

THE COMMONS

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PREFACE

In the Spring of 1995, Appalachia - Science in the Public Interest sponsored a conference at Eastern Kentucky University entitled "The Forest Commons." At the conference several distinguished experts addressed issues of forest conservation within the context of the concept of forest commons. The presentations were very informative and drew upon a variety of academic and professional disciplines, ranging from history and law to science and forestry. While this paper is neither a verbatim record nor a strict summary of the proceedings, it draws heavily upon ideas presented in the conference in attempting to draft a vision for a greater forest commons. For those interested in more in-depth analysis of specific issues addressed at the conference, several presentations are included in the appendix to this paper. In addition, video tapes of conference presentations may be purchased from ASPI Publications, 50 Lair Street, Mount Vernon, KY 40456. For further information call (606) 256-0077.

INTRODUCTION

Threat. Until recently, the portion of the earth covered in forest remained fairly constant. According to scientists, forest eco-systems decreased in size only slightly in the period from the beginning of human civilization until the turn of the nineteenth century (roughly 10,000 years), dropping from about 34 percent to 32 percent of the earth's land area. However, in the last two

hundred years -- and particularly since 1950 -- deforestation has proceeded at an alarming rate. Today trees cover less than 26 percent of the earth's land, and intact forest eco-systems, less than 12 percent.⁽¹⁾

The continuing loss and fragmentation of forests carry serious implications for climate, air quality, and biodiversity and could ultimately jeopardize the earth's ability to sustain life.

Response. In light of the grave threats posed by deforestation, concerned citizens around the world have fought to curtail timber cutting and stop the clearing of forests. Needless to say, they have met with only limited success. With disturbing consistency, concerns for forest sustainability are pushed aside in favor of short-term economic gains derived from forest damage or destruction. However, the problem is more complex than just economics versus ecology. Some of the greatest difficulties in halting forest destruction are political and ideological, not simply economic. In attempting to restore healthy and sustainable forests it is important that we address not only the greed that drives the destruction of forests, but also the political systems and underlying philosophies that have protected and encouraged destructive practices. With this imperative in mind we seek in this paper to explore and develop the concept of the forest commons within the context of present day forestry policies and practices.

Concept. The concept of forest commons is neither new nor especially radical -- though some citizens would challenge it today. This concept is rooted in ancient tradition and finds precedent in virtually every culture on Earth. However, in the modern era, as the ideologies of individualism and capitalism have come to dominate political thought, the idea that society bears a common responsibility for the well-being of its forests has fallen into disuse and even disfavor. Culturally imposed restraints that once afforded forests protection against destructive exploitation have been stripped away in favor of the notion that freedom to dispose of private property without limitation is the exclusive and absolute right of the individual or corporate owner. This philosophical shift coupled with tremendous technological advances in logging, processing, and transportation has worked to facilitate the devastation of America's rich forest heritage. Only in the management of government-owned forestland does the forest commons concept survive in a substantial way -- and even there, it is under heavy assault. If we are to halt and reverse the precipitous decline of sustainable forestlands, we need to vigorously revive and broaden the concept of forest commons.

Convictions. For those of us who strive to retain a sense of social responsibility, the concept of "commons" is key to our understanding of civilization and culture. We are convinced that the concept of "forest commons" is crucial to sound future policy-making especially in regard to eastern American forests, which are predominantly in private hands. Furthermore, we are convinced that certain forest management practices are environmentally superior to others, that logging patterns could be changed through regulation, and that a viable sustainable program must be implemented quite rapidly, if our forests are to have a future.

Invitation. This paper seeks to help revive the concept of forest commons and to inspire deeper commitment to the protection of our forests. It is not meant to be an exhaustive or a conclusive exploration of the idea of commons. Rather, it aims to open up the topic of commons for discussion within the context of its historical meaning and in view of its potential to impact the

future. By placing this document on our internet site we are extending an invitation to a broad audience to participate in this discussion. We would be grateful for any constructive comments, criticisms, or suggestions you may care to offer to help strengthen weaknesses or fill in gaps in our presentation.

Organization. We have organized our discussion of the forest commons into six sections. The first section examines the historical origin and application of commons, focusing primarily on the Western tradition, but touching on other traditions as well. The second looks at how the idea of a commons could legitimately be extended to threatened segments of the environment--particularly forests--in the United States. The third section examines how adopting a forest commons vision would impact forest policy and management. In section four we discuss specific forest utilization practices in relation to forest health, and in the fifth section we explore how a forest commons philosophy could advance sustainable forestry goals through both voluntary restraints and mandatory government regulations. Use the following or not, depending on how you want to treat Paul's speech. The sixth section presents a vision of ideal and sustainable forestry from the perspective of a professional forester.

Section I - Commons: A Conceptual Background

Summary -- "Commons" is a concept enshrined in all cultures, but its application in Anglo-Saxon practice has been limited. The limitation has carried over into American culture, where the Judeo-Christian concepts of land use and commons have conflicted with inherited "Germanic" values. The suggestion that the commons should be expanded to afford greater protection to the environment has been a source of intense controversy over the past several decades. Misuse of resources has occurred on a global scale; extending the commons through international protection is necessary so that both the global and the local commons are preserved and enhanced. -----

The Word. In old English law the *commons* were areas of land that were held in common by the general population, "the commoners," as opposed to specific tracts that were held by the nobility. The grounds may have been pasture lands, woodlands, or open space used by the general population. The word *commons* is derived from Latin "communis" and means the quality of sharing by all or many. To *communicate* is to impart, share or literally to make common. A *community* is a place shared by many for residence or for some joint mission or purpose. Indeed *communism* is also derived from the same basic word "communis," and involves the ideology that all resources and means of production are held in common. However, the concepts of commons and private property are not mutually exclusive. Most cultures even communistic ones agree that some property may be held individually or in families with rights to the use, or usufruct, of goods and land for the benefit of the individual or family.

The Controversy. Arguing from an ideological standpoint, many demonize the idea of expanding the commons, as "un-American," "communist," "utopian," or "tyrannical." They perceive the exclusive and absolute right to private property as the mother of all human rights -- the right from which all others flow -- and a key component of the American ideals of liberty and justice. Others, arguing from an economic perspective, assert that property held in common is destined to be inefficiently managed and subject to greater plunder than private property. This assessment,

commonly referred to as the *tragedy of the commons paradigm*, leads many to advocate even greater privatization of land and resources. While these objections to extending and more vigorously regulating the commons deserve careful and thoughtful consideration, we believe that abandoning the commons on their account would be a tragic mistake. The commons model has been successful in the past and continues to be successful today. Given the imminent threats facing the environment and the potential of a commons model to address these threats positively, it is more prudent to explore ways in which government excesses and wasteful practices can be preempted within the model, than to simply discard it.

Much of the controversy surrounding the idea of a greater commons stems from confusion and disagreement over what "commons" really means. For some, the term "commons" is understood to be synonymous with "common property" which has been variously used to refer to property that is owned by the government, property that is owned by no one, and property owned and defended by a community of resource users.⁽²⁾

As used here "commons" embraces common property in all these forms; but it is a much larger and deeper term. Unlike "common property," the concept of a commons is not a human construct. It is less a statement about the legal rights associated with land ownership than an affirmation of a condition that exists prior and superior to ownership. In affirming the concept of a commons we acknowledge that the notion of property, whether public or private, is an artificial human creation superimposed on a natural reality. The natural reality is that the Earth and its inhabitants form an organic system in which we human beings are part of the total community. Private property is an expedient that facilitates civil society by affording to individuals a degree of protection and security in those things they need for sustenance and comfort through the assertion and enforcement of certain "rights." However, the concept of a commons -- a shared interest, respect, and responsibility for the wholeness and well-being of the Earth -- is a much greater and primordial truth.

1. Roman and Germanic Land-Use Practices

Cultures around the world and throughout history have acknowledged the validity of a commons perspective in defining their relationship to the Earth. It is the dominant way of looking at land and resources in virtually all aboriginal societies and it is a key component in much of Western political and moral philosophy. However, our historical past has colored our western understanding of "commons" and of proper land use. A paper delivered by Eugene Hargrove at a previous ASPI Conference and crucial to our understanding of land use and thus of forestland use, is excerpted here.⁽³⁾

Roman land-use practice developed very differently from the Germanic tradition. Among the Germans, population pressures yielded to a scarcity of new freehold farmsteads. Normally family members separated and went their own ways when they were old enough to assert their rights as freemen. The German tradition maximized individual freedom and autonomy and minimized governmental influence and control, especially over matters relating to land use. Among

Romans, however, large extended families (both blood relatives and others) were an economic necessity in order to till the soil and manage herds. The family head, the *pater familias*, had absolute control over other family members and all property. For Romans, property ownership was divided into two kinds: the individual personal property and property belonging to the family. Personal property could not be inherited because at the time of death it was customarily buried or burned with the person who owned it. All land was owned by the joint family and not by individuals. When the individual family became a legal entity in Roman law, property ownership for land passed downward from the joint to the individual family.

The Roman state regulated land use and landownership. As ownership rights to land moved downward to the individual family, societal controls over land and land use moved upward to become part of the role and function of the Roman government. In Roman culture possession meant nothing without legal title. In conquest the Roman state distributed land to deserving soldiers along with legal title. Under this system, landholding and farms were generally small.

As the Empire expanded, huge tracts of land became available along with an abundance of slaves for working the land. This combination of land and slaves permitted the establishment of large estates called plantations, which, unlike the family farm, produced much more than was needed by those working the land, and thus proved to be very profitable business ventures. Small landowners, unable to compete because of lack of capital, were bought out, speeding the conversion from small-scale to large-scale farming. Assigning small tracts of land to veterans did not work because they had little interest in farming.

Roman land practice influenced our law but not our attitudes.

