

Women , Trees and Tenure:
Implications for Agroforestry Research and Development

International Council for Research in Agroforestry
Dianne E. Rocheleau
P.O. Box 30677
Nairobi, Kenya

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1. INTRODUCTION

Women's current and potential contributions to rural development have been widely discussed in recent years. The reciprocal contributions of development to rural women have also received some (though noticeably less) attention (Tinker, 1981, 1976a; Hoskins, 1979, 1983; Mazumdar, 1984; Muchena, 1984). The longstanding recognition of rural women's responsibility for basic family welfare (food, water, health and hygiene) has led to a multiplicity of welfare programs focussed on women, whether as heads-of-household, wives, mothers or as individuals. Rural women's roles in Third World food production and fuel consumption have also become highly "visible" in recent years (Muntamba, 1982; Deere and De Leon, 1981; Ki-Zerbo, 1981; Brokensha and Castro, 1984; Brokensha et al 1983; Hoskins, 1983; Williams, 1983). The importance of women's labour is now routinely mentioned in agricultural, agroforestry and social forestry circles, but often without a realistic assessment of women's needs, motivations and limitations as clients in their own right (Agarwal and Anand, 1982; Williams, 1982). The terms of availability of their labour and its combination with the other factors of production also requires careful study and imaginative responses (Tinker, 1976b; Nagvi and Gupta, 1980).

Some sectors of the rural development community have recognized the need to improve women's access to, and control of productive resources (land, water, capital, information) to enable them to increase and/or stabilize production in their own behalf (Berry et al 1983; FAO, 1983a,b). Where women already have access to such resources, development efforts need to help safeguard their customary rights rather than eroding them through external intervention (Colfer, 1984). In either case actual progress has been slow and irregular, primarily due to 1. a lack of political will and/ or 2. lack of information and understanding about women's past, present and potential access to, and control over the means and fruits of production in rural areas. The following directly addresses the information gap, for both technical and policy sectors, in the hope of motivating techno-political will by talking in terms of the real and the possible re: women, tenure, and agroforestry.

Rural women and agroforestry programs have much to gain from a well-informed and well-defined association. Tenure is a key point of information, definition and/or action in cases where improved production is the main shared objective. In cases where equity is a major objective, both tenure and technology changes may be used as mutually reinforcing means to that end (Riddell 1985). However, tenure and technological innovation will not suffice. Whereas tenure refers to ownership of, control over, or access to space and fixed objects (plants) in space, production also requires time, energy, capital, information, and control over the use thereof.

Numerous experiences in rural development (Papanek, 1981; Siedman, 1981; Peacock, 1984; Lewis, 1984) social forestry (Skutsch, 1983), land tenure reform, and special women's projects (Unasyuva, 1984b) have demonstrated that the road to failure is paved with good intentions, bad information, and inadequate treatment of women's access to one or more of the factors of production. However, a few project histories (Hoskins, 1979; Scott, 1980; Wiff, 1984; Fortmann and Rocheleau, 1984) and a wealth of experience in traditional and evolving agroforestry systems suggests that a symbiosis is possible. A firm basis for cooperation rests on careful attention to a few key points:

1. the factors that differentiate women re: land tenure, tree tenure, and agroforestry technology;
2. the social units of organization and production which integrate their rights, responsibilities and participation;
3. the landscape and ecosystem units which integrate their physical resource base with the social reality;
4. the desirability and practicality of working within, working around, modifying or radically changing any or all of the above.

2. POINTS OF DIFFERENTIATION AND INTEGRATION

Whether we consider women apart, or women as a distinct client sub-group within the larger population, the terms of their participation will usually be distinct from those for men, owing to de jure or de facto differences in rights and responsibilities. This is especially true with regard to the quantity, quality and terms of access to land (Black and Cottrell, 1981). Women's access to other productive resources (water, draught power, agrochemicals, labour, information) also usually differs from men in degree and in kind. Moreover, control over the components (animals, crops, trees, shrubs, pasture) and the products (food, fodder, fuel), timber, cash, fibre, medicine) of AF systems is often subject to rules distinct from those governing men's actions. All of these differences may be expressed in the division of men's and women's separate places and activities, in nested complementary roles in the same places and activities, or in sharing of interchangeable roles (Boormans, 1984; Kelly, 1981; Vayda et al. 1980).

While all of the differences cited above may limit the scope and nature of agroforestry technology and project design, there are also distinct advantages and opportunities for AF within women's separate domains of space, time, activities, interests and skills. They may also have special knowledge, rights and obligations vis-a-vis special categories of artifacts (tools, infrastructure) and natural objects and phenomena (water, fire, animals, plants, animal and plant products).

Likewise agroforestry may imply new demands on women clients: negotiating new arrangements for use and management of shared lands (household or community), new labour or capital inputs, learning new skills, and closer management of soil, water, plants, and animals in existing woodland, cropland, pasture or boundary lands. On the other hand, AF may serve to validate women's land and tree use rights or claims to ownership, to increase production, to decrease gathering time and to reconcile conflicting objectives for shared household or community plots (e.g. from cash crops vs. fuelwood to cash crops plus fuelwood). Both the opportunities and constraints of differential roles warrant a closer look at each of those domains where differences count, and at the potentials for their integration into a larger unified system of production and distribution.

2.1 Legal Status

Women's legal status usually differs from men's in terms of clarity and strength of defined rights and responsibilities, as well as in the nature, scope and complexity of rights and obligations. Even in countries where traditional law (eg. Moslem law) (Mayer, 1984). or modern legal reforms have provided for equality in most spheres, strong discrimination often exists with respect to use and ownership of agricultural land (Ahoosja-Patel, 1982; Mazumdar, 1982; Fortmann, 1981). This has obvious implications for women's adoption of agroforestry technologies that depend on secure access to land on a permanent or long term basis.

2.1.1 Statutory, Civil and Customary Law

In some cases there are de jure differences in men's and women's land and tree rights clearly stated in statutory or civil law (FAO, 1979). More often these codes defer to (coded) customary law in matters of "marriage" and inheritance, which include most of the cases relating to women's land rights. While civil and statutory law usually applies to all people in all regions of a given state, customary law may vary by region, religious affiliation, or ethnic origin, adding to the complexity of interpretation and administration. Within both civil and statutory law, as well as customary law, women's rights are often tied to marital status, (FAO, 1979) though the most independent group under one customary code may be the most powerless under another body of customary law (married vs. widowed, divorced, single). The result is a complex array of types of rights, within parallel legal codes, nested within units ranging from the individual to the kin group. (Table 1).

