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Gender and the environment: traps and opportunities

Melissa Leach

A growing debate about gender and the environment highlights women's roles in the use and management of natural resources, opening up important opportunities for development analysis and action. But there are traps in conceiving of women's roles in relation to the environment in a partial, narrow, or static way; of isolating them from men's roles; and of assuming a close link between women and 'nature'. An alternative approach examines dynamic gender-differentiated activities, rights, and responsibilities in the processes of natural resource management. A case study from the Gola forest, Sierra Leone shows how this approach can help to ensure sustainability and equity in the design of projects concerned with the environment.

INTRODUCTION¹

There is a fast-growing debate about the relationship between women and the environment in developing countries. It asks whether and how this relationship is distinct from men's, and about the roles that women might play in environmental protection or improvement. It is a debate with strong justifications. From a practical viewpoint, it could help development interventions to avoid conflicts and compromises between the interests of women and initiatives to enhance environmental sustainability; as well as to identify ways in which such interests and initiatives might complement each other. The debate could also contribute to action-oriented analysis: thinking about gender issues will enhance our understanding of processes of environmental change, while examining environmental issues should help us to improve our understanding of gender relations.

Since this debate is so important, we must get it right. Current policy discussions often assert that women's relationship with the environment is 'special'; and that women therefore have a particular stake in initiatives to enhance environmental sustainability. But on what is this 'special' relationship based? Is it conceived of in a way which allows these analytical and practical opportunities to be exploited, or does it rather create traps?

Discussions of the relationship between women and the environment are emerging both at a general level and from various environmental settings. This article starts by examining some of their common themes, pointing out both their valuable insights and some of their problems. Drawing on forestry issues for illustrative purposes, it suggests that if misleading guidelines for projects and policies are to be avoided, we must move beyond general assertions of women's special relationship with the environment and, indeed, beyond a narrow focus on women. The second

part of the article suggests an alternative approach which looks at gender relations, and considers gender-differentiated responsibilities, rights, and activities in a more detailed way. Using examples of natural resource use in the West African forest zone, I suggest that this gender-based approach can enable separate, complementary, and conflicting interests to be identified in ways that could improve the sustainability and equity of environmental policy and programme and project design.

USERS AND MANAGERS: WOMEN'S ENVIRONMENTAL ROLES

The last ten years have witnessed increasing discussion of women's relationship with the environment in both conservation and development policy circles; and ever-stronger arguments for involving women in environmental projects. These discussions have linked the growing concern with environment and conservation in the 1980s with the concern for 'women in development' (WID), first popularised a decade earlier. Discussions at the 1985 NGO Forum brought environmental issues firmly on to the WID agenda (Munyakho 1985), encouraging a body of further publications and meetings for development activists and policy-makers as well as popular audiences (see, for example, Dankelman and Davidson 1988). From the environmental side, the greater interest in women is reflected in the profusion of publications in the 1980s focusing on women's roles in natural resource management, such as forestry activity (Hoskins 1983; FAO 1987, 1989).

Discussions which focus on women's roles are a valuable counter to those environmental debates which ignore them. They point out firstly that women's work involves them closely with the environment and its resources, whether as hewers of fuelwood, haulers of water, or participants in agricultural production. Secondly, they argue that women have particular responsibilities which make them closely dependent on, and give them distinct interests in, natural resources. Women's responsibilities to provide for daily needs such as food and fuel are common examples. Thirdly, they emphasise that women have deep and extensive knowledge of natural resources, deriving mainly from their intimate daily experience of them.

The relationship between women and the environment which derives from these existing roles has dual dimensions. On one hand, women are users of natural resources and rely heavily on them. On the other, women are active and knowledgeable managers and caretakers of the environment. Both aspects, it is argued, influence links between women's status and the state of the natural resource base. The degradation of natural resources, including that induced by development processes, can undermine women's ability to perform roles in food production and the collection of fuelwood or water; or it can mean that they can fulfil them only with increasing costs to their time and energy (Agarwal 1989). But women also play an important part in conserving natural resources, for instance by planting trees and engaging in soil protection measures (Hoskins 1983). Thus, if environmental policies fail to take account of women's roles, they risk both having negative impacts on the natural resources on which women rely, and failing to make use of women's important skills and knowledge (Dankelman and Davidson 1988).