Among Anglo-Americans, the Roman view of land has always been unpopular because it is in many respects the very antithesis of the Germanic view. While the German or Saxon freeman established his claim to land independent of society or government, the Roman citizen established his claim only with a governmental and legalistic framework which greatly limited his personal and political autonomy. Among the German freemen, landholding was a pre-societal right and was tied to a notion of a free citizen, free of governmental control. No comparable right to land or notion of personal or political freedom existed among the Romans. Germanic practice, moreover, is associated with a period in English history, up to 1066, when freemen had all the land they needed or could use, and with a comparable period in American history, the late eighteenth and early and middle nineteenth centuries, when the Germanic movement across Europe was reenacted in North America by small farmers preempting and homesteading their way across the continent. Roman land practice, on the other hand, is associated with the Middle Ages, when land was scarce and freemen lost most of their political autonomy.

To trace the influence of Roman land practice one must turn to the legal history of the conflict between Normans and the Saxons in England after 1066, when Norman and Saxon law became hopelessly entangled with each other. The chief conflict conceptually was between landholding based on possession and use (the Germanic model), and landownership based on legal title derived ultimately from a government land grant (the Roman model). Strictly speaking, however, landownership itself did not exist in practice even under Norman law. The king, from whom all legal titles were obtained, was essentially "tenant in chief," the head serf or vassal of God.

Landownership did not come into being in England until 1660 with the "Act of Indemnity and Oblivion," in which feudal dues were abolished and replaced by taxes. In one sense this was simply a victory of one kind of landholding (ownership) over another (renting), but in another sense it was a return to the Saxon common law with ownership replacing the lesser notion of landholding, thereby strengthening the notion of absolute dominion over one's own land, free of government interference.

The Roman and Germanic traditions continued to be intertwined even in nineteenth-century land-use practice. Early versions of the homestead act including inalienability clauses which would have prevented the selling of a homestead and in some cases even the inheritance by the farmer's children-- with the land reverting to the state at the death of the holder. Such versions of the act would in effect have turned the farmers into feudal tenants, rather than Germanic freeholders.

Germanic land-use attitudes have inhibited environmental planning and zoning in the 20th century. Rural landowners frequently defend their rights to do as they wish without concern about the damage they may cause, and they do so in terms that can be traced back to Germanic and Saxon land-use attitudes. Essentially, efforts to protect the environment conflict with the rights that landowners believe they have over their land, and indeed with their conception of their relationship as a citizen with their government and their relationship, in turn, with their land. Had Roman instead of Germanic land-use attitudes developed, it is likely that this friction would not exist. However, given the centuries-old association of Roman land practice with feudalism and (from a Germanic point of view) with unjust authoritarianism, there seems to be little likelihood that appeal to Roman attitudes will make any contribution to easing problems associated with environmental planning and zoning.

Historically, however, just as the nineteenth century was a reenactment of Germanic freehold farmsteading, the 20th century may well be a return to a kind of feudalism in which small landholdings developed through homesteading in the last century are consolidated into larger holdings reminiscent of feudal estates and Roman plantations. This new feudalism is likely to be just as unpopular as feudalism was in medieval times, and unfortunately governmental efforts at environmental control are likely to be associated with it.

2. Judeo-Christian Concepts about Commons

Americans carry the burden of the nation's cultural history which includes serious disagreements and clashes. None is more evident than the friction over concepts of land use where the difference is between the Germanic understanding (through the Anglo ancestry of the ascendent culture) and the Roman understanding (through the Judeo-Christian traditions of the majority of Americans). The Judeo-Christian tradition includes Biblical elements that are worth pointing out here.

Judaic Understanding. In the Judaic tradition the concept of a commons was embodied in the ancient Israelites' understanding of their relationship to the land through Yahweh. Possession of the land was contingent upon the people's covenant with Yahweh who alone was entitled to the right of possession, a sentiment reflected in the Psalms:

To Yahweh belong the earth and all it holds, the world and all who live in it (Psalm 24:1).

The notion that the dweller does not have absolute right to the land and promised land was embodied in religious tradition at least in theory. God owns the land; dwellers are all strangers and guests on this Earth. They are stewards of what is entrusted to them for their short life spans. The Holy Land or place of dwelling is a pure gift and deserves to be treated with respect. In their generational observance of the Jubilee (Leviticus 25:8-55) year, the Israelites, by returning acquired lands to their ancestral occupants and by allowing the land to lie fallow through the growing season, ceremoniously affirmed that ownership of the land is vested in God rather than in individuals. In so doing, they acknowledged the primacy of the values of economic justice and ecological health over the values of wealth and private property.

Christian Tradition. The Judaic view that ownership of land is vested in God was carried through into Christianity. In the Acts of the Apostles, the early Christians are described as sharing all things in common, selling their goods and possessions, and distributing the proceeds according to need (Acts 3:43-45). Jesus' righteous anger at those changing money in the temple may have been partially motivated by what he perceived to be a violation of the commons. The temple had been designated as a sacred worship place for all, but was being defiled by merchants and bankers who sought to profit at the expense of the devout. The Gospel of Mark (ii:15-17) lends credence to such an interpretation, as it reports that Jesus quoted the prophet Isaiah (56:7): "My house shall be called a house of prayer for all peoples,' ...but you have turned it into a den of thieves."

The Common Good in Christian Teachings. Though contemporary Christian social teachings recognize the institution of private property, they do not consider private property to be an absolute or exclusive right. Instead, they see private property as subject to civic authority and valid only inasmuch as it does not jeopardize the public good. The view within this tradition is that God intends the earth and its goods to be used by everyone; all other rights must be subordinate to this.⁽⁴⁾

Furthermore, the common good is a dynamic state, something that can be fostered--or damaged--through human cooperative activity or lack of it. The quality of that good is ensured through an open commitment exercised in an atmosphere of freedom. "Only a renewed commitment by all to the common good can deal creatively with the realities of international interdependence and economic dislocations in the domestic economy."⁽⁵⁾ Both commons and common good are able to be modified and to develop with time and circumstances. Thus a strong religious tradition should enhance environmental efforts at expanding commons to cover threatened and fragile zones of the planet.

Middle Eastern Concepts of Forests. Within the arid Middle East the traditional culture regards the forests and trees as quite precious, the wonderful work of creation. Destruction or cutting of trees is strictly forbidden even to conquering armies. To this day the uprooting of olive trees as a result of the Arabic-Jewish conflict is regarded as a grave crime. Preserving the woods is a communal sacred duty; destroying trees entails a severe penalty. The Cedars of Lebanon have been highly prized; the blessing of cool shade from trees in an oasis is esteemed. Trees will last

and therefore they are planted on solemn occasions as fitting memorials. Forests are regarded as the common treasure of everyone, and there is no notion of private ownership of the woods.

3. Misuse of the Commons

Ironically, while our consciousness of the global commons grows, so does our understanding of just how fragile this reality is. Selfishness can work to undermine the commons, and greed can sequester portions of the commons for self-interest or for narrow partisan or national interests. Those who generously share may be duped into thinking that all do likewise. The human trust that comes with proper sharing and care for the commons can be shaken, and in such cases a stampede may result as people take all they can while the getting is good, before the greedy devour the resource. In such panics the poor and powerless are left far behind.

A Socially Vital Concept. The commons are where commoners come together, manifest their equality, and communicate. The commons are meeting places of minds and hearts, where culture grows, and where sharing occurs. All material things need not be held in common, but some should be. It is proper to recognize and to respect these commonalities. The resources that add to the well-being of the community and thus should be held in common include roadways, historic and fragile areas, certain means of communication, marketplaces, sources of drinking water, certain recreational areas, and maybe forests. Part of civility is to respect these common resources as social capital that ultimately enhances all of us.

A Collective Concept. The existence of common resources is legally protected. A person seeking to share within a family and community sets limits on satisfaction of appetites. The responsible person takes what is needed according to a proper procedure and leaves the rest as part of the common pool. Our preserving the commons is directly dependent on our willingness to share properly. If we are unwilling, the commons will begin to be raided and disaster will follow. The survival of the fittest will become the rule. A saying from Colonial America has been adapted for our times:

*The law doth punish man or woman
Who steals a tree from the Common,
But the law doth set the felon free
Who steals the common from the tree.*

*The law does deal both swift and harsh
Poaching duckling from the marsh.
So why does the law set felon free
Who steals a marsh from duck and me?*

The Commons is more than a concept; it is also a reality that has flesh. It may be great territories or parcels of land and tracts of forests, all of which can be measured and designated. We may use this land in a just manner or alienate it and privatize the land for special purposes. Furthermore, individuals who have some degree of access to the common lands may damage them. Thus abuse of the commons can occur and has occurred down through the ages; this leads to questions of

proper management of privately owned land that is actually part of a global environmental commons.

Enclosure of the Commons. Through a process of enclosure, which occurred principally in the seventeenth century, the new industrial gentry was able to gain not only access but outright legal title to many of the common lands. Over time the enclosures forced people off the land that was their birthplace and dwelling place. Herein lies the first battle of the commons, which created the first environmental refugees who were forced to move to cities. The enclosure process did not stop at the advent of the industrial revolution; it continues unchecked today, creating about 25 million economic refugees, plus more than 23 million political refugees.⁽⁶⁾

Tragedy of the Commons. Garrett Hardin ⁽⁷⁾ develops his scenario of the tragedy of the commons in this manner: A herder seeks to keep as many cattle as possible in the commons after times of dislocation (below carrying capacity) and then during a period of social stability. He asks himself, "What is the utility for me of adding one more animal to my herd?" An additional animal is virtually a plus one for the herder, as he shares only a fraction of the minus one for overgrazing. Other herders reason along the same lines, and therein lies the tragedy. Each becomes locked into the pursuit of unlimited growth but the resource is limited. Hardin concludes that freedom of the commons brings ruin to all. He cites the pressure by cattlemen to allow an increase in herds in our Western national rangelands, an increase that has resulted in overgrazing and thus caused soil erosion and weed-dominance. Also the maritime nations' so-called freedom of the seas has brought species after species of fish and whales close to extinction. The unlimited numbers of visitors to the national parks erode the values that people seek there. And finally pollution itself is such a tragedy because of what it puts in, not takes out of the commons.

