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GENDER AND ENVIRONMENT

A feminist political ecology perspective

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The convergence of interest in environment, gender, and development has emerged under conditions of rapid restructuring of economies, ecologies, cultures, and polities from global to local levels. Global economic, political, and environmental changes have affected both men and women as stakeholders and actors in resource use and allocation, environmental management, and the creation of environmental norms of health and well-being. Some scholars and activists see no gender differences in the ways human beings relate to the environment, except as they are affected by the constraints imposed by inequitable political and economic structures. Others see the gendered experience of environment as a major difference rooted in biology. We suggest that there are *real*, not imagined, gender differences in experiences of, responsibilities for, and interests in "nature" and environments, but that these differences are not rooted in biology per se. Rather, they derive from the social interpretation of biology and social constructs of gender, which vary by culture, class, race, and place and are subject to individual and social change.

In this volume, we explore the significance of these differences and the ways in which various movements, scholars, and institutions have dealt with gendered perspectives on environmental problems, concerns, and solutions. The major schools of feminist scholarship and activism on the environment can be described as:

1 ecofeminist;
2 feminist environmentalist;
3 socialist feminist;
4 feminist poststructuralist; and
5 environmentalist.

Ecofeminists posit a close connection between women and nature based on a shared history of oppression by patriarchal institutions and dominant Western culture, as well as a positive identification by women with nature. Some ecofeminists attribute this connection to intrinsic biological attributes (an essentialist position), while others see the women/nature affinity as a social construct to be embraced and fostered (Plumwood 1993; Merchant 1981, 1989; King 1989; Shiva 1989; Mies and Shiva 1994; Rocheleau 1995). Feminist environmentalism as articulated by Bina Agarwal (1991)

emphasizes gendered interests in particular resources and ecological processes on the basis of materially distinct daily work and responsibilities (Seager 1993; Hynes 1989). Socialist feminists have focused on the incorporation of gender into political economy, using concepts of production and reproduction to delineate men's and women's roles in economic systems. They identify both women and environment with reproductive roles in economies of uneven development (Deere and De Leon 1987; Sen and Grown 1987; Sen 1994) and take issue with ecofeminists over biologically based portrayals of women as nurturers (Jackson 1993a and b). Feminist poststructuralists explain gendered experience of environment as a manifestation of situated knowledges that are shaped by many dimensions of identity and difference, including gender, race, class, ethnicity, and age, among others (Haraway 1991; Harding 1986; Mohanty 1991). This perspective is informed by feminist critiques of science (Haraway 1989; Harding 1991) as well as poststructural critiques of development (Escobar 1995; Sachs 1992) and embraces complexity to clarify the relation between gender, environment, and development. Finally, many environmentalists have begun to deal with gender within a liberal feminist perspective to treat women as both participants and partners in environmental protection and conservation programs (Bramble 1992; Bath 1995).

We draw on these views of gender and environment to elaborate a new conceptual framework, which we call feminist political ecology. It links some of the insights of feminist cultural ecology (Fortmann 1988; Hoskins 1988; Rocheleau 1988a and b; Leach 1994; Croll and Parkin 1993) and political ecology (Schmink and Wood 1987, 1992; Thrupp 1989; Carney 1993; Peet and Watts 1993; Blaikie and Brookfield 1987; Schroeder 1993; Jarosz 1993; Pulido 1991; Bruce, Fortmann and Nhira 1993) with those of feminist geography (Fitzsimmons 1986; Pratt and Hanson 1994; Hartmann 1994; Katz and Monk 1993a and b; Momsen 1993a and b; Townsend 1995) and feminist political economy (Stamp 1989; Agarwal 1995; Arizpe 1993a and b; Thomas-Slayter 1992; Joekes 1995; Jackson 1985, 1995; Mackenzie 1995). This approach begins with the concern of the political ecologists who emphasize decision-making processes and the social, political, and economic context that shapes environmental policies and practices. Political ecologists have focused largely on the uneven distribution of access to and control over resources on the basis of class and ethnicity (Peet and Watts 1993). Feminist political ecology treats gender as a critical variable in shaping resource access and control, interacting with class, caste, race, culture, and ethnicity to shape processes of ecological change, the struggle of men and women to sustain ecologically viable livelihoods, and the prospects of any community for "sustainable development."