WOMEN AND ENVIRONMENTAL POLICIES AND PROJECTS

The growing appreciation of the roles of women has stimulated attempts to involve women in environmental projects. But all too often the design of such interventions

has been influenced by popular and partial images of women's interests and activities, with unfortunate results. For example, women's close dependence on natural resources has frequently translated into an image of women as victims of environmental degradation, struggling to find food and fuel from increasingly depleted land and treescapes. This implies that any outside intervention would be a help: women will participate because they have no choice, and it is assumed that benefits to women and the environment will necessarily go hand in hand. But this is not necessarily the case, especially for women whose time and energy are already overstretched. For example, social forestry projects motivated by such condescending concerns have proved unsuccessful, because women could not tend the trees without undermining their other activities (Rocheleau 1990).

At the same time, women's roles in managing natural resources have sometimes led them to be portrayed as major assets to be 'harnessed' in initiatives to conserve resources — as 'fixers' of environmental problems. This too can have negative effects for women, by simply adding 'environment' to their already long list of caring roles. Again, in the case of social forestry programmes, women have sometimes been treated, in effect, as a source of cheap labour with little consideration of whether the project really served their interests.

In response to such dangers, there has arisen a notion of 'environment as opportunity': that women can and should benefit from environmental and conservation initiatives. Rather than assume that women's and environmental needs are the same, projects should seek out and build on whatever complementarities can be found between them (Davidson 1990).

To identify such complementarities, a clear picture of women's interests and opportunities *vis à vis* the environment is clearly needed. But do current discussions of women's environmental roles provide this? I suggest that they often fail to do so, for two sets of reasons. The first concerns the ways that they conceive of women's roles; and the second their exclusive focus on women.

UNDERSTANDING — AND MISUNDERSTANDING — WOMEN'S ROLES

A number of common pitfalls recur in the way in which recent environment debates treat the question of women's roles. Firstly, these roles are often portrayed in a very generalised way: women are portrayed as 'food producers', 'tree planters', and so on, without considering precisely what this means in terms of activity, time, responsibility, and knowledge. But without seeing more exactly what women do and the interplay between different aspects of their various roles, it is hard to assess what they might stand to gain or to lose through their involvement in environmental projects. We may also miss significant influences on the management of natural resources if we fail to appreciate, for instance, the constraints on women's tree-planting which are created by heavy workloads in areas such as food processing.

Secondly, women's activities and interests are often narrowly equated with providing sustenance for family members through the productive and reproductive activities generally thought of as part of a 'domestic' sphere. Thus, women use natural resources in caring for their children, in 'survival tasks' (such as growing and processing food, providing water, gathering fuel), and 'household tasks' (such as cooking) (Dankelman and Davidson 1988; Shiva 1989). Only rarely are women's uses of natural resources to generate money recognised (cf. Hoskins 1983). Still less

attention is paid to the asset-creating activities in which women engage, such as through trade involving natural resources and their products; or to the ways in which the use of such resources involves them in the wider social and political life of their families and communities. For example, community forestry projects have frequently assumed women to be interested only in species for fuelwood, in contrast with men's interests in, say, trees to produce building poles to sell for cash. While women often do have pressing fuel needs, their own responses to narrowly-focused fuelwood projects have in many instances revealed the broader scope of their interests and needs (Bradley 1991). Policies designed from a blinkered view of women's roles risk not only ignoring large parts of their spectrum of interests and activities, but also entrenching women in narrowly-defined domestic roles and thus reinforcing, rather than rectifying, gender inequalities (Dharaim 1991).

