approval from the Minister for the Environment, to become a "heritage protection authority." An authority is able to influence local governments considering whether to issue a heritage order which provides official protection for sacred Maori sites by including them in a district plan. The Historic Places Act also allows for Maori representation, but in the form of a Council (Sole and Woods 1996).

Examples of religiously based codes include "*Adaty*" Islamic customs in North Caucasus, and taboo, i.e., resource use restrictions, that are placed on sacred groves or other areas that must be left intact. Often these areas have important functions in hydrology or erosion control.

Women's Roles in Mountain Communities

In addition to their central roles as stewards of family well-being and cultural heritage, mountain women are key natural resource managers. An example of a positive experience that couples women's participation in farming with efforts to promote sustainable agricultural techniques comes from the highlands of southern Brazil where a women-led farm management and training center has been established (Dankelman and Davidson 1991). Another successful example comes from the mountainous region of Lorestan in eastern Iran. A project initiated in 1974 sought to help recently settled women reclaim important traditional roles they had occupied in their nomadic days. It selected female extension workers from the local population to work in four key units: agriculture, education, health, rural industries and domestic economies. With the exception of the agricultural unit, women's participation has proved a success; participating in innovative literacy techniques based on the local culture, and improving their living standards through the production and marketing of handicrafts (Dankelman and Davidson 1988).

There are many other initiatives that by ensuring the full participation of women have experienced considerable success. An illustration comes from an agricultural extension project in eastern Nepal, which initially worked exclusively with male farmers. It made little headway until the emphasis was shifted to working with women who were the actual vegetable growers. In a single year, the number of gardens increased from 75 to 210 (Pakhribas Agricultural Centre 1987).

Multi-sectoral approaches have also proved to be effective mechanisms for addressing gender issues. *Save the Children* in Nepal combined community forestry projects with literacy classes for women that emphasized environmental issues and concerns. Since 1990, committed women have formed hundreds of user groups and have initiated an array of community projects. Many of these groups have since been granted legal control over community forests by the national government (Acharya 1993).

The community of Alta Cima in the El Cielo Biosphere Reserve—a mountain cloud forest in northeastern Mexico—traditionally depended on what is now a protected area for its livelihood. The people of Alta Lima found alternative livelihoods with the help of a local NGO. This NGO assisted the community in organizing workshops and developing action plans. One result was the formation of a women's cooperative called El Grupo de Mujeres de Alta Cima. With start-up money from a small international grant, the cooperative opened a restaurant and a small store. According to the results of an economic impact study, the benefits from the cooperative are numerous (Walker 1998).

Conversion from Natural Resource Dependence to Local Tourism Initiatives

Bouma Falls, in the highlands of Taveuni island in Fiji, is a popular tourist destination. It is largely managed by the local community and overseen by the Native Lands Trust Board (NLTB). The NLTB provided technical and financial assistance to develop a trail winding from the local village up to Bouma Falls. Before any work began, local clan-based leaders reached consensus as to how the project should proceed and much of the success of Bouma Falls has been

attributed to that fact. The project also allows for the maintenance of the traditional community, as the trail is well outside the village (Godde 1998).

In contrast to Bouma Falls, the Koroyanitu Forest Ecotourism Project involves the entire community. The project operates on the belief that commercial activities like tourism must involve everyone residing in Koroyanitu village, not just the chiefs and local leaders. It facilitates ecotourism workshops where information on community-based tourism as an alternative to logging is shared (Godde 1998).

Legal Rights of Disadvantaged Community Members

Mountains often straddle national boundaries, which can divide ethnic groups. An example of such a group is the Akha community, which originated in China and now resides throughout much of mountainous mainland Southeast Asia. Since the 1930s, two vastly different political economies and state structures have influenced Akha access to resources and land management. After the 1949 Chinese Revolution, all Akha living in China automatically became citizens of that nation. As citizens, they were included in land use policies that affected all rural farmers. In 1982–83, economic reform policies resulted in the distribution of land that was previously held by the commune to villages and households. Akha households in Xianfeng Village, China are now relatively well off due to thriving activities in community forestry, agriculture, horticulture, and wage labor in the nearby city.