The analytical framework presented here brings a feminist perspective to political ecology. It seeks to understand and interpret local experience in the context of global processes of environmental and economic change. We begin by joining three critical themes. The first is *gendered knowledge* as it is reflected in an emerging "science of survival" that encompasses the creation, maintenance, and protection of healthy environments at home, at work and

legal and customary rights that are "gendered." Our third theme is *gendered environmental politics and grassroots activism*. The recent surge in women's involvement in collective struggles over natural resource and environmental issues is contributing to a redefinition of their identities, the meaning of gender, and the nature of environmental problems.

GLOBAL PERSPECTIVES FROM LOCAL EXPERIENCE

Until recently, conventional wisdom in international environmental circles suggested that environmental issues in industrialized countries had to do with "quality of life," whereas in Africa, Asia, and Latin America they had to do with survival. If we compare the conservation agenda of wildlife organizations in the United States with the Chipko movement to protect the forests and watersheds of the lower Himalayas, or with women's tree-planting initiatives in Kenya, this view seems accurate. However, there are also wildlife conservation organizations in Africa and citizens' environmental justice movements in the United States. Toxic wastes, contaminated food, and workplace environmental hazards have become more than quality of life issues in many urban and industrial communities as well as in the remote rural areas affected by the same processes.

Perhaps it would be more accurate to recast this dichotomy along different lines, based on a careful analysis of the gender division of rights, responsibilities, and environmental risk in everyday life. While there are several axes of power that may define peoples' access to resources, their control over their workplace and home environments and their definitions of a healthy environment, we focus on gender as one axis of identity and difference that warrants attention. Feminist political ecology deals with the complex context in which gender interacts with class, race, culture and national identity to shape our experience of and interests in "the environment."

Our approach to feminist political ecology examines the very definition of "environment" and the gendered discourse of environmental science, environmental rights and resources, and environmental movements, using feminist critiques of science (Hynes 1989, 1991, 1992; Shiva 1989; Mies and Shiva 1994; Merchant 1982, 1989; Keller 1984; Griffin 1987; Birke and Hubbard 1995; Haraway 1989, 1991; Harding 1986, 1987; Tuana 1989; Hubbard 1990; Zita 1989) as well as the analyses and actions of feminist and environmental movements. For example, Sandra Harding (1986) has raised issues of gender inequities in science as a profession, gender biases and abuses in the practice of science, the myth of gender-neutral objectivity, gendered metaphors employed in scientific explanation and process, and the possibilities for a transformed, socially just science. Donna Haraway (1991) discusses the need to recognize and combine situated knowledges and invokes the "power of partial perspective" as a pathway toward greater objectivity. She advocates a pursuit of scientific knowledge that joins many knowers on the basis of affinities (reaching beyond identities) to build a joint, expanded understanding as part of an explicitly social project

in social welfare programs in the United States, and Patricia Stamp (1989) who addresses the gendered discourse of "donors and recipients" in international development. We extend their analyses to examine the impact of gender on environmental discourse and its differential effects on women and men (Merchant 1992; Hynes 1989, 1992; Plumwood 1993; Haraway 1991; Harding 1991).

The overview and case studies in this volume draw upon the experience of grassroots environmental movements worldwide, including such diverse situations as the struggle to save old growth forests in Europe, women's initiatives to secure safe food supplies in the industrial core of Poland, community efforts in the United States and Spain to fight toxic waste dumping, women's movements to retain access to land and forest resources in Kenya, and women's participation in the struggles of the rubber tappers' union to protect their forest homes and workplaces in the Brazilian Amazon. Less visible, more diffuse gendered struggles occur at household and community levels in the case study examples from Zimbabwe, the Dominican Republic, the Philippines, and India. The experience of all of these disparate groups provides distinct examples of gendered science, rights, and political organization.

Reviewing these cases we find common threads of concern over:

- survival;
- the rights to live and work in a healthy environment;
- the responsibility to protect habitats, livelihoods, and systems of life support from contamination, depletion (extraction), and destruction; and
- the determination to restore or rehabilitate what has already been harmed.

These common threads surface repeatedly within our varied case studies, which range from urban neighborhoods to arid farmlands to dense rainforests. The commonalities and differences in the relation of gender and environment in these cases both contribute to and challenge prevailing theories and serve to inform policy and practice for environment, development, and women's programs and movements.