Thirdly, discussions about women and environment often take women's current roles at face value without asking why, for instance, women perform certain tasks and hold certain responsibilities. The implication is that women's roles are natural and unquestionable — as is their resulting 'special relationship with the environment'. Recently, 'eco-feminist' arguments have entered policy debates and encouraged this tendency both implicitly and explicitly. Certain strands of eco-feminism consider women to have an inherently close link with 'nature' which derives from female biology and reproductive capacities.² They argue that because 'patriarchal' development and cultural values have usually ignored this link, and allowed both women and the environment to be oppressed, women have a particular stake in ending the domination of nature (Shiva 1989). However, the idea that women are universally 'closer to nature' than men are flies in the face of the diversity between one culture and another, and of the various ideas concerning the characteristics of the sexes, and of different values ascribed to aspects of the environment found in different societies (cf. MacCormack and Strathern 1980). Interventions based on a misunderstanding of how women themselves perceive their relationship with the environment are unlikely to attract their willing involvement, and risk imposing ideas about female nurture of natural resources upon them. Furthermore, the assumption that women's resource use and management activities are natural and unchanging contradicts evidence of their variation over time. Women's apparently timeless 'special relationship with the environment' is actually shaped by specific social and economic processes; and changes in the character of their work and responsibilities may have important consequences for their management and use of natural resources.

As some discussions about women and environment now point out, it is not enough just to look at what women do; we must also examine their rights of access, control, and decision-making over natural resources. This helps to reveal reasons for women's current activities and decisions: for instance, women may sell tree food products from communally managed land areas, partly because they lack access to income from trees on private holdings (Rocheleau 1988). It is important to recognise that women's activities in the management of natural resources, as well as the economic opportunities open to them, can be constrained by their lack of control over decisions concerning the use of key resources; and that insecure rights over land, trees, and products can limit women's incentives to invest in 'sound' environmental management (Fortmann and Bruce 1991). To enhance women's general rights and control over resources might therefore assist overall improvements in the management of natural resources.

Although questions of rights and control open up opportunities for analysis and action in the field of development, further traps appear when rights are treated as static and predetermined. All too often 'women and environment' discussions portray women's rights and decision-making control as unchangeable 'female domains'. This is to ignore the ways in which these may alter along with changes in the availability, quality, or economic values of natural resources. Furthermore, the impression is given that rights are determined independently of women's relations with men and among each other. But questions of rights and control, perhaps above all others, denote the social relationships within which resources are managed and used. If we ignore these, we gain little sense of women's real interests and opportunities.

WOMEN ONLY?

The second set of problems in most recent 'women and environment' debates concerns their exclusive focus on women. Commonly, men are simply invisible. Although this rectifies a balance — women are often invisible in 'mainstream' environment and development work — there are several reasons why an exclusive focus on women can be unhelpful. Women's roles in managing and using natural resources are exaggerated if men's roles are ignored; indeed women's relationship with the environment may appear 'special' only because men's does not appear at all. Further, women's relations with men are obscured, implying that the resource-management activities of women and men proceed along isolated parallel tracks. But this ignores the ways that women's work, responsibilities, and rights arise through the organisation of gender relations; and how women's interests and opportunities are shaped by their changing relationships with men and with each other.

To focus only on women suggests that they are a distinct category when it comes to the use and management of natural resources. This can also be misleading. Women come to be presented as a homogeneous group, while differences related to age, kinship, and socio-economic status are ignored. Even if differences among women are recognised, 'women' still tend to be thought of as a distinct group as opposed to 'men'. This encourages commentators to ignore interest groups focused on natural resources which unite members of both sexes along age, kinship, or socio-economic lines, even though these might be the most appropriate client groups for certain development activities.

Indeed, an exclusive focus on women's relationship with the environment often translates into separate women's programmes and projects. Although examples of 'successful' women's environmental projects are documented (for example, Dankelman and Davidson 1988), experience in the wider field of rural development shows that this approach is not necessarily the most effective way to address either women's concerns or more general issues. Separate women's components are a poor vehicle for guaranteeing women access to the resources they need, such as land or decision-making power. It is easy for 'women's projects' to become marginalised relative to those which affect a whole community. Yet, if 'successful', they are often taken over by more powerful sectors of the community, and the majority of women fail to realise the intended benefits. And when broader environmental concerns are at stake, tagging on a 'women's project' to deal with them will seldom be sufficient.

