

important function itself, as it enables foresters and society to discuss forestry in a broader perspective than primary production alone. The constant change of relative dominance of particular functional relations (production, recreation, conservation) has characterized the history of forestry and probably will characterize its future development; time will show, for which functional relations societies will appreciate forests in future.

*See also:* **Landscape and Planning:** Perceptions of Forest Landscapes; Perceptions of Nature by Indigenous Communities. **Social and Collaborative Forestry:** Canadian Model Forest Experience; Common Property Forest Management; Forest and Tree Tenure and Ownership; Joint and Collaborative Forest Management; Social and Community Forestry; Social Values of Forests.

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## Social Values of Forests

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## Introduction

Amongst all the environmental sciences, forestry is perhaps the one that has to recognize and work with the values of the widest range of social groups.

Forests affect the interests of everyone, but are often the property or responsibility of a few. Even the definition of a forest is a value-laden exercise, in what has been termed the ‘social construction of forests.’ There is however a difference between the postmodernist view that forests are the projections of each observer, and the more pragmatic philosophy that forests are real systems with definite contents and boundaries – but that the importance of the contents, boundaries, and whole varies according to the observer. The last consideration has been much discussed during the last 20 years, following the famous statement by Jack Westoby in 1968 that ‘Forestry is not about trees, it is about people’.

This article explores the many ways in which social values have been defined and applied, and looks at how such values are formed, recognized by forest managers, and incorporated into forest management – and what happens when they are not. Issues of consensus and conflict are considered, and the article concludes with a discussion of the evolving demands on the modern forester who needs to be able to balance social sensitivity with technical and management skills.

## Definitions

The value of a forest refers to its ‘worth, desirability or utility,’ while the values held by people regarding the forest refer to their principles, or judgments about what is important in life. Values are implicitly subjective, and forestry, which has always held itself to be a science, sits uneasily with subjectivity. Economics has evolved its own ways of dealing with the economic value of a forest in the face of environmental concerns. However, forestry is not only about environmental values, but also about social values, a phrase which has come to be used frequently in relation to forests, but often only in passing and without explanation.

The term ‘social values of forests’ can best be understood as referring to the basic worth and utility of forests as are experienced by people. A distinction can be made between material utilitarian values, nonmaterial utilitarian values (such as soil conservation, climate regulation), cultural and spiritual values, and aesthetic values. These terms all relate to values of forest with respect to human use and perception. In addition, the term ‘intrinsic value’ is used, to denote that value related not specifically to human use and benefit, but an unchanging value outside the human sphere of influence and perception.

Another approach towards defining social values of forests is derived from environmental economics. Here a distinction is made between direct use values,

indirect use values, option values (options for use in the future), bequest values (value of leaving use values for coming generations), and existence values (value from knowledge of continued existence).

Both the social values of forests and the environmental economics approach basically focus on the role of forests for human benefits. Such values do not include all forest–people relations. For instance, social values regarding forests may also include perspectives on the appropriate relation of people to forests, with, for instance, a distinction between dominion or guardianship.

The term social values has a more general connotation, referring implicitly to ‘values held by people other than foresters.’ In democratic, post-industrial countries the phrase might perhaps be synonymous with public values but the notion of a public that is unanimous in its desires and behavior, is transparently a problematic one.

Whilst in industrialized countries the social values of forests can seem largely related to enhancing the quality of life, in developing countries the phrase can refer to much more tangible benefits. Poor rural communities are often highly dependent on forests as part of their resource use system, for animal fodder, fuelwood, soil nutrients, medicinal supplies, and also in emergencies (times of famine, drought, war) as their sole source of food. Where forests are so essential to livelihoods, their use is often controlled by other social values as well, such as the need to maintain good social relations or one’s place in the social hierarchy; and in the expression of cultural values which hold the community together. For example, the presence of sacred groves in India, Laos, and Ghana continue (to varying extents) to represent persistence of culture and to symbolize a nonutilitarian importance of the forest.