THREE THEMES COMMON TO GENDER AND ENVIRONMENT WORLDWIDE

Environmental science and "the international environmental movement" have been largely cast as the domain of men. In fact, while the dominant and most visible structures of both science and environmentalism may indeed be dominated by men, mostly from the wealthier nations, the women of the world – and many men and children with them – have been hard at work maintaining and developing a multiplicity of environmental sciences as well as grassroots environmental movements. And while it is the same few who may lay claim to pieces of the living landscape as private and state property throughout the world, women and many men and children have also been busy maintaining and developing their own places on the planet through the daily management of the living landscape.

rights (over both property and the resource management process) ar gendered organizations and political activity. Specific places are treated culturally and ecologically distinct, but with many shared problems ar concerns related to gender and environment in both global and local context

THEME 1: GENDERED SCIENCES OF SURVIVAL

Gendered science can be viewed in terms of the definition of what is scienc and who does it, in terms of the different possibilities for defining the rela tion of people and "nature," and in terms of the apparently separate science and technologies of production and reproduction, public and privat domains, and home, habitat, and workplace spaces. Through the stories c communities involved in a wide range of political and environmental strug gles we examine the gender implications of the separation of work an knowledge, science and practice for the gendered science of survival in rura as well as industrial contexts. The case studies presented here illustrate th intersection of rural "local knowledge" with urban and suburban "house wives' epidemiology" and link the gendered knowledge of everyday life ir urban and rural, and "north" and "south" contexts.

Our exploration of the convergence of gender, science, and "environment" is informed by several sources, including feminist scholarship, environmental science and policy literature, alternative environmental and development scholarship, women's movements, environmental movements, and alternative "development" movements (including "appropriate technology"). We rely heavily, but not exclusively, on the literature and experience of the last twenty years.

In North America and Europe, feminist health movements and the "housewives" environmentalist and anti-toxics movements have questioned the prevailing paradigm of professional science. They use women's experience to challenge the professionalized definitions of "environment" and ecology, and offer their own alternative perspective on environmental issues related to personal health and the home. Many feminists among the "deep ecologists," social ecologists, and "biocentric" environmentalists have also developed a distinct critique of mainstream environmental science and resource management, with a strong emphasis on the identification of women with nature and the mistreatment of both by a male-dominated, instrumentalist science (Plumwood 1993; Biehl 1991; Merchant 1992). Many advocates of these approaches have been labeled or have begun to call themselves ecofeminists. We suggest that feminist political ecology encompasses much of ecofeminism as well as several related approaches that would not fit that label as currently used.

Many rural women from around the world have also begun to raise their voices internationally to speak of a science of survival largely in the hands of women. Several rural women's movements to protect forests, trees, and water resources in Asia, Africa and Latin America have recently received global recognition and women scholars have in several cases become leaders

Plate 1.1 Linking environment with health: march in Boston for Breast Cancer Awareness Month

Source: Lisa Beane

Several common threads have run throughout the scholarship and the movements that address the convergence of gender, science, and environment, but common concerns have often been obscured by the distinct discourses of resistance, critique, and alternative practice. We draw the following points into a common perspective and the authors pursue each of them in the case studies, as appropriate:

1 Women's multiple roles as producers, reproducers, and "consumers" have required women to develop and maintain their integrative abilities to deal with complex systems of household, community, and landscape and have often brought them into conflict with specialized sciences that focus on only one of these domains. The conflict revolves around the separation of domains of knowledge, as well as the separation of knowing and doing, and of "formal" and "informal" knowledge.

2 While women throughout the world under various political and economic systems are to some extent involved in commercial activities (Berry 1989; Jackson 1985), they are often responsible for providing or managing the fundamental necessities of daily life (food, water, fuel, clothing) and are most often those charged with healthcare, cleaning, and childcare in the home, if not at the community level (Moser 1989). This responsibility puts women [illegible] threats to health, life, and vital subsistence resources,

This does not preclude women from engaging in economic interests, but suggests that they will almost always be influenced by responsibilities for home, health – and in many cases – basic subsistence.

3 Both health and ecology are amenable to feminist and alternative approaches to practice since they do not necessarily require special instrumentation, but rather focus on the "objects" and experience of everyday life, much of which is available through direct observation (Levins 1989). While some aspects of health and ecology have become highly technical, there is much new insight and information to contribute to these disciplines that is still available to observation without specialized instruments beyond the reach of ordinary folk. There is also scope for a feminist practice of ecology that uses specialized tools differently and for different ends.

