

M.G. CHANDRAKANTH AND JEFF ROMM*

Sacred Forests, Secular Forest Policies and People's Actions**

ABSTRACT

Forest policies in India classify lands by administrative, economic and ecological criteria, but religious classifications proceed simultaneously and also govern people's actions, particularly at a local level. These religious classifications express human interests in forests and shape human responses to secular policies. This article develops the potential policy implications of religious forest classifications. Using material primarily from India, the article describes religious systems of forest classification that often coexist on land governments classify in legal, economic, and ecological terms. It then discusses the impacts of religious motives on what people do, on how people respond to public policies and on the effects these policies therefore attain. The article finally considers means by which secular policies in India can become more effective by allowing a broader scope for the expression of these religious motives.

INTRODUCTION

Forests throughout the world have religious meanings that influence where, why, and which trees people plant, protect, and cut. However, public policies generally are designed as if acknowledgement of and influence upon secular motives alone should suffice to satisfy public interests. Although this pattern is understandable where governments are

*M.G. Chandrakanth is Associate Professor, Department of Agricultural Economics, University of Agricultural Sciences, Bangalore 560024, India. Jeff Romm is Professor, Department of Forestry and Resource Management, University of California, Berkeley, California, 94720.

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committed to secular principles, it is not necessarily effective in fulfilling public interests where religious motives govern people.

This article develops the potential policy implications of the religious attributes of forests. We describe religious systems of forest classification—institutionalized expressions of criteria that are thought to differentiate behavior—that often coexist on land also classified in legal, economic, or ecological terms. We argue that the religious classifications are part of the institutional context of forest policy. Using material primarily from India, we suggest that religious classifications can exert force on human behavior, and we address the possible impacts that religious classifications may afford if forest policies allow a greater scope for their expression.

The article has four sections. The first defines the relationship between forest classifications and public policy. The second describes religious forest classifications. The third section considers potential links between religious classifications and secular forest policy in India. The final section briefly summarizes the argument.

FOREST CLASSIFICATION AND POLICY

Forest policies typically allocate land among various legal and administrative classes, each of which defines some set of rights, responsibilities, and authorities. Alternatively, policies modify human motives and capacities to manage land for the purposes assigned to its class. Both types of policy are undertaken to achieve public purposes thought to be neglected without state intervention. The intervention is assumed to shift people's motives, capacities, and actions in directions that favor public interests.

In India, for example, the government classifies forest lands into (1) production forests, (2) social forests, and (3) protection forests, on the basis of the public purposes the land is thought suited to satisfy. The government then applies distinctive sets of policies to each of these classes.¹ This system of classification reflects the governmental perspective of the differences in conditions that affect attainment of the diverse public interests in forests.² Analogous systems prevail in the United States.

1. The National Forest Policy of 1952 recommended a functional classification of forest lands as 1) protection forests, 2) national forests, 3) village forests, and 4) tree lands. Since the administration of forests lies with the State Governments, this classification was not implemented. The Estimates Committee of the Fourth *Lok Sabha* (1968-69) suggested a reappraisal of the National Forest Policy. In 1976, the National Commission on Agriculture recommended that all forest lands should be classified on a functional basis into protection, production, and social forests, and that production forests should be further classified into mixed quality, valuable, and inaccessible forests. See Government of India, Report of the National Commission on Agriculture, Part IX (Forestry) 18, 37 (1976).

2. The Karnataka Forest Department has a program for ambitious development of sacred groves and temple forests all over the State. Around 200 sites, distributed in all 20 districts of the State, have been chosen for developing temple forests.

Production forests are designated and managed for the commercial production of raw materials. These forests are then subclassified by their economic value, for example, "valuable," "mixed quality," and "in-accessible." Ecological criteria further subdivide these sub-classes into units containing forests that are likely to respond similarly to managerial treatments.

Social forests are planted or designated to produce fuelwood, small timbers, fodder, fruit, shelter, and other locally important forest goods. They are further subclassified by the tenures of the land they occupy: for example, "revenue" land;³ reserved public road, canal and railway banks and, in some circumstances marginal, or degraded production forests; community forests, *panchayat*⁴ lands, and village commons; private lands; and the mixes of interests and capacities these tenures create. The tenure classes are subdivided locally by ecological criteria that help to guide managerial choices.

Protection forests are designated, reserved, and managed for soil and water conservation, erosion control, and flood and reservoir protection. They are subclassified by purpose. Some are classified to protect against wind or water erosion; others are classified as elements of larger coastal, desert, or water control schemes, such as river basin projects. They include natural, managed, and planted forests, depending upon location, site quality, and purpose. Felling generally is not permitted.

