ENVIRONMENTAL STRATEGIES TO EMPOWER

AFRICAN RURAL WOMEN

by

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Once a leading exporter of agricultural commodities, Africa now leads the world in reliance on food imports. In the past 20 years, Africa has also experienced an increase in population, with an increased incidence of malnourishment and starvation. These problems are closely related to land degradation due to overuse (Mathews, 1989). The Economic Commission for Africa conducted a wide-ranging study of the continent and warned that its "...exploding population threatened to turn farms, rangelands, and other rural areas into desert and evaporate already scarce water supplies" (Mathews, 1989). The commission predicted that in the rural areas, "...lack of arable land (and governmental funds) would drive poverty to unimaginable dimensions" (Mathews, 1989).

Due to this rural environmental degradation people entered the cities where funds for education, health care, and housing were already being stretched to fulfill existing urban needs. Most government aid is dispersed to areas of greater population density.

What little money is received in rural areas from the government goes directly to modernization projects that usually do not benefit the vast rural areas. Often such projects fail because of poor management and a low level of awareness of local conditions (Tietenberg, 1990). African planners and developers should drop modernization projects, such as taking land to build dams, ports, and cash crop
plantations in the rural areas, and renew their interest in redeveloping and maintaining Africa’s essential resources: soil, trees, and plants (Dankelman, 1988).

Although government leaders often fail to recognize that Africa’s future growth depends on increased farm productivity, African women are beginning to take steps to promote the sustainability of African agriculture. The link between farm productivity and poverty has stimulated some rural African women to come together and seek out new ways to ensure their families’ futures.

Many of those dispossessed of land by the increasing concentration of male ownership are women and their children. Women have title to only one percent of the world’s land (Dankelman, 1988). Because of this, there is little incentive to produce a surplus of crops which would provide them with extra money in cases of emergencies. Yet they produce more than half of the world’s subsistence food, and in countries experiencing food scarcity the percentage is even higher. For example, women produce more than 80 percent of the food for sub-Saharan Africa (Foster, 1986).

Women make up the majority of subsistence farmers. In most rural cultures, it is their work which provides a family with its basic diet and with any supplementary food. "In the agricultural sector of Africa, women perform 80 percent of the storing, 90 percent of food processing, 60 percent of the marketing, and 50 percent of the domestic animal care... often with few, if any, modern tools" (ILO/INSTRAW, 1985).

With the displacement of subsistence agriculture to less fertile areas, women who still have access to land must travel longer distances to their fields, which
further decreases the incentive to plant surplus crops. When they arrive, they must work hard to compensate for severe soil erosion and low soil fertility. When their plots are exhausted, they must move elsewhere in search of food. In the Ivory Coast, women have had to leave their own fields because of expanding cash crop farming, agro-industrial coconut and palm oil plantations, which grow crops for exporting. They were forced to move into the Tai Forest, where farming not only caused environmental damage, but the land they used was not suitable for sustainable agriculture (Bamba, 1985). Environmental degradation of this kind has other consequences as well. In Mozambique, not only political instability but erosion and environmental degradation are causing increasing numbers of refugees to move into Zimbabwe, imposing extra burdens on the capacity of Zimbabwean resources (Dankelman, 1988).

The women in the rural areas of Africa rarely receive assistance from the government or the males in their household. Men often migrate to work in urban areas, mines, and on large agricultural estates where they are paid for their labor. Since men in Africa are not required by law to support their families, the women and children often suffer from not receiving this additional income, and often live in poverty (Buvinic, 1978). Since African women traditionally bear an average of six children in their lifetimes, they often struggle to acquire the basic necessities for their families (Mathews, 1989).
Nor can African rural women depend on governmental assistance to support their families. Most governmental aid is dispersed to the urban areas for development and social programs.

Therefore, being the primary providers, these women must turn to each other in order to support and empower themselves, or live complacently in poverty.

Facing the scarcity of rainfall in large expanses of the continent, the risk of deforestation, and ongoing desertification, some of these women have realized the need to work together to increase their chances for survival.

In this paper I illustrate how through "grass roots movements... women empower themselves and effect change in their communities. It is also true that, for the most part, the efforts of these women are on a small scale, a more life-sized scale" (Brown, 1991). Grass roots organizations help rural women come together to listen and learn from one another and to motivate others. They raise environmental awareness to create and reintroduce methods to enhance the soil, restore vegetation, increase crop yield, obtain more income, and become socially enriched.
GRASSROOTS MOVEMENTS

Like any other disadvantaged group, women organize because it provides them with a larger pool of resources upon which to draw. "My experience is that it is usually women who have been the first to organize and lead ecological grassroots movements to press for change, perhaps because we are directly involved with family affairs" (Guazzelli, 1985.)

