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SHARED OWNERSHIP OF FORESTLANDS: EXPERIENCE AND PROSPECTS

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I. Introduction

Particularly since the mid-1960s, a rising number of claims have been made on America's forestlands, both in New England and nationwide. A wide variety of individuals and groups assert these claims. Recreationists express concern about denial of access and motorists complain of loss of scenic views due to timber harvest or land use changes. Owners of second homes have come to feel a proprietary interest in the management of timbered parcels adjoining their own. Persons and organizations concerned about fish and wildlife habitat and about water quality have strongly objected to management practices on both publicly and privately owned forestland. As Marion Clawson has put it, "the number of people who neither own nor use...land now, nor propose to do so in the future, but who nevertheless assert an interest in its use, is rising sharply." (Clawson, 1972)

This increase in concern by non-landowners has occurred in the context of intensified timber management on many forestlands, rising land prices, and increased pressure to convert land to non-forest uses. Most often it has been expressed by calls for increased governmental regulation to protect newly defined "public interests" (Healy and Rosenberg, 1979; Popper, 1980). It has also resulted in a large number of fee simple purchases of rural land, as persons with a newfound interest in rural land either purchase it outright for their own private use (see Healy and Short, 1981) or seek its transfer to public ownership. The availability, particularly during the late 1960s and the 1970s, of large amounts of federal money under the 1965 Land and Water Conservation Fund Act encouraged substantial purchases of rural land by federal, state and local park systems. Increasingly active have been private land conservancies--there are several hundred nationwide--which purchase land either for their own preserves, or for eventual resale to government agencies (Diehl and Barrett, 1988)

Somewhat neglected in the attention paid to (1) increased regulation of rural land and (2) increased public and private purchase has been a third important way in which newly emerging demands on rural land might be fulfilled. This is shared ownership, a set of institutional arrangements through which ownership rights to land are divided among multiple parties. This can involve joint ownership of a single right (e.g. multiple ownership of timber cutting rights), temporary severing of one or more use rights (e.g. various forms of leases) or the permanent dedication of easements (e.g. conservation easements). It can also involve shared ownership of undivided interests in a single large parcel. These new forms of shared ownership often involve new legal arrangements, for example limited partnerships, land conservancies, and community land trusts. They also can involve new sorts of arrangements among government agencies or between government agencies and private entities.

This paper will review the principal varieties of shared ownership of rural land, with particular attention to those which are relevant to large tracts

of timberland. It will also pose some of the important public policy issues which these new arrangements raise.

II. Legal and Customary Bases for Shared Ownership

In legal theory, as well as in land economics, the ownership of land is seen as entitling the owner to a "bundle of rights" including, among others, rights to possession and use, to sell, devise, lease, mortgage, subdivide, and to grant easements (Barlowe, 1986). Fee simple ownership, the dominant ownership form in the U.S. includes a very broad range of rights. However, even the owner of a fee simple interest is limited by the government's reservation of several important rights, including the right to tax, the right to take land under eminent domain, and the right to regulate land use under the police power.

It is not unusual for fee simple title to land to be held by multiple owners, either through partnerships, trusts and estates, and corporate entities. There is also a long history of severing certain rights from the fee simple bundle, which are then held by others and sometimes resold. Perhaps the most common severed rights are easements, which allow others to traverse the property (access easements) or allow public or private authorities to build roads, power lines, and pipelines accross the property. Water rights may also be severed from land, and are sometimes resold to third parties. Perhaps the most active market for severed rights is for mineral rights, including oil, gas and coal. The existance of this multiplicity of severed rights provides a precedent for more ambitious forms of ownership sharing, in which multiple entities share fee simple ownership or divide the bundle of rights according to their own desires.

New forms of rural landownership have borrowed several of the legal procedures of earlier types of rights sharing or rights severance. For example, conservation easements are recorded and exercised in much the same way as access or utility easements. But new landownership arrangements have also been influenced by new ideas in capital markets, most of them fully developed only in the past two decades. One is the limited partnership, which has become a very important shared ownership arrangement for a variety of capital assets, from apartment buildings to airliners and rail cars. Another is the condominium form of ownership, which offers the advantages of pooled ownership, but allows the owner to claim the security and tax benefits of individual title. Both of these concepts have already been applied to rural land ownership.