People classify forests by additional criteria, however, and their classifications embody values, motives and capacities—manifest institutions—that govern their own behavior. When the enforceability of governmental forest policies is slight, a much more typical condition than is commonly appreciated, policy effectiveness depends on the degree of complementarity between the classes the state creates and seeks to implement and the differentiations and purposes that people actually apply in their uses of land.

Disparities between *de jure* and *de facto* classifications of forests affect the outcomes of public policy. Current discussions of forest policy emphasize disparities that arise, for example, when population densities and settlement patterns outgrow those prevailing at the time forests in a place were classified. Changes in political balances—strengthened environ-

3. Revenue land is public land that the State has not transferred to private or village ownership or reserved for a specific public purpose. The land may have been forested at one time, prior to the reservation of forest land, but in most cases it is now open-grazed. It is analogous to public domain lands in the United States prior to the Federal Land Planning and Management Act of 1976 (FLPMA), 43 U.S.C. § 1701 et seq. (1988), except that the Constitution of India places it entirely under the state and not federal authority. It is administered by the Revenue Departments of the respective States.

4. *Panchayat* land refers to land belonging to the village. The "*panchayat*" is a traditional form of local governance by council. It has been modified in post-Independence India to be a vehicle for representative governance from the village to the district level. It has also become a unit of local public ownership and management of forest and land resources, its powers depending upon the degree of decentralization adopted in the respective States.

mental or ethnic relative to industrial interests for example—and changes in scientific understanding—about forests' roles as carbon or biodiversity banks for example—also form disparities between the social content of forests and the more limited content public policies assume they possess. Such developments recarve the institutional forest without necessarily changing its juridical condition.⁵

RELIGIOUS CLASSIFICATIONS OF FORESTS

Religious classification is a particularly enduring source of institutional disparity that nevertheless continues to be treated as just an interesting anachronism. Religious classifications have a pervasive and powerful effect on how people perceive, allocate, and use forests.

Forest classifications express value systems which differentiate land by its relative merits and purposes. Religious criteria for classification differ from the legal, economic, and ecological standards of the state. They differentiate forests by the symbolic needs that people believe forests satisfy. They do so from a perspective that is often local or otherwise in tension with the secular authority of the state.⁶ Forests in these terms are factors in the cohesiveness of society, as shared symbols, and the fragmentation of society, as symbolic or spatial sanctuaries for escape from prevailing codes. In India, these considerations have shaped forest policy and localized reactions to it for at least 2300 years. Kautilya, the prime minister during the Chandra Gupta Maurya's rule, 321-296 B.C., classified forests in a manner he thought best served the state's need for cohesion, wealth, and autonomy.⁷ In the same era, political dissidents sought their independence by creating autonomous temple-centered colonies in the forest.⁸ The tension between concepts of the forest as state resource and

5. A growing literature discusses the impacts of different forms of disparity between *de jure* and *de facto* classifications of land in India on the quality of land management. See, e.g., Romm, *The Uncultivated Half of India*, 107 (1 and 2) *Indian Forester* 1-24 and 69-85 (1981); Romm, *Forest Policy and Development Policy*, 2 *J. World Forest Res. Mgmt.* 85 (1986); and Romm, *Forestry for Development: Some Lessons From Asia*, 4 *J. World Forest Res. Mgmt.* 37-46 (1989). In some cases, political balances and *de jure* classifications do not express such disparities, as for example in classification by environmental or ethnic versus economic criteria: see M. Gadgil, *Deforestation: Problems and Prospects*, Foundation Day Lecture, Society for Promotion of Wastelands Development, New Delhi, (May 12, 1989).

6. The Coorg District of Karnataka has at least 600 "Devara Kadu"—sacred groves of varying dimensions (from a single tree to an area of 100 acres) totalling an area of at least 10,000 acres. The local people worship the sacred groves to appease the local and family deities and their ancestors. The Coorgies have often complained to the Government that the Forest Department has indulged in extracting timber from the sacred groves instead of honoring the local religious values for protecting them. From a report submitted by Mrs. K. Polly Aiyappa of Coorg, Member of the Legislative Council, Karnataka Legislature, Bangalore, dated 7th August 1986 to the Chief Minister, Government of Karnataka, Bangalore.

7. R. Shama Sastry, Kautilya's Arthashastra 45 (1915).

8. See Romila Thapar, *From Lineage to State* 3-20 (1984).

as religiopolitical refuge continues to this day. Temples throughout Asia maintain surrounding trees at least partly as symbols of the separateness of sacred and secular power.

Religious classifications of forests appear to operate at four levels. Trees of particular species, size, age, or historical connection, are imbued with religious significance. Groves of trees are treated as sacred by virtue of their place, content, history, or relations with other social functions. Forests are also protected because their goods and services sustain temples and other religious institutions. Forests are protected, managed, and planted to achieve patterns of landscape that are thought to harmonize the spiritual relations between people and nature. We use these four categories—religious trees, sacred groves, temple forests, and spiritual landscapes—to organize our observations of religious attributes of forests.