In addition to the multiplicity of systems, the process of codification and interpretation (of each body of customary law) is itself riddled with mistaken and/or arbitrary judgments in reconciling culturally incompatible categories of rights,

obligations, property, and units of social organization. Whereas many outsiders are quick to point out the discriminatory nature of traditional systems, it is often in the translation to "modern" legal terms that women lose out (Onger-Hosgor, 1983; Etienne and Leacock, 1980; Muntemba, 1982). In Tanzania and Malawi the customary law was standardized at the national level after independence, resulting in a uniform patrilineal system. This deprived the women of matrilineal groups of former land use and residential rights in their own villages, by allocating land to households, through male heads (Fortmann, 1981; Brain, 1976).

2.1.2 Land Tenure Reform

In other cases it is the field interpretation of the customary law during land reform and settlement programs that undermines women's access to land. One well documented example illustrates this process:

Luo women in Kenya lost their rights and security of access to lineage land (in the commons and in the household plots) when land adjudication officers equated the inherited right to allocate land with land ownership, ignoring all other rights. Male heads of household and male relatives of women heads of household were allotted exclusive rights of ownership, with few exceptions. By contrast, the actual categories of traditional rights included: ownership, (vested in the lineage), the right to allocate land (vested in married men), membership in the parilineage (passed on to sons through the mother), and rights of usufruct and residence, including access to common lineage lands as well as to own plots within husband's allocation (acquired by women through marriage) (Pala Okeyo, 1977, 1980; Okoth-Ogendo, in Pala Okeyo, 1980).

The Luo women did not lose their access to all the lands they previously used, but they have lost some lands, all security of access, and they have lost the status they formerly held as channels of lineage land to sons. With each succeeding generation women may be less able to rely on tradition to protect their intra-household autonomy as farmers, and their access to (de facto) communal lands as gatherers (Pala Okeyo, 1980).

Not only does this case exemplify the loss of prior customary rights, it also points out the elements of ambiguity, dependence, and insecurity that replaced a fairly definitive, complementary, and stable relationship between men and women, re: land. While the men's rights and inter-household distinctions were well defined relative to the legal system, women's rights and intra-household distinctions were left in the realm of customary law, as modified and circumscribed by the new tenure system. This opened a wide gap between de jure and de facto rights and responsibilities, and made women's farming and gathering activities dependent on permission to use individual men's property.

This example is by no means isolated, nor does it represent any one culture, region, or form of political economy. The erosion of women's (often substantial) customary rights under modern legal reforms (colonial and post-independence, capitalist and socialist) is a widespread phenomenon (Etienne and Leacock, 1980; ; Onger-Hosgor, 1983; FAO, 1979; Cultural Survival Quarterly, 1984). It has been reported as an accomplished fact for many ethnic groups, throughout Africa (Fortmann, 1981; Barnes, 1984; Alonja, 1981; Muntemba, 1982;) Asia (Nowak, 1984; Endicott, 1984; Cultural Survival Quarterly, 1984 b; Palmer, 1978; Mazumdar, 1982) and Latin America (Arizpe, 1982; Deere, 1981; Deere and De Leal, 1981; Mickelwait et al. 1976;). Sometimes this has been done on the pretext of formalizing customary tenure systems, as above, and in other cases it has simply been imposed by colonial powers or by national governments on ethnic minorities. This was particularly pronounced during the colonial period with respect to matrilineal groups, extending to de-registration of women's ownership or use rights in Zimbabwe, Zambia (Muntemba, 1982) and Malaysia (Boserup, 1970).

The tendency of most land tenure reforms in agricultural and mixed farming areas has been to expand and legalize men's access to land , while decreasing and "informalizing" women's rights of ownership and use rights. Rights of usufruct in general, and overlapping multiple use rights in particular, have been largely ignored in favor of individual or state ownership. In both cases the titles or the allocations of land are made on a household basis (to male heads), or to associations whose members are exclusively or predominantly male heads of households . Even where a separate commons is recognized as part of the reform process, as in India and Pakistan, unregulated overuse and privatization by influential individuals (Cernea, 1985) reflect the inadequacy of legal and administrative infrastructure vis-a-vis maintaining women's access to land and trees.

These trends do not bode well for women's land and tree use rights , but the process is just beginning in some areas, and has not reached others. There are also some examples of women (Yoruba and Ghanian) gaining more secure rights to land after privatization (Alonja, 1981; Stevens, 1981) although the questions then arise "how many?" and "which women?" (Mazumdar, 1984). Some governments have implemented reforms-of-reforms as in Mexico, where government changed the rules of membership in Ejidos to allow women to retain their own plots after marriage (FAO, 1979). Some recent land reform programs have also incorporated special provisions for sharing of benefits by women (Deere, 1981), while others have simply perpetuated prior de facto exclusion of women from land ownership and management (Onger-Hosgor, 1983; Garrett, 1981). In other cases landless women have gained access to land through revolutionary or liberal land reforms, though the terms of access are limited by marital status , are administered by male relatives, or are vested in associations of male heads of household, as in Ethiopia (Onger-Hosgor, 1983; Whelan, 1984).

2.1.3 Gap Between Women's De Jure and De Facto Rights

In addition to formal legal differences between men's and women's land and tree rights, there is often a widening gap between women's de jure and de facto rights and responsibilities. Land reform programs have generally formalized and strengthened men's individual ownership, at the expense of women's control of lands vested in the lineage or at the expense of their well defined rights of usufruct. The latter often persist as informal (or de facto rights, but with no meaning or value in the formal sector where contracts are signed, land is bought and sold, credit is disbursed, and technical assistance is given. As beneficiaries of land reform men's legal rights often include and exceed former customary rights and as such they have less need, or interest, as a group, in recourse to customary law. Women's rights, by contrast, are either nested within rights legally ascribed to male relatives and community groups, or they are part of a growing body of uncoded, evolving customary law, outside the formal legal system.

The disparity between de jure and de facto rights in many areas is a land reform crisis in the making, particularly for women, but also for landless people in general. It may well be that right of residence, and some access to land, however insecure legally, is what keeps many women and landless people in the countryside. For many women the inability to dispose of property is of little consequence, as long as they have farmland to work. However, as urban-dwelling sons and other relatives inherit and take possession of the land, they may change the terms of access (Haugerud, 1983) as well as the land use and land cover.