Other values held by society, or groups of people, affect their attitude to forest less directly. Spiritual beliefs, or an ecocentric philosophy, can affect people’s stance on whether a forest and its species have intrinsic value, or whether aspects that benefit only humans should be valued. In the same way, some social values also have a negative impact on forests. The spiraling desire to consume, and the search for satisfaction in material goods, which underpins so much deforestation, urbanization and environmental degradation, is a much more powerful force than that based on conservation and aesthetic values.

One definition cannot cover all of these uses. ‘Social’ refers to society, its organization, and the relationships between groups of people. We might summarize by describing social values of forests as those that are beneficial to society as a whole, or to particular sections of society, or that are held dear in

particular cultures, or that contribute to the development of human organization in a sustainable way. They may or may not be freely available, measurable, and/or accessible to all who desire them. Furthermore, they do not exist independently of people, so they evolve as society evolves – and forest management that takes account of social values will therefore be a dynamic, adaptive enterprise.

## The Evolution of Social Values in Forestry

Both society, and forestry, have changed radically over the centuries of forest management, and both have affected ways in which social values are recognized. Social values change as society’s organization, beliefs, affluence, level of education, and spare time change. The rise of pluralistic forestry is often attributed to the surplus income and spare time of people in post-industrial parts of the world, and it is true that the social value of forests is referred to increasingly in industrialized countries. But there has always been a social value or function of forests, in that forests have always provided benefits for people other than foresters or forest owners; and it is interesting to note that much of the early discussion of social values in forestry publications comes from Romania, Bulgaria, Poland, Hungary, and (the then) Czechoslovakia, while donors and policy-makers emphasize the value of forests for the poor, in developing countries.

There is an element of positive feedback here, in that the recognition of social values stimulates study of them, leading to further recognition. Some of the stimulus has come from within forestry: the rise of approaches such as community forestry, urban forestry, and adaptive management, and the recognition of non-timber forest products in rural communities’ lives has opened the way to foresters listening to a wider range of people. But these approaches have in turn been prompted by wider movements: the global sustainability debate, and the rise of interdisciplinarity. To foresters, sustainability has in the past meant sustainable timber production, but the enormous amount of global discussion, while sometimes appearing inconclusive, at least highlights the need for attention to social as well as ecological and economic factors.

Attempts to bridge the natural and social sciences have also affected forestry. The door has opened to anthropology, which has provided a number of insights into the cultural construction of nature, the recognition of a conservation ethic among some cultures, and the documentation of indigenous knowledge and practices with potential importance for forest management. Environmental psychology has also contributed understanding of the meaning of

nature, wilderness, and beauty, among other factors, to forest management. At the same time, science itself is increasingly recognized as a political and value-laden activity, where conservation values are not objective. These changes are affecting the way in which the relationship between society and nature is mediated by policy and research, and forestry is not alone in having to adapt to the new agenda.

Social values, or the values held by society, are particularly evident in the choice of species to be planted, for example on farms and common land, as well as in more conventional plantations. In making such choices, foresters, farmers, and planners reveal and reflect a wider set of values. In particular, the importance attached to the use of native or exotic species varies widely. In postindustrial society, there is often a strong public demand for native trees, resulting from awareness of threats to wildlife depending on those species, as well as perhaps a nostalgia for wilderness and more 'natural' appearance of the landscape. By contrast, foresters in many countries continue to favor exotics which grow fast and reliably, and have established markets. Exotic species can also have social value. In Ghana, rural people can associate foreign with modern and successful, and hence favor exotic trees; in contrast, in India, introduced species represent colonialism and can inspire political protests and moves to uproot plantations. A sense of aesthetic in forestry is also affected by society's stage of 'development'; in Cameroon the forest landscapes considered most beautiful include modern houses and electricity wires, a view which provides a sharp contrast to the aesthetic sense of the overurbanized, jaded, European.

## **Values and Stakeholders**

### **Value Formation**

In order to understand the wide range of perspectives held by society in relation to forests, we must look at the process by which values are formed. Values are strongly linked to culture, or the set of practices and beliefs which holds a community together; but they are also affected by individual circumstances, education, and experience.

