

PN ARR-543
88076

ESSENTIAL CONNECTIONS:

LINKING GENDER TO EFFECTIVE NATURAL RESOURCE

MANAGEMENT AND SUSTAINABLE DEVELOPMENT

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July, 1993

*The authors wish to thank Mary Rojas, Deputy Director of International Programs at Virginia Polytechnic and State University, Wanjiku Mwangi, Director of Kenya's National Environment Secretariat, Dale Shields and Karen Schofield, research assistants at Clark University, Richard Ford, Professor in the International Development Program, and Gerald Karaska, Professor of Geography, both at Clark University, and Rosalie Huisinga Norem, Office of Women in Development of the Agency for International Development, for their thoughtful comments on earlier versions of this paper. We have benefitted from their perceptive observations and wise counsel.

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ESSENTIAL CONNECTIONS:
LINKING GENDER NATURAL RESOURCE MANAGEMENT
AND SUSTAINABLE DEVELOPMENT

A RATIONALE FOR INCORPORATING GENDER INTO A FRAMEWORK FOR
ANALYZING NATURAL RESOURCE MANAGEMENT

Linkages: Poverty, Resource Decline, and Ecological
Degradation

The growing linkages among poverty, resource decline, and ecological degradation constitute a formidable challenge to development policy and practice. In many countries of the South, the natural resource base on which large populations depend for their livelihood is deteriorating significantly. Pressures of commercialization often affect land use adversely from the perspective of the needs of the poorest households. Poverty forces families to cultivate increasingly fragile, non-productive lands, addressing short-term needs for survival while putting off concerns about tomorrow (Kates and Haarmann, 1992).

Approximately 80% of the world's poor live in rural areas, and, of these, nearly 60% are in regions of low agricultural potential and high ecological vulnerability (Leonard, 1989:20; World Bank, 1988; Durning, 1991). In these communities, the processes of achieving sustainable livelihoods require attention to the particularities of the local ecosystem. By definition this includes people and their institutional structures as well

as the landscape which they both create and inhabit. Central to improving livelihood systems are the capacities of local institutions to respond to challenges within these ecosystems. The effectiveness of institutional responses is linked to the roles of both women and men within the local community. Thus, gender - a key factor in the division of labor, rights, and responsibilities - affects the management of local systems for sustainable livelihoods and equitable development.

Factoring in the Gender Variable

Gender shapes the roles and relationships of human beings across all dimensions of activity. A social construction, it is one of the key variables defining access to and control over natural resources as first noted more than a decade ago by Williams (1981) and Hoskins (1982). In communities around the world, women - as well as men - are resource users and managers and have different roles, responsibilities, opportunities, and constraints in managing natural resources both within the household and in the community (Fortmann and Rocheleau, 1985; Rocheleau, 1988; Thomas-Slayter, 1989).

Conceptualizing gender is essential for disaggregating and interpreting information about the functioning of households and community organizations in natural resource management. Using the gender variable helps clarify the indefinite boundaries of household and family and the complex ways in which family, household, community, and ecosystem are linked.

Gender is central to positioning both men and women vis-a-vis institutions that determine access to land, to other resources, and to the wider economy. Today, in many countries, there are not only growing numbers of landless among the rural

poor, but there are increasing numbers of women and women-headed households among the poorest (Stichter and Parpart, 1988; Folbre, 1991; Paolisso and Yudelman, 1991). There is also a growing awareness that the burdens of natural resource destruction may fall most heavily on women in poor households (Rocheleau and Fortmann, 1985; Agarwal, 1988; Leonard, 1989; Kates, 1990; Kabeer, 1991).

In many areas, regardless of wealth and social class, women are legally landless, which limits their options for independent land use innovation (Rocheleau, 1985). In Kenya, for example, where privatization of land is well underway, women rarely have ownership rights to land, and, hence, are not eligible for credit, cooperative membership or other benefits made possible by land ownership. Given the importance of land resources for rural livelihoods, there is a clear need for attention to the resource base and to gender roles, particularly in ecologically vulnerable regions. With the growing numbers of female headed households throughout the world and the increasing role of women as household providers in declining rural economies, it is essential to incorporate gender into the discussion of resources and sustainable development.

Such an approach does not suggest that there is a "women's perspective" or that all women are alike. Class, ethnicity, and other characteristics lead to distinct experiences for all women. These differences, however, do not obviate the need for examining the ways in which social and economic roles are structured by gender. Ultimately, we need to understand the ways in which changes in the environment and in community structures affect both men and women across all social categories. Gender is a useful concept for analyzing the rural production system as

a whole in order to understand men's and women's separate, overlapping, and shared labor, responsibilities and accountability. In so doing, we can better understand rural responses to ecological degradation.

In sum, powerlessness, marginality, and dispossession are found in all corners of the world. Gender is one of the factors shaping these conditions. It is imperative to examine the role of gender in matters of access to and control over natural resources. It is these resources which constitute the basis of rural livelihood systems around the world and the key to effective empowerment of rural men and women.

SHAPING THE QUESTION: VIEWS FROM THE LITERATURE

This paper identifies issues which are relevant to increasing our understanding of gender as a key variable affecting institutional responses in sustainable resource management. We hope to clarify how gender affects the social, economic, and ecological processes at work in rural communities around the world. We believe that attention to gender can increase the equity and effectiveness of natural resource management programs.

The term "natural resources" encompasses a vast array of materials and processes. In this paper, we focus on those resources most directly relevant to rural, agricultural and pastoral communities in Asia, Africa and Latin America. These include: forests, trees and related plant and animal products for fuel, food, fodder, building materials, medicine, and other purposes; rangeland, livestock and wildlife; river systems, other water resources, and irrigation systems. Resource management encompasses the relations between a wide array of social and physical processes. For example, watershed management might include upstream and downstream cultivators, watershed

management focusing on overall management of vegetation and soils within a catchment area, as well as soil conservation and cropland management. An analysis of gender is central to an understanding of the ways in which resource users relate to all of these resources and to each other.

The literature dealing with questions of gender, resources, and institutional responses at the community level comes largely from three distinct fields: women in development, community organization, and environment and resources. Rarely have the approaches been integrated, and only within the last several years have there been scholarly works, such as Fortmann and Rocheleau (1985), Rocheleau (1987), Carney (1988), Hoskins (1988), Agarwal (1988), Davison (1988), Dankelman and Davidson (1988), Collins (1991) or Agarwal (1992) which begin to bridge the gaps.