While rights of residence and gathering may persist, the land use changes may drastically reduce availability and quality of tree, shrub and crop by-products. The legal heirs may sell multipurpose trees for timber or charcoal, unless women residents have legal tree ownership or well-defined rights of usufruct. For example, in some groups on the Kenyan coast, widows retain exclusive rights to harvest fruits and nuts from trees, while the land itself may be inherited and already managed by another relative. Women's tree rights are also recognized among the Ibo of Nigeria (Fortmann, 1984; Obi, 1963) and among Tanzanian coastal people observing Islamic law (Fortmann, 1984; Tanner, 1960).

Where more egalitarian or separate-but-equal rules now apply, (as in some groups of pastoralists, forest dwellers and hill people) women may soon lose those rights under poorly conceived land tenure reform, or land settlement projects. In many areas development projects have set precedents for subsequent survey and land allocation/registration procedures by dealing only with men heads of household and community leaders (Nowak, 1984; Lampell Ennicott, 1984). In other cases, extension

services and development projects have (wrongly) blamed matrilineal land tenure systems for low adoption rates of agricultural innovations (Kishindo, 1984) calling for introduction of patrilineal and patrilineal systems.

Strengthening or improving women's tree ownership and rights of usufruct might well provide a means to reconcile women's needs for secure access to trees and tree products with men's legal ownership of the land. Where such rights are not well-defined there may be a gradual shift to men's vs. women's land use types, and men's vs. women's trees in the landscape, as legal distribution of land and trees is increasingly reflected in actual use and management.

The causes for these trends and for the widespread imbalance between rural women's needs, responsibilities and rights have been, and continue to be, hotly debated (Etienne and Leacock, 1980; Arizpe, 1982; Deere and De Leal, 1981; Alonja, 1981; ICES, 1985; D.Jain, 1984; Mazumdar, 1984). Varying degrees of blame have been placed on traditional, colonial, neo-colonial, nationalist, capitalist and /or socialist political economies. The fact is that rural women's responsibilities are often way out of balance with their legal status and formal rights to land, trees, and the products of both. Discrepancies between women's rights, responsibilities, and authority, between de jure and de facto rights, and between coded and uncoded customary law, all must be faced by agroforestry and social forestry planners and project personnel, as well as by land settlement, land tenure reform, and women's program specialists. There is ample scope for agroforestry and social forestry projects to set positive precedents re: recognition and creative translation of women's land and tree rights into coded contractual form at project or local administrative level (Hoskins, 1979, 1983).

2.2. Division of Space, Time and Responsibility

In most rural areas of the Third World, men and women have distinct domains of activity, responsibility, control and knowledge. The extent of this division varies from almost nil, as among the Dayak forest dwellers of East Kalimantan (Colfer, 1981), to very strictly defined separation of men's and women's domains, as maintained in some parts of India and the Middle East, particularly where purdah and other forms of seclusion are observed (Ahooja-Patel, 1982). The degree, type and terms of division vary substantially between regions, ethnic groups, and classes, based on differences in customary law and practice.

During the past few decades most groups have also experienced dramatic changes in the division of space, time, expertise, and authority, due to cash cropping and other commercial enterprises. The effects vary in quality and degree, as illustrated in the following examples:

virtual domestic unemployment of Rashiidy Bedouin women whose

former home construction and fuel gathering tasks are obsolete in the cash economy of new settlements (Young, 1984); displacement of Yoruba women's food crops by men's cash crops on prime cropland, followed by women's increasing responsibility for food crops and entry of some women into cash cropping enterprises as land and/or tree owners (Alonja, 1982); women's assumption of men's labour and management roles where men have turned to off-farm labor in cities or in cash crop estates, as in Kenya (Pala Okeyo, 1980) and Peru (Arizpe, 1982; Deere and De Leal, 1982), or in distant mines as in Lesotho (Gordon, 1981), Botswana (Fortmann, 1984) Zambia (Muntemba, 1982) and Bolivia (Harman, 1984). These cases of men's migration do not imply a homogenization of roles, but rather a new division of space and labor on a different scale or on different terms.

Whether clients are following long-established customary practice or recently adopted forms of role definition, men and women in any given household or community are likely to have distinct interests, needs and capabilities vis-a-vis agroforestry or social forestry. Division of labour, expertise and authority, as well as spatial domains will influence the participation of women in given types of new technology and land use systems. For settlement or AF projects committed to women as clients, these role differences can also determine: the range of landscape niches available; the potential spatial arrangements of trees, crops, pasture and animals; the types of trees and tree products to be included; the type and amount of labour and management inputs; and the types of contract or special tenure arrangements needed.

2.2.1 Spatial Niches in the Rural Landscape

Visible landscape patterns and features are an excellent point of departure for determining the spatial distribution of men's and women's domains and potential niches for shared, separate or interlocking AF technologies. Given the cultural and environmental diversity of land use systems and the dynamic nature of community development cycles and land use change, little can be assumed as to which niches will be used, managed, shared or owned by women. While live fences are the major opportunity for women's AF technologies in some parts of western Kenya, the external boundary fences are the exclusive domain of men heads of household among neighboring groups. In some areas women still manage separate food and cash crop plots of their own, and in still others men and women tend and harvest separate plants within the same multi-storied AF systems.

While there are no niches universally used and managed by women, there are some spaces which are more often their domain. Strangely enough, the two niches of greatest importance to women are often the closest to home and the farthest away, respectively. Home gardens are located near the center of household activity, and common gathering areas (forests, bushland and grassland) are usually peripheral to the home and croplands or to

an entire settlement, depending on population density and land use intensity (Raintree and Warner, 1985). While the first (intensive land use) is located so as to minimize the opportunity cost of time away from the home, the location of the second (extensive use) minimizes opportunity cost of land and actual labor and management inputs on-site. A closer look at both of these land use types, their relative position in the landscape, and their importance for women, provides insights into general considerations re: spatial and functional niches for women's AF technologies and related needs for tenure and technology innovations.

2.2.1.1 . Home Gardens.

The cultivation and management of home gardens by women is a widespread phenomenon among settled groups the world over (Buch, 1980). This is particularly pronounced in Latin America in areas where women do not traditionally till the land, since it provides an agricultural production niche that is seen as an extension of the home. The home garden is often a way around taboos against tilling the main cropland, and it is considered an extension of the home as the women's domain. Moreover, by definition such plots are location-specific relative to the home, and as such are accessible to women whose mobility may be limited by custom, or by the complex logistics of mixing travel with child care, food processing and food preparation. Home gardens provide an opportunity to intensify labor inputs to increase production, without adding time away from home, and within a flexible schedule shaped around other household responsibilities (Chaney and Lewis 1980).

