ANALYSIS

Property rights and sustainable nature tourism: adaptation and mal-adaptation in Dalarna (Sweden) and Maine (USA)

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Abstract

Tourism is viewed in many industrial nations as an environmentally friendly way to revitalize distressed rural economies and communities. In the forest regions of Dalarna and interior Maine, hopes are pinned on nature-based tourism, with the presumption that natural capital is underutilized. This paper explores the potential and pitfalls of nature tourism as a basis for sustainable rural development in regions where most land is held privately but quasi-open access for recreation has been either a right (Dalarna) or a customary entitlement (Maine). The paper applies theories of common pool resources and impure public goods to show that both property regimes are mal-adapted for sustainable nature tourism. Limited exclusion combined with rivalry in land uses mis-aligns incentives facing landowners, tourists, and recreation businesses. Short-term effects include congestion, reduced economic opportunity, and depressed production of non-recreational goods. Longer-term effects include environmental degradation and weak incentives for value-added investment. Tourism development is further impeded by a scale mis-match between small ownerships and large efficient recreation management units. The analysis suggests that sustainable nature tourism faces four land use challenges. © 2000 Elsevier Science B.V. All rights reserved.

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1. The setting and the problem

Policy makers in many industrial nations view tourism as an economic growth opportunity. A recent Swedish Tourist Authority report asserts, ‘The tourist sector is one part of the [expanding] service economy that has great potential and generates new employment opportunities and draws foreign exchange to the nation.’ (Turist Delegationen, 1998, p. 8). Half of Sweden, including western and northern Dalarna, receives tourism funding as part of the EU’s strategic response to rural economic distress. The EU-backed initiative,
ETOUR, describes the opportunity thus: 'With the changes in the rest of the world forecast ... tourism stands out as a central economic sector for development of Sweden’s sparsely populated areas. Those [regions] also constitute a meaningful resource to meet a large share of Europeans’ need for recreation and active leisure.' (Sahlberg, 1998, p. 145). Similarly, Maine’s 1995 tourism Marketing and Development Strategy stressed that, ‘Within the...emerging global economy, growth of the tourism industry... brings jobs and stability to the state.’ (MOT, 1995, p. 2).

Rural landscapes are considered under-exploited, multiple-use resources and ‘nature’ a powerful tourist magnet, as a recent survey of European visitors to Scandinavia confirmed (Arbman, 1999). Diverse ecosystem services underpin all rural tourism, with undeveloped landscapes both the locus of outdoor recreation, catalogued in Fig. 1, and the backdrop for activities ranging from heritage celebrations to curio shopping. An ETOUR publication summarizes (Sahlberg, 1998, pp. 228–229, 282):

Nature is an obvious central asset ... the combination of information technology, environmental consciousness, city living, and economic growth elevate the attractiveness [of areas that offer high quality tourism products in the form of pure nature, lots of space, [and] good accessibility ... The environment in its entirety with clean air and clean waters, the lack of noise and crowding has qualities seldom found at other places in Europe.

The same is often said of Maine vis-a-vis America’s Boston–New York–Washington ‘megapolisis.’

1.1. Core property rights problems for sustainable nature tourism

This paper employs the Bromley (1997, p.3) conception of property rights:

Rights are not relationships between me and an object, but rather are relationships between me and others [present or future] with respect to that object ... To have a property right ... is to have secure control over a future benefit stream. And it is to know that the authority system will come to your defense when that control is threatened.

Recreational landscapes might be considered common pool resources, subject to reciprocal externalities in the form of short-term congestion and long-term depletion. These adverse effects result from a combination of open access and rivalry in resource use. Aquifers and fish stocks are commonly used to illustrate incentive misalignment in common pool situations. The theory has been extended to recreational landscapes by Burger and Gochfeld (1998), Marcouiller (1998) and Anttila (1999). Easter weekend snowmobile congestion on Dalarna’s popular mountain trails illustrates single period crowding, while excessive trout fishing in some Maine lakes exemplifies long-term resource depletion. Dalarna landowners have limited legal right to exclude tourists, whereas Maine owners have such rights, but face practical difficulties (transaction costs and retaliatory threats). Regarding the policy goal of developing the tourist economy, open access — free riding tourists — weakens landowners’ incentives to invest in resource stewardship or value-added facilities.

Common pool theory clarifies a sub-set of nature tourism problems, but is unrealistic in two important ways. First, recreational lands in Dalarna and the Maine woods do not fully meet the open access conditions of no vested ownership, no limitations on use, and no user responsibilities (Hanna et al., 1996). In both places, institutions have evolved to shape ownership, usufruct, and land ethics. Second, most recreational lands are best understood as impure public goods supplied by multi-function ecosystems. A specific tourist activity may impose unidirectional external costs on other recreational or non-recreational land users. In the Dalarna snowmobiling example, heavy peak traffic adversely affects cross country skiing, Sami reindeer herding, alpine lake fish stocks, commercial forest regeneration, ambient air quality, and green-
Multi-season

- picking mushrooms, berries, flowers, herbs
- picnicking
- camping
- river and stillwater fishing
- motor boating, jet skiing and water skiing
- white water and flat water canoeing & kayaking
- technical rock and ice climbing
- orienteering
- all terrain vehicle and dirt bike driving
- mountain biking
- day hiking & backpacking
- horse riding
- bird watching
- photography & painting
- environmental and natural history education
- survival training

Winter and early Spring

- alpine skiing and snowboarding
- cross-country and telemark skiing
- snowshoeing
- snowmobiling
- ice fishing
- dog sledding

Fig. 1. A catalog of nature-based tourism in forest regions.

Rent-seeking landowners deciding among alternative land uses, but not constrained by legal regulations or ethical norms, are likely to give less weight than society would to option, bequest, and existence values. The private discount rate (opportunity cost of capital) exceeds the social rate. Land use decisions stemming from misalignment between private and collective valuations may jeopardize the sustainability of tourism and resource use more generally. Another mismatch arises when private holdings are smaller than efficient recreational management units, raising tourism’s transaction costs and discouraging value-added investments.

‘Mal-adaptation’ in the essay’s title connotes a co-evolutionary failure. Property institutions once well adapted to objective conditions and subjective purposes may prove ineffective when conditions and purposes change. Motorized backcountry recreation is such a change; sustainable nature tourism is such a purpose. This essay documents how property regimes have become mal-adapted over time and confirms that no ‘invisible hand’ can be relied on to reshape prop-
roperty institutions for greater ecological fitness or economic efficiency (North, 1991; Ostrom, 1990).