A new framework linking these fields is needed to explore the relationships among gender, resources, and sustainable development. Such a framework would incorporate perspectives from feminist political economy, recent conceptualizations of local ecological science and practice, and models emerging from farming systems research in regard to gender. The new feminist political economy (Stamp, 1989; Sen and Grown, 1987; Antrobus, 1987; Heyzer, 1989; Shiva, 1989) focuses on gender issues within the context of women's specific historical and cultural experience. These scholars analyze the powerful underlying structures which operate to the benefit of certain classes and groups across international boundaries. They focus on the ways in which site-specific ecological and livelihood systems are linked into national and global environmental, economic, and political systems which shape the opportunities and constraints occurring at the local level.

Second, such a framework would be informed by recent

conceptualizations of rural peoples' science in regard to resource management (Richards, 1985; Blakie, 1989; Dommen, 1989; Jiggins, 1989; Rocheleau, 1988, 1991; Shiva, 1989; Stamp, 1989; Thrupp, 1989). This literature emphasizes not only the value of "indigenous knowledge," but also the need to re-evaluate the research process. Drawing on an exchange, as opposed to a technology transfer model, this research approach focuses on the resource user and attempts to increase his or her resilience and flexibility over time in the face of uncertainty and risk. In the 1990s that user is more likely than ever to be both poor and female. Moreover, as part of the social fabric, knowledge is gendered (Jiggins, 1986; Rocheleau, 1991). As Norem, Yoder, and Martin point out (1989:93), "gender differences influence the structure of the overall knowledge system."

Third, the model emerging from research linking farming systems research and gender analysis (Feldstein and Poats, 1989; Feldstein, Flora and Poats, 1990) is relevant. This interdisciplinary approach to problems of great ecological and social complexity contributes conceptually, methodologically, and pragmatically to new exploration in the area of gender, natural resources management, and sustainable development.

Two sets of issues shape this discussion. First, is an ecological focus on the interaction of the environment and human beings in a diversity of complex land use systems. Our emphasis is on human interests, values, and activities as they relate to the ecosystem, as well as on sustainable production in the context of specific ecosystems. An ecological approach allows us to see land-use and technology change as a dynamic, interactive process rather than one of incremental and unilinear movement.

Second is a community orientation based on the assertion that strong, viable local institutions and organizations can form a foundation for effective resource management, increased

agricultural productivity, and improved livelihood systems. In addition, many see local organization and grassroots movements as the key to effective social change and the empowerment of women.

Institutional analysis and cultural ecology both provide frameworks for investigating multiple uses and multiple users of resources, which are key to understanding the role of gender. We argue in this paper that men and women have varying responsibilities for local resource management at the community level, and that there is need to explore the relationships among local production systems, local organizations, and resource management and the ways in which all three are structured by gender. This matters for women's interest in changing economies and ecologies, as well as for those who would work with women and resources used and/or managed by them.

ECOLOGICAL PERSPECTIVES: GENDER, RESOURCES, AND DEVELOPMENT

Our ecological perspective as it pertains to issues of gender, community organization, and natural resources draws on the theoretical work of cultural and political ecologists (Watts, 1989; Blaikie & Brookfield, Richards, 1985), ecofeminists (Merchant, 1981, 1989; Shiva, 1988), and biological ecologists (E.P. Odum, 1983; H.T. Odum, 1971; Margulis, 1982; Lovelock, 1988), as well as a growing body of policy-oriented applied research on gender issues in resource management (Agarwal, 1987; Fortmann, 1984; Rocheleau, 1987, 1990; Williams, 1990; Talle, 1988; Jiggins, 1985, 1986; Carney, 1989; Thomas-Slayter, 1989). Through a combined focus on multiple land users and gender (Rocheleau, 1988) we seek to link apparently disparate ecological, economic, and equity concerns with the social and political context in which resources are allocated and managed and in which policy decisions are made.

Ecology

An ecological approach "challenges the mechanistic tradition by focusing on the interchange of energy, materials, and information among living and nonliving things in the natural environment" (Merchant, 1989:7). Change is viewed as dynamic, interactive, and dialectical, as opposed to linear or incremental (Levins and Lewontin, 1985). Ecology, by definition, emphasizes process and relationships as well as the context in which interactions take place. Increasingly, ecologists also treat people, their "resources" and their habitat as parts of a unified whole. Human beings are regarded as a part of nature, not separate from it. This represents a real departure from the technocratic, managerial approach to environmental science which places people outside of nature or casts them as a "disturbance."

The key concepts are those of interdependence and interrelatedness in complex, dynamic systems. Rather than the "dog eat dog" world of competitive exclusion, many ecologists now invoke images of cooperation and complementarity. The work of several eminent ecologists has emphasized co-evolution, that is, the simultaneous mutual adjustment among organisms that use and inhabit the same environments. Likewise, some have postulated the co-evolution of living organisms and their physical environments. Many ecological scientists now work from the hypothesis that the earth is a super-ecosystem controlled in large part by the living organisms which both adapt to it and simultaneously create the proper conditions for the continuation and proliferation of life. While initially greeted with skepticism, this approach has gained credibility in international scientific circles, and provides an alternative to the prevailing mechanistic and reductionist approach (Odum, 1989).

This "new" ecology lends itself well to the inclusion of

people, since it can incorporate both competing and cooperating groups and their respective use of space and resources in a given place. Ecology provides a broad array of conceptual approaches to complex interactions between resource users. While ecological theories and methods pertaining to resource utilization have dealt primarily with populations of plants and animals, they can be expanded for human ecology to include multiple resource user groups defined by gender, class and ethnicity as well as species.

Ecological concepts relevant to rural resource management may range from predator-prey relations, to resource "partitioning" between potential competitors, to mutual resource "creation" by symbiotic groups, to exchange of mutually beneficial services or products. The concept of ecological niche allows us to focus on the ways in which organisms sub divide space, resources and functions within complex ecosystems. Systems models allow us to "track" energy flows and material cycles in ecosystems, to understand the amount and the movement of energy and material between living organisms and their physical environment. The latter provides a theoretical basis for analyses that combine biological and economic elements of human land use systems, as well as an accounting system to evaluate the relative merits of particular resource management alternatives.