While home gardens may occur within systems ranging from shifting cultivation to intensive multiple-cropping in permanent plots, they seem to be the domain of women where such a plot is one among many other plots available to the household, or in cases where men are almost exclusively engaged in off-farm labour. In intensively cultivated areas of acute land scarcity, the whole household may work the home garden under the management of the head of household as in Java (Sommers, 1978; Hunink and Stoffers, 1984). The rationale for the home garden shifts more toward labor intensification on scarce land, rather than efficient multiple use of women's scarce time. Even so, these plots may have greater relative importance for women than for men, based on the distribution of labor input and on the fact that men may have alternative sources of cash income (Stoler, 1978). This is also reflected in the tendency for women in Java to inherit home gardens, while their brothers inherit the rice croplands (Palmer, 1978; FAO, 1979).

The home garden is uniquely suited for agroforestry projects with women. The limited plot size encourages multi-storied systems, while the woman's de facto control and the permanence (or relative permanence) of the site encourage investment in tree crops and site improvement (terraces, manuring, fencing). The small plot size also implies a high ratio

of peripheral to enclosed area (Rocheleau and Hoek, 1984) and hence a relatively high proportion of the site production potential could be relegated to multi-purpose living fence. The site can also be an ideal place for small livestock such as chickens, or caged rabbits, and may provide residues useful for feeding hogs or goats confined nearby, or supplementary fodder for a larger milk animal. Likewise such an intensive small plot is often a cost-effective site for application of manure from livestock confined nearby.

Although the home garden is primarily a phenomenon of settled agriculturalists, there is an analogous niche among some semi-nomadic pastoralists. Milk animals, young animals or sick animals may be kept by women in special small corrals close to the home, as is the case among the Maasai in southern Kenya (Grandin, pers comm.; Nestle pers. comm.; Nambombe, 1984). As in the case of the home garden the location minimizes time away from home and allows for a more-intensive-than-usual investment of time, attention and protection. Such a land use unit constitutes a reasonable basis for introduction of a fodder-based agroforestry technology around and adjacent to it. By providing high quality fodder on site, such a technology would reinforce the ideas of convenience to the home, intensive care and milk production for sale or distribution by women.

Some features of home gardens may also be applicable to community or social forestry approaches (Chakravorty, 1980), particularly the features of location near the home and of species and product diversity. If fuelwood or tree products are the main objectives and women have landscape niches available close to home, they may be better able to plant and utilize such trees in a home-garden or in a block planting of equivalent size close to home. Time, distance and distribution of costs and benefits may discourage some women from participating in large community plots. This does not automatically imply a farm-household organizational approach, but simply an on-farm planting niche similar to the home garden.

The other aspect of home gardens that might be partly integrated into social and community forestry is structural and functional diversity. Women's groups in some projects have specifically requested combining vegetable gardens with tree nurseries (Rocheleau, 1985), particularly where sufficient water was not available at the household level, and was available at a community site.

This idea could be extrapolated to interplanting of trees and vegetables. Multipurpose trees combined with horticultural and vegetable crops in a large community plot may be more useful to women than a single-species stand of timber or fuelwood trees. Moreover, timber or fuelwood species compatible with such a multi-stored, multipurpose system could help to alleviate conflicts between men's and women's trees (as in Kakamega District, Kenya; Chuvangi, 1984) or men's vs. women's land use (as in Kisii District, Kenya; Fortmann and Rocheleau, 1985;

Barnes, 1984) and between commercial (trees) and subsistence (agricultural) land use, as has been reported for some Gujarat (India) social forestry projects (Foley and Barnard, 1984).

Establishment of valuable horticultural crops in the plot can also help to identify the site as one of value, thus strengthening "social fences" against grazing and browsing. While trees are respected as property in some places, crops are more valued and respected in others. Although the problem might shift from one of damage due to neglect, to losses due to theft, the participants might well be more motivated and capable of solving the latter.

2.2.1.2 . The Commons.

While the commons is rarely the exclusive domain of women, it is often a major source of subsistence and commercial products for women. In some stages of land use intensification and landscape development it may become the major source of women's livelihood or of their contributions to the household and community (Roy, 1980; Dahlberg, 1981). Where land is plentiful, as among some forest dwellers, shifting cultivators, and pastoralists, the forest or rangeland is a shared domain of men and women with division more likely to occur on the basis of labor, expertise and security. Women are usually, but not exclusively, responsible for gathering food and fuelwood, as well as fibre, some medicinal plants and other "minor" forest and range products. They may also manage grazing or browsing animals, but are generally more responsible for the other products and activities listed above.

The communal grazing and gathering areas may be differentiated from the household lands by use alone, if at all. However, this domain deserves special attention re: establishment of tree ownership and land use rights early in the process of land use change. While men may replace their foraging activities with wage labor or intensified agricultural and livestock production, the group may continue to rely heavily on forest and range products gathered by women. Safeguarding or expanding women's tree ownership and rights of usufruct in surrounding forests and rangeland may help to prevent environmental degradation and to maintain important sources of food and other products, as well as maintaining women's status and tribal rights to use and protect forest and range lands of adequate extent and quality.

As village development cycles and land use conversion and intensification proceed, the commons may become a residual domain, left to women by default. In the process of land use intensification from bush fallow to multiple cropping, women's access to, and dependence on gathering grounds changes substantially, and the commons itself may shift from one spatial niche to another over time. This transition is also marked by constant adjustments between use of the commons and use of interstitial niches on-farm.

In bush fallow systems women gather from forests at the village periphery, often in combination with work trips to outlying agricultural fields of the lineage or household (Ruthenberg, 1976). Many of the same products or their equivalent are also gathered from scattered fallows in various stages of development. As the length of fallow is shortened in response to land shortage/population pressure (Boserup, 1970; Lagemann, 1977), the diversity, quality and quantity of these products changes substantially. It is at this point that women may intensify their gathering activities in the peripheral forest or in croplands and short fallows, depending on the distance to the forest, the type of products sought, and the terms of access to forest and farm lands.

Women may eventually find their access to household or lineage fallow lands preempted by permanent cropping, and even their access to seasonal fallows may be curtailed by multiple cropping and/or irrigation. Changes in crop and reduction of crop and weed diversity can remove valuable sources of cropping system by-products. This process has been documented among landless gatherers in some parts of India (Das Gupta, 1984). It has also been reported, in various stages, by women in Kenya (Barnes, 1984; Fortmann and Rocheleau, 1985) (Kisii), the Dominican Republic (Rocheleau, 1984) and Zambia (Bemba) Huxley et al. 1985). Unless gathering remains an activity of the landowners themselves, its products are liable to be relegated to the status of by-products with no niche of their own, unless the plants or the niche are re-defined as gatherers' property. Perhaps this is what accounts for the integration of forest form and function into traditional multi-storied AF systems in areas where gathering was shared by men and women, and the intensification process was guided by the traditional values of both.