Still other financial market concepts have yet to be widely applied--for example, the participating mortgage, which allows the owner of a fixed income security instrument to share in the equity value or profits of an enterprise. (For example, a holder of a mortgage on a shopping center may be entitled to a fixed monthly payment, plus a percentage of rental income.)

American financial markets have very rapidly become quite sophisticated about new arrangements for shared ownership of capital assets. Condominium

ownership interests in apartment units, considered a very strange form of ownership only two decades ago, are now handled by virtually every real estate broker in the country. Limited partnerships have much greater liquidity than they did even five years ago, and a few of the largest ones are sold on the New York Stock Exchange. Irland and Howard (1989) note the increasing "securitization" of asset ownership, inlcuding timberland ownership, as assets are repackaged by various financial intermediaries so as to appeal to wider markets. The combination of new financial sophistication, and a long tradition within real estate law of severing some of the "bundle of rights" is setting the stage, we believe, for consideration of new forms of shared ownership of rural land. The remainder of this paper will analyze experience to date with these new ownership forms, and will point out some of the important issues which they raise.

III. Forms of Shared Ownership

Conservation Easements

One of the most common forms of shared ownership is the dedication to a second party of a conservation easement. The term "scenic easement" is also widely used, although it apears to be losing linguistic ground. Such easements may involve extinguishing of development rights or may limit land to a specified use, such as pasture or timber. A national survey of government and non-profit organizations' easement programs, taken in 1985, identified 1.77 million acres of land that were subject to conservation easements. Some 1.23 million acres were subject to conservation easements held by the federal government, 205,000 acres had easements held by non-federal govenment units, and 336,000 acres had easements held by non-profit entitites (Land Trust Exchange, 3,4:5-8, 1985) About three-quarters of the easements had been purchased by the holders, the rest had been donated. A 1989 survey identified 743 land trusts nationwide, and noted that over seventy percent accept conservation easements (Land Trust Exchange, 1989).

A very wide variety of organizations were found to be holders of such easements. Federal holders of conservation easements included the National Park Service, Fish and Wildlife Service, Forest Service, Corps of Engineers, Bureau of Land Management and Bureau of Reclamation. The 1985 survey also found 50 state agencies holding conservation easements in 32 states, 156 local governments, five national conservation organizations, and 213 local and regional land trusts and conservancies (Land Trust Exchange, 3,4:7, 1985)

Conservation easements originated as a means by which government could protect scenic values at a cost lower than that of fee simple acquisition, and without unnecessarily disrupting agricultural uses of the land. For example, during the 1930s, the federal government acquired easements along the routes of the Blue Ridge Parkway and the Natchez Trace. During the 1950s, the State of Wisconsin made extensive use of scenic easements along the Great River Road, which runs along the Mississippi River (Gregory, 1972).

The federal government has more recently used easements in the Wild and Scenic Rivers program and in the creation of the Sawtooth National Recreation Area.

Easements have also been widely used by private conservation groups, again partly to save money (they are often acquired by donation or bargain sale), partly because continued agricultural or forestry use of the land is actually considered beneficial to its scenic quality. Increasingly, easements have been used by non-profit conservancies as part of "limited development" projects. In this concept, a developer will donate to a non-profit entity an easement over portions of a property under development. This provides a tax deduction for the developer, and through permanent holding of an easement by the conservancy, assures that important natural values on the developed site (stream corridors or wetlands, for example) will be protected.