4 While formal science relies heavily on fragmentation, replication, abstraction, and quantification (Levins 1989), many women have cited the importance of integration and a more holistic approach to environmental and health issues (Candib 1995). Feminist scholars have shown that some women researchers in professional sciences have used distinct approaches based on skills acquired in their socialization as women (Keller 1984; Hynes 1989, 1991, 1992). On a more personal and everyday level, some grassroots women's groups have explicitly stated that "our first environment is our bodies" (Gita Sen, personal communication), calling for a more integrative approach to health, environment, and family planning in development, welfare, and environmental programs.

5 Most feminist or women's environmental movements have incorporated some or all of the elements of the feminist critique of science as summarized by Sandra Harding (1987). The five classes of critique address:

1 inequity of participation and power in science-as-usual;
2 abuse and misuse of science on and about women;
3 assumptions of value-free objectivity and universality in science;
4 use of culturally embedded, gendered metaphors in scientific explanation and interpretation; and
5 development of alternative ways of knowing and ways of learning based on everyday life, women's experience, and explicit statement of values.

Feminist political ecology addresses the convergence of gender, science and environment in academic and political discourse as well as in everyday life and in the social movements that have brought new focus to this issue. In this volume, we explore the critiques of gendered environmental science, as well as the alternative practices of science both within and beyond the current dominant paradigm. And finally, we examine the gendered sciences of survival in a wide range of circumstances, from production systems to responsibilities for health and hygiene.

These sciences occur in several forms, from local environmental knowledge (for example, which plants can cure us and how we can protect them)

(what is making us sick; or how we can maintain our forest plants in a changing landscape). These various sciences are practiced by diverse groups from rural herbalists and forest farmers to suburban residents, professional nurses, environmental engineers and urban residents and factory workers. While there are many other axes of difference that may shape peoples' experience and understanding of "environment" and their sciences of ecology, feminist political ecology focuses on gender, while including discussions of interactions with class, race, age, ethnicity, and nationality.

THEME 2: GENDERED ENVIRONMENTAL RIGHTS AND RESPONSIBILITIES

Who controls and determines rights over resources, quality of environment, and the definition of a healthy and desirable environment? The question is crucial to the overall debate on gender and environmental rights. Ecofeminism and other feminist critiques of environmental management paradigms have raised questions of gender, power, and paradigms of economic development (Merchant 1981; Hynes 1992; Seager 1990; Shiva 1989), while many feminist critiques of development have focused on access to and control over resources (Agarwal 1991; Deere 1992; Deere and De Leon 1985; Pala Okeyo 1980; Muntemba 1982; Wangari 1991). Although gendered resource tenure has been discussed primarily in the context of rural development, and gendered power over environmental quality has been treated more in terms of urban, industrial sites, the cases in this volume apply and synthesize both approaches in rural and urban contexts across regions.

We recognize gendered environmental rights of control and access as well as responsibilities to procure and manage resources for the household and the community. These rights and responsibilities may apply to productive resources (land, water, trees, animals) or to the quality of the environment. In addition to the gender division of resources, there is a gender division of power to preserve, protect, change, construct, rehabilitate, and restore environments and to regulate the actions of others.

These categories reflect women's and men's often distinct rights and responsibilities in production (subsistence and commercial), their rights and responsibilities to create or maintain a healthy biophysical environment (including chemical aspects), and their rights and responsibilities to determine the quality of life and the nature of the environment. In more abstract terms, we can speak of gendered mandates and terms of control over things, processes, the direction and impact of environmental changes, and over the distribution of those impacts. The rights to control one's own labor and to regulate the actions of others are also highly gendered.

Environmental rights and responsibilities are also gendered spatially. For example, men's or women's domains of access and control are often divided between public and private places, and between home and workplace spaces. Likewise we find gendered spatial categories in different kinds of homes and

While the specific designation of gendered spaces and the strength and visibility of those divisions may vary dramatically by culture, the existence of gendered spaces is widespread and affects both technocratic and customary systems of resource tenure and control of environmental quality.