In Thailand, by contrast, the legal history of ethnic minorities is quite different. In 1898, the Royal Thai Government claimed ownership over the northern territories occupied by the Akha and other non-Thai ethnic groups, and the Royal Forestry Department was vested with management authority. Most of these areas were in mountainous and upland regions. Hill tribe identity cards that branded non-Thais by ethnicity and village were issued. The cards prohibited travel outside the province of residence without approval, and precluded any formal use rights or ownership rights to land and other natural resources. Villagers with hill tribe identity cards can at best only find menial jobs in town. The drug trade or other illicit activities tempt some young people seeking to increase their incomes. Work on tea plantations, which has resulted in over-felling of forests has become another source of income for many ethnic groups. Poorer villagers, who used to depend on swidden agriculture for food, face a serious loss of subsistence.

The differences in the treatment and histories of the Akha in China and Thailand reflect the political structures of the two countries. The Chinese approach has led to better opportunities for employment and less degradation of environmental resources. The socialist concept of state building in China includes all ethnic minorities. The Thai approach, which copied developments in its colonized neighbors (Lynch and Talbott 1995), vested the kingdom with sole ownership of most mountain and forest resources. Claiming all forests as state assets has enabled the Royal Forest Department to perpetuate the legal marginalization of many mountain people in Thailand, often on the grounds that they are "not Thai" (Sturgeon 1999).

In the Shivalik hills of India the untiring efforts of an NGO called *Vikalp* have evolved into the *Ghad Skhetra Mazdoor Sangathan,* an organization that strives to obtain legal rights for landless and forest workers. Interacting through *Vikalp*, it also works on larger legal and policy issues that can benefit forest workers and wildlife conservation (Gairola and Sreedhar 1999).

Associations of Local Communities

The likelihood that community-based initiatives will succeed usually increases when alliances are formed with other communities and institutions. Coalition allies can include other like-minded communities, lowland organizations or even national and local governments. An example of successful community associations is the Trentino cooperatives, described in Box 3. In the Dominican Republic, the rural associations of San José de Ocoa have formed a coalition organization that has been classified as an NGO, and is in fact a form of local government (Iturri 1997). The villages within the township of St-Martin, Switzerland have collaborated to revitalize and preserve the agriculture-based culture of this alpine region through a sustainable form of community-based tourism. Originally developed as an alternative to a winter ski resort, the project complements other ski resorts in the area as it provides fair-weather activity for tourists who wish to enjoy mountain environments (Gaspoz 1998).

Box 3: Federazione Trentina della Cooperative

Italian national law provides a friendly policy environment that encourages reinvestment in mountain communities. In Trentino, the Catholic Church has been instrumental for over 100 years in setting up agricultural and other local community cooperatives (co-ops). Members support each other through pricing mechanisms, profit sharing, mutual financial support, and product marketing. These cooperatives were developed during the late 1800s to mitigate the social disruption, poverty, exploitation, massive out-migration caused by the industrial revolution, outdated farming methods, land fragmentation, severe flooding and outbreaks of introduced crop diseases in the mountain areas. The co-ops are characterized by a clear identification of needs at the local level, clear objectives, democratic organization, and mutual trust between members. In some cases they are the only local enterprises that provide essential services to outlying communities with significant socio-economic challenges. The co-ops are key to the region's development, and help ensure that mountain communities, through local agricultural produce marketing and related enterprises, share in the benefits of development (Bassetti 1996).

Local Zoning

Zoning can provide a powerful legal instrument for protecting mountain communities and environments from unsustainable or undesirable land uses. In New Mexico, USA, the city of Sante Fe created a Mountain Special Review District. An ordinance has been issued by the district which regulates construction, development, and land management activities in order to better manage erosion, water (rights, storage and recharge), inheritance/family transfers, access roads, visual integrity and open space provisions (Sante Fe Extraterritorial Zoning Authority 1995). A Mountain Protection Plan created by Albemarle County, Virginia, USA provides local zoning, erosion and lighting ordinances, and planning tools based on aesthetic, agricultural, ecological and financial criteria (Tice 1997). In the Ecuadorian Andes, by contrast, a lack of land use planning and clear regulations concerning land development have been major contributors to the degradation of mountain resources and the depletion of biodiversity (Senanayake 1997c).