Women have formed grassroots movements to promote their interest in obtaining sustainable management of their natural resources and environments. Women, as providers and carers, are dependent upon the renewability of natural systems to provide for their basic needs of food, water, and shelter. When the women in the Reni forests of the Chamoli district, Uttar Pradesh, India, were confronted with the prospect of 2500 trees being destroyed by commercial industry, the Chipko Andolan movement, a grassroots activity, grew out of the protest. The women encircled themselves around the trees and the contractors withdrew from the forest. The Chipko movement presently organizes ecodevelopment camps in which rehabilitation of the ecological balance by tree planting is promoted (Dankelman, 1988).

In Africa, Kenya specifically, the threat of deforestation and desertification are so great that the Green Belt Movement, organized by Wangari Maathai, surfaced. In her book, The Green Belt Movement: Sharing the Approach and the Experience, she stressed that women in rural Kenya primarily want security with regard to food and shelter in an area where famine, drought, and poverty affects their daily lives. In
contrast, however, she notes that the Kenyan government has aspired to allocate money in the national budget to the extensive farming of rural areas for exporting cash crops, and building hydro-electric dams and airports. Such agricultural activities and projects do not leave a lot of fertile land for the subsistence farmers. (Maathai, 1988).

The Movement arose out of a ‘Save the Land’ tree-planting ceremonial, supported by the National Council of Women of Kenya, to create natural wind breaks and address the problems of desertification facing the rural population. Faced with the problems of firewood and food shortages, malnutrition, inadequate clean water, and soil erosion, Green Belt members sought ways to reduce the effects of deforestation and provide a forum for women to be creative and effective leaders.

One of the Green Belt’s main strategies was to provide fuelwood to Kenya’s rural population, which is scarce and highly valued because the communities are dependent on it to warm meals and heat homes. One example of how the Green Belt Movement addressed the scarcity of fuelwood was by helping create a public green belt centered around land owned by a cooperative of 800 rural women in Kiambu, Kenya (NGO, 1987). Another strategy was to prevent soil erosion. Maathai explains that soil erosion is precipitated by the indiscriminate cutting down of trees and other vegetation, and the destruction of indigenous forests (either by the rural residences or the government), which adversely affects catchment areas of rain (Maathai, 1988). These problems contribute to deforestation and desertification and can be controlled by planting regional trees, maintaining vegetative cover, and
THE GREEN REVOLUTION

Government implemented agricultural development programs seem to be inefficient in rural Africa because they are not aware of farmers specific, local concerns. This is why the Green Revolution failed small rural subsistence farmers, who are predominantly women.

The Consultative Group on International Agricultural Research (CGIAR), working with the World Bank, launched a Green Revolution program in the late 1960's (Walsh, 1991). The purpose of the program was to "...concentrate exclusively on expansion of agricultural output, especially of food" (Rudra, 1982). This program has proven to be disastrous for subsistence farmers who did not possess the money or skills to be pushed into growing cash crops.

Traditional rural agricultural practices of the farmers would be replaced by methods dictated by the Green Revolution's policies. High-yield varieties of seeds would be purchased from the program’s administrator instead of using seeds picked and stored by the farmers themselves. The high-yield seeds did not produce fertile seeds, so new seeds had to be bought every year. Animal manure was labeled inadequate and was replaced with store-bought chemical fertilizers. Pests were no longer removed by hand but were destroyed by harmful pesticides and herbicides. Water control instruments also had to be bought and set up just to allow the seeds to grow. Water tanks and small dams that the farmers previously used were labeled obsolete.
The Green Revolution’s policies stressed a single crop system which depleted Africa’s soil. The lack of intercropping plants robbed the small farmer’s soil of its nutrients, and unlike the large cash crop plantations, were not able to pay for another fertile lot. Maize, the predominant crop grown in Africa under the Green Revolution’s policies, proved to be too stressful to the soil. It was absorbing more nitrogen from the soil than it was replacing. The high-yield seeds were "sensitive to both the quality of irrigation and to pests that flourish once the ecological hardiness of traditional seed strains is lost" (Beneria, 1982). In Ghana, rural women were reluctant to accept new hybrid maize seeds since the crop had an unpleasant taste, was hard to prepare, was less resistant to drought and insects, required different storage methods, and depended on chemical fertilizers which changed the taste. Although these objections were rational, they were not considered by the development agency (Ahmed, 1985). The chemical pesticides and herbicides harmed the small farmers’ health.