Religious Trees

Religious trees symbolize specific arrays of human conditions, possibilities, and anticipations. In India, species of trees are worshipped as manifestations of gods, as representatives of particular stars and planets,⁹ and as symbols of the natural elements—energy, water, land, air—each of which has its own independent and relational meanings. As sources of social cohesion, continuity, and control, religious trees shape human actions.

Specific trees have special associations with particular deities. For example, the Lord Vishnu is associated with the fig trees *Ficus religiosa*, *Ficus bengalensis*, and *Ficus glomerata*; the Lord Shiva with *Aegle marmelos* and *Mimusops elengi*; the Lord Dattatreya with *Ficus glomerata*. *Aegle marmelos* and *Elaeocarpus ganitrus* (*Rudraksha*) are associated with Lord Rudra, and devotees of Shiva wear the seeds of the *Rudraksha*¹⁰ as rosaries which are used in meditation. *Acacia ferruginea* is the most feared and respected tree because it represents the dangerous planet Sat-

9. The Sanskrit hymn describing the nine-planet worship is:

Arkasam idam Adithyaya (*Calotropis gigantea* to represent Sun)

Palashagam Somaya (*Butea monspersma* to represent Moon) *Khadiram Angarakaya* (*Acacia catechu* to represent Mars) *Apamargam Bhudhaya* (*Achyranthus aspera* to represent Mercury) *Ashwatham Brihaspathaye* (*Ficus religiosa* to represent Jupiter)

Audumbarag Shukraya (*Ficus glomerata* to represent Venus) *Shamigam Shanaischaraya* (*Acacia ferruginea* to represent Saturn)

Rahuve Doorvaya (*Cynodon dactylon* to represent Rahu)

Kethuve Kushaya (*Saccharum spontaneum* to represent Kethu) From the Arka Maha Ganapathi Temple, Bangalore, India.

10. The *Rudraksha* is also referred to as the Third Eye of Rudra. The *Rudraksha* has "faces" ranging from one (*Ekamukhi*) to 11 (*Askanda*) and each of them has a special significance. The commonest is the five-faced (*Panchamukhi*) representing the five-faces (*Sadhyojatha*, *Vamadeva*, *Aghora*, *Tathpurusha* and *Eshana*) of Lord Shiva. The most precious is the one-faced, which is believed to offer luxury and happiness in life. See 2 B. Walker, *Hindu World* 217 (1968).



Figure 1
Star forest

urn,¹¹ and Agni, the powerful fire god. This species assumes additional meanings at different times and in different places; it is worshipped, assuaged, and vested in immensely diverse forms. Although these species are particularly notable, many common species in India, including species currently planted in production and social forests, have religious significance.

11. The Sanskrit hymn associated with *Acacia ferruginea* is:
Shami shamayathe papam (*Acacia ferruginea* removes sins)
Shami shatru vinashini (the tree gets rid of enemies)
Arjunasya dhanur dhari (it housed the warrior Arjuna's bow and arrow)
Ramasya priya darshanam (it is most liked by Lord Rama).
 See Satyavathi Adya, Puja Vrکشagalu 1 (1983).





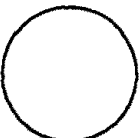

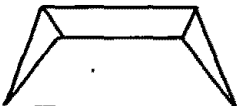


 KETHU, FLAG SOUTH, NORTHWEST <i>Saccharum spontaneum</i>	 JUPITER, RECTANGLE NORTH, NORTH <i>Ficus religiosa</i>	 MERCURY, ARROW EAST, NORTHEAST <i>Achyranthus aspera</i>
 SATURN, BOW WEST, WEST <i>Acacia ferruginea</i>	 SUN, CIRCLE EAST, CENTER <i>Calotropis gigantea var. albiflora</i>	 VENUS, PENTAGON EAST, EAST <i>Ficus glomerata</i>
 RAHU, WINNOW SOUTH, SOUTHWEST <i>Cynodon dactylon</i>	 MARS, INVERTED TRIANGLE SOUTH, SOUTH <i>Acacia catechu</i>	 MOON, SQUARE WEST, SOUTHEAST <i>Butea monosperma</i>

Figure 2

Planet Forest Indicating, Planet Name, Emblem, Direction of Idol in Temple, Position of Idol in Temple and Name of the Plant Respectively