Resource tenure

Gendered resource tenure encompasses both rights and responsibilities and can be divided into four distinct domains:

1 control of resources as currently defined;
2 access to resources (de facto and de jure rights; exclusive and shared rights; primary and secondary rights);
3 gendered use of resources (as inputs, products, assets; for subsistence and commercial purposes); and
4 gendered responsibilities to procure and/or manage resources for family and community use.

The recent literature on gendered resource rights in development studies has tended to focus on ownership and use rights in land, trees, water, wildlife and other rural resources (Hoskins 1982; Fortmann and Bruce 1988; Fortmann 1985; Rocheleau 1988a and b; Bradley 1991; Deere and De Leon 1985; Davison 1988; Carney 1988; Watts 1988; Berry 1989; Peters 1986; Bruce, Fortmann, and Nhira 1993; Leach 1994; Rocheleau and Ross 1995; Schroeder 1993; Jarosz 1993). These resources are often contested, with multiple claimants at different levels: men and women; households of distinct classes; different communities; distinct ethnic groups; and local, national and international users.

The very notions of property and resources, so often assumed to be fixed, are both variable between groups and places and dynamic in time. Resource values and claims upon them change with human needs, abilities, knowledge and skills (Rees 1990; Omara-Ojungu 1992) as well as relations of power based on gender, race, class, ethnicity, locality, and nationality. For example, the land tenure reform in Kenya initiated by the colonial government and later implemented by the newly independent state, excluded women from resources previously available to them through customary rights of use and access. While creating new resource values and property rights for some men, the privatization of land has led to destruction of forests, grasslands, water sources, and soils and the termination of women's access to many areas (Wangari 1991; Pala Okeyo 1980). In Eastern Europe and the Balkans the land tenure reforms spurred by political and economic change have in many cases returned control of rural farmland to traditional patriarchs and male heads of household (LaStarria-Cornhiel 1995).

Similarly, in the Gambia, a land tenure reform and irrigation project specifically intended to benefit women resulted in a redefinition of traditional land and labor rights and destroyed the women's traditional floodplain fields. The seasonal and spatial complementarity of men's and women's crop

Watts 1988). Similarly, changes in industrial technology in North America, coupled with simple definitions of land as property, have pitted the value of waste disposal sites for industry (men's domain) against use values of nearby residential property and against the public health of surrounding communities (women's domain).

Types of rights, types of uses, types of resources

The legal standing of resource tenure as well as the kind of tenure tend to reflect gendered relations of power. Environmental rights, especially resource rights, may be either de jure (legal by court precedent or statutory law) or de facto (by practice/custom). Men are often associated with de jure and women with de facto resource rights, which has major implications for the relative strength and security of tenure by gender. In many cases, particularly in Africa and parts of Asia, simultaneous systems of customary and statutory law have exaggerated and distorted the customary gender division of resources. This is particularly true where the customary law of family and marriage is applied to women's claims to household or community resources or environmental rights, while men's claims are settled under "Western" or statutory codes. The ways in which customary rights are distributed are also gendered, though inheritance and marriage laws vary tremendously from one place to another and are constantly changed and renegotiated over time (Mackenzie 1995).

The types of legal and customary rights can also be divided into ownership versus use rights. Rights of exclusive ownership often coincide with dominance by gender as well as class: wealthy men are often owners, while women or poor men are more likely to be users of lands/resources owned by others. Shared uses and multiple user practices are often beyond the legal definitions of property currently recognized, including formal definitions of "common property." The concept of articulated bundles of rights (Fortmann 1985; Riddell 1985; Bruce 1989) provides one tenure framework that lends itself well to gender issues and to rights that pertain to resources and environment, although it has been developed primarily in the context of forestry and rural development. Many forms of customary law incorporate such nested and overlapping rights, while modern legal codes usually do not.

The division between customary rights of control versus rights of use and access has a similar relation to gender (Rocheleau 1988a and b). In many cultures, elder men share authority to allocate resources among themselves and to women and younger men. They exercise control and allocate use rights. Overall, women's rights are often nested within rights controlled by men, or women hold rights to resources that are allocated by men's institutions or organizations (clans, lineages, cooperatives, political committees). This applies equally to "Western" or "Northern" countries but rules are indirectly encoded in the daily practices of political and economic institutions and the disposition of private property rather than explicitly articulated as a gendered legal code. For example, women may encounter difficulty in

community level, women may be less likely than men to get elected to pla ning and zoning boards.