4. Environmental Extension to "Global Commons"

In recent centuries common property has been taken over by a few for personal gain at the expense of the many, or it has been misused indiscriminately by some at the expense of the larger world community. With the advent of the First United Nations Conference on the Environment at Stockholm in 1972 the basic concept of commons was refined to include consideration of the res omnium or something belonging to everyone, and was applied especially to air and water rights. It was becoming all the more evident that the air we breathe is part of the greater commons, and that no individual, corporation, or single nation has a right to pollute what we all require to sustain life. Air and plentiful and potable water are the more obvious parts of that global commons. What about wildlife, large tracts of forest, cultural heritage areas, unique and fragile terrain, and the oceans and seas?

Extending the concept is fraught with difficulties and distinctions, but the fact remains that such an extension is essential where powerful individual units apply strong pressure to sequester part of the global commons for private gain. The advent of multinational corporations adds urgency to the discussion.

Air. The air we breath was somewhere else yesterday and the day before; it has entered and left many pairs of lungs. Air does not stay in one place and become the particular claim of one

individual. We draw from the common stock to breathe and live. We also suffer if that common air is polluted in any way. Air, along with water and wildlife, is a mobile resource. The air mass moving across continents and oceans obviously does not belong to the land over which it flows at a given time. Thus the clearest designated natural commons is our planet's air.

Water. Water like air is a mobile resource, for we all live downstream from some water source that does not come under our direct control. Water flows and evaporates and recycles in a global hydrologic cycle that includes the overhead clouds, the rain and snow, icebergs, rivers and ocean currents. In zones of the Earth with plentiful supplies of water the battle over water rights seems quite remote. Not so in the arid West of our country and in other water-short parts of the globe. There, control over the use of water (conservation measures and apportionment measures) and over the quality and quantity of materials that can be added to water is of great concern to the public.

Wildlife. An extension of the concept of global commons to include fauna that move about is only natural. At the center of global concern for wildlife are the many species that travel each year from continent to continent or from one part of the ocean to another. The whales, migratory fish, caribou, reindeer, the tropical migratory songbirds, ducks, and geese belong to our planet, not to the particular place where they nest, rest, or spend the summer. Furthermore, other species may need vast environmentally sound areas in order to exist. Fragments of forest are not sufficient to sustain large carnivores, for example. Unbroken tracts of forested lands are needed, a wilderness expanse, where these species can be relatively well protected. Roadways, powerlines, and developments that fragment these woodlands threaten their habitats. Paradoxically, creating artificial forest clearings to attract game threatens other species that need unbroken forested areas.

Forests. Land and its flora may be more stable than air or water but, as is already evident, they are not immune from the global environmental commons discussion. In part, this is because forests, which purify air and retain and reduce the flow of water, play key rolls in the total global cycle of air and water. At the Stockholm Non-Governmental Organization Alternative Environmental Conference in 1972, a Brazilian professor gave an eloquent talk on the grave environmental threats to the Amazon rain forest. He asked those of us assembled whether we could not alert the rest of the world to what was happening in South America and to the fact that this forest was severely threatened. In the quarter of a century since, much of his early warning has proved true. If the Amazonian and other forests are lost, the globe suffers as its oxygen and other natural cycles are disrupted.

Cultural Heritage Areas. A number of land areas are of immense interest to people other than those who reside in the locality. The people who do may not appreciate the familiar treasures. Cultural preservation obviously raises some difficult land-use issues. Who is authorized to make judgments about protection from misuse? With a global commerce in artifacts that can make local treasures valuable, poaching may become a problem in unguarded areas. If a situation is handled properly, a treasure may become a tourist attraction that can benefit many local people if the situation is handled properly. In areas of ancient ruins local folks may be forced to halt such damaging practices as quarrying for building materials (a common practice in culturally rich but economically poor areas of the globe). It is natural to extend global environmental commons

arguments to include cultural heritage areas, and to advocate that wealthier groups assist poorer heritage-rich communities.

Fragile Natural Areas. What about unique waterfalls, springs and geysers, rock formations, cliffs, caves, or habitats of endangered or rare species of plants or animals? We may add the fragile watersheds of metropolitan areas as well. All of these unique features should be beyond local economic development or exploitation, and should become a further extension of the concept of global or regional commons. What about fragile uninhabited parts of our world land resources such as Antarctica? Is not that entire continent part of the global commons? Often political or economic groups want to carve out zones for exploitation, especially if scarce minerals or oil is thought to be below the surface. Some scenic fragile lands become the destinations of eco-tourists, who harm the places by their presence and discarded materials. Good ecology calls for the commissioning of professionals to photograph the unspoiled areas of the world and to bring them to peoples' living rooms rather than vice versa.

Law of the Sea Treaty. During the 1970s environmentalists proposed that the oceans especially areas far from national shorelines be formally designated as ocean commons. They had, in fact, been treated as such throughout human history. The designation would curb attempts by exploiting nations to carve out the sea floor for their own private purposes. Thus, any future development of mineral resources in the common area would be regulated and the minerals utilized by the global United Nations. The concept of sea commons had widespread popularity except within the United States Government, which succumbed to pressure from mineral and oil companies with sights on untapped ocean resources. The United States and a very few allies stalled the process for years. However, in 1982, after nine years of complex and painstaking work, the wide-ranging Convention of the Law of the Sea was finally passed--and some regard as the most significant legal instrument of the century.⁽⁸⁾

Section II - Forest Commons: An American Environmental Concept

Summary: The time is ripe to apply the concept of commons to our American forests. With some reluctance our colonial forebearers and our new nation embraced the pre-conceived notion of "commons," and then proceeded to accept that of a democratic "Commonwealth." However, Jefferson's dream of a land of freedom-loving smallholders was not fully realized. It gave way in the nineteenth century to excesses by property-grabbing barons and eventually led to the redefining of the public trust. Thus were born the National Forests which have become a model for future action, even amid their imperfections.

1. The American Ideas of Commons and Commonwealth

Historical Concept of Commons. We Americans inherit our concept of Commons from old English law which was accepted somewhat uncritically by our Revolutionary War ancestors. "Commons" were public lands held by towns, counties or, later, states that were preserved for general citizen uses such as parades, gatherings, recreation, and fairs. The "Boston Commons" and other New England areas were prominent in the American Revolution as places to muster and drill soldiers. Few questioned the reservation of land for such purposes. With the beginnings

of the Republic other lands of national or state interest began to be set aside. Much of this early common land was reserved for military uses, both for defense from foreign invaders, and, through outposts, for pacification of restless Native Americans.

Public Lands. The Constitution recognized the right to public land and added that those whose private land was transferred to the public were to be justly compensated. The United States government acknowledged the need to protect areas of common interest such as shorelines, through coastal fortifications; and rivers, bays and harbors, through the use of our armed forces. Certain areas of common or public lands were to be held in reserve--though that reserve was not explicitly defined until later in the history of the nation.

Many of the following ideas are taken from previous ASPI publications especially those of Timothy Collins.⁽⁹⁾ Hopefully we will clarify our understanding of forest commons and understand a little better why extreme individualism, fierce competition, and the hunger for power and wealth cause the various elements in our society to hesitate to work together for our collective current and future good.

The Commonwealth. In general terms as applied in this country, the "commonwealth" is a unit of democratically controlled self-government (any state in the United States but by legal definition strictly PA, VA, MA, and KY) that is based on common interests or on a basic resource or wealth that is held in common. The commonwealth is an idea and a practice that is perhaps as old as the human race. While there are many variations on the principle, all share some characteristics such as societal cooperation, balance of economic and political powers, and continual guarding of a sacred trust.

a) **Social Cooperation.** Essentially, a commonwealth is based on social cooperation. We are who we are as individuals and yet we have a social history. As cooperating persons, individuals direct their energies toward the survival of the whole group, rather than solely toward their personal needs. Ideally, each individual works for the common good, the general welfare. In so doing, the living standard and quality of the whole society are raised, and political and economic power are ever more widely shared. Retaining this form of government requires participation and cooperation by everyone lest the privilege erode.

b) **Balance in Power.** Thomas Jefferson had a vision of a commonwealth, an ideal democracy in which the potential for conflict between government and its citizens was kept in balance. As noted above, his was an agrarian vision of many small individual landholders with relatively equal economic and political power. Private landholders would live in communities, independent and free, but they would also take care of each others' needs, the needs of the commonwealth. However, this vision remains more a myth than a reality. The rival vision of Alexander Hamilton based on an elite economic and political group that would make the nation strong through industry has dominated since the earliest days of the country.

c) **Ecological Respect.** Commonwealth, like commons, has been expanded to take into account the natural world. The "natural commonwealth" is the natural cooperation among all creatures including human beings. We share this Earth with other creatures and we and they are interrelated. To hurt them in any fashion is to hurt ourselves and our common grounds and

destiny. Whether our human needs are met depends on how we treat our natural treasures. If we preserve and enhance the environment, our commonwealth is improved; if we allow it to suffer in any way, the commonwealth suffers. Our own proper social relationships are closely tied to respect for the environment.

d) Continual Trust. When Benjamin Rush was asked at the Constitutional Convention in 1787 what kind of government this nation should have, he replied "A republic, if you can keep it." Any democracy or republican form of government is an experiment, and the task of achievement is never finished. Preserving the commonwealth is a dynamic activity requiring our exercise of freedom as citizens. We are free to choose to support the commonwealth; but, if it is to succeed, essentially all must adhere to some limited degree, and the commitment requires that we all share common goals and aspirations. A small closely knit group profiting at the expense of the majority damages the trust. By the 1880s, a mere lifetime after Jefferson's death, his vision seemed to be dying. Rich industrialists, through their corporations, exploited small landholders, literally stealing land and resources. They took over local and state governments, exercised undue influence over the federal government, and impoverished people though the land was rich in resources.