Such species often are planted together for religious purposes in patterns ("star forest," "zodiac forest," "planet forest,") that express particularly desirable relations among what the species represent (figures 1, 2, and 3). These patterned forests symbolize a sense of cosmic order, a kind of spiritual constitution. Analogous patterns appear in ancient Thai manuscripts, which prescribe the placement of different species around homes for good fortune,¹² and in the home gardens that Javanese, Sundanese, and Balinese plant today and when settling newly cleared land. Such patterns are apparent in contemporary Japanese gardens as well.¹³

12. The Buddhist epic of Thailand prescribes that Tamarind, *Zizyphus jujuba*, and *Phyllanthus distichus* should be planted on the west side of a dwelling, and the coconut, bamboo, and *Crataeva religiosa* on the eastern side for good luck. See Sukwong, *Patterns of Land Use as Influenced by Forestry*, in *Culture and Environment in Thailand* 66 (1989); Soemarwoto, *Homegardens: A Traditional Agroforestry System With A Promising Future*, in *Agroforestry: A Decade of Development* 163 (H. Stepler & Nair eds 1987).

In Buddhist tradition, each of the Buddhas is associated with a tree associated with their enlightenment: they are the Vipassi Buddha with *Stereospermum suaveolens*, the Vessabhu Buddha with *Shorea robusta*, Kakusandha Buddha with *Acacia speciosa*, Konagamana Buddha with *Ficus glomerata*, Kassapa Buddha with *Ficus bengalensis*, and Gauthama Buddha with *Ficus religiosa*. See R. Saletore, 5 *Encyclopedia of Indian Culture* 1627-1628 (1985).

13. The Tenryu-ji temple of Kyoto, a meditation garden in Japan, is constructed according to Buddhist geomantic principles. See Johnson, *Geomancy: Sacred Geometry, and The Idea of A Garden: Tenryu-ji Temple, Kyoto, Japan*, 9(1) *Journal of Garden History* 1-19 (1989); W. Wright (ed.), 1 *A History of Garden Art* 45-49 (1928).

PISCES JUPITER <u><i>Ficus bengalensis</i></u>	ARIES MARS <u><i>Pterocarpus santalinus</i></u>	TAURAS VENUS <u><i>Alstonia scholaris</i></u>	GEMINI MERCURY <u><i>Artocarpus heterophyllus</i></u>
AQUARIUS SATURN <u><i>Acacia ferruginea</i></u>			CANCER MOON <u><i>Butea monosperma</i></u>
CAPRICORN SATURN <u><i>Dalbergia latifolia</i></u>			LEO SUN <u><i>Stereospermum chelonoides</i></u>
SAGGITARIUS JUPITER <u><i>Ficus religiosa</i></u>	SCORPIO MARS <u><i>Acacia catechu</i></u>	LIBRA VENUS <u><i>Mimusops elengi</i></u>	VIRGO MERCURY <u><i>Mangifera indica</i></u>

Figure 3

Zodiac Forest—In Each Cell, the Zodiac Sign, Name of the Controlling Planet and Name of the Plant Species Representing the Zodiac Are Furnished

Species that are viewed as religious throughout India often display a syncretic evolution of meaning over time. An example is the fig deity seal (figure 4) is from the ruins of Mohenjo-daro, the center of the Indus Valley civilization that flourished about 3000 B.C.¹⁴ Texts of the Vedic religion, practiced on Indian soil as early as 2000 B.C., describe fig trees as housing the fertility spirits of Gandharva (male) and Apsaras (female). A fig tree (*Ficus religiosa*), or the *peepal* or *bhodi* tree, alive today in Bodh Gaya, India, is believed to have sheltered Buddha when he gained Nirvana in the sixth century B.C. The Buddhist emperor Ashoka planted this species wherever he spread the new religion. In the *vratas*, Sanskrit

14. Asko Parpola, The "Fig Deity Seal" from Mohenjo-daro: Its Iconography and Inscription, presented at 10th International Conference of South Asian Archaeologists, Paris, July 3, 1989. Sacred trees are also observed in non-Hindu religions. In Jainism, which is older than Buddhism, each of the 24 thirthankaras is associated with a different species. Adinatha is associated with *Ficus bengalensis*, Abhinandanatha with *Buchanania lanzan*, Ajithanatha with *Alstonia scholaris*, Suparshvanatha with *Acacia speciosa*, Suvidhanatha and Chandraprabha with *Mesua ferra*, Sitalanatha with *Aegle marmelos*, Sreyamsanatha with *Diospyros melanoxyton*, Vimalanatha with *Syzigium cumini*, Anatanatha with *Ficus religiosa*, Kunthanatha with *Symplocos racemosa*, Aranatha with *Mangifera indica*, Mallinatha with *Saraca indica*, Munisuvrata with *Michelia champaca*, Naminatha with *Mimusops elengi*, Neminatha with *Ochlandra rheedi*, Parsvanatha with *Cedrus deodara*, and Sambavanatha and Mahavira with *Shorea robusta*.