From the Brundtland Commission onward, sustainable development has been understood as a moral responsibility to ‘meet the needs of the present’ while bequeathing future generations capacities to ‘meet their own needs.’ Sustainable tourism here refers to activities that, individually and in aggregate, function within ecological carrying capacities while contributing to durable economic prosperity and to social, civic and cultural vitality in host regions. Each of these conditions is problematic. For instance, sustainable scale limits are not easily estimated for most nature tourism, particularly when activities (e.g. snowmobiling) affect numerous other recreational and non-recreational activities, present and future (Getz, 1983; Ceballos-Lascurain, 1996). Likewise, although Dalarna’s County Board expects growing tourist numbers and spending to help sustain local cultural life, commercial infrastructure, and public services, there is evidence that un-managed tourism growth erodes local quality of life by congesting public spaces, restricting access to natural amenities, increasing public spending needs, inflating prices, and even raising crime rates (for a more thorough discussion, see Vail et al., 1998).

1.2. Dalarna and Maine’s north woods: a quasi-experiment

Central Sweden’s Dalarna County and the northeastern US state of Maine offer insights into how nature tourism is shaped by particular differences within broadly similar property rights regimes. Before tourism became a mass phenomenon a century ago, visitors to Dalecarlia, such as heritage park builder Arthur Hazelius, and to Maine’s forest wilderness, such as naturalist H. D. Thoreau, wove a cultural mystique that still cloaks these places. Today, Dalarna and Maine retain the allure of places that are accessible yet ‘off the beaten path,’ with intriguing folk cultures and stunning lake, river, and mountain scenery.¹ Maine’s Office of Tourism can thus promote nationally significant attractions: the greatest contiguous forest and only designated wilderness waterway east of the Mississippi River, the northern terminus of the 3000 km Appalachian Trail, and 40 000 moose. Sahlberg, above, paints a similar picture of interior Sweden.

Dalarna and Maine are both overwhelmingly rural and 90% forested, with over three-fourths of the land private. Southern reaches are within a day’s drive of major metropolitan centers: Stockholm, Gothenburg, and Oslo; Boston, New York, and Montreal. Although economic prosperity has waxed and waned with the fortunes of resource-based industries, for complex reasons, the mainstays — forest products, agriculture, mining and metals — are mature or declining. Policy makers have come to view tourism as a way to mobilize underutilized natural and human capital and diversify rural economies. In sum, Dalarna and interior Maine offer a setting for comparative study of property rights and nature tourism because of their historic, geographic, and economic parallels — and policy makers’ conviction that tourism can lead economic revitalization.

Maine’s north woods are 94% privately owned, nearly the highest proportion of any US state. Most is ‘working forest,’ owned primarily by paper corporations (see Fig. 2A). Although landowners are legally empowered to restrict trespassing, tourists have customarily had ‘permissive access’ to most of the woods and have come to view it as an entitlement. Public lands, although limited, are important for recreation: two federal parks attract five million yearly visitors and state lands host more than two million. Nonetheless, most outdoor recreation takes place on private land, including all alpine skiing, most hunting, 98% of primitive camping, 67% of snowmobiling, 60% of hiking, and 59% of cross-country skiing. (Irland, 1993)

Most of Dalarna’s undeveloped land is in 24 000 small private ownerships, although a na-

¹ Tourism along Maine’s 5000 km. Atlantic coastline is not dealt with in this study.
Fig. 2. (A) The Maine woods.


National park and more than 100 nature reserves cover 8% of forest land. There are three large industrial forest owners, but just 131 holdings (0.6%) exceed 400 ha (see Fig. 2B). Sweden’s ‘right of common access’ (allemansrätten) gives recreational users — including non-citizens — free access and extensive use rights on most private land. The Lake Siljan region’s fragmented land tenure is an outgrowth of egalitarian inheritance practices. Strips a few meters wide, but several kilometers long, are common. In the past this posed problems for forest operations; more recently it has become an obstacle to commercial tourism development. A private recreation complex was delayed for years because so many landowners were involved, and fragmentation and open access impede commercial development of beaches and marinas. In the fjäll (mountains), property rights controversies revolve around proposed alpine ski area expansion, motorized recreation, aboriginal Sami rights, and damage to fragile alpine ecosystems.
2. Conceptual framework: impure public goods in multi-function ecosystems

The private lands under consideration lack the non-exclusion and non-rivalness characteristic of pure public goods. Recreational landscapes are best considered impure public goods, with some degree of exclusion and rivalness. Sweden’s allemansrätten prohibits public access to cropped fields and homesteads, and forbids activities such as hunting and tree felling without owner permission. Overarching these legal limits is a widely shared ‘land ethic.’ Swedes are reminded in many ways that rights also entail responsibilities toward nature and landowners. Recreational access to Maine’s undeveloped land is not an enforceable right, and some owners have always posted land against trespassing.

Regarding rivalness, recreationists do not cause significant reciprocal externalities in most rural landscapes most of the time: there is ‘excess capacity.’ At prime sites and peak times, however, incremental welfare losses and environmental damage imposed by additional tourists exceeds zero. There are two fairly distinct carrying capacity limits: single period thresholds, where tourists beyond some level increase congestion disamenities (e.g. white water rafters on a stretch of river); and longer-term limits, where cumulative use depletes natural capital (e.g. all terrain vehicles’ trail erosion and habitat disruption).

Common pool theory was developed to analyze how open access and rivalness affect homogeneous stock resources, such as aquifers and fish populations. Misalignment between individual incentives and collective interests results in over-en-
try, rent dissipation, and often resource depletion. This framework helps explain some land use problems in nature tourism, as illustrated by Fig. 3, for the cases of Easter snowmobiling in Dalarna and overfishing in some Maine trout streams.

Quasi-open access and secular demand growth combine to intensify these detrimental externalities. Demand growth reflects rising population, wealth and income; declining travel costs and physical access barriers; and better tourist information services. A question to explore is whether property rights and land use regulations adapt effectively to rising demand. Limited exclusion allows tourists and some tourist businesses to free ride on landowners’ resource conservation efforts, weakening their incentive for farsighted land stewardship. Similarly, when it is costly or impossible to exclude tourists from trails, camp sites, or boat launches, the incentive to invest in such value-added facilities is weakened. (We think of nature tourism as a production process in which tourists combine their own time and skills with human-made goods and services and with natural capital services. Human-made and natural capital — e.g. a camera and a beautiful landscape — are essentially complementary inputs; however a zero price on nature’s services can lead to their overuse, both absolutely and relative to purchased inputs.)