Modern Movements. The inexorable erosion of Jefferson's ideal of commonwealth was marked by a number of trends that were evident by the beginning of the twentieth century: exploitation of vast natural resources, expansion of economic wealth, development of large corporations, an increase in the social well-being and individualism of many in the population, and the translation of economic wealth into political power. Those who were threatened by these trends tended to become part of the Progressive Movement and conservation movement of the late 1800s and the turn of the 20th century. These movements tried to adapt Jefferson's ideas of commonwealth to changing times and increased the role of government to balance the power of large-scale property holders. Thus such agencies as the United States Department of Agriculture's Forest Service were created. Furthermore, the desire to save natural resources gained momentum with the close association of President Teddy Roosevelt and John Muir at the turn of the century. It was Roosevelt who increased the national forests by 150 million acres and started the first five national parks, 18 national monuments, and 50 wildlife refuges.

The National Commons. The Federal domain now covers one-third of our total United States land mass or about 700 million acres. The National Geographic calls this "a public trust unmatched in the world."⁽¹⁰⁾ It adds that the land might have been lost had the nineteenth-century policies of giving land away to railroads, homesteaders and veterans continued. Federal lands exist in every state, the largest percentage being in Nevada with 83% public ownership. Alaska has 250 million acres of federal land, almost a third of the total. The following are parts of a current National Commons:

* National Resource Lands. The Bureau of Land Management oversees 270 million acres (the National Resource Lands), the largest acreage under a single government agency, and it manages rights to minerals under 570 million acres;

* National Forests and Grasslands. The National Forests (155 in number) cover 200 million acres, or a quarter of the public lands. The forest tracts are administered by the Department of Agriculture's US Forest Service as are 20 National Grasslands;

*National Wildlife Refuges. The refuges, which are administered by the Department of the Interior's US Fish and Wildlife Service, occupy 90 million acres divided among every state in the Union. They include some private lands set aside as easement refuges;

*National Parks, Monuments, and Preserves. The Department of Interior's National Park Service supervises 369 sites (including lakeshores, seashores and monuments) covering 83 million acres;

*Native American Reservations. The Bureau of Indian Affairs is trustee for 55 million acres of Native American-owned reservations;

*Military Lands. The Department of Defense manages 27 million acres of military reservation and defense establishments with 220 threatened or endangered species and over 100,000 archaeological sites;

*Department of Energy Sites. The Department of Energy has 50 major sites with 2.4 million acres, which range from nuclear reactor sites to oil reserve storage;

*Other Areas. Already partly counted, within lands managed by the various agencies are National Recreation Areas, National Wild and Scenic Rivers, Wilderness areas (102 million acres), and the National Trails System;

*National Marine Sanctuaries including the Channel Islands off the southern California coast and additional national marine research facilities.

National Forests. The National Forests are, in many ways, the epitome of this reformed and compromised notion of commonwealth. They were a noble idea: the careful use of the Earth's bounty today, always with an eye on protecting that same bounty for our children and our children's children. But the idea also has its problems. The Forest Service is a bureaucracy dependent on expert managers whose credo is the science of forestry. Bureaucracies are fraught with internal politics, power relationships, and sometimes isolation from the very people they are meant to serve.

National Forests as Models. Nevertheless, our National Forests remain in principle a correct response by representative government to the problem of protecting and rebuilding the citizen's natural commonwealth. In parts of the nation with little public land, they also represent a fragment of "free" land accessible to the public. Modern ecological designers want the National Forests to become a model for what all lands could become--shelters of biodiversity, havens of rest and quiet, and places where nature can work in its own ways. Some National Forests have unique habitats deserving special protection. Others are unbroken forested tracts and candidates for biological reserve areas.

2. Anglo-Americans' Notions of Forestland Use

Americans accept the concept of public lands but are often reluctant to extend this to include regulation of private lands and to expand it to include a global environmental commons.

The following are excerpts from a talk given by Eugene Hargrove.⁽¹¹⁾ His environmental, ethical, and historical overview of land use in general and common law as understood in our American tradition, is a good introduction to how we conceive of "forest commons."

It is only recently that people have accepted the idea that some land is valuable even if nobody does anything to it. The prevalent notion was that land that is not cultivated is waste land. Sir L. Dudley Stamp, the Aldo Leopold of England, estimated that by the 14th century every piece of land in the United Kingdom was being utilized to the limits of the agricultural technology of the time. The remaining forests of England were places where the soil was too bad to be farmed. So in England, people felt that if land could be farmed, they ought to farm it. This led up to the basic Anglo-American attitude to land, one that is not especially ethical. In fact, it seems to be a view that retards our ability to think in ethical terms about land. If you work a piece of land and cultivate it, you gain ownership right to it and can do whatever you want to it, regardless of consequences to anyone else in society.

Hargrove visited a Missouri county courtroom and found various farmers saying, "I worked this land; I own this land; nobody has the right to tell me what to do with it." According to this point of view, their ownership meant that they had a pre-societal right (in Lockian terms a natural right), to do whatever they wanted with their land. To them this right held precedence over any sort of societal responsibilities or obligations. What are the historical sources of this argument? One is John Locke's theory of property. Another is the writings of Thomas Jefferson, who connected Saxon law with Locke's theory.

Hargrove looked into the history of common law and found that the Germans whom the Roman conquerors encountered did not have any notion of land ownership, only of land-holding. They were semi-nomadic, so their object was to hold land for a while and to use it. Use of land established a right to hold it, though there were certain problems. If they damaged the land through use, they moved on and established homesteads somewhere else. When overcrowding occurred, the younger people would form a military army and conquer more territory, and divide the land they had won into freehold farmsteads. Settlement was generally temporary, and in time there was a general Germanic movement across Europe. The citizen was a "freeman" with the right to hold land and was beholden to no one. The little hobbits in *The Lord of the Rings* are essentially freemen with a thain or earl who had certain responsibilities in time of war lurking in the background. Hobbits gave the thain gifts, but otherwise each minded his own business.

If freemen wanted to leave, they cleared financial obligations to their neighbors and then they departed, moving freely from one kingdom to another, much as Americans move from state to state. When one inherited from one's father, one did not inherit land; one inherited the right to hold land, and so the right to be a freeman. The first step in becoming a freeman was to prove that right by seizing land, possessing and seizing being closely associated. Next the freeman worked the land. The word inheritance in Gothic and other ancient German languages is associated with the modern German word *arbeit*, which means work. A freeman could hold only as much land as he could work. The number of slaves and animals he owned determined his

ability to work land and thus how extensive his holding could be. When disputes arose, a freeman obtained neighbors' petitions stating that he or his father had worked this land, and therefore it was his own. If this did not settle matters, the aggrieved party went to war.

The oldest existing political structure in the Anglo-American tradition--the county court--continues to be an important level of government in America. When the county court was created, landholders did not particularly want to give a governmental body any authority over what they did with their land. They were only concerned with basic services (i.e., roads and the settling of disputes). Because of population pressures, land was divided, but if it was divided too far, no one would have enough. Some individuals benefitted from primogeniture (first son) inheritance while others moved elsewhere and even lost their freeman status. Thus the Medieval feudal system replaced the freeholder one.

In England a curious thing happened. The conversion of the freehold system to the feudal system had not occurred by the time of William the Conqueror, who imposed the feudal system on top of the Saxon freehold farm system. For six hundred years there were thus arguments about the sense in which land was held. In fact, the English were not really sure they owned their land until after 1660, when feudal dues were finally abolished. They spoke of being freemen with freehold farmsteads as the way things ought to be. The Saxons thought freeholdings were being kept from them because of military conquest. Locke sides with the Saxons.

When the British moved to North America, the idea of the freeman was still very current. Many held that they could go out and clear some land and put up a freehold farmstead. Thomas Jefferson thought that this was the way the United States ought to develop. In 1774 in "Summary View of the Rights of British America" he defended Saxon right against what he considered to be the Normans: "That their Saxon ancestors had under this universal law, in like manner, left their native wilds and woods in the North of Europe, and possessed themselves of the island of Britain then less charged with inhabitants, and had established there that system of laws which has so long been the glory and protection of that country." Jefferson argued that since the British are not governed by the Germans, Americans should not be governed by the British. In another place he makes it quite clear, "America was not conquered by William the Norman." Rather it was conquered by Saxon freemen who came from England.

Jefferson in 1776 wrote a draft constitution for the state of Virginia in which he included a section stating that anyone could get fifty acres of land free, simply by going out and working it for a year. This land would be held in full and absolute dominion, i.e., independent of any sort of social controls. Jefferson argued against the divine right of kings. He wanted to establish the idea that like the ancient Saxon freeman, one owned land by working it and society had no control over that ownership or what one did on one's own land. Not until after the war was over did Jefferson stop talking about Saxon freemen and start talking in terms of a special moral relationship between society and the person who worked the land. "Cultivators of the earth are the most valuable citizens." The most natural thing to do is to have a piece of land and to work it. Those unfortunate people who cannot, will have to engage in business and industry of some sort. When Jefferson started, he was not concerned with democratic society, but with Saxon society--which is in a sense a democratic society because the people had the basic notion of a freeman. He drew from Locke (with a Saxon view) the idea that one acquired property through labor.

Locke discusses the creation of society, the transition from a state of nature or a state of war into a state of society. Scholars have generally considered that this discussion was hypothetical, but Locke may have been referring to the creation of the county court in the eighth century. He also had a notion that ownership or control of property is pre-societal. For him it was all right to destroy the land that you live on. In the First Treatise he described the right of human beings to kill animals for food as a pre-societal.