FIGURE 1
Fig Deity Seal

ritual handbooks written about 600 A.D.,¹⁵ the same species is the king of all trees and worshipped as a symbol of the Hindu Trinity (Bramha, the creator; Vishnu, the preserver; and Shiva, the destroyer). To this day,

15. The Sanskrit hymn describing the *Ficus religiosa* is:

Moolatho Bramha Rupaya (Bramha, the Creator is at the Tree Base)

Madhyatho Vishnu Rupine (Vishnu, the Preserver is in the Tree center)

Agratah Shiva Rupaya (Shiva, the destroyer is in the Tree periphery)

Vriksharajaya Tennamaha (I bow to this tree, the king of all trees)

The Sanskrit hymn describing *Aegle marmelos* is:

Bilva patra namastestu shivapujana sadhana (The leaves of *Aegle marmelos* are for the worship of Lord Shiva)

Moolatho Bhavarupaya

Madhyatho Mrdurupine

Agrathaha Shivarupaya

patrai veda swarupine

(you have Lord Shiva in you, the central portion of the tree is soft, and you represent the Vedas)

Skande Vedanta rupaya

taru rajaya tennammaha

(I bow to you representing the upanishaths and you are the king of trees) See Satyavathi Adya, Puja Vrkshagalu 5 (1983). Worship of trees is documented in the following ancient texts: *Taittiriya Bramhana*, *Padmapurana*, *Matsya purana*, *Bhavishya purana*, *Bramha purana*, *Kadambari*, *Shanti parva*, and *Anushasana parva*. *Hemadri* deals with the planting and dedication of trees and the merit bestowed upon making gifts of various trees. See P. Kane, II History of Dharmasastra—Ancient and Mediaeval Religious and Civil Law 894-895 (1941).

Hindus throughout India worship the *peepal* tree early each morning. It is revered as well by Jains and Buddhists. The species, which originated in the Himalayan foothills, is now found throughout southern and south-eastern Asia. A person or government would remove a peepal tree only at significant risk.

Although we are unaware of tree species that draw similarly explicit religious commitments in the United States, individual trees, because of their great age, size, history, or character, inspire reverence that would be described as religious in other cultures. Current usage of "old growth" and "ancient forest" is consistent with religious interpretation. The names of the General Sherman Sequoia and the Treaty Oak may further suggest how Americans prefer to deal with this particular aspect of their lives.

Sacred groves

Sacred groves are clusters of forest vegetation that are preserved for religious reasons. They may honor a deity, provide sanctuary for spirits, be a living expression of ancestors, or protect a sanctified place from exploitation. They may or may not contain individually religious species. Sacred groves in India serve any and all of these functions depending upon the historical culture of the place.

In the southern state of Karnataka, sacred groves tend to be associated with a goddess; they are named variously as "*Devara Kadu*," "*Devara Thopu*," and "*Deva Vana*," or "Forest belonging to God."¹⁶ Among Mon-Khmer groups of Eastern India, sacred groves protect burial sites

16. See B. Baden Powell, 3 *The Land Systems of British India* 478 (1974). According to Ashton, *A Question of Sustainable Use*, People of The Tropical Rain Forest 185-192 (1988):

The Hindus have inherited perceptions of a people who have lived since ancient times in a humid climate particularly favorable for forest life. Settled people, they see themselves as one with the natural world, as both custodians and dependents. The people of India continue to harvest an astonishing diversity of products from forests. Forests of the mountains and watersheds have traditionally been sacred; springs and the natural landscape in their vicinity have attracted special veneration. . . . Throughout the mainly Hindu and animist rain-forest regions of India there existed, and in a few places still exist, sacred groves or aboriginal forest usually owned by a temple, a member of the religious elite, or by rulers who traditionally have embodied religious values. Some forests were only a few acres, others covered a whole watershed. In such forests as the Devara Kadus of Coorg . . . only products for the temple could be harvested; not so much as a twig was—and is even now—permitted to be removed by the villagers. The *kans*, or woodlands, which are typical of Sarab in the moist parts of Western Mysore, were prototypes of a technique currently being promoted as a new approach to forestry: agroforestry. In a region dominated by deciduous forests that were annually burned, the *kans* stood out as belts, often miles long, of evergreen forest along the moist scraps of the western Ghat hills. Assiduously protected by villagers. . . . But by far the most profound and permanent impact brought by the introduction of Western culture was the onslaught, albeit unintentional, on the ancient Hindu perception of forests as belonging to God, with the ruler acting as the deity's custodian. No corps of secular foresters or police however dedicated can receive the respect and obedience due to the Maker.

or form living cores, encircled by ancestral monuments. Some groves appear to derive their sacredness from the springs of water they protect, from the curative properties of their plants, or from the wild animals they support.¹⁷

Sacred groves are common throughout southern and southeastern Asia although virtually nothing is known about them outside India and their immediate localities. They have gained attention in many places only recently because they have become so visible amidst the surrounding forest clearings. The stark contrast humbles the understanding of technicians working to reverse deforestation.

