

GENDER AND ENVIRONMENT: LESSONS TO LEARN

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Summary

This article focuses on the differentiated relationships between women and men in resources use and management, at the implications of environmental degradation for gender differentiation, and the steps taken to cope with these. It is underlined that although women are key players in environmental use and management, care for the environment should not be added to the long list of tasks for which women are already responsible.

Women's work as the active, labor-based interaction with the material world forms an important determinant of women's interaction with natural resources and ecological processes. This work, and therewith the interaction with the physical environment, is gender-determined. Women play a major role in food collection, production, and preparation, e.g. in agriculture, forestry, and fisheries: all depend on natural resources. But also in women's household tasks, for example water and energy collection, as well as income-generation, the gender-environment relationship with the physical environment becomes visible. The article analyses the gender-differentiated interactions between people and their environment in a situation where there is a dynamic balance between the socio- and ecosphere: or sustainable development. In the socio-sphere

micro-, meso-, and macro-levels are distinguished. In the many situations, which are not sustainable, (for example where deforestation, pollution, and soil degradation increase) also women's work, and gender relations are influenced adversely. People, including women, have developed strategies to handle these problems; and governments and developments organizations are taking rectifying actions at different levels, focusing on improving the environmental situation, the position of women, and/or the socio-economic context. It is argued, however, that it is a prerequisite that actions are being taken at all these levels in a coordinated way. Sustainable development asks for a basic understanding, recognition, and focus on both environmental and social—including gender—aspects, and their inter-linkages.

1. Introduction

People live in a livelihood with all its specific environmental, human, social, economic, and cultural characteristics (Scoones, 1998). Everywhere the physical environment differs. But also the set-up of society is very differentiated: there are women and men, young and older people, people from different classes, castes; and religious, and cultural backgrounds. This article focuses on the differentiated relationships between men and women and their environments. It is based on personal experiences and studies, (mainly in India and other countries in the world) literature, and documentation.

Internationally the attention for gender and environment issues has grown significantly during the past decades. After the first UN Conference On Environment And Human Settlements in Stockholm in 1972, the Women's Decade (1975–1985) started. That found its conclusion during the UN Conference on Women in Nairobi in 1985 and the parallel NGO Forum. At both these occasions for the first time attention was asked for women's position in relation to environment and natural resources at the international level. During the process for the preparations of the UN Conference On Environment and Development (UNCED), Rio 1992, many women's organizations and individuals played a major role in putting gender issues on the agenda; and finally in *Agenda 21*. It was underlined that environmental sustainability for life on this planet was unthinkable without considering the women who make up more than one-half of the world's population. In *Agenda 21* women were recognized as one of the nine important Major Groups. At the World Summit For Social Development, in Copenhagen in 1995, women were able to bring worldwide attention to the fact that the majority of people living in poverty are women and that the majority of women are poor. It was highlighted there, that women must be involved in decision-making to bring about the necessary changes. (Friedlander, 1996).

The Fourth UN Women's Conference in Beijing (September 1995) resulted in the "*Platform For Action*". A special section (K) is included in the "*Platform For Action*" on Women and the Environment. It calls upon governments (at all levels), international organizations, NGOs, and private sector institutions, (1) to involve women actively in environmental decision-making at all levels; (2) to integrate gender concerns and perspectives in policies and programs for sustainable development; and (3) strengthen or establish mechanisms at the national, regional and international levels to assess the impact of development and environmental policies on women. (United Nations, 1995).

In the processes preparing for the World Summit on Sustainable Development (Johannesburg, 2002) many organizations are lobbying for a clear gender perspective; for example through the drafting of a *Women's Action Agenda for a peaceful and healthy planet 2002-2015*.

Many development organizations already focus for more than three-decades on specific theme-areas, such as gender, human rights, and environment, in order to promote sustainable development for people, communities, and countries. In each of these areas initiatives are supported and promoted; such as support to women's organizations, gender sensitization processes within organizations, sustainable land use-activities; or environment and development legislation, awareness raising, advocacy, and lobbying.