In a political sense, the idea of some government control has been very difficult because land ownership has always been associated with representation and the people control the government through their votes. Hence it was very unlikely that any major attempts to curb the way that people act toward their land could come about politically. Only in this century have people even wanted to try to limit the way in which a person treats his own land. Aldo Leopold's land ethic can be read as a criticism of Locke's view of land as having no value until it has been cultivated. Locke felt that it was permissible for people to enclose the common land, because, he estimated, more land existed than human beings could ever use. The excess land was principally in North America. Some land was so far away from civilization that it was totally useless, because even with added labor, the distances were too great to get products to market. His views differ greatly from an ecological land ethic, according to which land is very valuable even though we are not doing something to it.

3. Forest Management--American Style

Locke's and Jefferson's concepts of land use give forests a role secondary to that of cultivated land. First, most forestlands in England at that time were in less arable areas and thus not of great economic value. Forests were "waste" or at best a source of raw materials that could be cut so that the land could be cultivated. Second, the forest acquired value by being used. The views of Locke and Jefferson differed little from the use ethic of the US Forest Service, which often maintains that its mandate is to use forests and to make them more productive, in other words to gather and obtain more wood products off the land or to use land for other productive purposes, e.g. recreational vehicles. To use up the land is better from the standpoint of that ethic than to view it as a sightseer might, with all its aesthetic and biological value.

4. Property Rights Reaction

Current attacks. Two libertarian attacks are simultaneously occurring: one aims to privatize our common lands for individual economic gain; the other, to restrain the government from regulating private land practices.⁽¹²⁾ In the first instance libertarians attack the U.S. Forest Service in order to extend private ownership; in the second they preach an absolute right over land without any social responsibility. Given the prevalent view of forestland as wasteland, or only of value if used, it is a short leap to the abuse of woodlands as a common practice. The pressure is on to damage both public and private lands. Often the pressure stems from corporate interests seeking to clearcut federal lands or to buy timber from private holders and to be negligent in the manner of harvesting it.

Eric Freyfogle in "The Construction of Ownership" discusses the relationship between an owner's right to use land and his or her right to halt a neighbor's conflicting use. In the early

nineteenth century, the right to restrict others' harmful activities was important; but during that century the mix of rights changed and the right of an owner to use his or her property as he or she wished became dominant. Today, land-use restrictions in effect or under consideration are again changing the mix of rights, as they curtail the right to use and increase the right to complain about neighbors' misuse. Property law is still suited to the frontier era when resources were plentiful, but the law can and should be reshaped, Freyfogle argues. See Appendix.

Privatization. Those pressing for less public land and complete freedom of private land from restrictions include "sage brush rebels," some economists and academicians who give the movement a theoretical bent, commercial forest interests, some small forest landowners upset with the US Forest Service, and private citizens who think government is too big. They want efficiency and profits, public revenues in their private hands, elimination of the public voice in forest policy, and abandonment of ecological considerations. They will not let cooperation and social responsibility stand in the way of individual profits and gain--the worst kind of social Darwinism. The fittest will survive and prosper, while the rest muddle along. These also attack the concept of commonwealth as "socialistic," a rhetorical device to conjure up Cold War fears. But a commonwealth means allowing the many to enjoy the fruits of the earth, sharing and cooperating democratically, and protecting the environment as part of the national treasure.

Forest Conflicts. Some revere the forest as a beautiful treasure; others see it only as a source of economic gain. The Forest Service is caught in the middle and, when it seeks to appease both groups, can harm its own cause. The Service can aid and abet private business by emphasizing economic efficiency and monetary gain for logging companies, but is then subject to criticism when below-cost timber sales make logging unprofitable. Non-sustainable use of forests strays from the notion of commonwealth and responsibility for our natural heritage, as it opens forests to even-age and monocultural management, leads to intensified use of pesticides, allows use of off-road vehicles, assists private interests to profit from below-cost timber sales, encourages a rigid hierarchical management structure, limits public access to decision-making processes, and subverts democratic discourse.

Decentralism. The libertarian and Wise Use attack on the commons is partly augmented by an attack on the other end of the spectrum, namely from radical anarchists and the modern day Luddite advocates of an overly decentralist political agenda. A radical decentralism carried to its logical conclusion would not allow for global or national commons, the very foundation for expanding the concept of commons today. Critiques of radical decentralism are beginning to surface as the intentions of various groups become more clear.⁽¹³⁾ On the other hand, moderate decentralists would encourage some locally held common properties (e.g., recreation parks, marketplaces, etc.), although they do not wish to focus attention on the broader political groupings. A modified decentralism leaves to the local community governing unit the right and duty to provide for the neighborhood's basic necessities required for a fair quality of life.

Wendell Berry argues in "Private Property and the Common Wealth" that "the best conserver of land in use will always be the owner or operator ...who lives within a securely placed family and community, who knows how to use the land in the best way, and who can afford to do so." If forest land is a commons, there will be nobody to care for it, as neither timber companies nor the government can be trusted to do so. Vigorous local economies, which can afford to reward

farmers and foresters for their products and their care of the land, are a key to conservation of the land, Berry believes. See Appendix.

Takings. Libertarians, Wise Users and their supporters say that big government is taking things away from the private citizen and quote from the final clause of the Fifth Amendment to the U.S. Constitution, namely, "*nor should private property be taken for public use without just compensation.*" Thus there has been a raft of federal and state legislative action in recent years aimed at requiring compensation of landowners whenever a federal or state rule decreases the value of their land, even if the original market value depended on the inappropriate use of the land. Here environmental preservation and economic self-interest clash head on. Takings, carried to its logical conclusion, would ultimately transfer to taxpayers the costs of restoring strip-mined mountains, cleaning up toxic waste sites, and not building in fragile or hurricane-prone area. This could amount to billions of dollars. Furthermore, the payments to landowners would come from the agencies handling the regulatory programs such as the U.S. Army Corps of Engineers or the U.S. Department of Agriculture. The net result would be paralysis of regulatory agencies and a monetary outflow from government to the very groups who oppose it.

Response to the Takings Movement. Environmental groups such as the National Wildlife Federation have argued quite effectively that while private property is an integral part of the American tradition, it is in the best interest of all that we maintain property values. We all live downwind, downstream or next door to property on which uncontrolled pollution originates. Social responsibility makes it essential that we protect our common environmental and economic interests simultaneously, and not play one interest against the other. Takings proponents want the government to pay them through taxpayer dollars simply to obey laws that protect community property values. Specific examples would show that takings legislation is really fundamentally anti-environmental and that such legislation would be an ecological nightmare. Takings legislation would undermine wetlands protection, remove scenic vistas and thus trigger a host of additional lawsuits as other groups find that the permitted practice has cut their own property values. Some even suspect that government as we know it would cease to function as regulatory activity because it would be trapped in a "Catch-22" situation.

Section III - Management and the Forest Commons Concept

Summary: Land holdings and management decisions can take a multiplicity of forms. Just as we can speak of several varieties of public lands (national parks, wilderness areas, forests, etc.) so we can speak of sub-categories of private lands (individual, corporate, land trusts, etc.). Both enclosure and exploitation of common lands for forest products or minerals are misdeeds that need to be addressed. The exploitation of private lands, which affects a far larger environmental constituency, should also be addressed.

1. Public Forest Management

Mismanagement of Public Lands. Our American public woodlands are our national formal acknowledgment of the concept of "forest commons." Their management can become a model of what can be done, through some modifications, with our country's private lands. Since public

lands are managed by those held publicly accountable, these lands can be better controlled than the private lands. Livestock growers, the railroads, mining companies and logging operations have had an inordinately strong voice in determining public as well as private land use policy. Isn't it time that the general public has an opportunity to contribute to public land use policy?

Surface Mine Model. Until the Second World War most coal was deep-mined, accompanied by a heavy toll to life and limb. Gradually deep mines were regulated by state and federal agencies for the safety and health of the miner. After the war, deep mining gave way in part to the use of heavy mining machinery for removing overburden and uncovering and extracting coal near the surface. The surface mining operations required fewer workers and were relatively safer than deep mining. But environmental damage through surface disturbance, siltation, and acid mine drainage became a major concern to many who resided in the mining zones and beyond. The first attempts at voluntary measures in the 1950s and 60s gave way to a variety of state regulations with a wide degree of enforcement requirements. For fear of losing business to neighboring states, many states fell prey to weak regulations. Finally in 1977 the U.S. Surface Reclamation Act was passed to bring about uniformity and stricter controls on surface mining of coal and restoration of mined lands.

The rationale for the surface mine legislation is that disturbing private land surfaces affects the broader commons, namely our common environment. The case was made that massive land disturbances affect vegetation, wildlife, the quality of water run-off, and air. Therefore standard national regulations had to be imposed on the mine operator and land owner. The actual involvement is more than perfunctory. It includes regulating a wide range of procedures for extracting the coal, processing and transporting the coal, and restoring the land after the extraction is complete. These include detailed specifications for access road-building, treatment of water runoff, use of blasting materials, grading of slopes, reseeded, and burying of waste materials. Waivers are granted for different ultimate uses of the mined areas. While some flexibility is permitted, the reclamation standards are, on the whole, quite rigorous.

Applications to the Extraction of Forest Products. Extracting wood from forests can be just as damaging as mining, especially when modern equipment such as chain saws, heavy trucks, and loading machinery is used. Wildlife habitat and the earth itself are disturbed. Poorly engineered access roads and loading areas can cause siltation. Stream beds can be polluted; certain species of understory flora, threatened or endangered. Loss of greenery will greatly reduce tourist potential. Therefore the same reasoning that was used to regulate surface mining of coal can be applied to the extraction of forest products even on private land. Both forms of extraction affect the environmental commons.