Collaborative National/Local Policy Development

Local tourism planning works better when it involves collaborative frameworks that include local community groups as well as external supporting agencies. An example comes from Huascarán National Park, Peru, where facilitators from The Mountain Institute brought together national officials, park staff, and literally hundreds of community and private sector groups to create a local ecotourism plan. The plan is now seen as "the most comprehensive attempt to manage tourism in the history of natural protected areas in Peru, and the first one specifically tied to a management plan for any unit within the National System of Natural Protected Areas in the country" (Torres 1997).

MARTIN PRICE

Stol (farmers' cabins) in Steinskvanndalen, Norway.

Identification of Key Issues in Mountain Laws and Policies

IDENTIFICATION OF THE BEST and worst elements of existing mountain laws and policies is beyond the scope of this paper. Some key issues and legal approaches, including those raised by the electronic conference participants, however, can be identified.

Commonalities between mountain areas in the majority and minority worlds, i.e., the South and the North, have already been described in the section on "Specific Characteristics of Mountain Ecosystems" above. There are also major differences. Over 50% of the Alpine population, for example, now live in small towns and urban centers. Remote areas experience out-migration but the changing settlement patterns often create opportunities for new economic and industrial activities in the main valleys (Messerli 1999). The situation in the financially prosperous North is also more conducive to transfers of financial and technical resources into mountain areas, as in France, Austria, Switzerland and Norway. These transfers may represent the true value of mountain resources and the environmental services they provide, as well as an appreciation of the cultural diversity mountain peoples bring to wider societies.

In Southern nations there is greater differentiation among mountain ecosystems, such as tropical humid mountains and arid tropical and subtropical mountains. In humid tropical mountain ecosystems, in-migration is common, in part because of better climate and soils. In arid tropical mountains, by contrast, unfavorable ecological conditions foster out-migration to agricultural areas and urban centers. Colonial legal legacies of public (state) ownership of mountain resources exacerbate demographic pressures, and attendant demands on water, forests, pastures, and other natural resources, in tropical humid mountain areas by pulling in migrants in search of arable land. They likewise undermine community-based tenure systems, including traditional incentives for conservation and sustainable management. The problem tends to become more acute when excessive concentration of private ownership over arable land resource pushes migrants into ostensibly public frontiers.

In both the North and South, the best laws and policies provide for community-based or decentralized and participatory planning and implementation. Both approaches reflect an official commitment to subsidiarity and thereby promote local community participation and decision-making. Whether one is working with forest user groups in Nepal or in "regions" identified in Swiss law, legal recognition of existing community-based property rights and respect for local knowledge and priorities increases the likelihood that efforts to promote equity, conservation and sustainable development in mountain areas will succeed. Decentralized approaches can provide an attractive alternative when there is insufficient political and legal support for community-based approaches.

The foregoing compilations of international and national (domestic) laws and policies highlight many relatively recent positive developments. Indeed, positive institutional developments are occurring in some countries (Price 1999b). But the compilations also reveal serious problems and gaps that must still be addressed if law and policy are to be effective tools for promoting social justice and mountain conservation and development. These problems and gaps include the following:

Need for Comprehensive National Mountain Policies and Laws

Some governments opt not to enact comprehensive national mountain policies and laws on the grounds that they are too costly or time-consuming. Indeed, comprehensive approaches may be unnecessary and inappropriate, especially if other laws already provide for varied approaches to ecosystem management. The 1997 Report of the FAO Task Manager on Chapter 13 of Agenda 21, however, notes that "in spite of increased international attention since UNCED on the need for reform . . . , examples of departments, programmes or legislation that deal with mountain issues in a more integrated way are still rare." The mountain sections of country profiles submitted to the United Nations list forestry, fisheries, wildlife, biodiversity and other sectoral legislation but comparatively few mountain-specific laws or policies (UNCSD 1997).