New Hampshire's Lake Chocorua (Gallagher, 1976) offers an interesting example of how restrictions on development can be collectively self-imposed imposed by a group of property owners, benefitting them and the public at large. The lake had long been a popular site for summer homes, with most of the shoreline held by about 55 families. During the late 1960s, market conditions made it feasible to develop homes at much higher densities around the lake, and owners began to worry that some among their number would subdivide property, affecting scenic views and contributing to pollution of the water. In response, two families which together controlled 60 percent of the shoreline organized the property owners to support a plan for the lake's future development. After negotiations, nearly all landowers agreed to voluntarily restrict development to lots a minimum of eight acres in size, limit timber cutting, and prohibit structures higher than the surrounding forest cover. The restrictions are enforceable through covenants deposited with the Chocorua Lake Conservation Foundation. In order to encourage all owners to join the pact, the original landowning group deposited its covenants in escrow, to be released and recorded when other key owners executed their agreements.

Transferrable Development Rights

A mirror image of the conservation easement is the transferrable development right. This is a legal device which permits all or part of the legal permitted development potential to be transferred off-site to some other property. There has been a modest amount of experimentation with the TDR technique, both in protecting historic structures in urban areas and in reducing the development of farmland. The TDR technique might be used to protect large forestland holdings, although we are unaware of any specific instance in which it has been tried. Early in the historical development of TDR, John Costonis proposed a rights transfer from a natural marine area in Puerto Rico, Phosphorescent Bay. "If the [TDR] scheme could protect the Phosphorescent Bay," wrote Costonis, "couldn't it also safeguard woodlands, nature preserves, estuaries, and other environmental resources that are similarly threatened?" (Costonis, 1974). Recently, TDRs have been discussed as a possible means for protecting the shoreline of Maine's Moosehead Lake. Development might be concentrated on certain parts of the shoreline and

development rights transferred away from properties elsewhere on the lakeshore.

Prerequisities for using TDR to protect forestland are that there be an active demand for development both in the area to be preserved and in the area that will receive the development rights. Also neccessary are regulatory controls on the receiving are that restrict development to below the present level of market demand. Only when these requirements are present--and they rarely are in rural areas--will there be a viable market for the development rights.

Pooled Management of Timber

A number of arrangements exist through which groups of landowners might theoretically manage their timber as a common pool. They are relatively infrequently employed in New England, where the large timberland owners do not need them, and the small owners are too diverse and independent to accept joint decisionmaking about investment and harvest scheduling. A number of timber companies have created what are in effect management pools of private properties through various "Landowner Assistance" or "Tree Farm Family" programs. Under these arrangements, private landowners within a reasonable hauling radius of a firm's mill are given management advice, free or at-cost seedlings, and access to equipment. In return, they may agree to give the firm the right-of-first-refusal when they decide to harvest. Often the firm makes no formal demand on the owner, but assumes that it will be considered when the owner is ready to harvest. Sometimes consulting foresters or land management companies make ad hoc arrangesments with groups of owners whose properties lie within a reasonable distance of one another to offer joint timber sales or to undertake replanting or timber stand improvement.

Limited Partnerships in Timberland

Limited partnerships, which may involve a handful of investors or many thousands, offer investors a way to own timberland without becoming personally involved in management. Other benefits are the ability to control a larger amount of land than an individual investor could afford, the opportunity for diversification, and the possibility of hiring higher quality professional managers. (Rasmussen, 1986) Limited partnerships also offer somewhat greater liquidity than does individual or pooled ownership of individual timber tracts, particularly when the number of partnership units is large and where national brokerage firms or banks are involved in forming the partnership and maintain a secondary market for partnership interests.

Limited partnerships can be classified as private placements (generally partnerships having fewer than 35 investors) and public offerings (Rasmussen, 1986). All are based on the concept that a general partner is responsible for management and is liable for debts incurred by the partnership, while the limited partners are liable only to the extent of their original investment. There is a wide range in the sizes and sponsorships of timberland partnerships, including some put together for small groups of high income investors, partnerships sold nationwide by syndicators or brokerage firms,

and publicly traded partnerships that represent spin-offs of timber company landholdings (Irland and Howard, 1989)

Howard and Lacy (1986) estimated that in 1986, at least 9.1 million acres of forestland was held by limited partnerships, with over 80 percent represented by public offerings of four large timber companies. (It is likely however that some small private offerings may have been overlooked in their survey.) At least two insurance companies have marketed timber partnerships to pension funds, emphasising the purchase of immature timber, to be sold 10 to 20 years later at maturity (Rinehart, 1985). It appears that an important difference among various partnerships is whether they intend to manage the land over one or more harvest and regeneration cycles, or simply serve as the passive owner of standing timber.