Forests feature in the mythology of many cultures, and have deep-rooted associations with nature, magic, religion, safety, or evil. Consequently, they mean something to almost everyone. Religious beliefs can also influence value formation with respect to the environment, though in a wide range of ways: there are numerous studies of the proto-environmentalist messages in religious texts, but Christianity at least has in the past nurtured a view of humankind as lord

of creation, which arguably has supported the exploitation and destruction of nature.

Societal change obviously affects such values, and disillusionment with consumer culture is reportedly causing a decline in materialist values among the young, in Western Europe. The global debate about biodiversity has brought a new term, and arguably a new concept, into the forest debate: to a wide range of people, forests are no longer just utilitarian storehouses of trees and forest products, but the embodiment of biodiversity, a more holistic, intangible concept. And of course the changing environment, loss of forests, and loss of contact with wilderness, as society becomes more urbanized, leads to greater interest in nature as it becomes scarcer. But the increasing emphasis placed on social choice means the public often have influence over decisions for which they are not equipped to understand the ecological consequences.

At a more individual level, education and personal experience deeply affect values. People who have experience of the negative effects of deforestation are more cautious about further damage to forests, and value forest more highly. Contact with nature is also relevant; longstanding visitors to national parks often have stronger conservation values than short-term and new visitors.

### **Stakeholders, Conflict, and Consensus**

The existence of different values for forests among different sectors of society requires an approach that analyzes the perspectives of stakeholders. 'Stakeholders' are defined as groups and organizations that have an interest or are active players in a system, such as a forest. A methodology known as stakeholder analysis for exploring the goals, values, and influence of such groups has become widely used since the early 1990s. Stakeholder analysis begins by defining the system boundaries, in order to then define groups of people who may have an interest. Direct and indirect research methods are then used to analyze the perspectives of each stakeholder. The tool is a powerful one for pointing to potential conflicts of interest, based on conflicting goals, beliefs, or values; and also for providing a starting point for building consensus or trade-off of costs and benefits between different stakeholders.

Some differences of values are broadly predictable. For example, communities living close to forests are likely to be more economically dependent on them and to value the products accordingly, while those traveling from further away tend to be seeking the 'wilderness experience' or landscape beauty values. Forests with high economic value may have low social and ecological value; and conversely, wild,

wet, irregular and twisted trees may fill the imaginations of myth-starved urbanites and provide them with the high social value that the foresters' forest fails to. At a global level, those with most influence over international policy-making may value the rarity of particular kinds of forests or species (e.g., montane cloud forest in Costa Rica, or elephants in Namibia) which contrast directly with the values of local people who depend on alternative ecosystems or species for their livelihoods.

Hence, pluralistic, democratic decision-making needs to take into account not only the different values of different stakeholders, but also the potential for distortion by the greater power and louder voices of some stakeholders. A new and challenging role for foresters requires them to see through this clamor and balance the multiple desires and goals of forest users, with the need to maintain an ecologically healthy forest.

### Eliciting and Measuring Social Values

Defining the stakeholders is one important step in understanding social values, but the most challenging methodologically is that of finding out (or eliciting) and comparing the values held by the different stakeholders. Economists are expert in comparing values, particularly where a financial value can be attached to them, and their expertise has certainly provided a starting point for the measurement of social values for forests. Many of the values termed 'social' are what economists would consider to be externalities, i.e., not values accounted for within the forest production system, and not accruing to the forest owner. Many are also 'intangibles,' in other words not directly amenable to measurement. Both provide a challenge in terms of observation and measurement – because the stakeholders need first to be accessed, and then indirect methods need to be used to measure their values. Still worse, as we have seen, social values can be strongly affected by personal experience, and hence be subjective, highly variable between individuals, and even unmeasurable.

Many clever methods have been devised to measure social values indirectly, under what is generally termed 'contingent valuation' using indicators such as 'willingness-to-pay.' Such values are then added or subtracted, in a process known as cost-benefit analysis, which produces an overall value for the forest.