Where a binding unified mountain law is not possible or desired, a national mountain policy can still foster more

consistency in governmental approaches to mountain management (Gabelnick et al. 1997). A national mountain policy statement can also serve as a model for international comparison.

It is important to recognize that the primary problems for the sustainable management of mountain ecosystems are related to altitudinal, slope and climatic peculiarities, and the resulting natural and cultural isolation of highland biomes. Many of the points raised by participants to the electronic conference, however, are not exclusive to mountain ecosystems. Sectorally, while forestry laws may not be sufficient to cover mountain forests, policy makers can learn from community forest policy and programs, and should consider incorporating lessons learned in any comprehensive mountain laws or policies.

Discrepancy Between Formal Enactment of a Law and its Actual Implementation

As noted previously, laws and policies may be enacted at national and international levels but the absence of implementing legislation and political will largely preclude any implementation. This can be referred to as *lex simulata*, a largely political response to pressure in the guise of a law that is not (at least yet) intended to be implemented. For example, the US can proudly list the impressive collection of UNESCO Biosphere reserves it has successfully nominated. The agreed principles of biosphere reserves, such as the establishment of buffer zones, however, have often not been complied with. This highlights the need for more effective international and national monitoring of compliance (Peterson 1997).

Local Access to Existing Information

One study found that frequent change in China's forest policy causes confusion among farmers regarding their rights and responsibilities. As many as 60% of farmers are unsure of the changes concerning afforestation and 85% of farmers attribute their fear of investment in timber to the policy instabilities. "To promote development of forestry there is a need to clarify the ownership of forests, . . . and develop management guidelines involving the state, collectives and individuals" (Shuncheng 1998).

Gender

The key role of women is noted in the CBD and DC. Such statements, however, have been largely rhetorical. There has been little effort to date on international and national levels to address women's roles in law and policy instruments concerning mountain peoples and ecosystems (Byers and Sainju 1994).

Defining the Boundaries of Mountain Areas

There are widespread discrepancies in mountain areas between local ecosystems and local government administrative units. This can lead to the inclusion of non-mountainous areas in mountain administrative units and vice-versa, inconsistent application of laws in administratively separated parts of the same mountain range, and resentment of communities located on the periphery of a mountain administrative unit due to their exclusion from favorable socio-economic policies earmarked for mountain populations (Saint-Pierre 1997). There is a need for inter-governmental cooperation to address cross-boundary issues concerning shared mountain populations (Saint-Pierre 1997). It may be impractical and unadvisable to draw sharp legal lines that isolate mountain ecosystems from surrounding areas. Rather, efforts should be made to understand the linkages and develop laws and policies that foster productive interactions.

South/North and Domestic Equity Issues

Most national (domestic) laws and policies still fail to reflect the values and importance of mountain cultures and areas and the environmental services provided by many mountain communities. Existing international documents, including the Mountain Agenda/Chapter 13, likewise fail to appreciate the contributions of mountain communities or to provide for international burden-sharing arrangements, the distribution of benefits from the utilization of mountain resources, or other related equity issues (Gabelnick et al. 1997).

Persistent Attitudes and Behavior

Law and policy makers and development workers often treat local mountain communities in patronizing ways. These attitudes can undermine local peoples' traditions as well as their confidence in, responsibility for, and commitment to sustainable management and externally initiated projects. The traditional patron-client relationship between Nepalese state forestry officials informally known as "*Banko Raja* (Kings of the Forest)" and local forest user communities, for example, has stood in the way of the participation of mountain communities in development and conservation (Lama 1997).

This is a difficult area for law and policy to address. National and international law cannot eliminate prejudices and other negative attitudes and behaviors. This limitation reinforces the need for dialogue, cross-cultural training and a commitment to change from within bureaucracies, institutions and broader societies.

Intellectual Property Rights

Indigenous knowledge of the natural world is generally undervalued and inadequately protected under current national and international intellectual property rights regimes. Given the role of mountains as a storehouse of both biodiversity and traditional knowledge, the ongoing failure of international and national legal systems to recognize and protect traditional knowledge is harmful to some mountain communities and the floral and faunal resources they steward.