The reality, in which people live, shows, however, that these issues cannot be dealt with in an isolated or purely sectoral way. In life you cannot separate social and physical aspects. Therefore, it is very important and relevant to also work on these issues in an integrated way, looking at the linkages (and non-linkages), which exist. It is in a country like India, for example, that already in the 1970s-beginning 1980s several efforts took place, which made linkages between these themes more visible: the activities of the Chipko-movement in the Garhwal and neighboring regions of the Himalayas, in which many women participated in an environmental struggle, or the State of India's Environment report (CSE, 1985) which described the actual relationships between women and the Indian environment. Already in the eighteenth century some women under leadership of Amrita Sen had actively involved themselves in an environmental struggle for survival in Gujarat (India). In Cape Verde, which was struck by severe droughts, by the end of the 1970s it was women who were growing half a million seedlings a year. Because most of the men work away from the islands, replanting has been left to the women and children. With their work, much of the hillsides had been terraced and replanted, and many low-lying sandy areas planted out with shrubs. (FAO and SIDA, 1987) The Acao Democrática Femina Gaúcha in Brazil was originally a women's organization focusing on social and educational issues. But as from 1974 the organization put environment high on its agenda: so even that it had become the Friends of the Earth Brazil. (Dankelman & Davidson, 1988).

This article looks at gender relations in resources use and management, at the implications of environmental degradation for gender differentiation and the steps taken to cope with these. "**Gender**" is in this context defined as a sociological indication of comparative relations between (male and female) sexes. "Gender and development" considers the interdependent nature of women and men's positions in society (Barrig & Wehkamp, 1994). The current Gender and Development approach is not only concerned with women, but with the social construction of gender and the assignment of specific roles, responsibilities, and expectations to women and men. (Matiza, 1993).

It should be underlined from the beginning that although the focus of this article will be on gender aspects in resources use and management and women prove to be - often neglected - key players in that, care for the environment should not be added to the long list of care tasks for which women are already responsible. Women's roles are all the time related to those of men. Gender relations determine the type of work women carry out and their responsibilities and rights. (NEDA, 1997 No.1) Agarwal warns that the

fact that women within their own socio-economic classes occupy different positions from men is related to gender-roles and not to an inborn affinity with the environment. (Agarwal, 1992) Wickramasinghe (1994) stresses that it is mainly a material interest in the well-being of their families, which motivates women to become active in environmental struggles.

2. Gender Differentiation in Resources Use and Management

A peasant woman from India explained to us - development workers, policy makers and academics, some time ago in Hyderabad:

“Life is a whole-it is a circle.

That which destroys the circle is threatening life.

That which restores the circle will bring life”. (CWDS, 1991). (Note: During the National Peasant Women Summit on Environment, which was held in Hyderabad, August 26–30, 1991. This was a meeting of poor peasant women and policy-makers, academics and development workers, as a preparation for UNCED, with the objective to give voice to women’s concerns. It was organised by the Centre for Women’s Development Studies (Delhi) and UNIFEM).

As many recent studies have indicated, women play a predominant role in the management and use of natural resources at the local level. As Davidson and Myers describe it, women are often responsible for the **primary environmental care** (Davidson and Myers, 1992). It is of course dangerous to generalize about the position of women; there are many differences according to society or community, class, caste, and age. But what is obvious, all over the world, is the gender differentiation that exists in relation to the management of natural resources.

In her very clear article on ecological transitions and the changing context of women’s work in tribal India Geeta Menon (1991) describes **work** as the active, labor-based interaction of human beings with the material world. Historically this interaction has been intricately based upon the natural environments in which human populations survived, since nature and natural resources and processes represented that material world. She distinguishes major areas of human work: food procurement (incl. food gathering/collection and production); the protection of life, property and territory; and childbearing/rearing (incl. maintenance of basic health standards). Extension activities of these areas are: food processing and distribution, house construction, fencing and care of livestock, maintenance of sanitation and physical cleanliness. The traditional tribal economy was based on a division of labor along gender lines.

2.1 Women Maintaining the Food Chain

Food gathering was primarily a female responsibility. According to feminist contentions, e.g. in the writings of Ester Boserup (1989) it is argued that it was actually “woman-the-gatherer” who was a source of sustained food supply (and not “man-the-hunter”). Her activities, among which were the gathering of fruits, nuts, edible leaves, flowers, mushrooms, roots, tubers, and medicinal herbs etc. provided daily sustenance, while meat was merely a supplementary food item. Studies on present-day gatherer–

hunter communities show that vegetable foods and fish make up 60 to 80 percent of the total calorie intake of the community.

Women play a major role in **food collection**. The Brahui women in the Noza sub-watershed in Balochistan, Pakistan, go out in early spring. Walking in groups or sometimes alone they collect tiny edible plants and mushrooms. The plants are green and succulent and all lumped together as “spinach” even though each plant has its own name. These spring greens are sometimes life saving and provide much needed nourishment after a long winter of not enough to eat. Medicinal plants are flowering from May through June. Then small groups of women walk in the early mornings to collect medicinal plants. In a FAO supported project they went out for walks to identify these plants. Women participating in the activity expressed their desire to record the collected information. One of them, Zer Malik, said:

“We want our daughters to be able to see how much knowledge their ‘illiterate’ mothers actually possessed. Our daughters are not so interested in traditional remedies and are turning more and more to modern allopathic medicine.” (FAO, 1997 No.1).