Cultural, Human and Political Ecology

However, when we seek to understand human land use systems, these biological models cannot stand alone. These systems are created through an interaction of culture and environment, and culture is taken here to include values that shape social, political and economic systems. The way that people divide and share knowledge, access, use and control in rural resource management reflects the social, political and economic context at local and national level. These factors influence the character

and condition of the physical landscape as well as the roles of men and women as resource users, owners, managers and caretakers.

The theories and methods of cultural and political ecology provide a basis for the other half of a more inclusive, integrative approach to gender, ecology and rural community development. Cultural ecology most often focuses on human/environment relations and the resulting land use practices in rural, non-industrial systems. Among the useful insights from this tradition are the concepts of land use intensification, the interdependence of population, land use systems and landscape (Boserup, 1970; Geertz, 1963), the development and evolution of local ecological science (Richards, 1985; Geertz, 1986) human adaptation to the environment through technological innovation, and the role of humans in transforming the local, regional and global environment (Turner, 1988). Cultural ecology also provides us with detailed descriptions from the field of the ways in which people use and manage resources and the division of rights and responsibilities between groups of people that inhabit or use the same ecosystems. While most of these descriptions tend to idealize "traditional" systems and take for granted the current division of labor by gender, we can apply the theory and methods of cultural ecology to studies of gender, resource management and community development under changing social and environmental conditions.

Political ecology, a recent off-shoot of cultural ecology and political economy, provides several good examples of a more critical approach to rural resource management using many of the field methods and concepts of cultural ecology. Landmark studies in Africa (Watts, 1983, Bassett, 1989; Blaikie, 1987; Wisner, 1988) and the Amazon (Hecht and Cockburn, 1989; Schmink and Woods, 1987) have documented the related impact of national and international economic policy on fragile ecosystems and

vulnerable groups of people. Most political ecologists focus on the uneven distribution of access to and control of resources by class and ethnicity. However, several researchers have expanded their analyses of poverty, powerlessness and environmental degradation to focus increasingly on gender-based conflicts over natural resources (Agarwal, 1987; Carney, 1988; Watts, 1989; Talle, 1988). Yet others have applied an essentially critical and feminist cultural ecology perspective to develop alternative approaches to rural development and resource management (Fortmann, 1988; Hoskins, 1988; Rocheleau, 1987; Thomas-Slayter, 1989; Williams, 1989; Rojas et al, 1987). A gender-focused land user approach derives from all of these cultural ecology traditions and innovations, with emphasis on multiple uses of resources, multiple users, a sliding scale of analysis from individual to nation, recognition of local knowledge as science and treatment of rural people as research partners (Rocheleau, 1987, 1988).

Ecofeminism

While the latter constitutes a pragmatic feminist approach to applied research on resource management, ecofeminism presents an alternative theoretical perspective on the relation between gender, culture, and ecology. Ecofeminists connect the oppression of women and the domination of nature within political and economic hierarchies (Merchant, 1989; Mies, 1986). Some scholars working on gender, environment and development link ecological concerns with feminism, and question fundamental Western modes of development and change. Shiva (1989:2) takes issue with what she calls "maldevelopment" and dispossession which have "aggravated and deepened the colonial processes of ecological degradation and the loss of political control over nature's sustenance base." The costs of resource destruction are borne largely by the poor. This crisis of poverty touches women

most severely. In sum, these scholars argue that the exploitation of both women and "nature" is exacerbated as societies of the South come into commercial production and the global cash economy.

The Ecological Overview

An ecological approach to sustainability is predicated on the continued capacity of nature to renew forests, fields, rivers, lakes and the life-supporting atmosphere, as well as the multiplicity of species which inhabit distinct ecosystems throughout the world. Many ecologists now seek to promote sustainable, non-dominating relations with nature. Cultural and political ecologists treat human decision-making and resource allocation as essential factors in environmental quality, and emphasize the social, political and economic context as determinants of resource policies and practices. For the ecofeminist there is a critical linkage between problems of domination and exploitation as experienced by women and nature. Ecofeminists see promise in fostering "female" concepts of interdependence and connection, as well as hope in the transformational politics of rural women's ecology movements and women's environmental health organizations throughout the world. Feminist cultural ecologists and applied ecologists seek insight and pragmatic solutions from all of these traditions, to address the related crises of rural women's deepening poverty and natural resource degradation.

INSTITUTIONAL PERSPECTIVES: LINKING GENDER, COMMUNITY ORGANIZATIONS, AND DEVELOPMENT

Local organizations and institutions are widely regarded as critical ingredients in the development process (Hunter and

Jiggins, 1976; DAI, 1975; Korten, 1980, 1984; Nyoni, 1987; Tisdell, 1988; Uphoff, 1986; Tripp, 1989; Olowu, 1989; Love, 1991). We focus here on collective activities of a formal or informal nature, not the broad recurring patterns of behavior, which also constitute a definition of institutions in a non-organizational sense. Given the preceding discussion of ecological perspectives, gender, and resources, it is essential to consider how organizations work at the community level and to ascertain the ways they are shaped by gender-defined roles and relations.

Most of the literature on local organization and development has emerged as a response to top down, centralized, large-scale, growth-oriented development models of the 1960s and 1970s which clearly have not met the needs of most rural people around the world. The response to this failure has spawned widespread networks of alternative development theorists and practitioners, many of them inspired by the works of Paolo Freire (1970), E. M. Schumacher (1973), and Ignacy Sachs (1976). In the last two decades analysts have looked closely at local-level organizations to ascertain what they can contribute to the development process, whether in national and international "mainstream" initiatives or in alternative strategies. In the United States the Cornell Rural Development Committee pioneered both theoretical and empirical research in an effort to understand local organizations and local institutional development (Uphoff and Esman, 1974; Uphoff, Cohen and Goldsmith, 1979; Uphoff, 1986). Since 1980, scholars working in a number of countries including Ethiopia (Griffin and Hay, 1985), Kenya (Holmquist, 1984; Thomas, 1985), Nepal (Rahman, 1984), Zimbabwe (Bratton, 1986), Paraguay (Bray, 1991), Nigeria (Trager, 1989) and Mexico (Fox, 1988) among others, have demonstrated with considerable empirical data the value of local organizations for increasing productivity,

mobilizing labor, and leveraging resources from the state. Others have focused more on local self-reliance, independence, technical assistance institutions, and ways to strengthen Third World non-governmental organizations (Korten (1990), Clark (1991), Olowu 1989), Nyoni (1987), Fowler (1985), Bratton (1989), Brown 1990).

