3.8 Gender, Water and Environment

Introduction

The different roles and responsibilities of women and men in water resources use and management are closely linked to environmental change and well-being. This is true both for how women and men affect the environment through their economic and household activities and how the resulting environmental changes affect people's well-being. Understanding these gender differences is an essential part of developing policies aimed at both better environmental outcomes and improved health and well-being.

Gender Relations and Challenges in the Management of the Environment

Women play a critical role in the field of environment, especially in the management of plants and animals in forests, arid areas and wetlands (see box). Rural women in particular maintain an intimate interaction with natural resources, the collection and production of food products, fuel biomass, traditional medicine and raw materials. Poor women and children especially may collect grasshoppers, larvae, eggs and birds' nests to sustain their families (Van Est, 1997). In Burkina Faso, for example, rural women depend on the fruits, leaves and roots of native plants to feed their families; supplementing agricultural grains such as millet and sorghum. Over 800 species of edible wild plants have been catalogued across the Sahel alone (Easton and Ronald, 2000, in UNEP, 2004).

Women and Wetlands in West Africa

Wetlands are fundamental ecosystems for the maintenance of life in West Africa. For centuries people have depended on wetlands for services such as food, water, natural resources and transport. For women, wetland ecosystems and the goods they yield sustain rural livelihoods. The main economic activities undertaken by woman in wetland areas are:

Wild resources provide materials for utensils and construction, and contribute to improved diets and health, food security, income generation and genetic experimentation.

Fishing is done throughout the year using different equipment for different seasons. The flooding of the wetland due to dams, diversions and climate change reduces fishing revenues.

Agriculture includes dry-land farming of sorghum and millet, seasonally flooded rice farming, flood-retreat farming (mainly cowpeas) and irrigated farming. Rice is the most important crop grown in seasonally flooded areas.

Dry season grazing of sheep, goats and cattle occurs when pastoralists move into the area during the dry season.

In the urban centres, the women process fish products, particularly the steaming of fish and oyster breeding. Recently several women's organisations have been getting involved in urban agriculture (market gardens).

Source: Diop, M. D., 2004.

As their knowledge is transmitted through generations, girls and women often acquire a thorough understanding of their environment, and more specifically of its biodiversity. Their experience gives them valuable skills required for the management of the environment. Women have an important role to play in preserving the environment and in managing natural resources to achieve ecologically sustainable production (UNEP, 2004).

Despite women's assumed special relations to nature it should be stressed that all people depend on the environment and all should share the responsibility for sustainable use of water and other natural resources.

Challenges

Public participation in decision making

Public participation in environmental management is increasingly seen as a vital component of environmental policies. Several major international conferences in the 1990s, including the United Nations Conference on Environment and Development (Rio de Janeiro, 1992) and the Fourth World Conference on Women (Beijing, 1995), acknowledged women's contributions to environmental management and proposed actions to strengthen women's role in decision making. However, from the local to the international level, women have had limited involvement in the formulation, planning, and execution of environmental policy. When women do contribute to environmental management, it is usually at the local level. For example, women in Bangladesh, Mexico, the Russian Federation and the Ukraine have been involved in planning and management of freshwater resources through women's groups and cooperatives. They mobilise communities and resources to conserve and protect supplies of clean, accessible water.

Environment vulnerability

The impacts of the degradation of the environment on people's everyday lives are not the same for men and women. When the environment is degraded, women's day-to-day activities, such as fuel and water collection, require more time, leaving less time for productive activities. When water becomes scarce, women and children in rural areas must walk longer distances to find water, and in urban areas are required to wait in line for long hours at communal water points.

Despite their efforts, women living in arid areas tend to be categorised among the poorest of the poor, and have absolutely no means to influence real change. They are often excluded from participating in land development and conservation projects, agricultural extension activities, and policies directly affecting their subsistence. Men make most decisions related to cattle and livestock, and even in households headed by women, men still intervene in the decision-making process through members of the extended family. However, because of the important contribution of women, the fight against the degradation of arid areas requires a gender-inclusive approach.

Access To and Control over Resources

In many countries, rights are linked to women's marital status; widowed or divorced women often lose those rights. Even in countries where the law guarantees women and men equal access to land, women may not be aware of their rights, or customs may exclude women from *de facto* ownership. In, Burkina Faso, Cameroon and Zimbabwe, for example, women have the legal right to own land and trees but, in practice, men control nearly all of the property.

Such insecure land tenure influences how different groups use natural resources. Women, the poor, and other marginalised groups are less likely to invest time and resources or adopt environmentally sustainable farming practices on land they do not own. In the eastern Democratic Republic of Congo, researchers found that men usually plant permanent tree crops, such as coffee, on household land where they have secure tenure. Women's food crops are

relegated to rented, steeply sloped land with eroding soils. Because tenure is not secure, women have little incentive to invest in soil conservation measures.