The types of uses enjoyed by men and women also vary. Women oft have rights of renewable use (plant crops on soil; harvest leaves from tre gather dead wood), while men have rights of consumptive use (harvest whc trees; buy and sell land; divert and consume irrigation water). A relat question is: rights over what? Men and women may divide use rights control by the type of resource: land, water, specific animals, plants or the products. These resource categories may also embody a division betwe resources for use value and resources as commodities.

Responsibilities

Parallel to the gender division of resource rights is an equally importar division of responsibilities. They are expressed most concretely at househol and community levels, although they may also apply to larger scales of soci organization. The most common forms of gendered responsibility fo resources include:

1 responsibility to procure particular inputs or products for home use (sucl as fuelwood, water, milk, and medicinal herbs in rural areas; or bottle water, air filters, pest traps, or disinfectants in urban areas); and
2 responsibility to manage particular resources (such as protection of wate sources, maintenance of community forests, and soil conservation in rura areas; or food shopping and meal planning, protection of parks, restora tion of neighborhood safety, and detection of home and workplace healt hazards in urban and industrial settings).

The relative distribution of resource rights and responsibilities between men and women is far out of balance in many areas (FAO 1988). Women carry a disproportionate share of responsibilities for resource procurement and environmental maintenance, from New York City to the Lower Himalayas, and yet they have very limited formal rights (and limited political and economic means) to determine the future of resource availability and environmental quality. In many cases, the rights of men to extract commodities or to engage in consumptive use have pre-empted women's use of the same resource or the same place, yet women remain responsible for providing the same product or service from another source. The consequences can be serious for the women themselves as well as for the environment. The gender imbalance in environmental rights and responsibilities derives from relations of power based on gender, among other factors.

Relations of power

The relations among resource uses, users, owners, and managers may be relations of conflict, cooperation, complementarity, or coexistence, which raises the issue of power and gender. Throughout the world, as we study

gendered power relations and tenure under shared use situations, as well as under private, state, and formal community ownership of resources, in distinct types of environments. We focus on concrete expressions, rather than explanations of the origins of inequities. We do not promise to resolve the theoretical debates, only to apply relevant insights from the case studies. We also recognize that it is possible to work within, circumvent, ameliorate, or undo the inequities, once they are understood, and we discuss the policy implications of specific approaches within the case studies and in the summary chapter.

Environmental quality

Gendered control over quality of environment encompasses the right to protect, change, or create environmental conditions that meet existing standards of quality (especially with respect to health) and the rights to determine the nature of the environment (land use planning, land use change, structure of homes, neighborhoods, landscape design). In spite of substantial progress in our understanding of gender conflict over resource use and control, and of the link between gendered resource use and environmental change, many areas of interest remain to be explored.

Just as the insights from resource tenure in rural development contexts can inform our understanding of gendered environmental rights in urban and industrial regions, so can the gendered struggles over environmental quality in North America and Europe help us better to comprehend related issues in less industrialized regions. In urban and industrial contexts, for example, conflicts have arisen between grassroots groups, industry and government agencies concerning: rights to use public space; access to and control over clean air and water; and rights to healthy homes and workplaces. Similarly, women in rural areas have a direct stake in the control of pesticide use on commercial crops, and also in the decision to use a given area for commercial rather than subsistence production. Women have been at the forefront of many efforts to address these issues of control over environmental resources and environmental quality. In many cases, their involvement is a response to their prior exclusion from access to resources as well as from the corridors of power where environmental decisions are made in government, industry, and mainstream environmentalist groups.

THEME 3: GENDERED ENVIRONMENTAL POLITICS AND GRASSROOTS ACTIVISM

Our discussion of gendered political participation focuses on the recent wave of women's involvement in collective action for environmental change. For more than a decade, women have been at the forefront of emerging grassroots groups, social movements, and local political organizations engaged in environmental, socioeconomic, and political struggles (Merchant 1992; Seager 1993; Hynes 1992). These phenomena are not localized; they are occurring around the world. They are documented not only by scholars and

critics, politicians, and administrators (Agarwal 1991; Bell 1992; Brown 199 Collins 1991; Braidotti *et al.* 1994; Dankelman and Davidson 1988; PAC 1990; Freudenberg and Steinsapir 1991; Marcus 1992; Rau 1991; Shiv 1989). We look not only at the reasons for an apparent surge in women involvement in collective struggles over natural resource and environmenta issues, but also at the various forms such activism has taken.