In addition, the organizational literature has investigated women's groups and associations with emphasis on the roles of these organizations in providing access to resources, increased independence, political voice, and security for their members (March and Taqque, 1986; Mwaniki, 1986; Nelson, 1981; Staudt, 1985; Thomas, 1988; Wipper, 1984). Yet in 1989 Stamp noted that there has been little emphasis in the development literature and in development policy on distinguishing between those organizations generated from within a community's own customs and needs and those imposed from outside. Nor has there been much attention to the relationships between local organizations and the ways in which gender shapes access and participation (Stamp, 1989:95).

Organizational Frameworks: Formal and Informal

Formal associations or organizations may be divided into two broad categories: those based on ascriptive characteristics such as language or ethnicity, and those based on common interest such as cooperatives, peasant associations, or self-help groups. Membership in the former derives from ascribed characteristics such as religion, ethnicity, gender, clan or language. In some cases, all persons with a given characteristic are automatically members; in other instances, membership is not automatic, but the most fundamental requirement for joining is a particular attribute. Common interest associations include groups which

have their origin in historic, ecological, political, and social structures and material conditions of the particular setting, as well as those which have been introduced recently by outsiders, most typically the state, and occasionally donor agencies. Membership is based on common interest and is obtained simply by joining. (This may assume a certain level of resources if there are membership fees.) Such organizations are accountable primarily to their members and work largely by consensus and persuasion.

Informal networks are diverse but fall largely in four categories. First, there are patron-client networks involving bonds based on uneven reciprocal obligation and private accountability. These are usually inegalitarian but mutually beneficial arrangements in which one party offers services or support and the other largesse or various resources. Second, there are familial relationships of an extended family or clan which may vary greatly in size and complexity. Third, there are rural-urban, largely familial, networks. They may, however, involve unrelated members of a rural community or ethnic group who are prepared to help "kindred spirits" obtain jobs, permits, and the like. Finally, there are inter-household labor and resource exchange networks. These may be quite small and informal, organized on an ad hoc basis, or they may be formally structured collectivities. They may range from egalitarian to highly uneven relations of power.

Berry (1989) has explored relationships between social institutions, largely the informal networks, and access to resources. She asserts, "People's ability to generate a livelihood or increase their assets depends on their access to productive resources and their ability to control and use resources effectively. Access depends, in turn, on participation in a variety of social institutions, as well as on material

wealth and market transactions." (1989:41) While Berry writes specifically about Africa, these phenomena are observed in other parts of the world, from the Philippines (Shields and Thomas-Slayter, 1993), or Malaysia (Hart, 1991) to the United States (Hanson and Pratt, forthcoming). Thus, involvement in these networks has importance and value well beyond the immediate task at hand.

Examination of individual and household involvement in local networks and associations offers several insights. First, a variety of resource transfers take place among households. Inter-household exchanges of labor, goods, or services are often critical to the viability of the rural household. Networks may also be used to gain access to resources of the state (Berry, 1989; Holmquist, 1984). They may be used to hold both state and market at bay (Hyden, 1986); Glavanis, 1984). They may co-exist with institutions of market and state in a complementary way (Thomas, 1988). They may disintegrate as traditional relationships give way to market relations and the demands of the state (Hecht, 1984; De Janvry, 1993). Alternatively, increased levels of formal cooperation may be a consequence of the intrusion of colonialism, the market economy, and an increase in male out-migration (Jiggins, 1986; Safilios-Rothschild, 1985; Thomas, 1985; Collins, 1991; Shields and Thomas-Slayter, 1993).

Local associations, as well as informal networks, have been important for purposes of common property resource management, including management of water points, grazing lands, and forests. In the last several decades, there has been increasing pressure to privatize common resources. In many rural communities poor women are particularly dependent upon access to the commons for fuelwood and other forest products (Hoskins, 1983; Agarwal, 1986; Shiva, 1989; Rocheleau, 1990). With a decline in common property resources and increasing privatization, they have been among the

first to suffer losses. In the face of this decline, networks and associations are proving valuable instruments for providing households with increased access to productive and exchange resources. They become key elements in individual and household strategies for survival, accumulation, and mobility. In addition, networks may enable their constituents to address community problems on an ad hoc basis. Associations, on the other hand, may offer a means to deal formally with the political system since they have an explicit structure, sustained and visible membership for political leverage, and a clear purpose and mandate.

The Realities of Gender and Community Organization

Three issues are central to a discussion of community organization and gender:

1) Community Organization: access, control and benefits

First, what are the lines of access and control and who determines allocation of benefits and obligations in these organizations? What structures and processes shape patterns of control and determine commitment (time, labor, and financial resources) and accountability? How are these differentiated by gender?

Evidence around the world indicates that rapidly changing economic opportunities and constraints are affecting relationships within and between households. One consequence of these changes is that new patterns of cooperation, reciprocity, and exchange among households are evolving - and old ones are being adapted - in order to ensure household survival and to promote individual well being. These changes are shaped, in part, by the structure of local gender roles as they evolve through the gender system for allocating authority and

responsibilities.

These patterns of cooperation, reciprocity, and exchange include both informal networks and formal associations or organizations to which men and women belong in order to enhance access to resources, to public and private goods and services, and to centers of power and decision-making. They have implications not only for the access of individuals and households to resources but also for stratification patterns within communities. These organizations may lead, in some instances, to increased equity or democratization and, in others, to increased social stratification. The consequences have important implications for distinct groups of people based on differences in race, ethnicity, age, class, and, of course, gender.

2) Female headed or managed households

Second, what is the relevance of networks and associations to female headed or managed households? Evidence suggests that networks and associations are increasingly important to female-headed households, whose numbers, as noted earlier, are growing around the world. The reasons may be economic, a response to problems noted above such as loss of access to common property resources. They may relate to the acute poverty which forces some women to combine efforts in order to maximize the few resources they have, namely their labor (Thomas-Slayter and Ford, 1989; Dankelman and Davidson, 1988). Organizations are also a means of empowering the vulnerable (Bhatt, 1989; Everett, 1989; Hart, 1991). That is, networks and associations help manage uncertainty and stress in rural households and their production systems. In many places these uncertainties are growing as ecological deterioration increases, and productivity and incomes decline. Site-specific investigation of networks and

associations helps to clarify the ways in which associations provide support for local residents. Decreasing vulnerability whether to the forces of nature, to the greed of individuals, or to the injustices of political, social, and economic systems at all levels is an objective of development. Analysis of the process must include gender as a variable.