Recommendations

THE ELECTRONIC CONFERENCE contained many important recommendations that merit attention in law and policy instruments relating to the conservation and sustainable development of mountain peoples and ecosystems. The normative value of these recommendations has been largely validated during subsequent research for this paper.

All Levels

Recognize the Importance of Mountain Ecosystems

Many important benefits are provided by mountain ecosystems. These benefits should be acknowledged and protected in international and national laws and policies. Although valuable in their own right, general environmental laws and policies do not adequately address mountain issues. Specific legal and policy tools are needed to address the unique biological, geological, climatic, economic, and cultural characteristics of mountain peoples and ecosystems.

Support and Protect Mountain Peoples' Rights and Cultures

National governments and the international community can use law and policy to support mountain peoples' rights and cultures. This should include appropriate recognition of, and support for, the useful roles mountain communities play in the sustainable management of mountain ecosystems. It should also include legal recognition of traditional community-based property rights and knowledge systems.

Improve the Well-Being of Mountain Communities

Supporting mountain peoples' rights and cultures can include creating legal and policy mechanisms for improving their well-being. As several European laws demonstrate, this can entail the enactment of laws mandating resource transfers, investment in health and education, reinvestment of profits from the exploitation of mountain resources, diversification of economic activities, and incentives for the development of appropriate technologies. As part of a comprehensive mountain policy, legally mandated investments in livelihood strategies could strengthen local communities and reduce out-migration and pressures on fragile resources such as forests and farmland.

Ensure Local Participation

Any prospective law or policy instrument concerning the conservation and sustainable development of mountains should in the early drafting stages ensure the participation of mountain peoples in designing, implementing and monitoring laws and policies that directly impact on their lives and livelihoods. Existing laws and policies should likewise be modified to ensure local participation. Development projects and ecotourism schemes need to integrate local participation in the design, management, implementation and sharing of benefits by communities affected by a project or living in the area of a project activity (Jain 1997a). A critical issue will be identifying who effectively represents those directly dependent on a specific mountain ecosystem, and what legal personality local representatives should have. Traditional structures of authority sometimes exclude important groups due to education, class, caste, livelihood or gender (Jain 1997a). To the extent possible, law and policy should be aware of and not reinforce these exclusions whether or not they are considered traditional.

Be Sensitive to Gender Issues

One area where some traditional norms, as well as national laws, discriminate is with regard to gender. Women play a critical and all too often unrecognized role in facilitating sustainable mountain development. Women are also frequently the primary users of community-owned resources and are the first to suffer if those resources are restricted or degraded (Byers 1995). Laws and policies should not undermine the traditionally prominent role of women in many mountain communities, nor should they reinforce existing prejudices and unfair practices.

Make Vertical and Horizontal Linkages

Local, national, and international legal norms, processes and institutions should reinforce each other by adhering to common principles. Traditional legal mechanisms can similarly reinforce and be reinforced by national and international laws.

Build Public Interest Law Capacities

As this report highlights, one of the greatest challenges confronting mountain communities is the failure of national governments and international institutions to respond to their concerns, aspirations, rights and potentials. The tendency of national law to override—and international law to overlook—the interests of rural peoples, including populations directly dependent on mountain ecosystems, is historically rooted and continues to frustrate sustainable development and sound environmental governance. But there are very few public interest lawyers researching and advocating on behalf of mountain peoples and ecosystems. Meeting this challenge will include fostering interest on behalf of mountain communities in law schools and the legal profession. Success in this regard should result in the creation and strengthening of national and international public interest human rights and environmental law organizations committed to advocating on behalf of mountain communities.

Promote Legal Education

Whether hard or soft, laws can be powerful tools. But in order to benefit fully from national and international laws, mountain peoples need to know about and use them. Public interest law organizations and other institutions working on behalf of mountain communities, including government entities, should develop paralegal training initiatives, including seminars and materials, so that public interest lawyers can help mountain peoples learn about their legal rights and responsibilities. The training of "barefoot paralegals" who come from mountain communities should also be considered.