These restrictions on women's land rights hinders their ability to access other resources and information. Unable to use land as collateral to obtain loans, women have difficulty in adopting new technology and hiring labour when needed. In addition, women may not be able to access other support services, such as extension and training programmes. Agricultural extension agents have traditionally focused on the male farmers, even where men are working off the farm and women are the primary cultivators (Population Reference Bureau, 2002).

Watershed management

Women do sometimes participate in watershed management, for example, by maintaining forest cover to reduce soil erosion which often floods and silts reservoirs and waterways. However, training programmes on the technical and scientific aspects of watershed development are usually aimed at men. Training for women tends to be concentrated on practical issues such as tree planting. Ultimately, this means that women do not have the necessary skills, knowledge and confidence to participate in community decision-making and to assume leadership roles in management of watershed development (Pangare 1998, in Rathgeber, Eva, 2003). Gender analysis has not been a component of most watershed development projects.

Similarly, the impact of displacing local populations to accommodate large dam projects has rarely been analysed from a gender perspective (Baruah 1999, in Rathgeber, Eva, 2003). In some cases, planners actually have been aware of the costs of not incorporating gender concerns into relocation plans but they have rarely acted accordingly. In the Narmada Dam project in Gujarat, India, where populations were displaced from the area that was flooded, it became more difficult for women to collect the forest and biomass resources needed for subsistence. All available water was channeled into the dam and the adjoining land was inaccessible to local populations (Rathgeber, Eva, 2003).

Towards the Integration of Gender

Women's status in conserving biodiversity may be enhanced through the following types of actions to integrate gender concerns into environmental planning:

- Improve data collection on women's and men's resource use, knowledge of, access to and control over resources. Collecting sex-disaggregated information is a first step toward developing gender-responsive policies and programmes.
- Train staff and management on the relevance of gender issues to water resources and environmental outcomes.
- Establish procedures for incorporating a gender perspective in planning, monitoring, and evaluating environmental projects.
- Ensure opportunities for women to participate in decisions about environmental policies and programmes at all levels, including as designers, planners, implementers, and evaluators. Women need official channels to voice their environmental concerns and contribute to policy decisions. Several countries have introduced affirmative actions to this end.
- Foster commitment at all levels—local, national, and international—to integrate gender concerns into policies and programmes which will lead to more equitable and sustainable development. At the international level, the Women's Environment and Development

Organization (WEDO) initiated "Women Action 21" at the United Nations Conference on Environment and Development (Rio, 1992), as well as a more recent version, "Action 2015 - women for a healthy and peaceful planet" during the WSSD in Johannesburg.

- Incorporate a gender perspective into national environmental policies, through a gender policy declaration that demonstrates the government's commitment; a reference document for technical staff working on national programs; and a framework for action to develop the capacity of both women and men to address gender concerns.

References

DIOP, Mame Dagou, 2004. Les femmes dans les zones humides oust africaines. Document interne. Wetlands International, Africa Office Dakar.

Economic Commission for Africa (CEA), 1999. *Evaluation Report: Women and Environment*. Sixth Regional Conference on Women: Half-way evaluation concerning the implementation of recommendations of Dakar platform and Beijing Action Plan.

Population Reference Bureau, 2002. *Women, men, and environmental change: the gender dimensions of environmental policies and programs*. Washington, DC. Available at: http://www.prb.org/Template.cfm?Section=PRB&template=/ContentManagement/ContentDisplay.cfm&ContentID=5473

Rathgeber, Eva, 2003. *Dry Taps…Gender and Poverty in Water Resource Management*. Food and Agriculture Organization of the United Nations (FAO). Available at: http://www.fao.org/DOCREP/005/AC855E/AC855E00.HTM

United Nations Environment Program (UNEP); 2004. *Women and the Environment: Policy series briefing*. DEP/0527/NA, May 2004/03-63959 Available at: http://hq.unep.org/Documents.Multilingual/Default.asp?DocumentID=468&ArticleID=4488&l=en

Van Est, D., 1997 : The changing use and management of the floodplain environment by Mousgoum women in North Cameroon. In: M. De Bruijn, I. van Halsema and H. van den Hombergh (eds.), Gender and Land Use; Diversity in Environmental Practices. Thela Publishers, Amsterdam, pp. 9-26

Women and Development Commission, 2004. *Gender and Environment*. Available at: http://www.dgcd.be/documents/fr/themes/gender/CFD%20300mmA-environnement%20FR.pdf (French)

Additional Resources

Braidotti, Rosi, Charkiewics, Ewa, Haüsler, Sabine and Saskia Wierenga, 1994. *Women the Environment and Sustainable Development: Towards a Theoretical Synthesis*. London: Zed Books.

Dankelman, Irene, 2003. *Gender, Environment and Sustainable Development: Theoretical Trends, Emerging Issues and Challenges*. Review Paper. Santo Domingo: INSTRAW.