3) Gender, Organizations and Development Interventions

What is the gender-basis for involvement in organizations which are most important in managing the resources in a given community? Are both men and women participating in them, and, if so, in what ways? Both formal and informal structures are relevant to the development process and link the state, public policy, development plans, external agents, and the rural household. Understanding how they function and their impact on the women and men who participate in them is central to determining appropriate development interventions. Development policies, programs, and projects must explicitly address the social arrangements among people as they interact with each other and with the natural resource base. This cannot be accomplished without attention to the way gender shapes labor, rights, and responsibilities in rural livelihood systems (Rocheleau, 1988; Alsop, 1993).

Examining multiple sources of community-level data, Moser (1989) observes that women the world over have community managing work. Yet, most development planners have not recognized the different roles women and men play at the community level, and they have not adopted conceptual frameworks and methodological tools for incorporating gender into planning. Nowhere is this more important than in the area of community organization and natural resource management. If sustainable management of resources is a development objective, gender analysis must be

part of the planning process. It is essential to identify changing forms of community organization, and to clarify the important gender-based variables arising in community-level management of resources. This matters for men's and women's own distinct interests as well as for the objectives of outside agents of social, economic, or environmental change.

ECOLOGICAL AND INSTITUTIONAL CHALLENGES: BRINGING GENDER IN

A focus on local organizations, and both the men and women in them, is critical to address ecological decline and restore both productivity and sustainability to rural communities. Observers have found, time and again, that project performance is better and sustainable development more likely to occur when local residents identify needs, and design and implement programs for their own community (Chambers, 1983; 1990; Sandbrook, 1985; Cernea, 1987; Rocheleau et al. 1988; Morehouse, 1989; Wunsch and Olowu, 1989). Efforts to engage local residents nevertheless run the risk of neglecting the poor, the marginalized, and the powerless who may be "invisible," inaccessible, and silent as well. Where organized, their voices may still be muted by more powerful interest groups. In many communities, these categories include the vast majority of women.

Analysis must establish and improve understanding of the connections among ecological and environmental concerns, gender-based responsibilities and opportunities, and community organizations for purposes of improving policy, program, and project design. Gender, as a key variable shaping rights, roles, and responsibilities must be factored into these processes. During the course of the past decade there has been a tremendous outpouring of research on topics related to women. One of the accomplishments has been the legitimation of concern about women and development. It is now widely recognized that gender

hierarchy is as serious an obstacle as questions of class, race, and ethnicity in the struggle to achieve human justice and freedom.

At no time in recent history have we been more concerned about the fate of the world's environment and linkages among declining ecosystems, degraded resources, and increasing poverty. We strive to understand the relationships between resource management and food production, as well as the ecological issues pertaining to water, soils, forests, and land use that have critical impact on food production and on rural livelihood systems. Grasping the role of gender in these local-level processes is more important than ever.

Finding the link between long-term global and regional sustainability and local co-evolution of culture, economy, and ecology involves understanding the larger political, cultural, economic, and environmental context, the particular social and biophysical environment, and the details of the local production system. It also means understanding the strategic roles of women, particularly in poor households, in food production, household labor, family income, and as the "daily managers of the living environment" (Dankelmann and Davison, 1988).

Gender is not, however, just a women's concern. It is a social construct through which all human beings organize their

. For more detailed discussion of methods as well as case studies and policy recommendations derived from case studies, see papers by Thomas-Slayter and by Rocheleau listed in the bibliography. See also the following ECOGEN publication, Tools of Gender Analysis: A Guide to Field Methods for Bringing Gender into Sustainable Resource Management. This guide (Thomas-Slayter et al, 1993) focuses on ways to use gender analysis to increase the effectiveness of development programs and projects for sustainable resource management. It has emerged from the research and analysis of colleagues associated with the Ecology, Community Organization, and Gender (ECOGEN) research project of Clark University and Virginia Polytechnic and State University launched in 1990.

work, rights, responsibilities, and relationships. Its meaning derives from specific historical and material conditions. Understanding the gender variable in particular contexts will enable us to find more effective - and equitable - ways of managing our natural resources for building productive rural livelihood systems.

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REFERENCES

- Agarwal, Bina. (1992). "Gender Relations and Food Security: Coping with Seasonality, Drought, and Famine in South Asia," in Unequal Burden, edited by Lourdes Beneria and Shelley Feldman. Boulder, Colorado: Westview Press.
- Agarwal, Bina. (1988) "Neither Sustenance Nor Sustainability: Agricultural Strategies, Ecological Degradation and Indian Women in Poverty," in Kali for Women (eds). Structures of Patriarchy. Delhi: Kali for Women.
- Agarwal, B. (1986) Cold Hearths and Barren Slopes: The Woodfuel Crisis in the Third World. New Delhi: Allied Publishers, Ltd.
- Alsop, Ruth. 1993. "Whose Interests? Problems in Planning for Women's Practical Needs." World Development. Vol. 21, #3, pp. 367-377.
- Andersen, Margaret L. 1993 3rd edition. Thinking About Women: Sociological Perspectives on Sex and Gender. New York: Macmillan Publishing company.
- Antrobus, P. (1987). A Journey in the Shaping: A Journey Without Maps. Unpublished paper, Cambridge, Ma: The Bunting Institute.
- Barkan, Joel D., Michael L. McNulty, and M. A. O. Ayeni. (1991). "'Hometown' Voluntary Associations, Local Development, and the Emergence of civil Society in Western Nigeria," The Journal of Modern African Studies. Vol. 29:3 pp. 457-480.
- Barker, Jonathan. (1989). Rural Communities Under Stress. Cambridge: Cambridge University Press.
- Berry, S (ed). (1989) Access, Control and Use of Resources in African Agriculture. Special issue of Africa, Vol. 59, No. 1.
- Bray, David Barton. 1991. " 'Defiance' and the Search for Sustainable Small Farmer Organizations: A Paraguayan Case Study and a Research Agenda," Human Organization, vol. 50, no. 2. pp. 125-135.
- Bhatt, Ela. (1989). "Toward Empowerment." in World Development. Vol. 17, #7, pp. 1059-1065.