Some of these problems can be avoided if we make gender relations in resource use the starting point for development analysis and action. This article goes on to outline and illustrate a possible approach.

A GENDER PERSPECTIVE ON THE USE OF NATURAL RESOURCES

Women and men interact with the environment within specific gender relations and processes concerning the use of resources. Instead of cataloguing women's (or men's) current roles, I suggest that examining how the uses of resources are differentiated by gender is a more helpful basis for identifying people's different interests and opportunities. Within a process such as agricultural production or tree planting, we can look at *differences* and *divisions* between distinct social groups, including those between men and women but also between, for example, age groups or patrons and clients. Divisions include those of work, responsibility, knowledge; and rights to use and decide the use of resources and products. We can then look at how divided interests and activities come together in *relations*: both between people, and between different aspects of resource use and production; for example, the ways in which rights to plant trees are linked with rights to land, or in which tasks are combined in sequence to create final products. From this perspective, the processes governing the use of resources can be seen as sets of interests and opportunities differentiated by gender — some separate, some shared, some complementary, and some conflicting. *Changes* of one kind — for instance, in the market value of a particular resource — may affect other aspects of resource management. Along with changes in the use of resources, significant *conflicts* may emerge between people's responsibilities on one hand, and their rights and opportunities on the other.

Gender-based studies of farming and rural production systems (such as Poats *et al.* 1988) provide insights which are helpful in understanding these issues, and can usefully be applied to current environmental policy concerns. These studies draw attention to the range of overlapping groupings and social institutions of which women and men may be members, and which give them different kinds of rights and responsibilities (cf. Guyer 1986). They emphasise that divisions of labour and responsibility in society are not 'naturally' constructed, and they demonstrate how these are influenced by ideas about the characteristics of the sexes, questions of resource control, and the social relations (such as marital status) within which both production and resource use are embedded (cf. Whitehead 1981). They highlight the power relations and bargaining processes which affect decisions about resource use, and the ways that social and economic changes — for example in the commercial value of particular products — can alter the terms on which such negotiations take place (Whitehead 1990).

The following case study shows how a gender-based approach to analysing the use of resources illuminates a specific set of issues concerning natural resource management in the West African forest zone (cf. Leach 1991). Some of the implications for development action will also be explored.

GENDER-BASED RESOURCE USE IN THE GOLA FOREST

Mende-speaking people in the Gola forest area of eastern Sierra Leone live in a rainforest environment which is now a mosaic of high forest, cultivated and fallow land. Local livelihoods are based on annual cropping according to rotational bush fallow methods, the cultivation of tree crops such as cocoa and coffee, and the collection of a wide range of non-timber forest products. In this comparatively

resource-rich (although fragile) environment, the sustainability of local livelihoods is not immediately threatened by population pressure; and villagers have a range of sophisticated ways of managing natural resources to conserve their productivity. Nevertheless, patterns of land and tree use are changing under the growing influence of a cash economy and opportunities for marketing tree products, and this is affecting ecological conditions as well as the relative access to resources of women and men.

Rice and intercrops are cultivated on upland cleared each year, or on inland valley swampland whose fertility is restored by 8-15 year fallow periods. Both women and men can secure annual land use rights from groups which own land through lineal descent. Farm households are generally the basis for annual cooperation in food production, usually bringing together one or two related men, their wife (or wives) and children. Responsibilities and obligations within the farm household are divided according to gender and to members' relative ages and status in kin groups. The type of farm (such as upland or swamp) and length of fallow are usually decided by a male head of farm household; but elderly women from important lineages sometimes take charge of farm households, and a man is expected to consult his senior wife about resource uses which affect the farm household as a whole.

Tasks related to producing the household rice crop are divided by gender and age, and related in sequence. Such divisions themselves reflect a range of ideas about the characteristics of the sexes (Leach 1990). Men clear and burn the bush, fell trees, and fence the farm against animal pests; both women and men plant rice; and women weed and harvest, sometimes helped by young men. Interlocking with this process for producing a jointly-used crop are two sorts of individual production through which women and men meet different interests and responsibilities. Firstly, wives plant root crops, vegetables and cotton as intercrops on upland farms to use for personal food security and gifts to kin, and to sell for cash. Their rights to use cleared household rice farmland for this are especially important, given that the way tasks are divided restrict them from clearing land for themselves. Secondly, wives and young men cultivate separate small plots of land for themselves, taking responsibility for all labour, decisions about how to use the land, and control over their produce.