Criticism of such approaches has focused on the hypothetical nature of such responses, their vulnerability to the phrasing of the questions, and the essentially consumerist assumptions underlying such approaches. The reaction against the economist's desire to quantify all values has asked questions such

as, 'How are we to attach a number to the beauty, uniqueness, or spiritual importance of a forest or a place in a forest? How are we to account for the subjectivity of personal experience, and how do we add together the variety of personal experience?' And to some stakeholders, values of nature are absolute and cannot be discussed; for example, the Paiute Indians of Michigan, USA, cannot rank one species over another, because they consider them all to be sacred.

Experience suggests that quantitative valuation may in any case be fallacious because the resulting numbers do not represent 'reality.' The value of valuation may lie more in the process, i.e., in the scope that the activity provides for helping different stakeholders to understand each others' goals and objectives. The use of participatory methods, semi-structured interviews, focus group discussions, and storytelling may help people to express their values in ways that they can later communicate to foresters and forest planners, so that they are taken into account.

Combining the quantitative and qualitative approaches, a range of visualization tools has been developed recently that helps stakeholders interact in discussing their preferences for forest management. An approach known as multicriteria analysis (MCA) can be used to define a set of criteria that are weighted after consultation with experts, after which stakeholders are invited to score each criterion. The quantification process can itself provoke questions about the meaningfulness of such numbers, and stimulate reflection on the usefulness of instead making values explicit in debate amongst stakeholders.

A similar approach is used in the many attempts to define criteria and indicators for sustainable forest management, epitomized by a large research program conducted throughout the 1990s by the Centre for International Forestry Research (CIFOR). This enterprise has recognized that indicators of social values need to be more widely developed and applied than they currently are, and must be able to respond to change in those values. Attempts so far have proved particularly difficult – largely because the results are so different in different cultures, ecosystems, and stakeholder groups.

A different approach may be taken by psychologists, who seek to understand the attitudes and values that affect people's behavior, both in order to understand what 'the public' wants, and to consider effective communication methods to encourage the public to interact with forests in a sustainable way. Psychologists may use both quantitative and qualitative approaches in their research, but conduct their analysis and communicate their results on their own behalf. They can also help foresters to understand how they are perceived, and to change their public image.

## Implications

### Implications for Forest-Based Trade and Certification

The values that consumers hold in relation to forests can be powerfully expressed through their purchasing behavior. The ethics of consumption choices has increasingly been expressed through various certification schemes, in the case of forestry since the early 1990s. Most certification schemes allow consumers to choose timber which has been sourced from forests deemed to be managed sustainably – a definition which in the last few years has sought to include social sustainability by responding to the concerns of forest-dwelling communities. In so choosing, the consumer rarely knows the forest in question and is in fact expressing a value for the forest's existence and for the philosophy of ethical consumption; he or she is valuing an idea as much as a product. The premium for certified forest products might be held to represent the social value of sustainability, and reflect the increasing concern about sustainability in general.

The timber certification movement has taken off surprisingly quickly, but its representation of social concerns responds more to the beliefs of consumers about how forests should be managed, than to their knowledge.

### Implications for Forest Training and Practice

The rise of pluralistic and adaptive forest management requires a revolution in forestry planning, management, and evaluation. The forester can no longer be the manager of a biological resource with economic value, but must acquire skills in communication, consultation, facilitation, and conflict-management participation. The forester has evolved from regulator to facilitator, from harvest planner to intermediary, channeling communication and perspectives between community and government.

Foresters continue to be on the receiving end of criticism that they fail to understand the values and needs of the urbanized or forest-dependent communities that they serve, both in postindustrial countries and in developing countries. Several studies and surveys indicate contrasts between the values of foresters (favoring nature conservation and/or timber production) and their constituency (villagers needing sustainable production of food and medicine; urban public wanting landscape beauty and recreation, or a wilderness experience). To a large extent, diplomas and undergraduate training in forestry tend to be a biological and industry-based education, focusing on timber production; the social skills are acquired

(if at all) during MSc courses and vocational or in-service training programs.