In remote areas, high costs for monitoring and prosecuting negligent tourist behavior, such as littering and damaging logging equipment, further depress owners’ investment incentives. A strong land ethic may reduce recreationists’ opportunism and strengthen landowners’ investment incentives. Such ethics can be considered ‘cultural capital’ (Berkes and Folke, 1992) and where it is costly to control access and monitor behavior, cultural capital formation may be a necessary condition for sustainable nature tourism. Like other types of capital, however, land ethics can also depreciate if ‘new’ tourists fail to appreciate ecosystem fragility or feel no obligation to their ‘hosts.’

2.1. Outdoor recreation as appropriation of ecosystem services

Wildland ecosystems perform many functions essential to non-recreational services. Timber growth, fresh water supply, bio-diversity preservation, and carbon sequestration are a few examples. Tourist activities above threshold levels compete for ecosystem services. (We note that recreation can also be complementary with non-recreational activities, for instance when timber harvesting enlarges moose habitat, benefitting hunters and nature photographers.) When rights to nature’s services conflict or are incompletely specified, tourism’s environmental impacts appear as negative externalities.

Limited power to exclude tourists prevents landowners from choosing the rent maximizing activity mix. Absent a collective land management regime, it also prevents attainment of the socially optimal mix. Pareto inefficiency is also a likely consequence where tourism growth causes uncompensated losses to traditional land users. In Dalarna and Maine, the growing ‘imperialism’ of

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**Reciprocal Single Period Externalities: Snowmobile Congestion**
- direct amenity loss
- health and medical costs
- equipment damage
- travel cost to more distant or less attractive sites

**Unidirectional Inter-temporal Externalities: Trout Stock Depletion**
- deterioration of sport fishing quality
- depressed commercial fishing productivity
- disruption of aquatic food chains
- reduced tourism spending and employment

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Fig. 3. Common pool problems in nature tourism.

*Fig. 4. The multiple-use resource problem: recreational and non-recreational externalities from snowmobiling.*
motor-powered recreation vehicles is a pertinent example, and Fig. 4 catalogues ways snowmobile traffic in Dalarna’s fjäll region usurps rights and curtails benefit streams for others, including benefits distant in time and space. The impact of snowmobiling’s on skiing illustrates how inadequately specified property rights worsens conflict between activities and interest groups. In Maine, an analogous conflict pits moose hunters, who want a larger kill quota, against fall tour operators who want more live moose to show ‘leaf peeping’ visitors (Allen, 1999).

2.2. Land owner rights, non-pecuniary values and discounting

The ‘bundle’ of legal rights and informal norms governing land owners’ behavior varies from one political system to another. Maine’s legal limits and ethical norms are much closer to the laissez faire tradition than Sweden’s. Paper corporations own most of the north woods and shareholders press managers for returns on timberland investment comparable to other assets. Granted, a 50–70 year tree rotation necessitates a fairly long time horizon, paper corporations nonetheless discount future costs and revenues at market interest rates, their opportunity cost of capital. They give little weight to non-pecuniary values (Austin, 1997). This helps explain several adaptations discussed below, including land enclosure and recreational fee collection, seasonal home development, and rapid ownership turnover. In contrast, Dalarna’s owners must allow public access. Land use is also shaped by regulations and norms prioritizing resource conservation — bequest and existence values. Together, Swedish laws, regulations, and culture drive a wedge between market interest rates and the low discount rate built into land use decisions. These institutions align private actions more closely with public policy goals.

2.3. Scale mis-alignments

Much nature tourism takes place in landscapes larger than individual land holdings, with activities dependent on infrastructures — waterways, road networks, trail systems — that cross property lines. Even activities contained within a property are set in larger biotopes, watersheds, and cultural–historical landscapes. The quality of recreational experiences, and hence of tourists’ willingness to pay and landowners’ ability to secure economic rents, hinge on common property features beyond any individual owner’s control. Potential scale economies create an incentive for landowners to invest collectively in transboundary infrastructures, like road and trail networks; in complementary commercial facilities, like cabins and boat landings; and in administrative mechanisms for promotion, fee collection, and even political lobbying. In managing outdoor recreation, there is a case for both public and collective private land use regimes, at multiple scales. The prospect of landowner collaboration raises questions about collective self-governance, countervailing organization by recreational user groups, and government’s potential roles as facilitator, partner and regulator.

3. Property rights adaptation and mal-adaptation in Maine’s north woods

For a century, most of Maine’s four million ha north woods (half of the state’s land area) have been held by roughly 15 large land owners, predominantly paper corporations with familiar names like International Paper and Georgia Pacific. Industrial forests were managed primarily for timber, fiber, and biomass. Although owners could restrict access, they customarily allowed free recreational use except where it interfered with logging operations. During Maine’s era as a ‘paper plantation,’ free access bought the corporations political good will (Vail, 1993). As recently as 1982, just 8% of undeveloped land was posted against trespassing and free access came to be viewed as a right: ‘The public has never clearly
perceived the Maine Woods as private property. The phrase ‘our forest’ is repeatedly heard in the rhetoric of hunters, canoeists, and snowmobilers as well as citizens concerned about broader values’ (Irland, 1996 p. 68).3

State agencies, ‘work aggressively towards enhancing the relationship between land owners and land users,’ particularly by reminding recreationists of owners’ rights (IFW, 1998). As this suggests, the north woods’ recreational status has always been somewhat precarious. Since the 1870s, for example, long-term leases have been granted for commercial sporting camps. Later, large parcels were sold for alpine skiing resorts. Until the 1970s, however, such rent-capturing activities involved a minuscule fraction of the ‘endless’ north woods. Even at a zero price, recreational use was sparse. Owners facing high fee collection and monitoring costs had little incentive to enclose land or invest in commercial tourism (beyond leasing). Thus managed timber and un-managed recreation were generally non-competing land uses. At the same time, backcountry recreation contributed relatively little to the economy of Maine’s impoverished hinterland.

As tourist numbers grew and their behavior changed in recent decades, ‘permissive access’ became increasingly mal-adapted to forest owners’ objectives. Key factors re-shaping their economic calculus have been:

- Construction of 40 000 km of logging roads that opened ‘wilderness’ to casual tourists.
- The advent of large-scale clearcutting and herbicide spraying, making recreation more of a nuisance.
- The spread of motorized recreation vehicles, ranging from four-wheel drive trucks to snowmobiles, and jet skis.
- Commercial and government promotion of wildlands tourism.
- ‘New’ tourists lacking a strong sense of responsibility to their hosts.