What difference do collective struggles make to sound environmenta policy and practice and to "sustainable development?" Three workin assumptions are noted below:

1 Given the involvement of women in collective action around the world there are critical linkages between global environmental and economi processes and the recent surge in women's participation in public fora, partic ularly in relation to ecological and economic concerns. This surge in women' activism is a response to actual changes in local environmental condition as well as to discursive shifts toward "sustainable development" in nationa and international political circles.

2 Applying Gillian Hart's analysis within the Malaysian context (Hart 1991), we transpose her conceptualization of "multiple and interconnected sites of struggle" to an international setting. Different visions of society and differing access to resources and to power are played out according to gender, race, class, ethnicity and nationality, variously connected in complex systems. Pramod Parajuli (1991) provides a similar explanation for the nature of social movements in India.

3 Women are beginning to redefine their identities, and the meaning of gender, through expressions of human agency and collective action emphasizing struggle, resistance, and cooperation. In so doing, they have also begun to redefine environmental issues to include women's knowledge, experience, and interests. While this is a worldwide phenomenon, the process and results in any one place reflect historical, social, and geographical specificity (Alvarez 1990; Egger and Majeres 1992; Friburg 1988; Fraser 1987; Touraine 1988).

Why women? Why now?

When we talk about the environment, we are referring to the ecosystem on which production and reproduction depend. The aspects of a particular ecosystem that are important to the people who live in it vary according to the circumstances of history and the specific demands of their system of production. Regardless of these variations, issues pertaining to the environment are inherently political, and decisions about the environment are not politically neutral. Access to and control of environmental resources are inextricably linked to the positioning of people by gender, race, class, and culture. Environmental issues are central to debates about the nature of the society we live in, the claims that each of us can make on that society, and the realities of justice in distribution. Five considerations are important:

movements derives from the difficulties they face in ensuring the survival of their families in the face of ecological and economic crises. For many, these difficulties have worsened in the last decade as a result of changes in social and economic relations arising with the spread of capitalism, migration for wage labor, divided families, and the decline in various forms of vertical ties to patrons (Chen 1991; Hart 1991; Kates and Haarmann 1992). Poor households face increased environmental risk, uncertainty, and insecurity, while their entitlements are either precarious or nonexistent.

2 The impact of structural adjustment policies: To these long-term structural changes one must add the immediate implications of the structural adjustment policies of the 1980s and 1990s (Gladwin 1991) and the "retreat of the state" from support of public services, social welfare and environmental regulation in wealthy as well as poor countries. Poor women throughout the world have been severely affected by insufficient food, the rising cost of living, declining services, and eroding economic and environmental conditions. These impacts have spawned not only protest but also strategies for change.

3 Consciousness raising and political awareness: Increasingly people are linking the immediate impact of ecological and economic crises with recognition of a need for structural political changes. Organizations that may have originated from a specific objective, such as India's Chipko movement or the United States' Citizens' Clearinghouse for Hazardous Wastes, have broadened their focus to include the larger social and political systems. In some instances, environmental movements have addressed systems that depress the standard of living for the poor or that emphasize economic growth and military strength to the detriment of environmental safety and personal health.

4 The political marginality of most women: For many women, economic and ecological conditions are potentially catastrophic. They face severe constraints on their livelihood options. They participate little, if at all, in organized politics at the national level. Their activism usually begins locally on matters critical to their own lives, their homes, and their families. It reflects the pressure and distress generated by the system and its impact on family welfare, among people operating "on the edge" both economically and socially. In the last decade, the problems that women face have become increasingly severe. The system does not address their needs, and so they act collectively to secure the necessary conditions to guaranty subsistence, protect the health of their families, and the integrity of the surrounding ecosystem.

5 The role of the women's movement: The women's movement, of which the most recent wave has now been active for over twenty years, has generated international interest in women's issues and women's perspectives. It provides some philosophical moorings for women's activism, while it also derives much of its vitality from the connections between groups that focus

roles and interests of women. The emerging international women's m ments have reconfigured the political landscape to address converging i of gender, race, class, and culture and to treat women's rights as basic hu rights. They provide crucial political and ideological underpinning support for the increased political activism of women on environme issues.