Agroforestry technologies can either reinforce or ameliorate this problem (Hoskins, 1983). For example, a new alley-cropping system could displace shrubs or weeds that provide leafy vegetables (Fortmann, 1985a). On the other hand, enrichment planting and more intensive management of selected (exotic or indigenous) woody species in cropland and grazing lands could provide forest or range products for women within a system compatible with men's crops or pasture. This would, however, require a clear statement of women's tree ownership or rights of usufruct.

As the farm land use tends increasingly toward monoculture or more uniform and intensive cropping, women may rely increasingly on distant forest or bushland as sources of gathered products. They can also opt to settle for the basic essentials (fuel and fodder) that can be gleaned from a degraded, overgrazed commons, sacrificing quality, quantity and diversity of products for proximity. Some women modify their schedules to fit the spatial distribution of common lands, with frequent visits to nearby commons and occasional visits to more distant forests for special

products or for goods seasonally scarce in the farmland and commons (such as tree fodder). The latter is widely practiced in the Himalayan foothills of India (Bhatt, 1980; Mishra and Trepahi, 1978; Raintree et. al. 1985) though gathering pressure on the forests is increasing as the commons are degraded or converted to cropland. A similar process of slow drift from government forest to commons (Panchayat) and from commons to private land has been observed in parts of Pakistan (Cernea, 1985).

In areas where a commons does not exist as such, women often rely on "borrowing" stickwood, grazing privileges, and other non-commodity goods and services from private woodland or pasture lands of a neighbor, relative or patron. This practice is widespread in Kenya among neighbors and clan members and in Latin America the patron-client relationship prevalent in rural areas often includes such arrangements.

As in the case of land use changes at farm level, women-as-gatherers and/or herders may find their communal and "borrowed" sources of forest and range products reduced in quality, extent, and accessibility. Just as the gathering grounds on-farm may have been "up-graded" to more intensive uses, the village commons can be annexed by influential members of the community (Cernea, 1985; Foley and Bernard, 1984) for cropland, grazing land or "anti-social forestry". However, the commons and nearby forest are often overutilized to the point of severe degradation or are reduced to residual remnants of successional vegetation in fragile environments. In some cases the frontier of the commons and the forests have been pushed to the limit (Roy, 1980) (as defined by women's walking distance, or by their tolerance for conflict with neighbouring villages or government authorities).

Women's tree and land ownership and rights of usufruct for commonlands may apply to individuals, households or groups. However, the issues of group ownership and distribution of rights and products between group members are likely to be more important than in on-farm approaches. While the "tragedy of the commons" (Hardin, 1968) is an oft-invoked (and perhaps overused) concept, there are several points which favor helping women consolidate and maintain well-defined, conditions and terms of tree ownership or rights of usufruct in village commons, in public forests and rangeland, or in "unclaimed" interstitial niches such as roadsides, gullies and boundaries.

The advantages of commons areas for women's practice of social forestry and agroforestry include :

locational advantages such as proximity to markets, water sources or other central places, as opposed to distant or scattered gathering areas (single-stop shopping);

unique site quality such as bottomlands, riverbanks, ravines, or special soil types or vegetation with site-specific resources not widely available on-farm;

economies of time re: amount and flexibility of time spent at site (if cooperative labour rotation arranged for convenience of members and not vice versa)*;

minimum size for establishment or maintenance of specific ecosystem types may be more suited to large community plots;

economies of scale vis-a-vis fencing, site preparation, protection, labor for maintenance and marketing of products;

availability and ease of access relative to on-farm lands (especially important for landless women or those with no access to separate plots or no freedom of experimentation on household land);

accessibility of training and assistance and advantages of "group learning curve"(Wake,1984) if commons site managed by group;

women may gain separate access to credit, individually or as a group, based on title to shared site (legal feasibility varies).

While home gardens and the commons do not by any means exhaust the potential niches for social forestry or agroforestry with women, they do illustrate the interplay of land use change in the larger system with women's access to land and trees. They also illustrate that women's involvement in decision-making and land use planning (at farm or community level) may be the key factor in choice of niche type, site and technology for women clients of AF and social forestry programs. Tree ownership and/or contractual agreements as to rights of usufruct may help to maintain or establish diverse, managed AF systems, whether integrated within plot, farm, watersheds or other landscape units. This leads to a consideration of the division of labor, expertise, and authority, including specialization by enterprise, activity, plant species, plant parts, management techniques, and products.

2.2.2 Division of Labor, Expertise and Authority

2.2.2.1 Labor, Expertise, and Interests.

The degree and significance of the division of labor between men and women varies as much or more than access to space. In fact it is often a major determinant of spatial and ecological specialization. Some of the major ways in which men's and women's labor is divided include:

*The relative convenience of small plots near the home versus single group sites will also depend heavily on local experience with labour exchange and labour sharing arrangements.

1. complementary specialization in different subsistence activities, such as:
 - hunting vs. farming, herding, gathering
 - clearing vs. planting (in the same plot for the same crops);
 - planting and tending of different plants for home use;
 - production vs. processing of goods for home consumption;
2. division of commercial vs. subsistence activities:
 - cash cropping vs. subsistence cropping gathering, herding
 - commercial vs. subsistence fishing, gathering, hunting, herding
3. division of activities within own cash cropping systems:
 - land clearing vs. planting, weeding, harvesting;
 - production vs. processing or marketing;
 - management vs. labour.
4. division of employment categories:
 - wage labour vs. self-employment vs. unpaid household labour;
 - casual vs. seasonal vs. permanent off-farm labour;
 - skilled vs. unskilled off-farm labour;
 - nearby vs. distant off-farm labour;
 - agricultural vs. non-agricultural labour.