Sacred groves are also common in Native American cultures and are becoming more visible as forest development continues to expose them. The United States also has groves that, although not called "sacred," seem to provoke analogous awe and reverence. Many Americans view the various "Big Tree" groves of redwoods as spiritual zones. The practice of naming these groves to memorialize people does not seem coincidental, and current moves in California to create a "Headwaters Park" of remaining private old growth redwood display very clear, albeit nonsectarian, religious motivation, perhaps analogous to the Indian symbolization of ultimate source. More generally, concepts of park cemeteries and church gardens create a pattern of tree cover in the United States that conventional classifications alone do not explain.

Temple Forests

Temple forests are managed to support the institutional functions of the temple and its rituals. Temple forests may be protected for naturalness, if that is what the temple needs. They may be managed for narrowly economic objectives if the temple needs money or materials. They may also be managed for seclusion or for supplying the requirements of self-sufficient monasteries.¹⁸

In Karnataka, a number of forests are managed to fund trusts that then support religious and educational institutions.¹⁹ These institutions have possessed vast tracts of land and have been in existence at least for the last 100 years. The Land Reform Act of 1974 allows these trusts to

17. The "Tala Cauvery" sacred groves in the Coorg district of Karnataka protect the springs of the river Cauvery. The sacred groves around "Gangotri" in the Himalayas protect the springs of the river Ganges.

18. N. K. Menzies, *Trees, Fields, and People: The Forests of China from The Seventeenth to The Nineteenth Century* 58 (1988).

19. The Dharmasthala Manjunatha Swamy Trust in Dakshina Kannada District, Shivayoga Mandira in Bijapur district, Sirigere Taralabalu Educational Trust, Chitradurga District, Siddaganga Educational Trust, Tumkur District, and the Singataloor Veerabhadra Trust in Karnataka State are examples.

possess up to 102 acres of land for these purposes.²⁰ In Nepal, two distinct types of temple forests are observable.²¹ The *guthi* forest is managed to provide resources for religious rituals. The *choko* forest is managed to maintain a general temple landscape that is consistent with the temple's spiritual role. Both types increasingly generate support for temples by providing recreational, aesthetic, and educational values to those who visit them for religious festivals and rituals. Although they typically have rules of access and use, these no longer need to be directed toward the taking of forest products. Menzies recorded the full range of management types—from pure preservation to pure exploitation—that characterized the monastic forests of China in times past.²²

Forests have also been planted around temples to enhance their spiritual integrity and force. These forests use certain qualities of religious trees and sacred groves on behalf of the concept of the temple. They contain particular species in specified orientations to one another and to the temple they serve.²³ These narrate the procedures of worship of deities, the spiritual and material benefits from such worship, and stories depicting why and when the worship began. Such worships are observable in Karnataka to this day. The star, zodiac and planet forests (figures 1, 2 and 3) are the more common. There are interesting analogies between the star forest of India, which has 27 tree species planted at specified angles to a north-south line, and the tree planting arrangement indicated in the Phromachat Buddhist text of Thailand.²⁴

Although churches in the United States own forest properties, and monasteries manage land to sustain themselves, the pattern is much less influential than it is and has been in Asia. On the other hand, millions of acres of America's forests are managed as educational endowments, by states like Washington and by public and private universities throughout the country. These endowments are buried in standard forest classi-

20. The State Department of Religious and Charitable Trusts supervises the resources in the recognized temples and charitable institutions. Each of the recognized institutions has been provided up to 102 acres for sustenance of the temple. Recent investigations into the management of such lands reveal that they are grossly mismanaged for selfish ends rather than for societal goals. Communication with Justice T.H.M. Shivakumariah, Commissioner for Religious and Charitable Trusts, Bombay-Karnatak area, March 17, 1990.

21. A.W. Ingles, *The Management of Religious Forests In Nepal*, Research Report, Department of Forestry, Australian National University, Canberra, June 1990.

22. Menzies, *supra* note 18.

23. Seven types of temple forests have been documented in ancient Sanskrit texts dealing with "vrata" (Sanskrit ritual hand books). See Karnataka Forest Department, *Sacred Plants—A Book on Varatas, Gardens and the Connected Plants Described in Our Vedas and Puranas* 1-66, 1988 Karnataka Forest Department, Bangalore; Das, *A Study of The Vrata-Rites*, in *Folk Religion of Bengal Series*, 2953 (1953); Chandrakanth, Gilless, Gowramma & Nagaraja, *Temple forests in India's forest development*, 11 *Agroforestry Systems* 199-211 (1990).