The economic attractiveness of timberland limited partnerships, like all timber investments, was somewhat diminished by the Tax Reform Act of 1987, which removed capital gains treatment of timber harvest revenues and limited the deductability of losses from passive investments. However, the attractiveness of timber as an inflation hedge remains, as well as its benefits as a means of portfolio diversification.

Maine's Common and Undivided Lots

The majority of the 110 unorganized townships in northern Maine are owned as "common and undivided lots." These are the result of the acquisition during the early 1800's of entire townships by small groups of investors. Over the years, as interests were conveyed to heirs, the common and undivided interests became increasingly fragmented. All owners--regardless of the size of their fractional interest--must be in agreement for any management activity to take place on the land. Several large land management companies in Maine specialize in managing such properties, securing a management agreement from the multiple owners. One observer notes that the trend among government, individuals and private owners is to privatize these interests through swaps, trades and divisions. However, most common and undivided lots are held by families--some have 20, 30 or more owners--and many families are content with the current arrangement (Cowperthwaite, 1989).

Timber Leases

Another form of shared ownership of timber producing land is through long term timber leases. These appear to be most common in the southeastern states. Meyer, Klemperer and Siegel (1986) found that in 12 states in the southern U.S., the amount of land under timber lease had fallen from 6.0 million acres in 1967 to 4.7 million acres in 1984. However, land subject to landowner assistance programs, negligible in 1967, had risen to 4.2 million acres in 1984. The authors noted an apparent preference within the timber industry for making new procurement arrangements under landowner assistance programs rather than long-term leases or contracts. The decline in timberland leasing was attributed to landownwer concerns over the length of contracts, inflation fears, and tax problems and to forest products firms' difficulties with broken contracts and disputes with the IRS over expensing of contract payments. The landowner assistance programs seem to offer both

landowners and firms many of the advantages of leasing, without incurring inflexible obligations on either side.

Hunting and Recreational Leases

The leasing of hunting rights on timberland has long been practiced by large timber companies, mainly as a way of controlling access, rather than for revenue purposes. However, in a few parts of the country, notably parts of Texas and Maryland's Eastern Shore, revenues from hunting rights has been a lucrative sideline for landowners. Hunting leases appear to be fairly uncommon in New England, although International Paper Company indicates that it has three leases for hunting, fishing and recreational access to its lands in Maine over an area totalling 51,000 acres (Eubanks, 1989).

The limitation of free hunting access as a result of increased posting of private land has led to increased use of hunting leases, particularly in the Southeast, and to significant increases in the cost of such leases. A 1985 survey of 187 firms managing 20 million acres of forestland in the South reported that "the amount of income that can be derived by selling access to wildlife is substantial and increasing." (Lassiter, 1985) He found an average payment of $1.38 per acre on 6.3 million acres under lease.

Leasing of fishing rights is not extensively practiced in the U.S., mainly because most streams are publicly owned. In England and Scotland, however, where streamside property owners can appropriate the rights to fishing, there is a lucrative market for fishing rights and fishing leases (Anderson, 1983) Anderson (1983) reports that landowners in the Gallatin and Yellowstone Valleys of Montana are leasing fishing access to streams the occur entirely on private land. The revenue potential from this use is giving them an incentive to make investments to improve fish habitat.

There may be significant economies of scale in offering recreational leases, both in marketing and administering the leases and because large contiguous areas may be relatively more attractive to lessees. The North Maine Woods Association
(Cowperthwaite, 1984, 1985; Meadows, 1985; U.S. President's Council on Environmental Quality, 1985) is an organization of 18 private landowners (mainly corporations and land management companies) which collectively own or manage 2.5 million acres of forestland in northernmost Maine. Since 1974, the Association has controlled access to this land, selling permits that allow use of the land for hunting, fishing and camping. Initially, fees were set low so as to avoid public relations problems with visitors long accustomed to free access. By 1983, user fees had risen to $294,000. This is still not sufficient to fully compensate owners for the costs of providing access (the Association's yearly deficit is about $10,000) but owners feel that group management offers them help in controlling liability and vandalism, as well as allowing them public relations benefits.