All of these forms of specialization have implications for the advisability and practicality of separate, joint, or interlocking men's and women's agroforestry technologies and programs. Many of the divisions listed above imply cooperation, competition, or coexistence between men and women vis-a-vis land and trees. For example, in Kakamega District, Kenya there are taboos against the planting of trees by women (Chuvangi, 1984), which also coincide with prior concepts of planted timber trees as part of men's domain re: house construction. The division is further reinforced by the commercial value of timber, coupled with men's dominance in cash cropping and commercial enterprises. The prohibition against "tree" planting by women will probably not apply to Sesbania sesban and other small fuelwood and alley cropping species. Similar examples abound re: distinct men's and women's priority use values stated in diagnostic interviews, extending to rigged voting, arguments and negotiation in group interviews over the relative merits of fodder vs. fuelwood trees, or fodder vs. timber (Rocheleau, 1984; R. Vonk, pers. comm.; Hoskins, 1983; Joshi, 1982; Fortmann and Rocheleau, 1985).

Although the subsistence vs. commercial conflict in men's and women's interests (Sharma, 1981) has received the most attention, there are often differences between preferred pathways to commercialization, reflecting the relative importance of men's and women's skills, labour, land resources and opportunities

within alternative enterprises or development strategies. The potential for commercializing minor forest products vs. timber resources in the Himalayan foothills is a case in point (Surin and Bhaduri, 1980). Women are already interested and involved in cash enterprises based on gathering, processing and retailing of many forest products, and might be best served by projects to improve and sustain that activity rather than planting new stands of trees that will not yield products for processing (eg value added) by women. Moreover, enterprises based on "minor" forest products depend largely on renewable products. This is yet another possibility for AF systems that address women-as-gatherers, while intensifying overall production in both cropping and forest based systems.

The scale at which interests are divided will also depend upon the extent to which off-farm labour and migration have influenced the division of labour and management (Kerven, 1981). In many areas men's and women's spatial domains of work may be split on rural/urban lines, or on estates vs. smallholdings. Labor may be split according to wage vs. unpaid labor or self-employment, as opposed to previous divisions based on particular operations or skills within the smallholding. Where their labour is required for well-defined seasonal tasks, as with plowing, men may still retain this role in their households (Fortmann, 1984). Authority may still be vested in the male heads of household, with varying degrees of freedom for women managers to make management decisions about land, trees and land use change (Cantor, 1984, Caplan, 1984; Rocheleau, 1985). The number and proportion of such "statistically invisible" woman-managed households has increased dramatically in many countries, and in Kenya these outnumber woman-headed households by a factor of 2:1 (Hunt, 1984).

Woman-headed households may also constitute a substantial part of the client group (Buvinic and Yousset, 1978), since they account for roughly 24 to 33% of all households in the world (Bryson, 1981). While women in such households may theoretically have more freedom of decision and less division of rights and responsibilities at the household level, all but the wealthiest or largest women's households may be disadvantaged by lack of special men's skills, an absolute shortage of labour and loss of off-farm income, (Fortmann, 1984 Jiggins, n.d.) as is the case among the Bemba of N.E. Zambia. There, most women heads of household shift from the Chitamene rotation of grains, tubers and legumes, to cassava mono-cropping in permanent plots, because they require men's labor for the first land-clearing and wood-cutting stages of the Chitamene cycle (Stolen, 1983). Woman-headed households and sub-households may also be affected by divisions practiced and enforced at the community level, and they may be disadvantaged re: access to men's decision-making and enforcement groups at the community level.

The latter is part of a larger issue, which is women's variable access to management and decision-making processes,

within units of organization of different scale (household, group, village, or national level). Aside from legal status, which has been treated above, and the day to day division of labour, there is the crucial role of administrative and organizational units in interpreting and enforcing women's access to trees and land, and their preferences re: AF technology.

2.2.2.2 Authority and Decision-Making

The exact form and degree of women's decision-making power and authority varies substantially from one culture (or ethnic group) to another as well as between sub-groups, between different units of organization, between different domains of authority and over time within groups (due to social change). In spite of this diversity, there are some common issues to be considered that are relevant to most cases. Moreover, there are many common constraints and opportunities for agroforestry, social forestry and land tenure programs based on the sexual division of decision-making and authority per se and the sexual differentiation of how such power is expressed.

In many cases men's and women's authority and decision-making powers are interlocked and nested in a complex system of household, kin group and community governance which recognizes sexual division of skills, knowledge and interests of the type already discussed above. For example among the Luo in Kenya while men as a group always had more authority over the allocation of land and now have even more control as individuals, through title deeds, women still retain ownership of the harvested crops from their sub-plots and have full authority over the disposition of the grain in their stores and the profits from its sale (Pala Okeyo, 1980, Chakin, 1985).

However, authority and decision-making are often viewed by outsiders as restricted to a legalistic realm of formal rule which they interpret from limited experience. The latter often includes instantaneous "decisions" taken in their presence by men representing households, groups and communities, or other indications of "absolute power" exercised by these same representatives over the rest of the population.

While such conditions may exist in exceptional cases this impression is often a mistaken one, a result of confusing spokesmen with decision-makers, and immediate answers to outsiders' questions with decisions that carry the weight of authority for a given social unit. When a decision is really required and taken seriously, many groups will request time to discuss the matter fully both formally and informally, among all members.

Even apparently concrete indicators of men's control over certain types of transactions, such as cash expenditure, may be misleading. For example in Fakot village (Tehri Garwal District in the Lower Himalaya, India) men heads of household make all or most purchases at local markets and seem to have exclusive (or nearly

so) rights to dispose of family income. However, critical questions about women's own interest in increasing household cash income in this same region elicited explanations of how women's "budgets" for household spending did increase with increase in total household income, and that they in fact usually "made the list" (figuratively or literally) for that part of their husband's purchases which corresponded to their domains of control (e.g. food, certain types of implements, clothes, medicine and other household goods). Similar processes of nested household decision-making were also described with respect to choice of crops and decisions to change the overall cropping systems (Raintree et al 1985). In this case men do seem to have more control in both domains, and are the ones who voice such decisions to outsiders or who discuss them with other men in exclusive male community meetings. However, they are not the sole decision makers and may defer to their mothers and wives on matters of special interest to women. The degree to which decision making is divided or shared relative to particular domains of interest, skill, and space, may determine in large part what types of agroforestry and social forestry activities should be tried, and in what landscape niches, with women clients or with mixed groups of men and women. (Hoskins, 1983; Fortmann and Rocheleau, 1985; Williams, 1985).

Another critical point is the choice of organizational units to mobilize public participation and decision making or to liaise between the whole client group and research and development programs (Max-Neef, 1982; Thompson, 1983; Weber and Hoskins 1983). Much of the basis for evolving common law, as well as for land tenure reform and environmental laws rests with the composition and procedures of decision-making groups at all scales of organization. Aside from the legal precedents set at an organizational and administrative level, there are also countless decisions about land management and land use planning made by groups ranging from the Forest Department to Peasants' Associations to councils of village elders and kin groups.