Divisions and relations of labour and land use in rice and intercrop cultivation are now affected by a second production process: of tree crops for cash sale. Cocoa and coffee began to be heavily cultivated in the 1960s and 1970s under the influence of high prices and development projects. Tree crop farms are established either by thinning long-fallowed bush to leave an upper canopy of shade trees; or by establishing young seedlings as intercrops on rice farmland, where food crops provide necessary shade for the first year. Most tree crop farmers are men or senior women. Wives' opportunities are variously limited: by divisions in agricultural tasks which restrict them from clearing bush for themselves, by difficulty in finding male labour through kinship and patron-client networks, and by marital obligations to work on their husbands' tree crops at certain times of year.

Annual cropping patterns are shifting to accommodate the demands of tree crops on both land and labour in ways which place pressures on women's activities and on forest ecology. Firstly, as men become more involved in cultivating tree crops, divisions of labour and responsibility for food provision are changing: women are taking over more of the work in producing household food, and relying more

heavily on their separate farm production. Secondly, rice and food cultivation is becoming increasingly common in valley swampland, rather than on uplands. This is mainly because swamp cultivation makes fewer peak labour demands, so it is easier for men to combine with tree crop work and for independent female farmers to manage alongside their other activities. But this contributes to growing competition for swampy wetlands. While swamps are more subject to degradation from over-use, people with weaker land-use rights — such as wives and outsiders — find it more difficult to gain access to them.

Thirdly, farmers increasingly use land for a second or third year before it is left fallow. Crop production on these easily-prepared areas helps certain people to meet changing responsibilities and to resolve conflicts arising from changes in land use. Some heads of farm households plant cassava on second-year plots as a security against hunger. Wives and young men produce cassava and groundnuts for cash sale, since they increasingly need independent cash incomes, but lack access to remunerative tree crops. Women also create vegetable gardens on second-year land to compensate for their loss of rights to plant vegetables as intercrops, since their opportunities to do this are lost if a household head decides to cultivate rice in swamp rather than upland since swamp soils are too wet for the crops they normally plant. These adaptations in the use of land are of concern to ecologists who have recently suggested that second-year plot cultivation damages the recovery of fallow land (Nyerges 1989).

Bush fallow is also a key source of wild tree and plant products. Many uses of these are divided by gender: women use various products to meet responsibilities in food and fuel provision, and to acquire gifts for kin; men collect and use construction materials; and both women and men use raw materials and medicinal produce. Women and young men also rely on occasional cash income from sales of food products (women) and baskets, mats, and tool handles (young men). Men and senior women with regular access to revenues from tree cash-crops tend to be less concerned with these small, irregular incomes.

Changes in the use of land and the values of products are affecting ways in which access to resources is divided, with differential effects on women and men. Swamp fallows yield some of women's most frequently-used plant products, including numerous fibres and leaves which women consider invaluable for wrapping and tying bundles. But these concerns do not necessarily figure in men's decisions to convert swamps to other uses. Conversion to long-term land use such as tree cropping or water-controlled rice cultivation in swamps can remove women's rights to swamp fallow products, while the increasing intensity of swamp use — in part by women for their own rice and vegetables — presages future reductions in the availability of fallow land. In the increasing competition for wetlands, women's rights to the products are under threat.

Upland fallow is also a source of wild tree and plant products. In some cases divisions of labour are changing as the market values of the products increase. Fuelwood, for instance, is normally collected from the semi-burned branches left on upland farm areas after burning, while building poles are cut from 7-9 year old fallow. Since these products are now scarce in urban areas, farmers can derive considerable incomes from selling them on roadsides. Men dominate sales of poles; and although women collect fuelwood for use and small-scale trade, men often take over collection and sale when cash-earning opportunities increase. The rotational bush fallow system can be managed to increase supplies: for poles, by severely

thinning the bush; and for fuelwood, by suppressing the burn to leave more fuelwood sticks. These management practices can compromise rice and intercrop yields, either by reducing the length or substance of the fallow which restores soil fertility, or by allowing more weeds to survive. Women remain concerned about rice and intercrop yields, and bear the brunt of the increased weeding burden induced by a poor burn.