The State of Maine, which owns about 5% percent of the area managed by the Association, is also represented, but does not share in the deficit. North Maine Woods has made improvements in facilities for visitors, providing 236 individual campsites and offering directions and help in spreading out usage.

The Association has a policy of not advertising recreational use of the area under management, because most of the private owners view recreational use as a source of public relations incidental to the timber business, rather than as a source of profit (Cowperthwaite, 1985).

Pooled Recreational Development

One of the most notable features of the rural land market is the tendency for large parcels to sell for lower prices per acre than do smaller parcels (Healy and Short, 1981). As a result, landowners catering to the recreational development market have found it quite profitable to divide larger parcels into the 1 to 40 acre tracts most in demand by those planning to erect a second home or to make other recreational use of the property.

A small number of rural recreationists have discovered that they can appropriate these profits from land division by making a group purchase of a large tract, then dividing it among themselves. A variant to this practice is to retain that portion of the tract on which no development is intended as an undivided whole. This allows participants to share in what Whitney (1989) calls "the satisfaction of being the owner of a large private kingdom that is protected from public intrusion." One West Virginia group, for example, manages a tract of 3,000 acres of forestland for recreational purposes (Healy and Short, 1981). The Chestnut Woods Association, formed in the early 1970s, is a partnership among 14 families, many from the Washington, D.C. area. Each participant owns a share in the association, which entitles them to exclusive use of a 12-acre tract, with improvements permitted to only 4 of those acres and no further subdivision possible. The remaining 2,784 acres are held in common, and is available in its entireity for hunting and other recreational pursuits by the members.

Another arrangement involving individual ownership of small homesite parcels and group ownership of extensive common lands was begun in 1980 near Mountain View, Missouri. The 600 acre tract was acquired for the specific purpose of protecting land bordering on the Ozark National Scenic Waterways (Healy and Short, 1981).

In 1980 an agreement was recorded in the Town of Tinmouth, Rutland County, Vermont, covering the common management of a 992 acre tract of forest and farmland as the "Tinmouth Mountain Land Condominium." Four individuals agreed to divide four "houselots" from the larger parcel, then to manage the remainder as a common area. A conservation easement was granted to the Vermont Land Trust, but the houselot owners retained the right to "unlimited use and enjoyment of the common area." Owners of houselots also agreed to give the others a 60-day right of first refusal in the event of sale.

Perkins (1988) describes a 17,060 acre forestland limited partnership in Maine that combines timber management with future recreational use of the property. Organized by a Boston-based investment advisor, it consists of himself as general partner and more than a dozen clients as limited partners. The land, located in the township of Attean, contains a large number of scenic lakes and ponds. Before the land was sold to the partnership, the previous owner donated conservation easements on part of it to a non-profit

entity, the Forest Protection Society of Maine. There were also restrictions placed on timber management practices. The limited partnership has put into effect a forest management plan, but also has retained the right to design a limited development on that land not subject to easement.

Government-Private Land Sharing

Government agencies, both state and federal, are involved in a variety of land sharing arrangements with private parties. Some are a consequence of longstanding government practices of allowing neighboring ranchers use adjoining federal lands, others are residual private interests based on old land transactions, still others are the consequence of very recent attempts to accommodate new types of private sector and governmental interests.

Grazing leases on federal lands, mainly in the Western states, have been very common since passage of the Taylor Grazing Act of 1934. The initial distribution of grazing leases favored those already owning land in the vicinity and tended to legalize longstanding practice (Libecap, 1981). Because the leases were renewable and transferrable, and because grazing fees have been below their true market value, the right of access to federal land has become an important part of the property rights of many western ranches, and its value is capitalized in their sale prices. There has been constant controversy between ranchers, the Bureau of Land Management, and environmental groups over the degree to which these grazing leases cause overgrazing and a diversion of public resources to private advantage.