2. Private Forest Management

Two forces work against the regulation of private forestlands: the desire of woodland owners to be left unregulated; the fear that regulations will cut into the profits of the wood products industry. Add to this one of the great economic ironies--some Appalachian land is worth less than the trees on it. This situation opens private lands to gross mismanagement, for land owners with no attachment to the land will enrich themselves by selling timber--and land--to the highest bidders. Logging companies may make quite enticing offers, a sum of a thousand dollars, for

example, for land worth half that amount. Generally the logging companies do not want to keep logged land with its subsequent security, liability, and taxation problems.

Extraction of Timber. Granted, some argue that there is a major difference between extracting timber and extracting coal, namely that timber comes from a renewable forest resource. If the forest harvesting technique is not sustainable and damages the land, this forest resource is also non-renewable, because trees, especially certain species, only regrow if conditions are right. When harvesting occurs at too frequent intervals, acorn and nut yields are suppressed. Also unsustainable harvest practices do not permit proper regrowth and encourage soil erosion; heavy machinery compacts the understory and destroys wildlife nesting areas. Logging companies are likely to neglect replanting and cover crops. In a forest, 85-90% of plant species are herbs, vines, and small shrubs, and many of these can be severely affected. If surface mining of coal is regulated on both public and private land, logging, which also has severe environmental impacts, should likewise be regulated on both public and private land.

Pulpmills. The use of paper has grown immensely in recent years. The trend damages the environment, since the pulp and paper sector is the biggest polluter among wood product industries, with its heavy use of energy, water and trees, and its contributions of toxic water pollutants such as dioxin. Paper production has increased twentyfold since 1913.⁽¹⁴⁾ In the United States alone, the spread of office printers, photocopiers and fax machines nearly doubled office paper consumption during the eighties.⁽¹⁵⁾ The regulations imposed on public lands in the West have shifted pulp production from the Pacific Northwest to the South, Maine and the upper Great Lakes. Logging interests exert increasing pressure to turn native and multi-species forests into monocultural forest "lawns" of pine and other pulp products. If this occurs, the ecological wealth of tree and general flora diversity is lost. Tree farming with a single species has a detrimental effect on the health of the surrounding forest, and forests do not automatically bounce back when such practices cease.

Chipmills. "The Chip Mills are Coming!," "Depletion for Dollars: The Economics of Chip Mills," "Forecasters predicting boom in Eastern Kentucky logging, Activists fear damage to land"--these are just a few of the many headlines on forests in newspapers throughout Central Appalachia. Why the heated debate? High-capacity chip mills remove tree bark and grind the remaining wood into small pieces or chips. The paper industry uses the chips for the production of pulp. These chips are also steam pressed into lumber: I-beams, roof trusses, etc. A single mill may devour 600,000 tons or more of timber a year. One plant proposed for West Virginia, Parson & Whittemore, would consume 1,950,000 tons of high-quality hardwood annually. That quantity would require 25,000 acres of trees annually, enough to consume all the forested land in Rhode Island within 16 years. Mills normally buy their timber from individual landowners, and contract with independent loggers to cut the trees.

To obtain maximum fiber at minimum cost, mills frequently get trees by clearcutting, removing all the trees on a site, whether they are mature or not. The owner decides whether to clearcut and how many leafy tops to leave on the ground to feed regrowth through breakdown into compost. Mills use any size wood. Trus Joist Macmillan in Hazard, Kentucky consumes 520,000 tons of low-quality hardwoods each year using logs from immature trees as small as four inches in diameter.⁽¹⁶⁾

Forest Alternative Crops. Ecological concerns are now extending to harvesting of products other than trees. Some state or federal government regulation may be required to control types of forest species targeted, time of harvesting, markets for the harvested product, assisted growing of wild species to improve yields, and the introduction of non-native species into the forests.

Considering logging to be the only environmental threat and ignoring alternative forest products would be a major mistake.

3. Managed Health Care of Forests

The 1995 Federal Salvage Rider Amendment has sparked considerable controversy. This legislative mistake (in President Clinton's words) has encouraged corporations to declare forests unhealthy and by means of this subterfuge to flaunt environmental laws and procedures and cut down indiscriminately old growth and other valuable forests, especially in the Northwest. From the point of view of corporations, the most effective health measure is killing the victim.

However, it is counter-productive for environmentalists to claim that forests are currently in good health. Threats to forest health do exist in all parts of America as is vividly proven by Charles E. Little in *The Dying of the Trees*.⁽¹⁷⁾ Little describes seven areas of this country and shows through interviews with forest health experts that numerous species are in sharp decline.

Citizen Forest Health Monitoring. ASPI belongs to the Appalachian Forest Health Project, a group of environmental organizations in central Appalachia. This coalition is seeking to monitor the health of a mixed Appalachian area that Lucy Braun termed "The Mixed Mesophytic Forest." On the western Appalachian range, the forest runs from southwest Pennsylvania to northern Alabama. It is regarded as the oldest and most varied temperate hardwood forest in the world and is quite precious with over a hundred varieties of trees, a number of which seem to be currently in noticeable decline. In response to this perceived condition a number of scientists and citizens under the initiative of Professor Orié Louchs of Miami University in Ohio have established forest plots. They are documenting the initial condition and training citizen monitors to observe changes in condition over a period of time. Hopefully this long term project will show the true condition of these forestlands.

Preliminary Results. The actual killers of the trees may not be the cause of their weakened condition. The situation may, in fact, be similar to that in which HIV predisposes the body for the onset of AIDS. Forest experts believe that in certain areas the continual assaults of acid rain may cause the affected soils, if not properly buffered, to release toxic chemicals that may harm vegetation. Damage is obvious in higher elevations of the Great Smokies, in foggy and misty parts of lower mountain ranges, and in Central European forests. In Europe sulfur oxide emissions have caused many forests to die by making trees susceptible to opportune viruses, fungi, or other pests. For thorough forest health monitoring, keen forest observers need to be found (even elderly and unlettered ones), and an audio or videotape history of their experiences recorded.

Crushed Rock Applications. John Hamaker and others argue that glaciation occurs whenever the supply of soil minerals ground from rocks by the last glaciation is used up.⁽¹⁸⁾ Sometimes we are tempted to dismiss their warnings as doomsday foretelling. However, some Kentucky farmers in the early part of this century collected their limestone rocks and hired a mobile crusher to come

once a year and pulverize the stones. They did exactly what Hamaker and others are calling for-- and the pasture fields of the land spread with minerals were obviously more lush than untreated lands. The remineralization of soil was being practiced with little fanfare. Today remineralization is being rediscovered within organic farming circles in North America and especially in Europe. Field testing needs to be done in our acid drenched forestlands.

4. Other Forms of Private Land Management

Community Land Trusts. While there are a wide range of such land trusts, a common thread is the holding of a major portion of the land in common and its being subject to community decisions. Individual homes and sometimes surrounding land are privately owned, and land may be leased to homeowners for an extended period of time, but the land trust still holds title to it. Land-use decisions become the domain of the land trust as such through the voice of its locally elected governing board. The community land trust concept is excellent, but it contains an often unarticulated weakness. An unstable family life situation can be disastrous, for if a divorced partner seeks to capitalize homestead equity, the other partner is unable to comply. Often such property goes into limbo. Thus trusts remain only as stable as the marriage bonds of the members.

Conservation Easements. A conservation easement is a legal agreement between a property owner and a government agency or nonprofit organization according to which the property owner voluntarily limits the activities that can take place on the property. The easement is recorded with the deed and binds future buyers of the land as well as the owner who entered into the agreement. As a general rule, easements allow government entities and land conservation organizations to determine the future of far more land than they can afford to buy, and are an effective means of protecting land from development. However, they have their limitations and drawbacks. ([See "Conservation Easements" by Mary Byrd Davis in the appendix.](#))

Section IV - Specific Forest Utilization Practices

In "Forest Lands in the Future," Paul Kalisz presents a vision of ideal and sustainable forestry from the perspective of a professional forester. When our goal is "sustainable forestry," we are, Kalisz says trying to implement and encourage a forestry that is nourished by the Earth and that, in turn, contributes to the nourishment of human and other natural communities and helps to keep them in existence. In practicing sustainable forestry, foresters would follow such practical guidelines as management of trees in uneven-aged stands and harvesting by single-tree selection or by selection of groups less than about one average tree height in diameter. Kalisz's speech is reproduced in an appendix; here we speak only of certain specific practices as they relate to forest health.

We treat our forests according to the value we place on them. If we regard forests as having mainly biological value, we emphasize the wilderness component and advocate natural growth and protection of biodiversity. If we want forests to provide shade or windbreaks or privacy barriers for interspersed buildings, we are less interested in logging than in preservation. We may want to extract valuable forest products (timber, fuel wood, chips, understory plants, wildlife,

mushrooms, fruit, nuts, and seeds) year after year, and can do so provided we allow the forest to remain productive and healthy. Lastly we may especially value forest-related recreational activities, with impacts ranging from small to heavy. The many possible uses of forests are certain to provoke conflicts. However, the substitution of non-forested cropland products such as hemp and kenaf for more significant and resource depleting uses such as pulpwood would decrease pressure on forests.

1. Extracting Forest Products

The forest may be fragile terrain, and excessive harvesting of certain forest products could doom these natural things. When ASPI sought to produce a videotape of forest products with the noted Native American naturalist, Hawk Littlejohn, he politely refused. He said that most Americans do not know how to treat their forests properly and teaching them what products are valuable would likely lead to their depletion and demise. Far better to teach a sense of reverence for forests than the philosophy that we should try to get as much as we can from them.

Timber and Wood Products. The previous section treated wood products used for chips and paper pulp. Many of the ecological dangers already mentioned apply to logging. Heavy equipment that causes soil compaction and erosion on access roads is generally used; chemical herbicides are often applied to enhance timber growth by killing unwanted plants; modern clearcutting practices increase resource waste and habitat destruction; and some methods (high-grading) remove the best trees that should be the stock for a more vigorous forest. Another problem is the introduction of non-native species, some of which become invasive and overwhelm native species. A rule of thumb is to work first and foremost with native species and to introduce non-native species only under very special control conditions and in communication with experts.