Exploring the forms of activism

Women's emerging environmental organizations and movements have three foci with organizational structures to suit the particular focus:

1 Policy and environmental management issues: Here organizations fc on specific policies, problems, or hazards that are harmful to individu households, and communities. Often they start with the intent of dc menting an association between the incidence of disease or a health prob and a specific toxic dump site, pesticide spray, workplace hazard, air po tant or contaminated water source. They may go on to significant victo in legislation and in public information about the specific issue. In the Uni States the leaders and membership often include significant numbers women as well as people of color. Environmental racism has become a ma topic of concern for many groups. Such organizations, however, are fou the world over as people respond to the issues confronting them in da life. In Bombay, for example, the Society for Promotion of Area Resou Centers (SPARC) is working to demand better living conditions (Bell 19 In countries of the Caribbean including the Dominican Republic, Domini and St. Vincent and the Grenadines, grassroots organizations of inform sector traders, many of them women, are springing up to claim and wc for better working conditions, protection of their rights, and environmen conservation (PACA 1990: 101).

2 Access to and distribution of resources under conditions of environmen decline and resource scarcity: Around the world, local groups are organizi to share the management of resources and to increase their availabili Local-level associations enable people to respond with increased effectiv ness to external changes in their environment. They help diminish risk ar they create new opportunities. Organizations can provide improved acce to land, labor, capital, and information. They may generate exchange oppo tunities. They may provide access to common property, including resourc such as water, forests and communal grazing, or institutions and servic such as schools and health clinics.

3 Political change and environmental sustainability: Environmental an economic impoverishment are intertwined and linked to the political struc tures in which they exist. Organizations may begin with the objective c economic survival, but they often come to a sharp realization of the pol tics of survival. The Green Belt movement in Kenya, for

them, find that their strategic interests raise major questions about the political systems in which they operate.

These organizational foci are merely suggestive. Most organizations deal at some time or another with all three categories. Their agendas, as well as the scale of their activities, are purposefully flexible and are continually adjusted as they endeavor to meet both practical needs and strategic, long-term interests.

What difference does women's participation make for women, the environment, and society?

All of these economic and ecological struggles have important implications for the meaning of gender and for the nature of men's and women's roles. These organizations are demanding more equitable development across classes, ethnic groups, castes, gender, and generations. The increased involvement of women is leading to a sense of agency and empowerment. As a result, there are new perceptions of women's roles. Women's visions of their rights, roles, and responsibilities are changing. Increasingly, women are "finding voice" and are being aided in doing so by their participation in groups and organizations (Ronderos 1992: 81).

There are many victories to be claimed by women's environmental action groups around the world. In addition to the cases presented in this volume, we note as examples the widespread planting of trees by the Women's Green Belt movement of Kenya, the protection of a public park in downtown Nairobi by the same group, and the protection of the Himalayan forests from timber concessionaires by the Chipko movement in India. In North America, grassroots movements led by women have prevented the disposal of toxic wastes, as in the case of a landfill in Warren County, North Carolina, and they have pressed legislators and courts in California and Massachusetts to take action on air and water pollution. Recently formed bridging organizations, networks, and coalitions (such as the Women's Congress for a Healthy Planet; WEDO – Women, Environment, and Development Organization; WEDNET – Women, Environment, and Development Network; and Worldwide Network for Women) bring the concerns of these locally based movements to national and international policy fora.

These grassroots organizations, with their significant involvement of women, are stressing the value of all human beings and their rights to satisfy basic human needs, including food security and health (Escobar and Alvarez 1992). They emphasize ecological as well as economic concerns and the needs of future generations as well as those of diverse claimants on existing resources. There is a fundamentally humanitarian, egalitarian, pluralistic, and activist stance to many such organizations, although – as noted by Jackson (1993a and b) – women's organizations are not inherently environmentalist or altruistic.

The myriad of grassroots organizations, with women as well as men involved in them, have begun to blur the distinctions between public and

what is environmental, as well as what is just and equitable. In the ch
ters that follow, the authors review gendered political responses to ecolog
problems exacerbated by economic decline in households and communi
around the world. They explore the way in which environmental activi
and politics have entered household and community and vice versa. T
case studies also document the extensive involvement of women in gra
roots organizations in response to declining ecological and econor
circumstances in degraded environments or to the magnitude of health a
safety problems posed by the "maldevelopment" of previously heal
communities and ecosystems.

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