International

Develop an International Instrument

The natural and logical culmination of the Mountain Agenda/Chapter 13 is a future international instrument on mountain peoples and the conservation and sustainable development of mountain ecosystems. The instrument could be a law or a policy. There is no consensus, however, on this point. Efforts to promote conservation and sustainable development within mountain cultures and ecosystems, meanwhile, need not await an international convention or any other instrument.

Create Mountain-Specific Protocols

Mountain ecosystems are unique and inadequately covered by more general conventions such as the CBD or DC. These instruments, however, could be made more applicable through the addition of future protocols focusing on mountain-specific concerns relating to property rights, biodiversity, climate change and desertification.

Strengthen Regional Policy Frameworks

Most mountain regions have already held an Intergovernmental Consultation as part of the follow-up to Chapter 13 of Agenda 21. These meetings have proved useful. More should be held in the hope they will lead to more concrete outcomes, such as strengthening national commitments and facilitating transboundary cooperation.

Build Transboundary Cooperation

Mountain ecosystems, cultures, and economies are usually not contiguous with international frontiers and domestic boundaries agreed to or created by central governments. Cooperation between neighboring states is necessary for promoting the well-being of mountain peoples and ecosystems. This cooperation can also promote peace between states and recognition of shared values and objectives.

National

The overriding recommendation in terms of national (domestic) law is to develop and enact a national law on mountains. Some aspects of existing national laws, especially those in Europe, can help inform and guide legislative drafting processes. The following recommendations also merit serious consideration:

Build on and Support Traditional and Indigenous Institutions and Mechanisms

Many mountain communities possess local knowledge important for the conservation and sustainable management of mountain resources. This traditional knowledge should be recognized, relied upon and supported.

Recognize Traditional and Indigenous Community-Based Property Rights

Traditional and indigenous tenure systems are a reflection of local knowledge and ecology. Original, long-term (i.e., indigenous) occupants of mountain areas should be recognized as the owners of the mountain areas where they are located. In most instances where property rights are not yet formally defined or individuated, this should include full legal title and recognition of traditional and private community-based property rights.[7]

[7]For a more detailed explanation of the authors' definition of "private community-based rights," see Lynch 1999.

Apply Full Cost Pricing of Resources

Outside interests typically fail to take into consideration the full social, environmental, and economic services provided by mountain ecosystems, the costs to mountain peoples of commercial resource extraction activities, or the downstream effects of mountain exploitation in lowland areas, such as reduced water supply or flooding due to deforestation. As a result, timber, minerals, and water taken from mountain areas are often exploited in ways that are adverse to the interests of local communities. Local communities, meanwhile, internalize the costs of polluted water sources, erosion, degraded forests and sacred sites. Large-scale commercial extractors, however, seldom provide affected communities with any significant benefits. If reflected in the price of concessions or other fees, full cost pricing could help reduce exploitation to more sustainable levels. Obligatory reinvestment of profits derived from the utilization of timber, minerals, water and other mountain resources would encourage benefit sharing and help reduce disparities in income and social infrastructure.

Create a Separate Integrated Policy which Addresses all Goods and Services Produced in Mountain Areas

Many domestic agricultural policies currently provide good examples of how governments contribute to the degradation of mountain environments, especially through subsidies for mono-cropping. An integrated policy should be formulated that addresses the financial and technical challenges of producing goods and services in harsh upland environments and the small-scale production systems that communities have evolved in response.

Target Development Assistance

International and domestic assistance programs should ensure that the primary recipients of outside support, financial and other, should be communities directly dependent on mountain areas.

Zoning

National and local governments have important roles to play in promoting the well-being of mountain peoples and ecosystems. When appropriate this may include zoning regulations for the purpose of directing development away from especially sensitive areas. Rural zoning measures can help ensure that fragile habitats are strictly protected and development is directed at less biologically sensitive or valuable areas. Zoning can also ensure that the activities of one community do not negatively affect the welfare of other user communities.

Conserve Ecosystems

Current environmental approaches must be tailored to mountain specificities. Besides zoning initiatives, three types of more comprehensive use patterns may merit consideration in some locales.

Absolute/strict protected areas: Forty percent of global biodiversity hot spots are located in mountain areas. Full protection of at least some of these biologically rich areas is necessary. In most, if not all areas, however, full protection can allow for limited (non-mechanized) traditional uses.