Ginseng. Syl Yunker, a Kentucky ginseng grower, has experimented with what he terms "virtually" wild ginseng.⁽¹⁹⁾ He sets the ginseng seeds or plants in the woods in the conditions that wild ginseng would normally use (proper hillside facing, amount of light, humus cover, and moisture). He protects the plants in much the same way that he would a wild patch, and he allows the product to mature under exactly the same conditions. The forests continue to yield while remaining healthy eco-systems; the product brings a price that is above that of cultivated ginseng; and there is no need for the heavy investment in acres of crop coverings and in the extensive cultivation and pesticide control necessary for the far lower-priced cultivated product.

Food Products. A wide variety of edible products can be gathered from the forest. Mushrooms are among the highly prized but gatherers must be thoroughly acquainted with the types, since some are poisonous.⁽²⁰⁾ Fruits, nuts and berries are food sources for wildlife and human overharvesting will decrease their availability. Generally this is not a major problem, except for nut gathering especially in times of drought. One ethical application is to harvest some but not too much of each of a variety of edible forests. Moderation is not a popular virtue.

Ornamental and Medicinal Products. A potential billion dollar market exists for ornamentals and medicinal plants, but here as in other cases the wide popularity of some such as "yellowroot" can lead to endangerment of the material in the wild state. Granted the considerable market for using

grape vines for wreaths and baskets will not hurt most forests -- and may even enhance them, but such products are rare at best. A wide variety of wildflowers can be dried for use in decorative items, but here again it would be far better to gather the exotic varieties that tend to grow along transportation routes than to pick rare wildflowers in the forests. In many parts of the world, picking wildflowers is forbidden.

2. Urban Forests

Some who work in natural forest areas and wilderness preservation wince at the concept of "urban forest." When flying over certain cities and neighboring urban areas, they may not have observed the large green canopies dotted with parking lots and rooftop openings that appear in summer. When properly planned, arching trees (American elms were prime candidates before the Dutch Elm Disease) have decorated our urban landscape and furnished cool shade cover for many buildings and streets. Growing trees in urban areas presents unusual challenges--the difficulty of obtaining proper nutrients and moisture, the impact of hard surfaces, disease and propensity for wind damage, and the limited popularity of certain trees.

Urban Forests and Climate Control. Forested areas serve a variety of purposes. In urban zones the "forest" lowers surface temperature considerably in summer (sometimes as much as 15 to 20 degrees). Tree for tree, urban "forest" climatic control may be one of the greatest potential benefits of trees in any part of the developed world. Three well-placed shade trees at any one house are said to reduce the need for air conditioning by half. Undoubtedly shading is one of the greatest environmental services that individual trees can perform. Now couple this with winter windbreaks generally consisting of clusters of trees, and one has energy savings through trees during both winter and summer. Vegetative energy conservation is a major area that is being rediscovered in urban planning. The total climatic effect may benefit an entire neighborhood.

Privacy and Noise Barriers. An added area of interest is natural privacy and noise barriers. We are all familiar with the massive concrete or wooden walls that sometimes run for blocks and miles along busy arteries in urban populated areas. Such barriers may be erected in an effort to keep out vehicular noises -- as well as unwanted intruders. Most likely the economic status of the community has much to do with such resource-intensive construction. But many barriers are profoundly ugly, exhibiting the bankruptcy of modern urban design. Vegetative barriers are just as effective and far more aesthetically pleasing--though more slowly established. These tree zones could include fast growing varieties that are cut out after slower evergreens come to maturity. However, some evergreens are sensitive to heavy auto pollutants.

3. Recreation in Forested Areas

Much attention has been given in recent years to the burgeoning tourist industry, now ranking among the largest employers in many forested (and naturally scenic) states. A healthy tourist industry is assisted by healthy forests, especially since the number one tourist activity is sightseeing. Again, forest commons relates to the private forests that form part of the contiguous scene, and this scene is of major concern in regions dependent on the tourist dollar.

Tourists and Sightseers. Sight-seeing, the leading "recreation" portion of tourism, is destroyed if a landscape is clearcut and denuded. In fact, our recent ASPI study on Logging and Tourism concludes that up to five jobs in tourism are lost for every job gained in non-sustainable logging.

The use of sustainable forest harvest methods keeps a forested area scenic, but can only be achieved if forested lands are regulated in much the same manner as private wetlands and historic lands. A forested private hillside is important for local tourism. Cutting a few acres away may not affect the total tourism potential, but cumulative cutting will do so. Tourism forces us to come to terms with the collective concept of forest commons, if only for the purpose of maintaining the contiguous green cover that is so vital to attracting visitors to a region.

Controlling Recreation Practices. A host of recreational activities occur in wooded areas. Limiting the number of people participating and their impact allows others access to the forest for a variety of different reasons. Use of private forest for recreation is one of the hardest areas to control. If the environmental impact is low, little or no regulation is necessary. If the impact is heavy as in the case of off-road vehicles, regulation even on private lands may be called for. Tourists wanting exotic experiences go to fragile areas, and can inflict severe environmental damage if their destinations become popular. Rock climbers desire access trails and drive pins into fragile surfaces, a practice that can prove damaging. Excessive camping and use of fire wood in pristine forested areas can also have a negative environmental impact.

Off-Road Vehicles. One of the most popular forms of recreation is the motorized recreational or off-road vehicle (ORV). It has gained popularity in fragile Western desert lands and in equally fragile Eastern forestlands. ORVs tend to go cross country rather than to follow hardened road surfaces. They are dangerous for drivers and riders, and they damage the environment by destruction of the understory, compaction of the soil and the resulting erosion, noise and intrusion on nesting areas of wildlife, as well as unnecessary expenditure of non-renewable petroleum products. Incidentally ORVs are restricted or forbidden on public lands in a number of states and are not allowed in the forests of Japan, the principal ORV manufacturing nation. Strict controls on operation of ORVs by minors would have some effect, especially if extended to recreation on private as well as on public land. Five young ORVers died in 1996 alone.

4. Reduced Use of Wood: Alternative Fibers and Recycling

Wood has been a predominant source of paper only in the last century and a half. Many people do not realize that a number of materials exist that can satisfactorily replace wood pulp for paper and timber for native building materials. For thousands of years a variety of agricultural products such as cotton, mulberry leaves, cereal straw, hemp, and kenaf were used to make paper. The last two of these seem to offer quite a promising alternative today due to the quantity and manner in which they can be produced. According to some estimates, the global demand for fiber products will nearly double to about 23 million hectares of forest in the next fifteen years. Hemp and kenaf will yield far more fiber per acre than will southern pine.

Hemp. Hemp goes far back in American history. From the early 1800s until the First World War, Kentucky supplied most of the nation's hemp, although many cooler and wetter regions could grow it as well or better since it has a relatively short growing season of from 100 to 120 days.

The plant is of the same family as marijuana even though some hemp species that are virtually devoid of the active ingredient tetrahydrocannabinol (THC) can be selectively grown. Unfortunately police can hardly tell the difference between species, but this drawback can be overcome by having a strict licensing procedure for commercial hemp growth. In actual fact, the reason hemp was banned in America was Dupont's need to protect its budding synthetic fabrics industry in the mid-1930s. Protection was afforded under the guise of drug control. The hemp curbs were removed when the Philippines fell to the Japanese in the Second World War. Some farmers hope that the ban will again be lifted and that a return to hemp will provide income to replace money lost from any scale back in tobacco crop markets in the coming years.

Kenaf. Kenaf is a member of the hibiscus family and a relative of okra and cotton. Like hemp it requires little fertilizer and its rapid growth crowds out weeds much in the manner of a pumpkin patch. The growing season is relatively long (four to five months); thus the tendency to grow this crop in warm climates such as the Mississippi Delta region. Since stalks are the part of the plant used for fiber, kenaf, like hemp, does not require pesticides -- even though Japanese beetles seem to love its high growing vegetation. Kenaf does not contain as much lignin as wood and is therefore easier to pulp, and the paper is acid-free, thus meeting archival standards. Because the paper does not require bleaching, it is chlorine free. It is 100% recyclable.⁽²¹⁾ According to estimates, yields could be almost as high as 11 tons per acre at a price of \$55 per ton. In Kentucky an estimated 200,000 to 250,000 acres could be devoted to production.⁽²²⁾

Domestic Construction Industry. Housing size has expanded vastly in the last few decades, a trend that works against sustainability. In 1949 the average new American home was 100 square meters; by 1993 that average had doubled to 185 square meters while the number of people sharing each residence had dropped from 4.8 to 2.6. Since 1950 floor space per capita in the United States has risen from 29 to 69 square meters.⁽²³⁾ These increases in size demand more building materials and wood. Since construction is a major use of wood products, any effort to change the style of housing and to use more native materials such as earth, clay and stone has the potential for making a great impact on our forests. We should challenge the construction of oversized housing whenever possible.

Recycling Programs. Recycling is growing in popularity and the practice now extends to a variety of paper products, e.g., newsprint, computer paper, general office paper, cardboard, etc. Businesses and organizations take pride in and call attention to the amount of recycled and post-consumer materials in the paper products they sell and use. A wider acceptability of recycling and recycled products will gradually reduce the current demand for virgin wood products.

Section V - Voluntary and Regulatory Initiatives

Summary: We include here ideas that were introduced and expanded upon in the Small Group Discussions at the Forest Commons Conference along with others mentioned to us at various times. The current political climate may not encourage some of these regulatory measures, but this paper may help change that climate. Along with many of the participants we are convinced that a multifaceted approach will be the most fruitful, provided that voluntary measures do not become an excuse for not seriously regulating logging practices on both public and private lands.