The scale and type of social organization chosen for program-client liaison can radically affect the results (Chambers, 1983). as in the case of land tenure reform among the Luo in Kenya, which reflected the absence of women among the adjudication officers, as well as on the local advisory committee (Pala Okeyo, 1980). Likewise the decisions of village Panchayats in the Indian Himalayas quite often show strong bias toward men's interests in the disposition of the village commons and in the terms of village participation in development projects, although women have begun to demand membership and a voice in the Panchayat (S. Jain, 1984; Berreman, 1984; Bhatt, 1980; Mishra and Trepathi, 1978). In many forestry and agroforestry projects species choices, planting niches and management plans are made by outside technical advisors in consultation with men heads of household or local headmen in the community, resulting in loss of information about women's ongoing work and their knowledge about particular environments, plants and their use and management (Hoskins, 1979). Women's involvement in a Honduras agroforestry

project through local women's groups has, however, made a positive difference in the success of a new technology (Wiff, 1984) as well as in its impact on the eventual disposition of the land and trees currently owned, used or managed by women.

To have any widespread impact on women's participation and benefits it is important to secure their integral involvement in the planning and management of (AF and social forestry) strategies, programs, projects, and technology development, through organizations willing and able to represent their interests and to facilitate their role in decision making from the national to the household level (Lowdermilk and Laitos 1981). Women clients may have a greater or lesser voice in land and tree-related decisions, in household, group or village units of organization. This will depend on the culture, the particular place, and the degree of urban and national influence on local practice.

While many researchers and practitioners of social forestry are disillusioned with the un-differentiated community as a unit of organization, and with the commons as a unit of design and management (Cernea, 1985) the undifferentiated household is no panacea, neither as a unit or organization, nor as a unit of design and management. While Palmer (1978) states that the "gravitational center of development is shifting to the cooperative, the farmers' association, and the village unit organization" in other areas these structures are breaking down, and households are the strongest unit of organization. In yet other cases clan groups or small women's groups are the predominant units of organization for rural development (March and Taqqu, 1982; Wijngaarden, 1983a; Rocheleau, 1985). Moreover, it is not only the strongest unit of organization that is of interest, but also the one that gives most voice and scope for women. The appropriate unit of organization will vary from place to place and with the type of technology and tenure question involved, and whether we are considering women as priority clients or women as part of a larger client group.

The relative advantages of various units may be structurally determined and the choice of unit may then be critical with respect to women's future participation in land and tree tenure and management programs. However, a particular organizational unit dominated by men may be very stable and well-defined, yet flexible enough to accommodate changes in procedure or composition that would facilitate women's participation.

Although the choice of units will vary widely between cases, the issues involved in that choice will be much the same: whether to strengthen and broaden existing male-dominated institutions and groupings by including women and their interests in collaborative programs (AF, social forestry, tenure reform) or whether to strengthen and diversify institutions or informal groups that already provide ample scope for women's participation/control in decision-making. The criteria for choosing between these approaches will vary with the relative emphasis given to equity

and production in any given program, as well as with the predisposition of program personnel and clients to structural versus functional transformation of institutions. In either case there remains a second series of choices as to how to accomplish a re-orientation of men's resource management institutions to women's participation, or of women's institutions to new land and tree management issues, activities, and enforcement roles. In yet other cases (as in much of South-East Asia) the question may be how to protect and strengthen existing egalitarian institutions (Michael Dove, pers. comm) responsible for allocation and/or management of natural resources. As in the case of other topics previously discussed, this implies a need for new types of policy research and development activities in agroforestry, social forestry and land tenure reform programs.

INDICATIONS FOR POLICY, RESEARCH AND DEVELOPMENT ACTION

The problems and opportunities inherent in the sexual division of access to land, labour, plants and their products require special consideration and types of action not yet part of the mainstream approach to agroforestry and social forestry programs. The implications of these differences extend to the content of technology designs and social contracts for management, as well as to the way that research and development activities are carried out with women clients. The gender based differences in legal status, use of and access to space, type of activities, and control of labour, all have a direct bearing on what type of plants can be planted, managed, used and harvested, where, by whom, for what purpose, for whose benefit.

Policy Formulation

If women are to gain or maintain secure access to the factors of production and the products of AF and social forestry systems, policy interventions may be required on five key points :

1. The very concept of tenure security, as usually applied, requires a broader approach if women's concerns are to be addressed. Nested "bundles" of rights (Fortmann, 1985a and b) and interlocking and parallel multiple use of the same spaces and plants must be accommodated within the legislation and procedural regulations that define people's access to land and plants. Since women's rights so often are nested within a larger family or village structure represented by men, the failure to treat the complexity of multiple rights and multiple uses will usually leave women with no formal legal rights to land or trees. By contrast, there is ample scope in some cases to use legislative and regulatory powers to recognize and formalize separation of land and tree tenure, and to refine and formalize de facto use rights and access to trees. Such laws and regulations could provide scope for detailed, locally defined codes to separate rights into complementary domains by assigning specific times, places, types of plants, types of products, or types of activities, to particular users and groups of users.

2. Gathering as an activity, and gathered products also warrant recognition within the law and the regulations that define valid uses and users of land. The role of such activities and products in subsistence and commercial economies may need to be documented, in order to justify such formal recognition, but in many cases the information is at hand (Fleuret, 1979; Livingstone and Zamora, 1983; Lee, 1979; Ayensu, 1983; Williams, 1984, 1985; Hoskins, 1979; Surin and Bhaduri, 1980; Cernea, 1982; Christophersen, 1981; Weber and Hoskins, 1983; Flores-Paitan, 1985) and has only to be interpreted and acted upon. This is a concern of landless people in general, as well as of most women in farming, herding, and forest-dwelling communities (Unasylva, 1984b; Cultural Survival Quarterly, 1982). Where rights of access can be orchestrated to accommodate gathering and

to reserve especially fragile or valuable trees and source areas for exclusive use by gatherers, environmental, equity and production objectives can be combined to the mutual advantage of women gatherers and the community at large.

3. National and regional policy initiatives can also increase women's access to the products and benefits of AF and social forestry systems by promoting women's involvement in, and control of, processing, marketing or some subset thereof. The same result could also be achieved by technology designs and market development programs that focus on commodities already controlled by women, or on products with a high potential for value added by women's labour. Such an approach could transform a currently marginal activity with no security, into a major, secure source of income for women. However, further legal or regulatory provisions might be required to maintain women's control, and to protect them from expropriation of newly profitable enterprises into men's domain or into the hands of local elites (men and/or women).