Women still play an important role in **fishing** communities. Sometimes they go out fishing themselves, but more often it is they who handle the preservation and marketing (Steady, 1985, 47–50). Other water organisms like cockles, are being used and managed by women.

According to Ester Boserup (1989) and others, women—daily dealing with vegetable foods and wild seeds to experiment by way of planting the seeds—have played a major role in the revolutionary innovation from gathering into production of food, through slash-and-burn cultivation. Because food collection required a thorough knowledge of plant and animal growth, maturation and fruition or reproduction, women have been credited with the discovery of domestication and cultivation of plants and animals and invented selective breeding. They discovered propagation by shoots and cuttings, seed selection and the construction of seedling beds. The following inventions are credited to women in cultivation: the use of ash as fertilizer, the creation of work tools such as the hoe, spade, shovel and simple plough; fallowing and crop rotation; mulching, terracing, contour planting, irrigation and land recuperation through tree planting. Seven of the most important cereals (worldwide) are all domesticated by women: wheat, rice, barley, oats, sorghum, millet, and rye (Stanley, 1982). Sir Albert Howard in his *An Agricultural Testament* of 1943 underlined that he saw in India’s peasants a knowledge of farming far more advanced than that of the West. In this land use women played an essential role.

In a study on women’s roles in **food production** in villages in the Garhwal Himalayas (Shiva et al, 1990) it became obvious that women played a major role in natural farming, the farming, which is based on sustainable flows of fertility from forests and farm animals to croplands. These food systems have always included the forest and animal systems in their processes. Women’s work in agriculture has traditionally been work in integrating forestry and animal husbandry in farming. The internally recycled resources provide the necessary inputs for seeds, soil moisture, soil nutrients, and pest control.

In Africa women produce 80% of the consumed food, in Asia this percentage is 60%, and in Latin America 40%. According to the FAO women make up 45% of the total agricultural labor force throughout Asia. This includes work in subsistence farming as well as on export-oriented farms and plantations. But it was also concluded that women often work longer days on the fields than men, by as much as 43%. In the Noza sub-watershed in Pakistan, an average working day for a Brahui woman is seventeen hours long during the productive season. (FAO, 1997 No.1).

Singh (1988) describes women's contribution in animal husbandry in Northern India as follows: the woman harvests the crops and stakes the hay for domestic animals; she transports the leaf fodder, and bedding material over long distances on difficult terrain; she grazes the cattle on distant grazing lands, carries animals to water sources for water, takes care of young calves, milks the animals, cleans the animal shed; and executes all other activities related to animal husbandry, except ploughing, castration, purchase, and sale. Especially the collection of fodder—leaves, herbs, and grasses—is almost exclusively a women's task, and that of children—often girls.

But also in other agricultural activities her role is evident. Bhata and Singh (1987) showed that women in the hill agriculture of Himachal Pradesh do 37% of the work in sowing, 59% in inter-culture, 66% in harvesting, 59% in trenching, and 69% in tending the animals. All this apart from all the household chores, which include collection of fuel and water. Women work also in irrigated agriculture: a Grameen Krishi Foundation project in Northwest Bangladesh showed that women carry out about 50 percent of all tasks in rice production; they even contribute for 50 percent in the presumably male task of irrigation. (Jordans and Zwarteveen, 1997). Singh (1988) accounts that a pair of bullocks works for 1604 hours, a man for 1212 and a woman 3485 hours in a year on a one-hectare farm in the Indian Himalayas.

Women know a lot about the cultivation practices of indigenous varieties of crops, for example women rice growers in central Libena (India). During an experiment the women identified 25 indigenous rice stalks with at most two or three errors; not only describing the different varieties, but also mentioning other features, such as the ease with which the husk can be removed, the length of time required to cook and suitability to different ecological conditions. The men could hardly get two or more correct answers. In a small sample participatory study with women hill farmers in Dehra Dun, Shiva was provided with not less than 145 species of forest plants that women have knowledge of, and which they utilize. (Shiva and Dankelman, 1992) The Brahui women in the Noza sub-watershed (Pakistan) identified 35 medicinal plants during field walks. (FAO, 1997 No.1).

In irrigated agriculture large quantities of water are used. Women's rights to water for agriculture vary enormously. In the Andes women are allowed to participate in the construction of irrigation systems and thus to establish rights to irrigation water. However, men dominate the written registration process and decision-making bodies. In Tanzania, by contrast, women are prohibited from operating water infrastructure facilities. (NEDA, 1997 No.2).