Cocoa and coffee cultivation has introduced a new source of non-timber forest products, because farmers can preserve trees with an economic value along with the shade trees which they leave in tree-crop farms. Trees in permanently-cultivated places near the village are subject to individual tenure, and thus offer convenient and secure access to their products. However, preservation opportunities are divided by gender, as a function of divisions of labour and control over decision-making in tree-crop farming. Whereas male tree-crop owners have the opportunity to preserve the supplies of timber and raw material that they value while they establish and maintain their tree farms, their wives have little say over which trees to leave. Male farmers often cut down trees used by women, such as those cultivated for fruit, oil seeds and medicines, if they are overshadowing their cocoa and coffee. This contradiction between women's interests and opportunities regarding the management of trees is problematic when time is scarce and supplies of products near the village are at their greatest premium. Such conflicts of interest may give rise to more serious tensions in the future if further changes in land use reduce the quality and availability of forest and fallows as alternative gathering grounds.

CONCLUSION

This example begins to show how a gender-based focus on divisions and relations of labour, responsibility, rights, and interests can help both to reveal how changes in resource management come about, and what they mean for different people. Although women's particular experiences can be extracted from such analysis, they cannot be understood outside the context of gender relations in resource management and use. Furthermore, this more inclusive approach can identify differences among women — and cross-gender coalitions of interest, such as between wives and young men — which are obscured by an exclusive focus on women. In this way, resource management is seen to be determined by a range of social differences, of which male-female differences are only one (albeit important) part.

The implications for development action which emerge from such a view are very different from the 'women's projects' advocated by many 'women and environment' discussions. When the design of specific interventions is at stake, an understanding of gender divisions gives scope for identifying whether joint or segregated activities are the most appropriate. In some cases, interventions are better addressed towards building on interests which women and men share — such as in sustainable increases in farm-household rice production, in the Gola forest case — rather than separate ones. In other cases, women and men may have complementary interests which can be addressed simultaneously. Incorporating incentives for different groups may help to avoid the tendency for a single set of benefits to be captured by the more influential (often male) participants. For example, Mende women's need for places to grow vegetables and men's need for building poles might be addressed through a single type of agro-forestry development. A detailed understanding of

rights and responsibilities as determined by gender also provides a basis for interventions to address the specific resource management difficulties of women and men, as well as the conflicts between their rights and responsibilities (cf. Rocheleau 1990). Two relevant examples from the case of the Gola forest concern women's need both for better access to male labour, and for secure rights to trees bearing food and oil seeds.

This kind of gender perspective also raises questions about the process of environmentally-oriented development and the relative roles of outsiders and local people. Encouragingly, agencies such as Oxfam now aim to link local-level environmental management with local-level empowerment, placing an emphasis on strengthening people's capacities to manage their environment according to their own perceived current needs and future priorities. As the case study from the Gola forest suggests, rural communities do not have a single set of shared concerns and priorities, but a range of gender-differentiated ones. The various perspectives of women and men on the use and management of resources reflect not only their immediate material concerns, but also their positions in wider processes of social change. Since the management of natural resources inevitably entails dynamic gender conflicts and power relations, interventions designed by outsiders are unlikely ever to 'work' as expected. They do not transform static situations, but instead shape continuous processes of change.

Participatory planning procedures which allow different social groups to voice their concerns, and which can work through conflicts as they arise, are therefore a necessary basis for environmental interventions.

NOTES

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2 Some ecofeminists, however, treat associations between women and nature as ideological constructions (Merchant 1983; King 1989). Diamond and Orenstein (1990) and Plant (1989) give useful details of multi-stranded ecofeminist thought which I cannot go into here.

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