Foresters can feel threatened by the changes in values and expectation, but on the other hand there is little currency in the argument that there is no longer room for professional foresters who can ensure biological sustainability. Instead, foresters need their ecological training, and must also be able to listen to the public and balance publicly defined goals with the demands of biology.

### Implications for Policy and Governance

Amongst forest users, the single factor that most directly affects values for the forest is tenure; and in industrialized countries, recreational access. It is widely recognized that the forest with highest value to society is not private forest. Both ownership and access rights are factors which are directly affected by policy and its implementation.

Finally of course the vast range of social values and stakeholders in forestry require attention to the processes by which forest-related decisions are taken. Deliberative, inclusive, and reflective policy-making processes help people to recognize and develop their values. The fact that pluralistic, values-based forest management involves moral and political questions, has in many countries moved forestry decisions out of the relevant department of the civil service, to a higher, or more intersectoral, or more participatory, arena.

*See also: Landscape and Planning:* Perceptions of Forest Landscapes; Perceptions of Nature by Indigenous Communities; Visual Resource Management Approaches. **Social and Collaborative Forestry:** Canadian Model Forest Experience; Common Property Forest Management; Joint and Collaborative Forest Management; Social and Community Forestry

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## Common Property Forest Management

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### Concepts, Definitions, and Terms

A 'common-property' regime is a regulated form of joint control and management of a resource by a group of users, with powers to define membership of the group, to exclude those who are not members, and to set rules governing use of the resource. It contrasts with unregulated 'open access' use of such resources when they are available to all and consequently not owned or managed by anyone, or with private or state control.

In the past a resource used in this manner has often been termed a 'common-property resource.' However, the use of the term 'common property' for both a resource that can be used in a managed or unmanaged fashion, and for a form of management regime that is limited to a specific group that holds rights in common, has proved to be confusing. A resource used in common is therefore now termed a 'common-pool resource.' Such a resource is usually characterized as one where exclusion of users from the resource is costly, one person's use subtracts from what is available to others, and overuse leads to degradation.

A common-pool forest resource may be the forest as a whole, or part of it. Or it may relate just to the product flows from that resource, or to individual product flows, such as timber, or fuelwood, or grazing. It is thus necessary to distinguish between rights to use a resource and the rights related to the resource itself. A common-property regime does not

necessarily require ownership of the forest resource, just rights to control usage.

This is particularly important in understanding uses in forests, where much of the resource is owned by the state, but most usage is by individual, collective or industrial entities, frequently with multiple users exercising rights to different products or to use at different times of the year. There can therefore be several different common-property regimes governing different outputs of a particular forest, and involving different groups of users. Similarly, the institutional arrangements for producing and selling forest products (flow units) are quite likely to be different from those controlling and managing the forest itself (the stock). Common-property use of particular forest products can also be found on private property.

Most management of forest resources as common property involves extractive outputs such as wood, nonwood products, and forage. However, it can also involve nonextractive uses, such as flood control.

### Common-Property Versus Alternative Forms of Forest Tenure

Historically, common-property regimes have evolved where the demand on a resource has become too great to tolerate open access use any longer, so that property rights in the resource have to be created, and other factors make it impossible or undesirable to allocate the resource to individuals, or to the state. A common-property regime can also emerge as a way of securing control over a territory or a resource, to exclude outsiders, or to regulate the individual use by members of the community. Collective management has historically been particularly prevalent where forests have provided critically important inputs into agriculture (e.g., providing replenishment of soil nutrients through green mulch or tree fallow), where livestock management depends on access to woodland or forest (as in arid Africa and Asia), or where forests provide important dietary inputs (e.g., in high forest regions without livestock).

As pressures on the resource increase over time, common-property regimes may be replaced by private property or state management, or revert to unregulated open access use, or, as is found in many forest situations, to some combination of rights and regimes. However, forest resources can continue to be managed as common property for long periods, where this continues to be the most appropriate form of management. For instance, it is still an active system of forest management in parts of the European Alps.

Historically, however, common-property forest management regimes have been widely reduced. Much