- Blaikie, P. and H. Brookfield. (1987) Land Degradation and Society. London and New York: Methuen Press.
- Blaikie, P. (1985). The Political Economy of Soil Erosion in Developing Countries. London: Longman.
- Boserup, E. (1970). Woman's Role in Economic Development. New York: St. Martin's Press.
- Bratton, Michael. 1989. "Beyond Autocracy: Civil Society in Africa" in Beyond Autocracy in Africa, working papers from the inaugural seminar of the Governance in Africa Program, the Carter Center of Emory University, Atlanta, Georgia, February 17-18, 1989.
- Bratton, M. (1986) "Farmer Organizations and Food Production in Zimbabwe," World Development, Vol. 14, No. 3.
- Bray, David Barton. (1991). "'Defiance' and the Search for Sustainable Small Farmer Organizations: A Paraguayan Case Study and a Research Agenda," Human Organization, Vol. 50:2 pp. 125-135.
- Brinkerhoff, Derick W. and Arthur A. Goldsmith. (1992). "Promoting the Sustainability of Development Institutions: A Framework for Strategy." World Development. Vol. 29:3. pp. 369-383.
- Brown, L. David. Bridging Organizations and Sustainable Development. Institute for Development Research, Working Paper, No. 8, 1990.
- Carney, Judith. (1992) "Peasant Women and Economic Transformation in the Gambia," Development and Change, Vol. 23, No. 2. April, 1992.
- Carney, Judith. (1988). "Struggles Over Land and Crops in an Irrigated Rice Scheme: The Gambia," in J. Davison Women and Land Tenure in Africa. Boulder: Westview Press.
- Cernea, Michael M. 1987. "Farmer Organizations and Institution Building for Sustainable Development." Regional Development Dialogue 8, No. 2:1-24.
- Chambers, Robert. (1990). "Shortcut and Participatory Methods for Gaining Social Information for Projects." unpublished manuscript.
- Chambers, Robert. (1983). Putting the Last First Burnt Mill, Harlow Essex: Longman House.
- Charlton, Sue Ellen, Jana Everett, and Kathleen Staudt (eds.)

- (1989) Women, the State, and Development. Albany: State University of New York Press.
- Clark, John. (1991). Democratizing Development: The Role of Voluntary Organizations. West Hartford, Connecticut: Kumarian Press.
- Collins, Jane. (1991). "Women and the Environment: Social Reproduction and Sustainable Development." in Rita S. Gallin and Anne Ferguson, The Women and International Development Annual, Vol. 2. Boulder, Colorado: Westview Press. pp. 33-58
- Dankelman, I. & J. Davidson. (1988). Women and Environment in the Third World: Alliance for the Future. London: Earthscan Publications.
- Davison, J. (1988). Agriculture, Women, and Land. Boulder, Colorado: Westview Press.
- Development Alternatives, Inc. (1975). Strategies for Small Farmer Development: An Empirical Study of Rural Development Projects. A report prepared for AID, Washington, DC, USA.
- Domen, A. (1989). "A Rationale for African Low-Resource Agriculture in Terms of Economic Theory," in Warren et al. Indigenous Knowledge Systems: Implications for Agriculture and International Development. Studies in Technology and Social Change Series, No. 11. Ames, Iowa: Iowa State University.
- Durning, Alan. (1991). "Poverty and Environmental Decline." World Education Reports. No. 29. pp. 5-7.
- Everett, Jana. (1989). "Incorporation Versus Conflict: Lower Class Women, Collective Action and the State in India." in Charlton et. al. (eds.) Women, the State, and Development. Albany: State University of New York Press. pp. 152- 176.
- Feldstein, H. S., C. B. Flora, S. V. Poats. (1990). The Gender Variable in Agricultural Research. Ottawa: IDRC.
- Folbre, Nancy. (1991). "Women on Their Own: Global Patterns of Female Headship." in Rita S. Gallin and Anne Ferguson. The Women and International Development Annual. Vol. 2. Boulder, Colorado: Westview Press.
- Fortmann, L. (1985). "The Tree Tenure Factor in Agroforestry with Particular Reference to Africa." Agroforestry Systems. 2:229-251.
- Fortmann, Louise and D. Rocheleau. (1985). "Women and Agroforestry: Four Myths and Three Case Studies."

Agroforestry Systems, Vol. 2: 253-272.

- Fowler, A. (1985). "NGOs in Africa: Naming Them By What They Are." in Non-Governmental Organizations' Contributions to Development by Kahiru Kinyanjui (ed.). Nairobi: Institute for Development Studies, University of Nairobi. pp. 7-30.
- Fox, Jonathan. (1988). "How do Regional Peasant Organizations Sustain Accountability and Autonomy? Lessons from Mexico," Rosslyn, Virginia: InterAmerican Foundation Report.
- Freire, Paulo. 1970. Pedagogy of the Oppressed. New York: Herder and Herder.
- Geertz, C. (1983) Local Knowledge: Further Essays In Interpretive Anthropology. New York: Basic Books Inc.
- Geertz, C. (1963). Agricultural Involution: The Processes of Ecological Change in Indonesia. Berkeley: University of California Press.
- Glavanis, K. (1984). "Aspects of Non-Capitalist Social Relations in Rural Egypt: The Small Peasant Household in an Egyptian Delta Village," in Long, (ed). Family and Work in Rural Societies. London: Tavistock.
- Griffin, K. and R. Hay. (1985). "Problems of Agricultural Development in Socialist Ethiopia: An Overview and a Suggested Strategy," The Journal of Peasant Studies. Vol. 13, No. 1.
- Hanson, Susan and C. Pratt. (forthcoming). "Feminist Politics and the Dangers of Difference: Some Notes from Two Geographers," Gender, Place, and Culture.
- Hart, Gillian. 1991. "Engendering Everyday Resistance: Gender, Patronage and Production Politics in Rural Malaysia." The Journal of Peasant Studies. Vol. 19, No. 1, pp. 93-121.
- Hecht, R. (1984). "The Transformation of Lineage Production in Southern Ivory Coast, 1920-1980," Ethnology, Vol. XXIII, No. 4.
- Hecht, Susanna and Alexander Cockburn. (1989). The Fate of the Forest: Developers, Destroyers and Defenders of the Amazon. New York: Verso.
- Heyzer, N. (1989). "Asian Women Wage Earners: Their Situation and Possibilities for Donor Intervention." World Development. 17:1109-23.
- Holmquist, F. (1984). "Self-Help: The State and Peasant Leverage

in Kenya," Africa, Vol. 54, No. 3.