24. See Sukwong, *supra* note 12 at 66.

fications that may hide the distinctive motivations behind their existence and the distinctive policy issues they raise.

Spiritual Landscapes

Societies distribute forest vegetation spatially, or distribute human activities with respect to the forest, in ways that are believed to stabilize relations between people and nature. Some landscapes "feel right" and others do not. When they don't feel right, customary basis for changing them usually can be found, even if in jeopardy of formal law.

The spiritual landscapes of China are good examples. Most villages in southern China place and protect forests to perform functions within the customary geomantic explanations of behavior.²⁵ These concepts become forms of social code that govern the spatial distribution of activity and of different environmental conditions. Examples include the *Long Shan* (Dragon Mountain), *Fengjing Lin* (Scenic forest), *Yinyang Lin* (Yin Yang forest), and *Feng-Shui* (literally, "wind-water").²⁶

The *Feng-Shui* is a Dai concept of human harmony with the cosmos (wind and light) that is achieved through proper alterations of the natural environment (water and land).²⁷ The basis is that cosmic forecasts which influence human beings for good or evil exist in every location. Homes, gardens, fields, and forests of different kinds are located with respect to the directions of wind and light, and relative to one another, to satisfy the rules of feng-shui that assure harmony. Although studies of geomancy elsewhere are much weaker, we and our colleagues have observed analogous patterning of settlement in the midlands of Nepal²⁸ and northern Vietnam.²⁹

The concept of "watershed" is such a notion of proper landscape in the western United States.³⁰ Although encoded in scientific explanation, compliance with its guides to activity and location, and discomfort with breaches—viz the sense of "feel wrong" with slopeside suburbs and

25. Geomancy is divination interpreted through the positioning and placement of objects. For example, in India people prefer to place the door of a dwelling to face east and, with few exceptions, the sanctum sanctorum of a temple faces east.

26. Personal observation of Nicholas Menzies and Pei Shengji, during their field visits in November 1989, indicated in personal communication dated July 25, 1990.

27. Pei Shengji, *Some Effects of The Dai People's Cultural Beliefs and Practices on The Plant Environment of Xishuangbanna, Yunnan Province, Southwest China*, in *Cultural Values and Human Ecology in Southeast Asia* 27, 341-372 (K. Hutterer, A. Rambo & G. Lovelace eds. 1985).

28. M. Ghimire, *Distribution of Authority for Conservation of Forest Resources: An Analysis of The Community Forestry Policy of Nepal*, Department of Forestry and Resource Management, University of California at Berkeley (1989).

29. J. Romm, *Applying Ecosystem Analysis to Rural Development: Three Districts of Vinh Phu Province, Vietnam*, Department of Forestry and Resource Management, University of California, Berkeley (1989).

30. A. Schiff, *Fire and Water: Scientific Heresy in The Forest Service* 116-163 (1962).

hillside clearances—appear to derive as much from symbolic explanation as is the case with *feng-shui*.

RELIGIOUS CLASSIFICATIONS AND SECULAR FOREST POLICIES IN INDIA

Classifications embody values. Conflicting interests often are expressed in the languages of different classification systems; resolutions are attainable through identification of shared concepts and the common means to express them. Because religious classifications generally have not gained legitimate standing in the secular arenas of forest policy, however, the force of values they reflect is as likely to become destructive as to serve common interests. In the United States, resolutions founder on religious differences—for example, “ancient forests” vs “private rights”—with which public procedures cannot cope. The consequences in India are even more stirring: simultaneous decimation of the nation’s forests and preservation of local forests with religious value, commonly in the same place by the same people.

By what means might religious motivations in India be turned more strongly toward public interests in forests within the limits of the secular state? The following are merely preliminary examples of means that deserve more systematic exploration.

Symbols Common to the Religious and Secular Realms

Some symbols have common religious and secular meanings and significance; they can be powerful motivators when joined. For example, although religious attributes of India’s forests are strongly feminine—temple forests are named after goddesses, “earth” in Hinduism is a feminine concept, tree worship is a predominantly feminine practice, tree culture and forest work are done primarily by women—“Mother India” is an important national symbol that has yet to be called to the service of forest policy. This may reflect the masculine characteristics attributable to the modern secular state and the forestry profession of India and manifest in almost entirely male national and state forest institutions. It contrasts with the effective use of feminine earth symbols for mobilization of national environmental movements throughout Southeast Asia.³¹ It suggests the practicality of identifying symbols that unify the expression of secular and sacred values, in this case to expand popular husbandry

31. The movement to prevent conversion of vast areas of forests in the Silent Valley of Kerala State, primarily involving women and educated youth, has been the most successful environmental protest in India thus far. Sugatha Kumari, Silent Valley Movement of Kerala, a talk given to the Social Forestry Group, Department of Forestry and Resource Management, University of California, Berkeley, March 1989. Women have also led the Chipko movement of northern Uttar Pradesh and present protests against the Narmada Valley project in Maharashtra and Gujarat.

of India's scarce forests. The unity of sacred and secular existed in pre-colonial and pre-national times in the then-localized authorities for forest control.