2.2 Household Chores

According to Menon (1991) because of the fact that one of the three major areas of human work, childbearing and rearing, is exclusively assigned to women, not only elements like the provision of health services and sanitation/hygienic measures, but also related aspects, like the provision of household energy and water are among women's responsibilities. This is not only true in rural, but often also in urban situations.

Women, and with them girls, are almost the exclusive suppliers of **water** for household use. They also play a predominant role in the provision of water for animals, crop growing, and food processing. It is often women who decide often where to collect water, how to draw, transport, and store it, what water sources should be used for which purposes, and how to purify drinking water. Women often make a disproportionately high contribution to the provision of water for family consumption compared with men. Male family members rarely help in the often heavy and time-consuming task of water transportation, and then only if they have bicycles or carts. They have acquired specialized knowledge in the field of local water management and use. It is a knowledge they share, especially with their daughters and with each other. Because many other tasks women perform—such as washing clothes and dishes, cleaning houses and latrines, and attending to personal hygiene, women have established specific ways of reusing wastewater to conserve supplies.

Most domestic **energy** comes directly from biomass sources. Wood fuels (both firewood and charcoal) and other bio-fuels, such as animal and crop residues, form the only source of energy for about two billion people, while some 1.5 to 2 billion have no access to electricity. (UNDP, 1998). Although, in spite of price increases, oil consumption and electricity production (especially from hydro sources) has increased, poor households—even in the city—still depend on biomass sources for their energy supply. Although men sometimes may share the task, women have the primary responsibility for meeting household energy needs through fuel collection, preparation, (e.g. chopping and drying) and use (cooking and tending the fire). Children, especially girls, take part in many of these tasks. All these tasks may take many hours per day.

Nearly 73% of women in Asia concentrate on obtaining fuel wood, food, and fodder from the nearby forests: 64% in Nepal, 84% in the Philippines, and 84% in Sri Lanka. (Wickramasinghe, 1994). Men in the Uttar Pradesh hills (India) are found to break the traditional division of labor only by fetching fuel and fodder when the productivity of women's labor is high, for example on irrigated land. When domestic fuel becomes more commercialized; and collection is oriented towards large-scale organized sale and charcoal making, men's participation increases. But so long as technology and marketing are absent, the task of fuel gathering is regulated to women. Women can carry loads up to 35 kilograms over distances as much as ten kilometers from home. The weight largely exceeds the maximum weights of 20 kilograms permissible by law in many countries.

In many so-called traditional societies women have played and continue to play an important role in the construction and management of **human shelters** and infrastructure (Steady, 1993). Households closely reflect the conditions of the

surrounding physical environment, and it is women, often assisted by female children, who bear the responsibility for protecting members of their households, especially the young, aged, and infirm, from pollution, poor sanitation, and natural disasters, and the risks inherent in poor housing conditions. Women may spend as many as twenty hours a day in the home, especially in secluded societies. In many cases, human activities in human shelters and the physical infrastructure supporting them, such as roads, water, energy, food, and sanitation systems, have come to depend on women's unpaid labor. The responsibility of maintaining a clean and safe household environment, including waste management, still falls primarily on women's shoulders.

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Biographical Sketch

Irene Dankelman (born 1953) an ecologist, is presently coordinator sustainable development at the University of Nijmegen, Netherlands; and senior advisor sustainable development to WEDO (Women's Environment and Development Organisation). She has been working in the field of environment and sustainable development for the past twenty-five years—as coordinator, senior adviser, consultant, researcher and lecturer—with national and international NGOs (like Netherlands IUCN Committee, World Conservation Strategy Steering Group, Both Ends, Environment Liaison Centre International, IUCN), donor agencies (like Novib or Oxfam-Netherlands), universities (Agricultural University of Wageningen, Free University Amsterdam, University of Nijmegen), and for governmental organizations (Ministry of Development Cooperation, OECD) and the United Nations (UNIFEM and UNCED). Her specialization is in the field of environment, sustainable development and social issues, with a specific focus on gender aspects. She is a member of the Commission on Development Cooperation of the National Advisory Board on International Issues, of the Working Group on Ecology and Development of the National Commission on International Nature Conservation, and of the Inspiration Group of the international COMPAS program (Comparing and Supporting Endogenous Development) of ETC Ecoculture. Irene Dankelman has published widely in national and international magazines and books, e.g. together with Joan Davidson she published the book: *Women, And Environment In The Third World, Alliance For The Future*. London: Earthscan (1988).