Hoskins, M. (1982). Social Forestry in West Africa: Myths and Realities. Paper presented at the annual meeting of the American Association for the Advancement of Science, Washington, D.C.

Hunter, G. & J. Jiggins. (1976). Farmer and Community Groups. Agricultural Administration Unit: Local Diagnosis, Farmer Groups and Coordination of Services Network; Paper IV, Overseas Development Institute, London, UK.

Hyden, Goran. (1989.) "Food Security, Local Institutions and the State: Two Tanzanian Case Studies." paper presented at the Second Annual Hunger Research and Exchange. Brown University. April.

Hyden, G. (1986). "The Invisible Economy of Smallholder Agriculture in Africa," in J. Mook (ed). Understanding Africa's Rural Households and Farming Systems. Boulder, Colorado: Westview Press, pp. 11-35.

Jiggins, J. (1989). "An Examination of the Impact of Colonialism in Establishing Negative Values and Attitudes Towards Indigenous Agricultural Knowledge," in Warren et al. Indigenous Knowledge Systems: Implications for Agriculture and International Development. Ames, Iowa: Iowa State University.

Jiggins, J. (1986a) "Women and Seasonality: Coping with Crisis and Calamity." in R. Longhurst (ed.) Seasonality and Poverty. IDS Bulletin 17(3):9-18.

Jiggins, J. (1986b) "Problems of Understanding and Communication at the Interface of Knowledge Systems." In S. Poats, M. Schminck, and A. Spring. (eds.) Gender Issues in Farming Research and Extension. Boulder: Westview Press.

Kabeer, N. 1991. "Gender Dimensions of Rural Poverty: Analysis from Bangladesh," The Journal of Peasant Studies. Vol. 18, #21. pp. 241-261.

Kates, Robert W. and Viola Haarman. (1992). "Where the Poor Live: Are the Assumptions Correct?" Environment. Vol. 34:4. May.

Kates, R. (1990). Hunger, Poverty, and the Human Environment. Unpublished paper presented to Michigan State University's Center for Advanced Study of International Development Distinguished Speaker Series. pp., 1 - 32.

Korten, David. 1989. Getting to the 21st Century. West Hartford, Connecticut: Kumarian Press.

- Korten, D. (1984). "Strategic Organization for People-Centered Development," Public Administration Review, Vol. 44, No. 4, pp. 341-352.
- Leonard, J. (1989). Environment and the Poor: Development Strategies for a Common Agenda. Washington, D.C.: Overseas Development Council.
- Love, Alexander R. (1991-1992) "Participatory Development and Democracy," in The OECD Observer. 173. pp. 4-6.
- Levins and Lewontin. (1985). The Dialectical Biologist. Cambridge, MA: Harvard University Press.
- March, K. & Taqque. (1986). Women's Informal Associations in Developing Countries: Catalysts for Change. Boulder, Colorado: Westview Press.
- Margulis, L. (1982) Early Life. Boston: Science Books International.
- Merchant, C. (1989). Ecological Revolutions: Nature, Gender and Science in New England. North Carolina; The University of North Carolina Press.
- Merchant, C. (1980). The Death of Nature: Women, Ecology, and the Scientific Revolution. San Francisco: Harper and Row.
- Mies, Maria. (1986). Patriarchy and Accumulation on a World Scale. New Jersey: Zed Books.
- Morehouse, Ward. (ed.) (1989). Building Sustainable Communities. New York. Intermediate Technology Group of North America.
- Moser, Carolyn. (1989), "Gender Planning in the Third World: Meeting Practical and Strategic Gender Needs," World Development. Vol. 17, No. 11, 1799-1825.
- Mwaniki, N. (1986). "Against Many Odds: The Dilemmas of Women's Self-Help Groups in Mbeere, Kenya," Africa Vol. 56, No. 2. pp. 210-226.
- Nelson, N. (1981). African Women in the Development Process. London: Frank Cass and Company.
- Norem, R., R. Yoder, and Y. Martin. (1989). "Indigenous Agricultural Knowledge and Gender Issues in Third World Agricultural Development," in Warren et al. Indigenous Knowledge Systems: Implications for Agricultural and International Development. Studies in Technology and Social Change Series, No. 11. Ames, Iowa: Iowa State University.

- Nyoni, S. (1987). "Indigenous NGOs: Liberation, Self-Reliance and Development," World Development, Vol. 15, Special Supplement.
- Odum, Eugene Pleasants. (1983) Basic Ecology. Philadelphia: Saunders College Publishers.
- Odum, H. (1971) Environment, Power, and Society. New York: Wiley-Interscience.
- Olowu, Dele. (1989). "Local Institutes and Development," Canadian Journal of African Studies. Vol. 23:2.
- Paolisso, Michael and Sally W. Yudelman. (1991). Women, Poverty and the Environment in Latin America. Washington, D. C. ICRW.
- Rahman, Md. A. (1984). "The Small Farmer Development Programme of Nepal," in Rahman (ed). Grass-Roots Participation and Self-Reliance: Experience in South and East Asia. New Delhi: Oxford University Press.
- Richards, P. (1985). Indigenous Agricultural Revolution: Ecology and Food Production in West Africa. London: Hutchinson.
- Rocheleau, D. (1992). Gender, Ecology, and Agroforestry: Science and Survival in Kathama. ECOGEN Case Study Series. Program For International Development. Clark University. Worcester, Massachusetts.
- Rocheleau, D. (1991). "Gender, Ecology, and the Science of Survival: Stories and Lessons from Kenya." Agriculture and Human Values. pp. 156-165.
- Rocheleau, D. (1990). "Gender, Conflict and Complementarity in Social Forestry: A Land User Approach." Paper presented to the Sub-Plenary on Social Forestry, IUFRO Quinquennial Congress. Montreal. August.
- Rocheleau, D. (1988). "Gender, Resource Management and the Rural Landscape: Implications for Agroforestry and Farming Systems Research," in Susan Poats, M. Schmink, and A. Spring (eds). Gender Issues in Farming Systems Research and Extension. Boulder, Colorado: Westview Press, pp. 149-169.
- Rocheleau, D. (1987a). "A Land User Perspective for Agroforestry Research and Action." in H. Gholz (ed.) Agroforestry: Realities, Possibilities, and Potentials. Dordrecht: Martinus Nijhoff.
- Rocheleau, D. (1987b). "Women, Trees, and Tenure: Implications for Agroforestry Research and Development. In J.B. Raintree (ed.) Land, Trees and Tenure. Madison: University of Wisconsin, Land Tenure Center. pp. 79-120.