Complementary Secular and Religious Classes

Watershed protection—land use regimes that improve the overall contributions of catchment units to social well-being—is a central objective of India's national and state forest policies.³² In contrast, the quality of stream flow is a fundamental value in the religions of India, and many religious forests are maintained locally to secure them. Despite the potential complementarity of interests in the land of a watershed and the stream that flows through it, we are unaware of attempts in India thus far to link the secular state interest in land management with the local religious motive to protect water flows. Merger of the two orientations would seem likely to produce a rather different map and stronger mobilization of human efforts to enhance forests than does one or the other alone. The separate emphasis on broad land use and on streamflow might be expected to merge, for example, in a common focus on the protection of natural water sources, drainage systems, and aesthetic/religious sites³³ for stream use.

Deference to Religious Values in Local Forest Regimes

India's social forestry programs are focused partly on the development of cooperative plantations involving state forest agencies and village or *panchayat* organizations. The success of these endeavors depends entirely upon villagers' willingness and ability to maintain the plantations and to regulate access to and use of them. There is a strong tendency in these programs for professional specification of the location, species content, and cultivation pattern of a "cooperative" plantation. As we have seen, these are precisely the choices in which villagers are most likely to express religious values and to draw upon the motivation these values provide.

Religious orderings affect human interests and actions. In the design of social forestry projects, religious classifications suggest that, above all else, villagers should possess the opportunity to select the location, choose the species, and arrange the plantings as they wish. They should be free

32. See Report of the National Commission on Agriculture, *supra* note 1, at 24.

33. Water flow is a very religious matter in India. We observe there is religious concern for water flows with secular interest in watershed land use. An obvious link is the use of groves for protection of streambanks as well as creation of religious and sacred sites. There are examples of religious classification serving this purpose, albeit they perhaps were not established with this intent. The examples are: the groves on the banks of river (1) Kabini/Kapila at Nanjanagudu (Mysore District), (2) confluence of Cauveri and Kabini/Kapila at Tirumakudalu Narasipura (Mysore District), Cauvery at Srirangam (Tanjavore District) and Kumara Dhara at Kukke Subrahmanya (Dakshina Kannada District).

to adopt whatever rituals they may want to associate with the formal secular arrangements of the project. By such deference, government does not commit itself to religious behavior, but it does allow the scope that such self-regulating conserving behavior requires. Thus, the State's needs for control can be satisfied in more constructive ways.

SUMMARIZING THE ARGUMENT

Secular states tend to dismiss the religious content of forest institutions and therefore to ignore a possibly significant factor in the exercise of forest policy. The religious codes for forests in India are deeply entrenched in the nation's history, landscape, and culture. They are explicitly structured. They are supported by an oral record of prescription, evidence, and judgment that extends several thousands of years. They appear to command no less compliance in daily local life than do the state's forest laws. There is reason to recognize their capacity to affect public interests and to protect or create their opportunities to do so. In this sense, sound forest policy derives benefit from religious diversity.

Such matters are most visible in India, where the codes are so clear and their consequences so alive, but they are more broadly apparent elsewhere. In Thailand, contemporary interpretations of Buddhist theology are creating a new framework of guidelines for human and natural relations in forest areas; monks lead local efforts to reverse forest degradation for spiritual survival. In the United States, similar sentiments are expressed outside of organized religion but in ways that also challenge, and are dismissed by, secular and perhaps masculine structures. American debates of forest policy have assumed some qualities of religious war. Perhaps they cannot be resolved until they are explained and treated in religious as well as in legal, economic, and ecological terms.

Secular acknowledgement of religious motives in India is rather fundamental to the future of the nation's forests and to the hundreds of millions of people who use forest resources for their livelihood.

The population, expanse, and poverty of rural India are too great and for State forest policy to succeed locally at any reasonable cost if the policy is inconsistent with institutions governing the people who need, use, and therefore control what happens to the land in these circumstances. The nation's massive financial and political commitment to social forestry reflects profound appreciation for this reality, but the success of the commitment depends upon increasing the recognition, the scope, and the support for choices that religious values encourage people to make.