- Growing demand for leisure homes, rooted in increased personal wealth and ‘baby boomer’ demographics.
- Concentration of leisure into briefer periods, especially long weekends, intensifying peak pressures. (Irland, 1993; LURC, 1997)

These changes inflated the cost of road maintenance, waste disposal, fire fighting, and vandalism. They also signaled untapped rent-capturing opportunities as paper corporations re-thought the strategic role of their timberlands: from raw material ‘mines’ to multiple-use assets, from cost centers to profit centers, from illiquid to liquid assets. This shift was part of an industry-wide restructuring, driven by shareholder pressure and, in some instances, by ‘corporate raiders’ advocating timber asset liquidation. ‘Chainsaw Al’ Dunlap’s takeover of Scott Paper and divestiture of its Maine mills and timberlands in the mid-1990s has become a local saga. In sum, growing pulpwood has fairly low returns under Maine’s conditions and ‘patient capital’ is uncommon in the US paper industry.

Today, historically evolved patterns of forest ownership, permissive access, and minimal state regulation are in flux. This section sketches five adaptations and mal-adaptations: gating, landowner cooperation, cumulative real estate development, regulatory reactions, and ‘buying back the north woods’.

3.1. Gating and fee collection

Once haul roads had opened remote areas, gating key entry points was an obvious way to limit use and collect fees. Since most tourists enter the woods at just five points, transactions costs can be limited without excessive free riding. Nearly all large forest owners charge fees for day use and campsites (a few wave fees for Maine residents, children, and elders). They continue to lease cabin and sporting camps sites. North Maine Woods Inc. (NMW) is a non-profit recreation management corporation formed by several owners in 1971. In 1998, it reported 206 000 paid visitor days on its 1.2 million ha northern Maine tract (see Fig. 2A). Its fees are typical: $4/person per day ($7 for non-residents), $25 for a season
In the face of growing demand, commercialized access to wildlands can contribute to sustainable nature tourism in three ways. First, fees can be a rationing device, reducing congestion at peak times and places. Fees align tourists’ willingness to pay for nature’s services more closely with owners’ costs. In practice, this rationing effect is small since peak-period pricing is not used. Second, revenues can be plowed back into environmental protection measures, such as hardened trails, secure latrines, and safe campfire sites. Third, fee collection strengthens owners’ incentives to invest in attractive camp sites, signed nature trails, boat ramps, and picnic areas, which increase local economic activity and employment. Attractive facilities also boost demand for value-added services supplied by professional guides and sporting camps. With gating and user fees a contributing factor, tourism employment in interior Maine has grown to 24,000 jobs, rivaling forest products as the region’s largest employer. Total spending (excluding alpine skiing) is nearly $1 billion/year, roughly one-fifth of forest product sales (Maine Audubon Society, 1996).

From an equity perspective, however, gating is problematic. First, it eliminates a long-standing free access entitlement for thousands of Maine residents, violating the ‘no losers’ condition for a Pareto improvement. Average household income in the unorganized territories is far below the Maine and US levels, and many poor rural dwellers still rely on subsistence hunting, trapping and fishing. Second, the combination of gating and easy vehicle access has diminished the quality of backcountry experience for solitude seekers: ‘One motorized canoe can ruin the feeling of silence on a river for an hour ... One light at night on the porch of a lakeside [cabin] eliminates the remote feeling of the lake for a viewer on the opposite shoreline.’ (Irland, 1993: p. 12).

3.2. Collective action and corporatism

Cooperative recreation management has become the norm among large forest owners, with North Maine Woods, Inc. the pre-eminent institution. NMW has 25 members and a management area of 1.5 million ha. Landowner cooperation traces back to 19th century allocation of spring floods for river log drives, and when river driving ended in the 1970s, they invested jointly in haul roads. Without those precedents, it is unlikely that so many and different owners could have shaped a common recreation strategy. Delegating recreation management (apart from leases) to a non-profit corporation allows owners to focus on timber management but still achieve scale economies in fee collection, monitoring, facilities maintenance. NMW’s manager believes the relatively low fees encourage responsible tourist behavior and counter popular pressure for tougher regulation of forest management and real estate development (Cowperthwaite, 1999).

Landowner cooperation has induced user group organizing, and in 1991 a ‘Sportsman–Landowner Alliance’ formalized NMW’s relationship with six sporting associations. The state promoted formation of the Alliance and public officials facilitate meetings and provide technical assistance. This state mediation of interest group relationships is analogous to Sweden’s ‘democratic corporatist’ tradition; however a tendency for state officials to ally with their ‘sportsmen’ clientele can conflict with their mandate to serve broader public interests. Quasi-contractual arrangements help align incentives and avert conflicts. Thus, for example, bear hunting stands are

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4 A caution: most tourism jobs are seasonal and offer low pay and few benefits; in contrast, paper mill jobs are among Maine’s best paid (Vail et al., 1998).

5 NMW’s members include paper corporations, timber management companies, insurance companies, extended families, and a land trust.
coordinated with logging operations; and a key Maine–Quebec snowmobile trail is maintained (with state financial assistance). The Alliance appears to be a ‘cooperative game’ that reduces conflicts among land uses and benefits both owners and recreationists. Sporting association members get vehicle access to prime areas for a modest $25 seasonal fee, while their participation in land management reduces environmental damage and policing costs (MSA, 1998; Cowperthwaite, 1999). This experience seems to bear out the Hanna (1995p. 60) hypothesis that ‘User participation [in resource management] contributes positively to the cost-effectiveness of management processes [by lowering] costs of information gathering, coordination, monitoring and enforcement.’

In contrast, NMW’s 1999 decision to impose access charges on long-term leaseholders (on top of their rising lease fees) raised a wave of protest. NMW contends that, as a non-profit organization, it needs the revenues to cover rising costs of serving leaseholders. The 700-member Maine Leaseholders’ Association disagrees. It has persuaded NMW to charge lessees a special low fee, backed by two threats: a civil suit claiming that access fees violate lessee’s contractual rights, and proposed legislation that would eliminate property tax advantages to forest owners who restrict recreational access. This conflict is one manifestation of powerful forces that threaten to transform Maine’s wildlands into a domesticated landscape and a political battlefield (Scruggs, 1999).