- Rocheleau, D. (1985). Land Use Planning with Rural Farm Households and Communities: Participatory Agroforestry Research. ICRAF.
- Rocheleau, D., F. Weber, and A. Field June. 1988. Agroforestry in Dryland Africa. Nairobi: ICRAF.
- Sachs, Ignacy (1976). The Discovery of the Third World. (translated by Michael Fineberg). Cambridge, Ma: MIT Press.
- Sandbrook, Richard. (1985). The Politics of Africa's Economic Stagnation. Cambridge: Cambridge University Press.
- Safilios-Rothschild, C. (1985). "The Persistence of Women's Invisibility in Agriculture: Theoretical and Policy Lessons from Lesotho and Sierra Leone." Economic Development and Cultural Change. V. #33. pp. 299-317.
- Schmink, Maarianne and Charles Woods, (1990) Contested Frontiers in Amazonia. Center for Latin American Studies. Gainesville: University of Florida.
- Schumacher, E. F. (1973). Small is Beautiful: Economics as if People Mattered. New York: Perennial Library.
- Sen, G. & C. Grown. (1987). Development, Crises, and Alternative Visions. New York: Monthly Review Press.
- Shields, Dale and Barbara Thomas-Slayter. (1993). Gender, Class, Ecological Decline, and Livelihood Strategies: A Case Study of Siquijor Island, The Philippines. ECOGEN Case Study Series. Program for International Development. Clark University. Worcester, Massachusetts.
- Shiva, V. (1989). Staying Alive. London: Zed Books, Limited.
- Snyder, M. (1990) Women: The Key to Ending Hunger. The Hunger Project Papers, No. 8, New York: The Global Hunger Project.
- Stamp, P. (1989). Technology, Gender and Power in Africa. Ottawa, Ontario: International Development Research Center.
- Staudt, K. " Women's Political Consciousness in Africa: A Framework for Analysis." in Monson and Kalb (eds) Women as Food Producers in Developing Countries. Los Angeles: University of California.
- Stichter, Sharon and Jane Parpart. (eds.) (1988). Patriarchy and Class: African Women in the Home and the Workforce. Boulder: Westview Press.
- Talle, (1988). Women at a Loss: Changes in Maasai Pastoralism and

Their Effects on Gender Relations. University of Stockholm, Stockholm.

Thomas-Slayter, B. (1992). "Politics, Class and Gender in African Resource Management: The Case of Rural Kenya." in Economic Development and Cultural Change. Vol. 40. #4. July. pp. 809-828.

Thomas-Slayter, B. & R. Ford, (1989). "Water, Soils, Food, and Rural Development: Examining Institutional Frameworks in Katheka Sublocation." Canadian Journal of African Studies. Vol. 23, No. 2. pp. 250-271.

Thomas, B. (1988) "Household Strategies for Adaptation and Change: Participation in Kenyan Rural Women's Associations," Africa. 58 (4), pp. 401-422.

Thomas, B. (1985). Politics, Participation and Poverty. Development Through Self-Help in Kenya. Boulder, Colorado: Westview Press.

Thrupp, L. (1989) "Legitimizing Local Knowledge: From Displacement to Empowerment for Third World People," in Warren et al. Indigenous Knowledge Systems and Its Implications for Agriculture and International Development. studies in Technology and Social Change Series, No. 11. Ames Iowa: Iowa State University.

Tisdell, C. (1988). "Sustainable Development: Differing Perspectives of Ecologists and Economists, and Relevance to LDCs" World Development, Vol. 16, No. 3.

Trager, Lillian. (1989). "Local-Level Development in Nigeria: Institutions and Impact." paper presented at African Studies Association meetings. Atlanta, Georgia.

Tripp, R. (1989). "Farmer Participation in Agricultural Research: New Directions or Old Problems?" Discussion Paper #256, Sussex: Institute of Development Studies.

Uphoff, N. (1986). Local Institutional Development: An Analytical Sourcebook with Cases. West Hartford, Connecticut: Kumarian Press.

Uphoff, N. & M. Esman. (1974) Local Organization for Rural Development: Analysis of Asian Experience. Rural Development Committee, Center for International Studies: Cornell University.

Uphoff, N., J. Cohen, and A. Goldsmith. (1979) Feasibility and Application of Rural Development Participation: A State of the Art Paper. Rural Development Committee, Center for

International Studies: Cornell University.

- Watts, M. (1988) "Struggles Over Land, Struggles Over Meaning: Some thoughts on Naming, Peasant Resistance and the Politics of Place." in R. Golledge, H. Coucelis and P. Gould (eds.) A Ground for Common Search. Santa Barbara: Geographical Press.
- Watts, M. (1983) Silent Violence: Food, Famine, and Peasantry in Northern Nigeria. Los Angeles: University of California Press.
- Wipper, A. (1984). "Women's Voluntary Associations," in Hay and Stichter, (eds) African Women South of the Sahara. Burnt Mill: Longman Press, pp. 69-86.
- Wisner, B. (1988) Power and Need in Africa: Basic Human Needs and Development Policies. London: Earthscan Publications, Ltd.
- World Bank. (1989). World Development Report, 1989. New York: Oxford University Press, 1989.
- World Bank. (1989). Kenya: The Role of Women in Economic Development. World Bank, Washington, DC, USA.
- Wunsch, J.S. and Dele Olowu. (eds.) (1989). The Failure of the Centralized State: Institutions and Self-Governance in Africa. Boulder, Colorado: Westview Press.