Mixed-use protected areas: The creation of strict preservation areas off limits to all human use, especially in light of expanding populations and human needs in ecologically important areas such as the Himalayan zone, is increasingly understood to not be viable. Innovative mixed-use approaches, including legal recognition of private community-based rights, could lead to the establishment of less strict conservation areas that permit human habitation and sustainable resource extraction. These approaches have engendered local support and are viewed as a realistic means for conserving biodiversity (Jain 1997a).

Areas open to the "modern" sector: Some mountain areas may be suited to more intensive uses. These uses might include primary (timber/minerals/water) resource extractive industries, construction of infrastructure, and recreation and other amenities that foster in-migration. These activities should be regulated by a framework that is specifically tailored to mountain considerations, and that requires environmental impact assessment, community participation, reinvestment, full cost pricing and protection of sacred sites.

Establish a Legal Framework for Protecting Sacred Sites

Traditional community-based beliefs and practices that are effective in preserving mountain ecosystems, such as sacred sites, are being overwhelmed in many locales. Some of these local controls merit legal support. Of course, sacred traditions are not always environmentally sound, especially when markets or other outside influences change the context of the sacred use of the materials (The Mountain Institute 1998). Law and policy can help define access privileges and negotiate appropriate controls over sacred sites.

Protect Intellectual Property Rights of Local Populations

Action at the international level due to the interlocking global patterns of extraction and exploitation (e.g. international pharmaceutical companies) is required to ensure that mountain peoples benefit from the exploitation of their local knowledge. At national levels this can take the form of a special traditional knowledge policy (GNWT 1996).

Information

To build on this initial report and respond to general calls for more information from the Commission on Sustainable Development, the Declaration of Antananarivo, and other

documents, there is a need for more research, database development, and information exchanges on mountain law and policy. In particular, information on the impact of laws and policies will help evaluate their effects on mountain peoples and ecosystems.

Local

Challenge Mountain Peoples and Communities

In order to better influence and shape laws and policies on all levels, mountain peoples are well advised to rethink their situations and perceptions. Global society is rapidly developing and penetrating virtually every mountaintop. Social, economic and political dynamics grow ever more complicated and this presents new dangers and opportunities for mountain peoples and ecosystems. Rethinking old taboos and traditional practices, including customary laws and practices, and being open to new initiatives is often necessary in order to respond to, and more effectively impact our changing world.

Recognition and Appreciation

Mountain peoples face threats on multiple fronts and many feel unappreciated. They should know that a small but growing number of people living in other ecosystems value their contributions in conserving and sustainably managing the world's mountains.

ELIZABETH BYERS

Trekking guide/naturalist with alpine flora, Mount Kenya National Park, Kenya.

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Note: References marked with an asterisk (*) are available on Mountain Forum world wide web site at <http://www.mtnforum.org>. For easy retrieval, enter the author's name or keywords from the title in the "Search" box on the Mountain Forum web site.

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Appendix A. List of Contributors to the Mountain Policy and Law E-Conference

Mountain Policy and Law:

Promising Examples and Innovative Legal Mechanisms for Conservation and Sustainable Development

An Electronic Conference of the Mountain Forum, April–May 1997

The Mountain Policy and Law electronic conference identified informal and formal legal mechanisms and examples that have been used to conserve mountain ecosystems and promote equitable and sustainable development of mountain peoples. There were 276 participants in the conference. Nearly half of the participants, 123 people from 38 different countries, made direct contributions to the conference. An on-line mountain library on the Mountain Forum web site at <http://www.mtnforum.org> provides access to key reference documents, including the texts of many hard-to-find mountain laws. The full Mountain Policy and Law discussion is archived at: <http://www2.mtnforum.org/mtnforum/archives/discuss/discuss.htm>

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Appendix B. Bibliography of Mountain-Related Laws and Policies

Note: Further information on the policy and law instruments listed below (including the full text in most cases) is available in the "Policy and Law" section of the Mountain Forum's on-line library at <http://www.mtnforum.org>

International (Hard Law) Instruments

Agreement on Trade Related Aspects of International Property Rights (TRIPS) 33 ILM 1197 (1994).