4. Women's ability to secure rights of land and tree ownership and access is also conditioned by the scope of their overall legal status, and by the conflicting interpretations of parallel systems of coded customary law, national laws and regulations, and actual practice (common law). Women's access to decision-making about land and trees, and to land and trees as goods, may require changes in legal codes, their interpretation or their enforcement. This may be as sweeping as a national legislative reform to improve women's legal status as property owners and claimants. It may also be as simple as a change in interpretation of existing national laws, in order to facilitate internal reforms of customary law, by ethnic group, to broaden (and/or protect) and formalize women's rights of ownership and access to land and trees.

5. National policy initiatives can also strengthen the status and power of organizations that represent rural women. While this sometimes results in government or elite manipulation of non-representative groups, it is also possible to empower authentic, popular women's organizations from grass roots to national level. Legal legitimacy and widespread official recognition can allow such groups to deal with credit, project administration, access to the factors of AF and social forestry production, directions of research and development, and formulation and enforcement of local codes or project contracts that protect women's rights to land, trees, and their products.

Policy shifts and interventions such as those outlined above would provide necessary, but not sufficient conditions for women's full participation in AF and social forestry. The process also requires appropriate technologies that serve women's interests and effective, responsive organizations for local

planning, implementation and enforcement of AF and social forestry programs for the benefit of both men and women.

Technology Research and Development

The technology development sector of AF and social forestry can help to maintain or improve women's access to land, trees and their products by placing more emphasis on the following design criteria:

1. Choose spatial arrangements that help to maintain or strengthen women's rights and ease of access to places, plants, and products already of use to them.

1a. Design for the whole system and the full range of landscape niches, not just cropped plots or titled, fenced farm and community plots (Rocheleau and Hoek, 1984).

1b. Include technologies for the commons and home gardens, or other landscape niches generally available to and used by women in a given region (assumes prior survey and "mapping" of women's use of and access to various landscape features).

2. Integrate women's gathered plants and plant products (or acceptable alternatives) into the design of AF and social forestry technologies.

3. Include plants that yield products with potential for profitable processing and/or marketing by women (especially important where tenure is a major constraint to equitable sharing of production decisions or direct production benefits).

4. Disaggregate client groups (except in stable, egalitarian conditions) to allow women to express their own needs, interests, knowledge, expectations, and constraints with respect to problems to be addressed, priorities, technology design and management, and distribution of costs and benefits from proposed technologies (FAO 1982, 1985; Butler-Flora, 1984).

5. Involve women clients and women professionals in the entire process of technology research, from problem definition and design and testing of technology prototypes, to local adaptation, extension and continued refinement of technologies (Hoskins, 1983; Unasylva, 1984a; Fresco, 1985).

Participation and Rural Development

Social forestry and AF action programs often emphasize women's participation as such, with less attention paid to access to resources. However, it is not only participation for its own sake that matters to women clients of AF and social forestry development programs. They also care about the concrete

performance of the program, the quality of their own participation, the actual costs and benefits, and their distribution.

Among the most important points to be addressed are the following opportunities for direct action:

1. AF and social forestry programs can use equitable project participation contracts (Hoskins, 1983; Bruce and Noronha, 1985) and program regulations to set precedents that can be formalized at district and national level. Policy action on all of the points already addressed (under policy) could be developed and tested in such site and program specific conditions, without initial recourse to slow legislative action or to inflexible national regulations. After careful bottom-up development and testing of new codes, either the codes themselves, or the procedures for developing them could be adopted at the district or national level.
2. Social forestry and AF action programs are fairly new and expanding, which gives them ample scope to train and hire women into skilled and supervisory positions. Women clients often are better able to deal directly with women professionals on matters of access to land, trees and their products, as well as on technology questions relating to women's work. This will vary by ethnic group, class, and education, and also depends on the communication skills and training of field personnel.
3. Most programs can help women to gain access to AF and social forestry benefits by focussing some of their resources on activities in which women already have some interest, control and rights of access to land, trees or their products. This may involve straying from a single commodity or single activity focus, in order to accommodate existing tenure constraints and/or strict sexual division of tenure.
4. Where women's tree and land tenure and direct access to decision making are unduly constrained, AF and social forestry programs may serve women clients best by working to adapt existing organizations to give women a greater voice in AF and social forestry decisions controlled by men. Another alternative would be to introduce new types of AF and social forestry activities, sites, and plant types that are not yet defined as men's domains (Fortmann and Rocheleau, 1985), and to promote profitable roles for women with as much control by them as possible over the production process and/or the final products.
5. Wherever possible AF and social forestry action programs should work with community organizations that are already able and willing to channel information to and from rural women and to provide a forum for discussion between local women, the community at large and the program. This may imply working with two or more groups instead of just one, or it may mean that a more general purpose community group would be more appropriate than an all men's farmer association.

CONCLUSION

Much attention is being focussed on women's involvement at a time when social forestry and agroforestry are still learning to involve the population at large, and to think in terms of "clients" rather than "targets". Much of the action research and organizational experiments required to find viable rules of tree and land ownership, access and management for women, can be nested within broader programs to achieve the same for the whole population. This is not to say that both agendas should be homogenized into a single activity, for all the reasons already stated. There is still a need to disaggregate information, decisions and action to ensure reasonable and equitable distribution of land, trees, or their products, and of program costs and benefits to all clients, men and women.

The recommended courses of action for the policy, research and development sectors in AF and social forestry are each ambitious undertakings. However, it is possible to integrate all three into a single approach. Technology research and action research, combined within larger development programs, can feed back appropriate experience and a diversity of models to the policy sector, which in turn can provide more scope for women's access to resources in future AF and social forestry research and action programs.

One of the key elements in the action research programs will be the choice of organizations to represent women and the style of interaction within and between organizations. Adequate information for these decisions will not always be available nor will it necessarily be consistent over large regions. Perhaps the best approach to this issue is to work toward the best unit and terms of organization through participatory research (Uphoff, 1979; Max-Neef, 1982; Lowdermilk and Laitos, 1981; Messerschmidt, 1983; Woods, 1983) in representative areas allowing women to identify, create or modify the most appropriate units of organization to represent their interests and to mediate their participation in AF, social forestry and land tenure reform activities. It is here that the research frontier beckons loudest, and where women's future access to land, trees and their products will be determined.

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