1. Voluntary Programs

Voluntary Stewardship and Management Plans. A number of forest stewardship programs have been initiated in the past few decades, some of which are effective in teaching good practices to woodland owners. Such practices may include: controlling exotic and invasive species, planting native species, thinning and trimming trees, detecting pests and using non-chemical pest control agents, preventing soil erosion, employing safe logging techniques, selecting timber for cutting, inventorying areas, and preserving habitat.

General Forest Education. Some regard education as a key component of new forest initiatives. Various groups may be targeted: general public through letters-to-the-editor, radio and tv programs, eco-tours to forested areas, general lectures, and reports and flyers; youth through programs such as ASPI's outreach to school children by means of both nature experiences and slide shows at the schools (by reaching children we hope to reach their parents); woodland owners through stewardship programs, lectures, workshops, and educational materials; and civic leaders through similar materials and workshops.

Educational Content. Education should focus on the environmental bioregional aspect of our fragile and unique forests, the ease and manner in which they can be damaged, the ways to reduce this damage and to restore forests to a better condition, and the need to plant and maintain additional trees. One avenue of education is the local or state woodland organization, which can teach through ongoing programs, field days, and workshops. Academic and extension agents as well as private forest consulting experts could be used for these comprehensive educational programs.

Voluntary Policies and Regulations. The forest industry favors voluntarism as an alternative to the forest regulations it dreads. The problem is that some companies become exemplars of good voluntary action but others do not. Thus total effectiveness is reduced. Although Virginia's voluntary programs are touted as a great example, one can observe devastating logging on the eastern side of Black Mountain in that commonwealth.

Shame Approach. Identification of poor harvest and forest management practices could lead to negative awards for the "worst forest offenders." Bad practices would have to be substantially verified, and the awarding agency would be subject to liability proceedings in case of a false accusation. However, such "dirty dozen" campaigns draw much publicity, and stockholders and the general public take notice. Shame can be an effective approach to enforcing community norms, as has been shown in Virginia.

Accentuate the Positive. What about praise in place of shame? If forest agencies and industry do good jobs, why not recognize them through a form of good housekeeping seal or restaurant star ratings. Here institutions that attempt to replant and to use low-impact logging methods are publicized. Such a recognition procedure would be somewhat difficult to administer and would require assistance from impartial individuals. Citizen forest forums, woodland owner coalitions, land trusts, multiple use land planning, and conservation easement programs are added ways of accentuating the positive.

2. Legislative and Regulatory Initiatives

Many people are convinced that voluntary regulations will have no more effect on forest extraction and management practices than they have had on the mining of coal. They argue that where environmental protection is concerned there must be some form of governmental regulation, because the impacts of logging extend beyond the bounds of property that is logged. Wildlife is threatened; siltation may occur from runoff; the integrity of the forest may be damaged.

Forest Practices Act. Attorney Sharon E. Duggan says that California has the United States's if not the world's most extensive regulatory scheme for forest practices on private land. This state has had legislation on the subject since the late 1800s. Its latest law was enacted in 1973 after a state court had ruled the 1945 forest practice act illegal (see discussion of history and in Appendix). Oregon and Washington, other primary timber producing states, also have regulations on forests on private land in part because more of the land in those states is publicly owned. Much of the eastern part of the United States, the target area of the Forest Commons Conference, has little or no regulation of private forestlands.

Attorney Duggan concludes that "It would seem that extensive regulation is not the answer, for it has not done much to protect forest resources in California. Industry believes it is over-regulated. The concerned public believes the regulation is ineffective, and not properly implemented. The agency believes it is overburdened with paperwork and cannot effectively do its job. I believe that California has the necessary foundational principles, and that it has elements of good regulation. It fails in the commitment to policy and the administration of regulation. Professional judgment and accountability is lacking--both from the side of industry and from the state agencies." She continues by presenting, in the words of Gordon Robinson, the principles of "excellent forestry": a sustained yield policy; an environmental protection policy, water quality standards, soil protection standards, limitations on clearcutting operations, licensed foresters and operators, independent and educated boards and regional advisory committees, a planning process with public involvement, and penalty provisions for violation with citizen enforcement provisions. See Appendix.

National Legislation. Some argue from experience with surface mining regulations that states are less able to regulate local environmental practices than is the federal government is. It takes a concerted effort to get the various states to enact effective laws--and some of these are spotty at best. The notion of commons extends beyond state boundaries, and thus the protection of our common forest is as much a matter of national interest as protection of our wildlife and water and coal. Federal model legislation could be an important first step that would help set limits on where forest harvest could occur (fragile areas would be off limits), state specifications for grades and engineering techniques for roads and culverts, outline methods and standards for restoration of cut-over lands, and list logging methods that reduce environmental impact. Big companies, especially those working across state boundaries, prefer uniform laws; a proliferation of state regulations leads them in some instances to support federal regulations.

Stewardship Plans. One of the mildest forms of regulation is to require stewardship plans prior to any sort of forest harvest. Some programs would exempt very small operators or fuel wood

gatherers. These stewardship plans could include ways to build and maintain access roads, types of trees to be cut, revegetation species and methods, care for existing stands, and other such activities. But, planning without teeth is useless. Effective plans could require loggers to notify the appropriate state agency before they start cutting. In turn, states would track loggers and their practices. They could compile and make available to private woodland holders a list of ethical loggers.

Proper Staffing. Quite often plans for forest stewardship and management cannot be implemented because of the shortage of personnel in the participating U.S. or state Forest Services. Widespread stewardship planning will require more staffing. At a time of severe downsizing, conservation and forest advocacy groups should lobby to increase staffing of such government programs. Some of the increased staffing at the U.S. Forest Service should be directed to educating and training private forest holders, even if this demands a modification in the mission of that agency as currently interpreted.

Governmental Economic Incentives. Today the United States is the only developed country in the world that exports raw logs. Those extracted materials go in great quantity to Japan, Germany and other Oriental and European countries. The United States needs economic incentives to keep these logs and the jobs that their processing generates close to home. Here it appears that environmentalists and those interested in forest economics have much in common, and some fruitful progress in communication should be possible. Local wood-processing firms should receive business loans and be encouraged to form wood marketing co-ops. A package of economic incentives should include programs devoted to encouraging alternative fibers such as kenaf and industrial hemp as well as reusing wood-derived paper products.

Joint Governmental/Private Co-op Ventures. The government should provide or encourage provision of small-scale venture capital for wood-working cooperatives and craft and specialty businesses. One participant at the Forest Commons Conference even volunteered to help create a privately funded cooperative, and asked for assistance in spreading the word about the plan. Hopes were raised for opening local co-ops from which income would return directly to the woodland participants.

Tax Incentives. Another proposal worthy of serious consideration is reform of the tax structure so that it would provide incentives for sustainable forestry or benign neglect woodland "management." People are now seeing the need for types of disincentives to discourage forest destruction. Granted, tax system reform would be quite complex and would involve much more than woodlands. The relatively heavy taxes on low-priced land is a very sore point for landholders especially in poorer parts of rural America which already suffers from a relatively low tax base. In many parts of the country woodland owners are severely affected by high taxes. On the other hand favorable tax structures could encourage woodland stewardship and restoration and alternative forest products.

Land Development Controls. Forest commons philosophy is closely associated with comprehensive land-use planning. Uncontrolled development of land through excessive road and utility line construction and scattered housing has fragmented some forested areas. The University of the South in Tennessee has a long history of forestry and forest management.

However, in recent years the institution has allowed professors and staff to develop housing at random locations among the university's extensive pristine wooded acreage. Had a comprehensive plan been implemented the housing could have been clustered and the forest preserved--except that people prefer to live in blessed isolation. Through proper government controls and land-use zoning this country could have far more uninterrupted forestlands, and the detrimental effects on tropical migratory songbirds and other forms of wildlife through so-called "development" projects could be largely avoided.

3. Certification Approaches

The Need for "Green" Forest Products. A growing environmental consciousness calls for certification of woodland harvest practices and the ability to know what are "green" forest products. Such certification consists of setting objective standards as to species, volume logged, and logging conditions, while allowing for local and regional flexibility. Furthermore, the group being certified must know what it must do and be committed to following the certification guidelines. Green certification will allow the product to be advertised as such and generally receive a higher price.

Standard Setting. The arguments for certification of private logging and other forest harvesting practices are somewhat convincing--provided that the "policy" agency does not impose a method so complex and involved that it is too costly for small woodland owners and operators. Otherwise the certification procedure would favor wealthier corporations and individuals. It would be ironic if some of the very culprits who have wreaked havoc on tropical or temperate forests in various parts of the world should turn out to be the only companies that can afford some sort of "green" designation. Excessive requirements on small woodland holders could prove quite burdensome.

Barefoot Certification. A "barefoot doctor" approach to small woodland owners and operators is worthy of consideration. Such a procedure would consist of guidelines that are comprehensive but understandable enough to allow the small woodland owner to be involved in all aspects of implementation. The focus would be on setting guidelines. Then the certification agency would return to ensure that the guidelines are implemented. This method is currently used in certifying "organic" farms and gardens and could be adapted to woodland owners. Training programs would need to be available. Small operators have the advantage of being able to give more care and attention than larger owners could afford. The ASPI "Appalwood" certification program is based on such a practice.

Training Programs. Working towards more sustainable forests may require training courses for loggers. In fact, some say that loggers should be certified. A logger training program could be held at convenient times and locations, utilizing extension agencies, state forestry departments, land grant universities, community colleges, and even high school and vocational school courses. Furthermore, clearinghouses dealing with sustainable forest practices need to be accessible on the electronic media and open to personal visits, phone calls or letters. The concept of forest commons opens the way for the public to bear training cost, since all citizens benefit from sustainable forests.

Awaiting a Conclusion

The vision in the Appendix presented by Paul Kalisz may be a glimpse into the ideal future, but it is not a conclusion. In fact, these authors and the participants at the "Forest Commons" Conference do not expect there to be a conclusion until the major forest issues are solved. In essence that becomes the challenge of all who read this report.

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