Convention on Biological Diversity, 1992, 31 ILM 818 (1992).

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 1973, 21 ILM 1085 (1973).

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Canada
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France
French Law No. 85-30, 1985.
Memo 13/7/1996–1453 on European Policy on Mountains, 1996.

India
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Italy
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Basic Environment Plan.
National Action Plan for Agenda 21.

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Russia
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South Africa
Mountain Catchment Areas Act, 1970.

Switzerland
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Ukraine
Law on the Status of Mountain and Human Settlements, January 12, 1995.

United States
Zuni Land Conservation Act of 1990 (Public Law 101-486).

Selected Examples of Community-Based Approaches

Note: further information on these examples is available in the Mountain Forum's on-line library at <http://www.mtnforum.org>. For easy retrieval, type the name of the example, or key words, in the "Search" box on the Mountain Forum web site.

Associations of local communities
San José de Ocoa, Dominican Republic
Trentino cooperatives, Italy
Villages in St-Martin Commune, Switzerland

Codes of conduct by community groups
Huascarán, Peru
"The law of the mountains," Caucasus
Sikkim, India
Revelstoke Tourism Action Committee Code of Ethics, Canada

Collaborative national/local policy development
Huascarán National Park Ecotourism Management Plan, Peru

Community-based enforcement
Chipko movement, India
Mt. Isarog, Philippines

Community-based resource management
Annapurna Conservation Area, Nepal
Forest management in Yunnan, China
Makalu-Barun National Park and Conservation Area, Nepal
Matsutak mushrooms in local economy, Hengduan mountains, China
Sagarmatha Pollution Control Committee, Nepal

Conversion from natural resource dependence to local tourism initiatives
Bouma Falls, Fiji
Koroyanitu Forest Ecotourism Project, Fiji
Protected area tourism services, Alta Cima, Mexico

Legal rights of disadvantaged community members
Different identities and rights of the Akha people in China/Thailand
Vikalp, rights of the landless and forest workers, India

Local zoning
Mountain Protection Plan, Albemarle County, Virginia, USA
Sante Fe Ordinance No. 1995-1: Mountain Special Review District, New Mexico, USA

Sacred traditions and environmental conservation
Badrinath reforestation, India
Maori *wahi tapu*, New Zealand

Traditional sanctions
Maori r*ahui,* New Zealand
Ridam, Bhutan
Sherpa *shing-i-nawa*, Nepal

Traditional tenure systems
Hunza and Kalam Valleys, Pakistan
Maso tenure, Italian Alps
Adaty, Northern Caucasus
Upper Mustang, Nepal

Women's roles in mountain communities
Farm management and training, Brazil
Literacy/forestry user groups, Nepal
Nomadic women in education, health, and enterprise, Iran
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Glossary of Terms and Abbreviations

CBD	Convention on Biological Diversity
CCC	Climate Change Convention
CIEL	Center for International Environmental Law
CITES	Convention on International Trade in Endangered Species
DC	Desertification Convention
ECOSOC	Economic and Social Council of the United Nations
FAO	Food and Agriculture Organization of the United Nations
FSC	Forest Stewardship Council
FUGS	Forest user groups
GNWT	Government of the Northwest Territories, Canada
ICIMOD	International Centre for Integrated Mountain Development
ILM	International Legal Materials
ILO	International Labour Organization
IUCN	World Conservation Union
MF	Mountain Forum
NGO	Non-governmental organization
SUDEMA	Sustainable Development of the Mountain Areas of Asia
TMI	The Mountain Institute
UIAA	International Union of Alpinist Associations
UNCED	United Nations Conference on Environment and Development
UNCSD	United Nations Commission on Sustainable Development
UNEP	United Nations Environment Programme

Keywords: Alpine, biodiversity, common property, community-based, cultural heritage, ecosystem, environment, forest, human rights, hills, indigenous peoples, isolation, international law, law, local level, marginalization, montane, mountains, national (domestic) law, participatory approaches, policy, property rights, steeplands, subsidiarity, sustainable development, traditional, uplands, water.