3.3. Cumulative and irreversible landscape changes

Maine’s north woods are experiencing a real estate boom that combines massive paper company land sales with accelerated land subdivision for seasonal homes. The process illustrates how market forces and private valuations undermine the public good character of undeveloped landscapes when property owners are subject to few regulatory restrictions and a weak land ethic. Maine’s Land Use Regulation Commission (LURC) has warned that, ‘Cumulatively, seasonal housing development may have the greatest impact on natural and recreational resources’ (LURC, 1997, pp. 67–68). Development tends to concentrate around ski resorts and on waterfronts accessible by logging road: places within an easy day’s drive of Boston. ‘Baby boomer’ demographics and a surging stock market have led thousands of metropolitan dwellers to channel capital gains into ‘a place in the north woods.’ Although new construction in Maine’s unorganized territories is not fully documented, land ‘transformed ... to non-forest uses like home sites’ jumped 38% in 1998, to 2000 ha (AP, 1999).

The current real estate boom is part of a long, cumulative process. From 1971 to 1991, 2% of the unorganized territories were sub-divided into small lots. From 1989 to 1998, LURC granted permits for 201 multi-unit housing sub-divisions. By a 1993 estimate, 1000 new lakeside cabins had been built in the past few years. And as early as 1986, 45% of surveyed tourists reported that development prevented their return to previously visited sites (Irland, 1993; LURC, 1997; Fisk, 1999). A federal study concluded that among northeastern states, Maine ‘had the worst record for subdivisions, parcelization and development.’ (Lansky 1999). The LURC staff (LURC, 1994, p.1) summed up the problem in a critique of its own Comprehensive Land Use Plan:

The principal development related problem ... appears not to be the amount of development taking place in the wildlands, but rather where it is located ... Scattered development primarily in areas where it has a disproportionate effect on public interests (e.g. lakeshores and other riparian areas) is eroding the special value of the wildlands as a productive forest, as wildlife habitat and as an area unique on the Eastern seaboard for its semi-wilderness character.

Astonishingly, there has been no systematic study of the long-term social, economic, and environmental impacts of converting land from forestry and backcountry recreation to leisure home development. However, it is clear that even relatively small developments can adversely affect
nature tourism and wildlife habitat. Leisure homeowners often post ‘No Trespassing’ signs on entire parcels and access roads, even though house lots occupy just a fraction of a hectare. Once development is underway on a road or shore front, LURC’s ‘adjacency re-zoning criteria’ make permitting easier for subsequent owners. Roads, drainage ditches and power lines domesticate the landscape and fragment wildlife habitat.

Massive corporate land sales in 1998–1999 have set the stage for still more real estate development. In the past, large tracts changed hands as paper corporations expanded or rationalized their timberlands. However, in the recent quantum leap of sales, paper corporations have been the sellers and land development companies among the major buyers. The dynamics are illustrated by SAPPI’s (South African Pulp and Paper) purchase of Scott Paper’s ca. 400,000 hectares in 1994 and its 1998 re-sale of the land to Plum Creek Timber. Plum Creek is a West Coast partnership with a reputation for liquidation logging and speculative land sub-division. Although it has contracted to supply pulpwod to SAPPI’s mills and has sold a 150 km shoreline ‘beauty strip’ to the state, Plum Creek has also set up a real estate division to oversee land development. A few months later, Bowater, Inc. sold Maine’s largest holding, one million ha, with 250,000 ha purchased by another out-of-state land management company. The new land manager ‘acknowledges that neither he nor his investors may be in this for the long term’ (Sayen, 1999). Combining these and other parcels, one-third of the north woods — one-sixth of the entire state — changed owners within a year.

The actors and the market forces are in place to accelerate irreversible landscape transformation. Real estate development grounded in a private decision calculus works against sustainable nature tourism in two ways. First, the collective values associated with large wildland tracts — especially option, bequest and existence values — are given little weight in decisions. Second, the discount rate of corporate shareholders and real estate dealers is higher than Maine citizens’ social discount rate.

### 3.4. Regulatory responses

Land enclosure and real estate development have changed the regulatory context dramatically. Nominally, land use in the unorganized territories is guided by LURC’s Comprehensive Land Use Plan, but its politically-appointed commissioners reflect a mix of interests, including large land owners and the anti-government property rights movement. Its actions are also constrained by statute and the quality of analysis its small professional staff can generate. A veteran LURC observer perceives increasing landowner influence, relative to conservation interests (Austin, 1997).

In sum, state regulators have limited inclination and ability to arrest changes that could undermine sustainable nature tourism.

In practice, LURC’s responses to the forces described above are often reactive and piecemeal. Nonetheless, the LURC staff’s self-critique has led to a new growth management mandate that could potentially make competing land uses more compatible and sustainable. In principle, planning is to be guided by two priorities. First, intensive land uses should be concentrated in ‘areas most appropriate for development,’ with development encouraged near population centers on the fringe of the woods and discouraged in more remote areas, especially on pristine waters. Second, stringent zoning criteria should be applied to all housing subdivisions and major developments to prevent incompatible uses in ‘Recreation Protection Subdistricts [with] opportunities for significant primitive recreational activities... All new development must meet the requirement that... the project [fit] harmoniously into the existing natural environment in order to assure that there will be no undue adverse effect on existing uses, scenic character and natural and historical resources.’ Incentives to channel development include planning assistance to towns bordering the unorganized territories and flexible permitting, for instance, allowing high-density condominiums near ski areas (LURC, 1997, p. 148).

LURC recently stood up to the powerful Sportsmen’s Alliance of Maine and its ally, the Inland Fisheries and Wildlife Commission, in rejecting a boat ramp on an undeveloped lake. It
also refused to permit a commercial sporting camp spanning several remote ponds. However, the Commission admits that its ‘Land Use Districts and Standards’ (1997) contain few firm or specific guidelines, giving land owners’ latitude to ignore or appeal its rulings. In sum, while the goal of protecting wildlands is clearly articulated in the Comprehensive Land Use Plan, LURC does not have the makeup, authority, facts, or staff to apply the Plan’s principles rigorously. Soon its enforcement capability may be overwhelmed by the impending real estate boom.

3.5. Buying back the north woods

The Maine woods are contested terrain. Political issues range from proposed clearcutting restrictions to regulation of real estate sub-divisions and even use of jet skis on remote ponds. A consensus is emerging that the public and private adaptations described above cannot ensure either sustainable backcountry recreation or healthy forest ecosystems. Citizen groups have reacted to gating and real estate development by demanding public land acquisition. In the late 1980s, voters approved a $35 million ‘Land for Maine’s Future’ bond, but priority was given to protecting land facing development pressure in populous regions. The US Congress also created a Northern Forest Stewardship Council, which focused on the Maine woods as the eastern US’s largest wildland, an area with nationally important features. However, the Republican-dominated Congress failed to fund the Council’s recommended land acquisitions.