Special Use Permits are used by the U.S. Forest Service to allow for certain long-term private uses (not including timber harvest) on the National Forests. Many of New England's major ski areas operate under special use permits on National Forest land; so do the huts and lodges operated by the Appalachian Mountain Club.

An unusual federal-private arrangement for shared management of a large timberland involves the U.S. Forest Service and a large timber company, which cooperatively manage more than 100,000 acres near Shelton, Washington. The "cooperative sustained yield agreement" began in 1946, under provisions of a 1944 federal law. The law, which was intended to maintain local employment in areas where private timber was depleted, allowed private owners to contribute cutover land and reforest it, in exchange for access to sufficient federal timber to maintain harvest levels. The intent was that the private land would eventually return to production when the federal land had been harvested. Timber managment on both private and federal land would be subject to a joint planning process.

The 100-year joint management agreement between the Forest Service and the Washington company was the only one undertaken under the 1944 law. The company's access to federal timber has enabled its nearby mill to continue in operation. However, changing economic conditions and new environmental demands have put strains on the relationship. The Forest Service has come under pressure to withdraw land from timber production for environmental reasons; the company chafes under federal restrictions that prevent it from

selling logs from company lands within the management unit to Japan, where they would bring a higher price than in the domestic market. The agreement illustrates some of the potential problems with very long term agreements between parties whose economic or political objectives may be subject to change.

Both federal and state governments have acquired land on which timber or other rights have been reserved by the seller. Vermont, for example, owns a number of tracts on which timber cutting rights have been reserved. One 1958 transaction, for example, which involved purchase of 6409 acres from a timber company, allowed the company the perpetual right to harvest any timber over six inches in diameter. (Barnard, Vermont, 1958) A 1985 federal transaction, also in Vermont, involved the purchase of 435 acres (for $95,000) of International Paper Company land for addition to the Appalachian National Scenic Trail. Although the federal government acquired the fee title to the land, International Paper reserved the right to harvest timber. In order to protect the scenic quality of the land, a 100 buffer around the Trail was to be left unharvested, and all harvest must be done on an individual tree or group selection basis. (Barnard, Vermont, 1985)

In other situations, the federal government has participated in sale-and-lease-back transactions that have acquired scenic lands, extinguished development rights, then leased them for limited rural use to private parties. This was done on the Blue Ridge Parkway, where the National Park Service acquired 177 scenic easements on 1,468 acres, incorporated them in the park, then allowed neighboring farmers to graze animals or raise crops in exchange for a small permit fee. This relieved the Park Service of the cost of managing the land in the desired grassland state (Whyte, 1959).

It is not uncommon for state agencies to be holders of conservation easements on private lands, particularly where they adjoing state-owned recreational lands. It is possible, however, for states to acquire more extensive rights of public use of private land, either by lease or by purchase. For example, in Florida there is an extensive state program of lease of hunting rights on private forestland. In New Hampshire, private lands open to public recreation without entrance fee are given an additional 20 percent reduction in property taxes, over and above the benefits of use-value assessment. Vermont has acquired hunting rights on some 5,500 acres of private land.

A recent land sharing arrangement recorded in Franklin County, New York illustrates how more extensive and permanent public use rights might be acquired (Franklin County Land Records, 1986). Paul Smith's College of Arts and Sciences is the owner of 623 acres of forestland adjoining the State of New York's Adirondack Forest Preserve. The college has long used the land for educational purposes, particularly for forestry and ecology courses. In consideration of payment of $81,000, the college conveyed to the state a permanent easement allowing public camping, hiking and canoeing on the property. The college also agreed to limit future building of structures and to prepare a forest management plan that must be subject to state approval. If the property is ever to be resold, the state will have the right of purchase at appraised value. Elsewhere within the Adirondack Forest

Preserve, an access easement on 35,000 acres may soon be transferred from The Nature Conservancy to the State of New York.