FAO, 2003. *The State of Food Insecurity in the World*. Available at: http://www.fao.org/docrep/006/j0083e/j0083e00.htm

IUCN, 2003. *Maximizing conservation in protected areas: guidelines for gender consideration*. IUCN San José and Population Reference Bureau, Washington, D.C.

Lin, Carol Yong Ooi, 2001. "Gender impact of resettlement: The case of Babagon Dam in Sabah, Malaysia," *Gender, Technology and Development*, 5(2), pp. 223-244.

> The resettlement of the Kadazandusun indigenous community of Kampung Tampasak in Penampang, Sabah, to construct the Babagon dam has altered the lives of the community. Women, men and children in the resettled community have begun to experience increased social, economic, cultural and psychological stresses, which are accentuated by the compulsory acquisition of their ancestral lands and resources. Resettlement has resulted in a restructuring of gender relations, livelihoods, value systems and culture. The study shows that the burden of change is far greater for women who have even less access to the benefits of 'development' than do men. There is need for greater involvement of indigenous communities in resettlement efforts supported by more adequate state and community resources.

Maathai, W, 2004. *The Green Belt Movement*. Available at: http://www.lanternbooks.com/detail.html?id=159056040X

Mame Dagou DIOP, 2004: Les femmes dans les zones humides oust africaines. Document interne. Wetlands International, Africa Office Dakar, 5 pages

Nierenberg, Danielle, 2002. *Correcting Gender Myopia: Gender Equity, Women's Welfare and the Environment*. Worldwatch Paper 161, Washington, DC: Worldwatch Institute.

Rocheleau, D., Thomas-Slayter, B. and D. Edmunds, 1995. "Gendered Resource Mapping: Focusing on Women's Spaces in the Landscape," *Cultural Survival Quarterly*, 18(4), pp. 62-8.

UNEP, 2000. *Success Stories: Gender and the Environment*. Nairobi: United Nations Environment Programme.

UNEP, 2004. *Report of the Global Women's Assembly on Environment.* First Meeting, United Nations Environment Programme, UNEP/DPDL/WAVE/1. Nairobi: United Nations Environment Programme.

WEDO, 2003. *Untapped Connections: Gender, Water and Poverty*. New York: WEDO. Available at: http://www.wedo.org/files/untapped_eng.pdf

WEDO, 2003. *Common Ground: Women's Access to Natural Resources and the United Nations Millennium Development Goals*. New York: WEDO.

Zhou, Wei Wen, 1996. "Water resources and development of women in arid regions in northern China," *Natural Resources Forum*, 20(2), pp. 105-109.

The paper describes the difficult situation faced by women living in arid areas of China, based on field research in Hebei and Shanxi provinces. The causes and effects of poverty in the targeted areas are described, and the roles women could play to alleviate poverty and improve the environment in arid areas is outlined. In addressing policies which could lead to sustainable development, improved education in a number of areas is discussed; public policies aimed at improving women's conditions; ways to involve women in environmental protection; encouraging migration to reduce environmental degradation; and improving child-bearing conditions.

Available at (Wageningen Library URL):
http://sfx.library.wur.nl:9003/sfx_local?sid=SP:CABI&id=pmid:&id=&issn=01650203&isbn=&volume=20&issue=2&spage=105&pages=105109&date=1996&title=Natural%20Resources%20Forum&atitle=Water%20resources%20and%20development%20of%20women%20in%20arid%20regions%20in%20northern%20China%2e&aulast=Brewster&pid=%3CAN%3E19971804058%3C%2FAN%3E%3CAU%3EZhou%20WeiWen%3bBrewster%2c%20M%3C%2FAU%3E%3CDT%3EJournal%20article%3C%2FDT%3E

Pangare, Vasudha Lokur. Gender issues in watershed development and management in India. Network Paper 88. Agren. ODI Agricultural Research and Extension Network. July 1998.

Baruah, Bipasha. .The Narmada Valley Project: displacement of local populations and impact on women, . Natural Resources Forum 23 (1999): 81-84.

Key Web Sites

UNIFEM'S Experience in Sustainable Development UN conferences and summits have underlined the contribution of women to sustainable development, with clear gender perspectives in environmental management incorporated.
http://www.unifem.org/

'Gender and Environment' http://www.genderandenvironment.org/ is IUCN's learning community dedicated to research, documentation, and exchanges of experiences that promote the mainstreaming of gender equity perspectives in the environmental management initiatives.

WEDO http://wedo.org/ is an international advocacy organization that seeks to increase the power of women worldwide as policymakers at all levels to achieve economic and social justice, a healthy and peaceful planet, and human rights for all.

Case Studies
The complete case studies are found in the annex of this resource guide

- Brazil: Conscious Fostering of Women's Leadership

- Guatemala: Meeting Women's and Men's Water Needs in the "El Naranjo" River Watershed Organization