Conservation organizations consequently took up the challenge, but quickly lapsed into factionalism, with one group proposing a million ha Maine Woods National Park and another calling for state acquisition of several smaller parcels with special scenic, recreational, ecological values. The forest products industry opposes the loss of commercial timberland but, like the new non-industrial land owners, is attracted by the prospect of selling prime parcels at ‘fair market value.’ Momentum increased in 1996 when the Maine Economic Growth Council, a public–private body, recommended doubling public lands by the year 2020, and the state’s governor created a Land Acquisition Advisory Committee.

Notwithstanding these initiatives, it took 1998’s massive timberland sales to break the political logjam. In November 1999, voters approved a new $50 million land acquisition bond by a 2-to-1 margin. The state has already purchased key strips from Plum Creek Timber, widening the Appalachian Trail corridor and protecting 150 km of shoreline. Nonetheless, $50 million is a timid gesture compared to the magnitude of the challenge. Priority will evidently again go to lands under development pressure in southern and coastal Maine; but even if the entire $50 million went to the north woods, it would purchase only 50,000–100,000 ha (1–2% of the woods). To date, the state has been upstaged by conservation groups: The Nature Conservancy has acquired 70,000 remote hectares on the Maine–Quebec border for $35 million and the New England Forestry Foundation has negotiated a ‘conservation easement’ to preserve 300,000 hectares for ‘green certified’ timber production and recreation.6

In shedding their historic reluctance to augment public land ownership, Maine citizens face two key challenges: selecting the land or easements to acquire within a very limited budget; and planning for sustainable multiple-use management. A Land For Maine’s Future board is addressing the first challenge with a multi-criteria land rating system; and the Bureau of Parks and Lands (BPL) is designing an ‘Integrated Resource Policy’ to delineate uses of public land parcels. The latter has sparked a three-way dispute among the sporting associations, recreational vehicle clubs, and conservation/wilderness organizations. Vehicular access and motorized recreational vehicles are especially contentious. Although BPL’s draft plan advocates ‘restoring peace and quiet of nature’ to some areas, it also opens more remote lands to snowmobiles, all terrain vehicles, and motorized canoes (Austin, 1998, 1999; Irland, 1998). As a

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6 Easements typically leave land title and most management functions in private hands, but prevent development and certain forest practices. Easements cost less than full ‘fee simple’ purchases.
small step toward rationalizing use levels, BPL has also widened peak/off-peak fee differentials. Maine’s public lands policy remains fraught with contradictory tendencies, competing interests, and inadequate funding. But at least policy statements now employ sustainable development rhetoric and accountable priority-setting bodies are in place. Given the cumulative domestication of the north woods, even small and halting initiatives to expand and systematize management of the public domain offer hope for more sustainable nature tourism.

4. Property rights adaptation and mal-adaptation in Dalarna

Despite a long tradition, Dalarna tourism has only recently been acknowledged as an important economic sector. It contributed little until the mid-1970s, when commercial tourism began to grow and undergo structural change, driven by European interest in alpine skiing. Skiing had been for hardy nature-lovers and school groups on tour, but big-time alpine skiing broadened the consumer base, extended the season, and stimulated the value-added services of a modern tourist industry. Mountain resorts grew and merged, with one listed on the Stockholm stock exchange. Summer tourism also evolved from dispersed family-based businesses into an organized, heavily promoted, multi-season industry. Nonetheless, alpine skiing remains the dominant sub-sector (LD, 1998). As in Maine, recreational land uses provoke controversy, although for substantially different reasons. Allemsrätten, the right of common access, rests on an implicit premise that recreational landscapes are pure (non-depletable) public goods. Not explicitly defined in law, allemsrätten is a collection of customs and judicial decisions governing activities not mentioned in laws stating the state’s obligations to defend landowner claims. These rights derive from archaic law and in a sense still reflect relative resource scarcities of the 13th century. Valuable species that are now scarce (e.g. chanterelle mushrooms and cloudberries) remain free to everyone, as do distinctly modern attractions like white water streams and snowmobile trails. Allemsrätten’s roots are in a custom allowing free travel in roadless country, including the right to stay overnight and gather nourishment (e.g. hazelnuts ‘to the brim of a hat’). Today, the custom allows trespass and primitive camping on private land, but is backed by ethical obligations to prevent harm to nature or economic damage to landowners’ crops, livestock, and timber (Colby, 1988).

These usufruct rights survived Sweden’s modern legislative reforms because they contributed to the political ambition of creating a social recreation policy. One aim was to narrow disparities between working people with little free time or discretionary income and socio-economic elites. Sustaining allemsrätten was viewed as part of the long struggle against feudalism. A second ‘social engineering’ goal was to foster habits of healthy living through outdoor recreation. Today allemsrätten enjoys nearly universal citizen support. It has been invoked to rationalize extension of recreational access into new areas, particularly sport fishing and snowmobiling, including some situations where free access conflicts with sustainable resource use, aboriginal Sami rights, and amenities for other recreationists.

A recreation policy founded on open access can work against rural economic development based on nature tourism. Dalarna conditions are less friendly than Maine’s for internalizing the cost of nature’s services or adding value to them. A major exception is alpine skiing: the force of gravity permits exclusion of free riders and appropriation...
of land rents via lift tickets. Despite incentive problems, Dalarna tourism has grown, both absolutely and as a share of total economic activity. This has intensified pressure on prime sites and resources, so that detrimental effects of open access have come into focus. Shrinking income and leisure disparities have also blurred class distinctions that once motivated recreation policy. Formal institutional adaptations, such as new statutes and judicial rulings, have come slowly, however. In the near term, changing public attitudes, entrepreneurial creativity, and decentralized collective action will probably be more important than legal and judicial reform. Three adaptations that could promote sustainable tourism are explored here: access fees, measures to capture scale economies, and multi-scale land use management.

4.1. Fees for access to nature

Nearly 80% of foreign summer tourists indicate that visiting nature is a reason they choose a Swedish destination (Arbman, 1999). That statistic reflects demand for a more-or-less free good, as is crudely reflected in tourism satellite accounts. They show that combined spending on recreational, cultural and sporting services was only 2.8% of non-residents’ (3.1% of Swedes’) tourist spending in 1992 (Nordström, 1996). Just a fraction of this small fraction is direct payment for enjoyment of nature, such as fishing licenses and guide services. True land rents are thus minuscule, however, rents can be appropriated indirectly through higher prices for commodities complementary to natural attractions. In Dalarna this is not very significant, except in ski areas. The lodging sector, a key example, is highly competitive and plagued by excess capacity, giving suppliers little scope to capture rents through higher room rates. Indeed, at the low end of the market (tent and caravan sites, hostels, and cabins), local governments add to excess capacity by offering business subsidies and loan guarantees or operating public facilities at below-cost prices. These practices depress the return to owners of lodgings (SHR 1998). Alpine ski resorts, in contrast, have the locational advantage of distance from competitors and the institutional advantage of collusive price setting for the entire package of ski holiday services.