Intergovernmental Sharing Arrangements

A pending transaction in the Nash Stream area of New Hampshire provides an example of innovative federal-state cooperation in protecting a large block of forestland. The 40,000 acre tract was part of a larger piece of property that had been placed on the market by Diamond International Corporation, a timber company. A development corporation bought the larger property, causing great concern among the New England environmental community. In 1989 an agreement was struck between the developer, the U.S. Forest Service and the State of New Hampshire whereby the state would purchase Nash Stream for $13 million, then execute an easement in favor of the Forest Service (which owns the adjoining White Mountain National Forest) prohibiting sale, subdivision or lease. Two private groups, the Nature Conservancy and the Society for the Protection of New Hampshire Forests, played a critical role in putting the deal together and arranged temporary financing.

The easement would allow the state of New Hampshire to manage timber, but would limit clearcuts to 30 acres each. The Federal government is to pay the State $4 million for the easement. As of this writing, the State has purchased the land but the easement has not yet been recorded.

Community Land Trusts

The community land trust is a very interesting form of shared ownership, developed only since the 1960s (Davis, 1978; Institute for Community Economics, 1982).[1] In its classic form, title to land is vested in a non-profit community corporation, but the land is leased, generally for a long period of time, to an individual or individuals. The income from using the land is shared under specified arrangements, between the trust and the lessee. Often leases are transferrable to the landowner's heirs. Improvements made to the land are property of the lessee, but any increment in land value due either to inflation or simply changing circumstance, such as a new road or greater demand, accrue to the community trust. A major purpose of the community land trust is to reduce or eliminate land speculation by making it unprofitable (Davis, 1978).

A variant of the land trust approach is the "shared equity deed." This is an agreement, which can be executed by a land trust or other conservation-minded landowner (grantor), to sell a property at below market value to a buyer (grantee) who intends to use it for farm or forest use. If the property is ever resold, the grantee is entitled to his purchase price, plus the value of any improvement, plus a specified proportion of the appreciation

[1] Community land trusts, as defined here, should be distinguished from "land trusts" a much broader term that includes land conservancies, most of which neither lease land nor intend for it to be improved for economic use.

over the fair market value at the time the grant was made. This technique was utilized by the Vermont Land Trust in a 1988 transaction in Charlotte, Vermont. It enabled a family which intended to farm a 101 acre tract to acquire it for $500/acre rather than the fair market value of $1,200/acre, subject to a 50-50 split with the Land Trust of any appreciation realized upon resale (Vermont Land Trust, 1988)

Land trusts offer a significant opportunity for both managing development and for making land available for agriculture, forestry or housing at affordable prices. They present difficult problems, however, in valuing improvements made to the land, particularly over long periods of time, and determining how land value appreciation can equitably be shared between the lessee and the trust.

IV. Issues in Ownership Sharing

Marketability Issues

Because land markets have relatively little experience with most forms of shared ownership rights, their marketability is quite problemmatic. Several issues are involved. First, if fee simple title is shared among several parties, the value of a proportional share may be hard to determine. It is not necessarily true that a 1/10 interest in a 100 acre tract of forestland represents 1/10 the fair market value of the whole. There may be a proportional income claim (e.g. a limited partnership share is entitled to a proportional share of timber harvest revenues) but owners of minority interests do not have power to make or perhaps even to influence management decisions.

Second, many partial rights in land are not resold on markets (e.g. scenic easements) or are only infrequently traded (e.g. hunting rights). Many are held by nonprofit entities or by governments, which participate in land markets as buyers, but rarely as sellers. This absence of frequent, profit-motivated transactions makes partial rights very difficult to appraise. The absence of regular markets also makes partial interests quite difficult for the owner to liquidate, particularly if cash is needed immediately.

Third, in the absence of reliable appraisals and regular markets, banks and other lending institutions will be reluctant to accept partial rights as loan collateral.

Many of these market imperfections could be overcome as market participants become more accustomed to the concept of shared and partial land interests. Indeed, it is not difficult to envision the creation of markets for some rights, particularly timber rights and recreational access rights, that would make them considerably more liquid than they are in their current undivided state.