Walsh (1991) states that,

it was becoming clear that the agricultural practices behind the Green Revolution were causing social and ecological problems in some areas. Liberal applications of water, fertilizer, and pesticides are required to get the most out of the improved crop varieties developed by CGIAR, and critics argued that the group’s concentration on intensive agriculture, large farms, and the best growing areas damaged the environment and offered little to poor farmers whom the research network was established to help.

Converting to the Green Revolution’s methods proved to be too demanding financially and physically for the farmers. In Zimbabwe, a woman too poor to
EMPOWERING AFRICAN WOMEN- BY LISTENING TO THEM!

It is not the lack of knowledge, but the lack of power and financial resources, that inhibits women. Women need to come together in grassroots activities by forming agriculture related cooperatives, clubs, and associations to deal with the concerns of sustainable resources. A successful outcome would ensure sustainable livelihoods and, with time, sustainable development. The sustainability of development, including the careful preservation of ecosystems and species, is of great importance to women who depend on the environment’s natural resources to provide for the basis of their lives. Women can gain collective power by organizing themselves into associations, power grows in numbers, and numbers can actively lobby for sustainable development. Once reaching the pinnacle, the governments will listen and work with the women, by building upon their indigenous practices, and together they may work at increasing Africa’s agricultural exports.

Agricultural methods that will be used by rural women adapt to the environment and are sustainable without long-term damage to the land (Shiva, 1985). The knowledge and experience of generations permit women to have great flexibility in cropping practices. For example, the serious decline in soil fertility in many parts of Africa has caused them to shift their cropping from maize to cassava. Although the traditionally-used cassava root offers less nutritional value than maize, women have begun to use all parts of the plant, including its leaves, in meal preparation so that there is actually an increased intake of calories and proteins (Dankelman, 1988).
As long as women are still engaged in seed selection, the future survival of traditional crops is assured.

Listed below are several strategies to help African women in rural areas equip themselves against environmental degradation, as deduced by this paper:

1) Instead of speeding up the cultivation cycle, return to shifting (fallow) cultivation which allows native trees, grasses, and shrubs to regrow and restore the earth's natural fertility. In the past Africa farmers have grown food in harmony with nature by clearing land, cultivating it for a few years and then when the land's productivity begins to wane, moving on to allow for the soil to recuperate (Mathews, 1989).

2) Three-tenths of the continent is covered by deserts or soil which is too sandy for crop production. Dry seasons extend through most of the year and when the rain comes, it beats down with such intensity that, if the earth has been cleared of its protective vegetative cover, the rain would carry away much of the fertile top soil. Solutions include:
   a) Capture rain and store it in small dams, or tanks, before it seeps into the ground or washes off, for use during the dry seasons.
   b) Construct rock embankments or bunds to fight soil erosion caused by intense rain on cleared land.
c) Terracing on hillsides and building mounds also prevent soil erosion.

d) Replant vegetation. This serves as an impediment which allows rain to seep directly into the ground, not carried away on flat land.

3) A high degree of species diversification to maintain flexible cropping patterns. "Many crops, trees, and other plants, when planted together, offer significant advantages over the Green Revolution's tenet of planting one crop over vast tracts of land. For example, intercropping of legumes or greens with subsistence crops provides a balance for the soil and keeps down weeds. Millet and sorghum are nutritious as well as drought resistant crops.

4) In order to alleviate pressure on the forests, community fuelwood lots should be established for the villages to share. Trees can pump nutrients from the deep soil, making them available to more shallow-rooted crops. Trees also lessen wind and water erosion, hold rain water, and retard the flow of nutrients from the soil" (Mathews, 1988).

5) To avoid dependence on imported nutrients, women can conserve fertile soils in which organic matter is deposited and recycled back into the land.
This is just a short list of environmental strategies to empower women in rural Africa.

"Once set in motion, this cycle of degradation is not easily broken. As more and more people draw on natural resources for sustenance without the means to put anything back, the land loses its productivity, soil moisture dwindles, and natural ecosystems begin to crumble. The environmental decline threatens the earth's rich biological diversity with extinction and upsets the delicate biological, chemical, geological balance. This cycle of degradation has destructive effects for Africa (Mathews, 1989). To avoid this cycle, women who are subsistence farmers must come together to become self-sufficient because they occupy an increasingly strategic role in maintaining the continent's agricultural productivity and in restoring rural environments."
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20


BIBLIOGRAPHY