Under allemansrätten, access fees cannot be charged for most undeveloped areas. Permission to fence an area and collect recreational fees requires a facilities investment that dwarfs natural features, as with golf courses, marinas, and amusement parks. Moreover, landowners cannot provide commercial campsites, fishing and bathing piers, and ski or snowmobile tracks exclusively to one set of users for instance, commercial tour customers. And fees can only cover costs. Finally, there are few ways to recover the cost of maintaining or improving a site’s environmental features, for instance, by thinning timber stands and hardening trails.

Allemansrätten faces no overt political challenge, but behind the scenes practices are changing. Some nature-based service suppliers are taking advantage of two limitations in allemansrätten to introduce pricing mechanisms: first, the right applies to individuals but not businesses, creating an opening to charge for certain recreational land uses; second, in most places there is no public right to fish or hunt. The first option has been little used thus far, and landowner compensation has been primarily for large-scale activities like national sporting events. Still, landowner associations have begun to take action. The National Farmers’ Association (LRF) has taken tour operators to court, seeking compensation for their use of members’ land. So far, courts have ruled against LRF, on grounds that tourists continue to have access rights as individuals even when they participate in a commercial activity such as white-water rafting.

Tourist businesses, have also taken initiatives. Court rulings do not prevent compensation of landowners, and prototype arrangements have made rental payments, in effect, mandatory. Two canoe trip outfitters compensate riparian owners along regularly used streams through a contract that includes annual payments if the owners avoid waterfront timber harvesting and charge no fees for camp sites. These outfitters circumvent the free camping right by offering their clients a discount equal to the tenting fee. Replicating such ‘cooperative games’ widely may be difficult since
uncooperative tourists cannot be excluded and relatively few outdoor recreationists participate in commercially-organized tours.

Sport fishing is Sweden’s most popular leisure activity, and allemansrättten does not cover fishing on most inland waters. Throughout Dalarna, riparian owners’ associations sell sportfishing licences, but fees are typically too low to limit effective demand. This is illustrated by the lower Dalälven River, called ‘Sweden’s most complete fishing area,’ with 30 game fish species. A daily license for one fish conservation district (fiskevårdsområde) costs just $3, less than a Big Mac and too low even to cover the administrative cost of selling licenses (Finn and Snellman, 1997). Although there is no price ceiling on licenses, publicly funded fish stocking and other conservation measures are conditioned on fishing being open to the public at ‘reasonable prices’. Just as important, fishing rights on private (non-industry) waterways are governed by riparian landowners as a commons with the landowners, but not family or friends, entitled to free fishing. This ageing group keeps fees low so family and friends can enjoy cheap fishing.

Discriminatory license fees — high to tourists and low to friends and relatives — seems an obvious way to resolve riparian owners’ conflicting objectives. An analogous pricing model was introduced by Domänverket, a parastatal corporation that formerly managed Sweden’s Crown lands. It offered a low cost ‘Domän fishing card’ usable on more than 200 lakes and streams in Dalarna/Bergslagen; and a premium ‘Crown license’ for a small set of exclusive and intensively managed waters. Private fish conservation districts are beginning to follow suit, offering licenses differentiated by place, duration, and catch limits. Such menus can discriminate in favor of local residents if they know about quality fishing waters omitted from the brochures, but this objective could be attained simply by direct price discrimination favoring residents, as North Maine Woods does in Maine.

Bundling services to paying clients is an indirect way to price nature’s services. For tourists who purchase package tours to avoid search and transactions costs and guarantee experience quality, a land use fee can be built into the price at the time of purchase. This is especially true where access to nature is combined with professional guide services and the use of specialized equipment. Until recently, outdoor recreation packages were rare in Dalarna, but a growing number of promotional brochures and Web sites offer complete package menus that combine value-added activities such as horseback riding, golf, whitewater rafting, dog sledding, and alpine lake fishing. In Malung municipality, a 5-day fishing card costs $12.50, whereas five days of guided fishing brings in $250 for an ‘ordinary’ fishing area and $500 for an exceptional fly fishing area. As a secondary benefit, most guides educate clients about environmental stewardship and monitor environmental conditions in their territories.

Although allemansrättten weakens land owners’ incentives to invest in nature conservation and value-added tourism, creative mechanisms to charge for nature’s services are slowly being developed and diffused. These adaptations strengthen nature tourism’s contribution to local economic vitality as well as sustainable resource management.

4.2. Capturing economies of scale

Apart from alpine skiing, theme parks, and sun-and-sea resorts, most rural tourism services are supplied by small businesses. In addition, nature tourists also tend to be spread thinly over large areas, suggesting that economies of scale are unimportant. Nonetheless, as the North Maine Woods, Inc. example shows, significant scale economies may exist at some levels in the vertical industry structure. Administration (promotion, monitoring, fee collection) and ‘infrastructure inputs’ (fish breeding, trail networks, access roads) are subject to increasing returns, which explains why governments often perform these functions.

Economic theory tends to focus on industries where firm size adapts rapidly to changing technology and cost functions. However, in land-intensive production, historically evolved tenure patterns and non-rent maximizing behavior commonly retard movement toward economically optimal scale. The generic problem, as well as a
possible solution, is illustrated by Swedish agriculture and forestry. Firm size has adapted slowly and incompletely to scale advantages offered by mechanization, despite decades of policy promoting land consolidation. Instead, small farm and woodlot owners have used collective action to reduce inefficiencies associated with smallness and land tenure inertia. Forest owner associations and agricultural cooperatives spread overhead costs through collective marketing and contracted heavy equipment operations.

Dalarna tourism also has a tradition of collective action in promotion and booking, with Siljan Tourism the marketing organ for 565 businesses and four municipalities. But in nature tourism, neighboring landowners have done little to coordinate investments and land uses, with the exception of fish conservation districts. Cooperation to capture scale economies seems to face two obstacles. First, lack of a straightforward price instrument makes it difficult to recoup joint investments or to compensate a participant who serves the group by curtailing competing land uses like timber and crop production. The inability to charge fees has, for example, impeded development of quality snowmobile and cross-country ski networks that require investment in trails, bridges, signs, fireplaces, and toilets.9 Constructing and maintaining trails falls largely to unpaid voluntary labor, so high quality, income-generating routes are under-supplied. Second, Dalarna’s social ethic favors subsidized recreation for residents at the expense of economy-building tourism. This bias is reflected in public and private promotional efforts, which under-invest in attracting foreign tourists. Thus, Siljan Tourism does little foreign advertising of summer rental housing, missing the opportunity to attract significantly more Germans, the largest foreign visitor cohort. County-based sportfishing promotions follow a similar pattern.