Management Issues

Partial or shared land rights can sometimes be difficult to manage. The owner of a given right must be constantly vigilant so that some other co-

owner or co-user of the land will not encroach on or even extinguish his interest. For example, when timber rights and recreational rights are idependently owned, the recreationist must be concerned that timber harvest does not reduce the scenic value of the land, disturb wildlife habitat or damage the roads. The timber owner, for his part, must worry about fires and litter caused by the recreationists. These conflicts are generally avoided when all rights are in single ownership.

On the other hand, sharing of ownership can in some cases make management easier. For example, multiple ownership of timber rights or recreational rights can make it possible for a group of owners to afford professional management in such areas as timber stand improvement, timber marketing, and road maintenance.

A special class of management issues may be encountered when federal or state governments share rights with private owners. One wonders, for example, how federal planning requirements such as the National Forest Management Act and the National Environmental Policy Act can be applied to properties where ownership is shared or where partial rights have been severed.

Perpetuity Issues

Most divisions of partial rights or easements are intended to divide the rights in perpetuity. Indeed, according to Internal Revenue Service regulations, only gifts of perpetual easements qualify for income and estate tax benefits for the donor (Diehl and Barrett, 1988). This fractionating of rights in land can produce management problems if circumstances change for either the land or its owners. For example, division of mineral rights under "broad form" deeds in the early part of this century allowed the owner of the mineral rights essentially unlimited right of access. This would not necessarily interfere with use of the surface right under the deep mining technology prevalent at the time. However, the increased use of stripmining in more recent decades has led many surface owners to seek legal protection against exercise of the mineral rights in this manner.

The same may be true for conservation easements. Kingsbury Browne, for example, speculates that "Eventually conservationists and tax administrators will have to resolve some thorny issues [regarding perpetual easements]. If an easement designed to protect the nesting habitat of a rare shore bird prohibits man-made alteration, would an amendment to modify the limitation to permit the construction of a dike to hold back rising seawaters be permissible under the amendatory language? The answer is by no means clear if perpetual really means perpetual." (Browne, in Diehl and Barrett, 1988) If urban growth continues in an area, nature reserves may be surrounded by more intense activities to such an extent that they are no longer viable for their original purpose, yet easements or other perpetual encumbrances may restrict their conversion to another use, for example developed parkland.

Local and Non-Local Interests

The severing of rights and the sharing of ownership has a tendency to direct rights toward individuals and groups that are willing and able to pay for them. This is one of the principal arguments for land sharing, as it imposes "market discipline" on the various rights to land. If hikers, for example, are able to buy or lease access rights, they will have the opportunity to demonstrate the intensity of their desire to use a particular piece of land. If some alternative use, for example clear-cut timber harvest, is even more profitable on a particular piece of land, the hikers will be priced out of the market and directed toward land with lesser timber value.

A potentially important issue in imposing this market discipline is the possibility that traditional local land users will be less able to compete for land use rights than under current arrangements. For example, if hiking or hunting clubs were able to compete for access rights, it is quite possible that recreationists from outside the locality would be able to pay more for such rights than local people. This situation would be much less likely to arise under alternative arrangements, such as regulation or fee simple purchase by government. In both of the latter cases, use of the land would be most likely open to all. Local users would generally have an advantage, simply because of proximity and their superior local knowledge of which lands were open to use.

Distributional questions may also arise when development rights have been extinguished on land through easements held by government or non-governmental entitites. Reduction in development value is likely to lead owners to seek reassessment of their property and may reduce the local tax assessment base. In response to this problem it has been suggested that states make annual payments in lieu of taxes for lands whose assessment has been reduced as a result of easements held by the state.

V. Conclusions

Despite the difficulties ennumerated above, the creation of partial and shared rights offers a new set of land management options to both private citizens and to government and nonprofit entities. Non-owners of land are likely to continue to feel that they should have some control over the uses to which privately owned rural lands are put. Shared ownership can provide alternatives to regulation and to fee-simple purchase, and may allow the expression of diverse interests in ways that satisfy the interests of all parties.

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