4.3. Needed: multi-scale land use planning and management

Several recent reports emphasize the need to complement promotion of nature tourism with stronger resource planning and management. Although Swedish environmental policies have been effective in many respects, some problems caused by outdoor recreation growth have been neglected, in part because of politicians’ reluctance to expose conflicts between priorities and interest groups. Environmental degradation caused by traditional activities such as hiking, skiing, and berry picking is minor. Dalarna forests are not generally vulnerable to soil erosion or long-term vegetation damage. Serious litter and sanitation problems are limited to a few well-identified places. The most severe environmental damage stems from activities not covered by allemansrätten: fishing and motorized recreation. As in Maine, increasing attention is being focused on measures to preserve or restore silence, both to reduce disruption of wildlife reproduction and to enhance muscle-powered recreation. Peace and quiet, a powerful attraction to the mountain regions, has been degraded by the seven-fold growth in snowmobiles since 1970. A few Swedish counties limit snowmobiling, but Dalarna’s most intensely used areas have no regulations. Even nature reserves are penetrated by trails and off-trail driving prohibitions are minimally enforced (LV, 1994). This situation calls for clarification and tightening of both national and county regulations.

Mis-management of sport-fishing resources is a long-neglected issue, though it was pointed out as long ago as 1759 in a report to the Royal Academy of Science (Hederström, 1759). The need for catch limits to protect breeding stocks has been scientifically confirmed, but limits have proven difficult to implement (Eriksson et al., 1999; Nordwall et al., forthcoming). In most alpine lakes and streams, where rates of fish biomass production are very low, fishing effort is above sustainable levels (Jonasson, 1995). Excess harvesting of mature game fish skews populations toward immature fish and less desirable species (Eriksson, 1998). Carrying capacity is also

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9 Free access to most snow-covered land contrasts with Norway, where recreational snowmobiling is tightly controlled, and with Maine, where landowner permission is required. This issue has been the subject of several official investigations but little action (SOU, 1994; Hultkrantz, 1995; SOU, 1995)
stressed in some productive lowland waters by sportfishing combined with riparian owners’ net and fixed gear harvesting. The latter is thought to remove much of the Baltic salmon and sea trout moving up river to spawn (Weisglas et al., 1996). There is at present no effective means to transfer a share of fishing license revenue from high value upstream areas to compensate downstream owners for cutting back low value, non-sustainable commercial harvesting. These problems have been exacerbated by recent parliamentary decisions, including one in 1992 that gave the public the right to fish waters in Sami reindeer grazing areas, an action some label environmental racism (Arneson-Westerdahl, 1994). The government rationalized its decisions as a way to stimulate rural tourism, but any economic gains are likely to be short-lived. The situation calls for state action to prevent breeding stock depletion and entice subsidized conservation from the cheap license fee requirement. County action could facilitate collective arrangements between upstream and downstream riparian owners to protect fish stocks and augment their economic value.

Important ecological underpinnings of Dalarna’s nature tourism are under stress, and tourism promotion without farsighted land use planning will intensify those stresses. As a matter of urgency, Sweden needs to resolve competing claims on its natural capital and protect nationally significant landscapes. Dalarna needs multi-scale land use planning, grounded in scientific assessment of carrying capacity, at the county, municipal and land owner association levels.

5. Sustaining nature tourism: four property rights challenges

The preceding stories of evolving recreational land use confirm the Hanna, et al. (1996) insight that, ‘Property rights regimes are critical institutions ... They link society to nature and have the potential to coordinate human and natural systems in a complementary way for both ecological and human long term objectives.’ As numerous examples have shown, mal-adapted property regimes can contradict those objectives. The narrative highlights numerous differences between Dalarna and Maine, but the analysis points to four broadly similar challenges for sustainable nature tourism:

- Keeping demand pressure within capacity limits at prime sites and peak times.
- Balancing tourism and non-recreational activities in multi-function ecosystems.
- Controlling cumulative, irreversible landscape transformation.
- Strengthening landowners’ incentives to invest in conservation and value-added tourism.

Carrying capacity is an amorphous concept with both social and biophysical dimensions. Sustainable tourism requires identification and effective management of hot spots where tourists — and their vehicles — cause congestion or resource depletion. Capacity-based inventories of natural attractions are needed, including forecasts of incremental impacts of further growth. Carrying capacity is not a definitive number of users, and an important strategic question is: how could innovations in access rights, incentives, and land use regulations augment capacity, for example, by encouraging off-peak use, a land-care ethic, and landowner investments in conservation measures?

In landscapes with multiple, competing uses, one challenge is to understand and quantify the costs each tourist activity imposes on other activities, present and future. In particular, planners need to analyze the effect of two connected trends — vehicular access and motorized recreation — on ecosystem health and the amenity of muscle-powered and solitude-seeking recreationists. A better grasp of these problematic relationships might overcome politicians’ reluctance to confront the tendency for motorized tourists to usurp the rights of landowners and other recreationists and disrupt habitat.

At present, irreversible landscape transformation is more serious in Maine than in Dalarna. The burst of real estate speculation, following decades of slow but cumulative leisure home development, threatens to carve up and domesticate parts of the eastern US’s largest wildland. Some innovations in landowner practices, regulations, and public lands policy are improving multiple-use land management, but the overarching prop-
A strong case can be made that sustainable nature tourism in both Dalarna and Maine requires amendments to national property law which do not appear to be forthcoming. Fortunately, examples highlighted here suggest there is much scope for decentralized initiatives to design a more sustainable fit between property institutions and nature tourism.

References


IFW (Maine Inland Fisheries and Wildlife Department), 1998. Land Owners and Land Users — How to Get Along. Maine Department of Conservation, Augusta, ME.


MOT (Maine Office of Tourism), 1995. Five Year Marketing and Development Strategy for Maine Tourism. Maine Department of Economic and Community Development, Augusta, ME.

MSA (Maine Snowmobile Association), 1998. Maine Snowmobile Trails. Augusta, ME.


SHR (Sveriges hotell- och restaurangförbund), 1998. Statistik för hotell- och restaurangnäringen. Stockholm


