Strategies for Enhancing Women’s Full Participation in Sustainable Agricultural Development and Environmental Conservation in sub-Saharan Africa

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Abstract
The paper reviews the impact of selected barriers on women farmers’ full participation in sustainable agricultural development and environmental conservation in sub-Saharan Africa. It is recommended that a holistic and integrated approach be taken, including promoting gender equality in access to educational opportunities and training programs for women and girls; women be a part of policy, and decision making process at all levels in the national and rural agricultural sectors; and that they be given access to other programs and other facilities that focus on the needs of women in agriculture and their other multiple roles, to enhance sustainable agricultural production and environmental conservation in sub-Saharan Africa.

Introduction
Women farmers continue to play decisive roles in rural development and in sustainable agricultural production in sub-Saharan African countries. However, women farmers are increasingly facing challenges in the light of the prevailing global and sub-regional trends: 1) globalization in agricultural trade, 2) population dynamics (HIV/AIDS and rural-urban migration), 3) increasing pressure on natural resources and competition for their use, 4) agricultural policies, 5) development of biotechnology (hybrids and genetically modified organisms), 6) the need for the production of food crops to feed the growing population, 7) environmental degradation, and 8) the rapid developments in agricultural information and communication technologies (LEISA Editorial, 2000; FAO, 1996).

The annual agricultural production rate of 1.7% lagged behind an annual average population growth rate of 2.8% in the sub-region between 1965 and 1990 (FAO, 1994). At the same time, the percentage of people in the sub-region lacking sufficient food increased from 38-48%. Some 41 states in the sub-region were experiencing food deficits, with under-nutrition ranging from a low of 13% in Swaziland to a high of 72% in Somalia. Between 1980 and 1990, annual imports of cereals increased from 8.5 million tons to 18.2 million tons in the sub-region (Sparks, 1999). The current food situation in the sub-region has implications for the rapid spread of the HIV/AIDS pandemic and for national and human resource development.

Inappropriate agricultural policies pursued by the national governments; slow technological change; environmental degradation; institutional weaknesses; civil wars; and lack of infrastructure have been identified as the major causes of food deficiencies in the sub-region (Obasanjo & Obasango, 1992). Also, agricultural institutions have failed to adapt education and training programs and to respond to the challenges women face in producing food and conserving the environment in the sub-region (FAO, 1997). There is, also, the growing recognition worldwide that gender bias and blindness constitute significant constraints that contribute to food insecurity and environmental degradation in the sub-region (Meena, 1992). In spite of the problems, agriculture still remains the dominant sector in terms of output, employment, and export earnings and accounts for approximately 21% of the GDP of the sub-region (Sparks, 1999).

According to FAO (1998), reducing gender disparities in agricultural education and training, and enhancing women’s independent access to land and credit facilities will: 1) promote agricultural growth, 2) provide greater income earning opportunities for women, 3) provide better food and nutrition for all, and 4) enhance environmental conservation and national development. Women in the sub-region are tremendous forces for change in their families, villages, cities, and countries in sub-Saharan Africa. Their role in agricultural production and national development has become more prominent in terms of undertaking most of the agricultural activities, including decision-making and implementing those decisions independent of men. They can and do make a difference when given opportunities (FAO, 1996; Meena, 1992; Carr, 1991).
Methodology

Relevant literature materials related to women in agriculture in sub-Saharan Africa were collected from a variety of university and specialized library data bases and were used as sources of information to write this paper.

The paper was written in response to the recognition of the growing need to close the gap between the problems women farmers face and their pivotal roles in agricultural development and environmental conservation in sub-Saharan African countries. The specific objectives were 1) to identify the barriers to women’s full participation in agricultural development and environmental conservation in the sub-region, and 2) to recommend strategies for providing agricultural education and training programs for women farmers.

Results

Barriers to women’s full participation in sustainable agricultural development and environmental preservation.

Land and other property ownership rights.

Most women, especially married women, do not enjoy equal and independent rights and control over the use of land and access to credit. Women farmers’ access to the use of land, credit and other farming facilities are determined by their husbands or by male relatives in the women’s family. Women also generally have less capital and extra farm labour to invest in agricultural enterprises.

Rural to urban migration of the male.

Approximately one third of all sub-Saharan African rural households are now headed by women who are older and less educated than their male counterparts. The major causes of this problem are: 1) the migration of able-bodied young men from rural areas to towns and cities or abroad in search of paid employment; and 2) the HIV/AIDS epidemic that has, and continues to take the lives of many young men and women, leaving the older women farmers with thousands of orphans to care for (UNDP, 2002).

Inappropriate recognition and reward for women’s labour inputs in agriculture. Women’s labour input into food production activities, which is often neither recognised nor appropriately rewarded, far surpasses that of men. Yet still men hand over the responsibility for meeting the basic family needs to the women (Dignard & Havet, 1995; Henn, 1987). In addition, women are increasingly undertaking farm jobs and making farm decisions that were traditionally done by men since the traditional gender division of household and farm occupations are gradually, but steadily declining as shown in Tables 1 and 2.

Table 1

<table>
<thead>
<tr>
<th>Country</th>
<th>Women’s Role in Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benin</td>
<td>70% of the female population live in rural areas, perform 60 to 80% of farm work, and furnish up to 44% of the work necessary for household subsistence.</td>
</tr>
<tr>
<td>Congo (DRC)</td>
<td>Women constitute 48% of the labourers in the agricultural sector.</td>
</tr>
<tr>
<td>Mauritania</td>
<td>Women account for 73% of the economically active agriculture labour and produce more than 80% of the crops.</td>
</tr>
<tr>
<td>Morocco</td>
<td>Approximately 57% of the female population participate in agricultural activities, with greater involvement in animal (68%) as compared to vegetable production (48%).</td>
</tr>
<tr>
<td>Namibia</td>
<td>Women account for 59% of those engaged in skilled and subsistence agriculture work and, women continue to shoulder the primary responsibility for food production and preparation (1991 census).</td>
</tr>
</tbody>
</table>

Table 2

Men and Women’s Role in Decision-Making within the Household

<table>
<thead>
<tr>
<th>Type of Decision</th>
<th>Men (%)</th>
<th>Women (%)</th>
<th>Both (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of crop to grow</td>
<td>48</td>
<td>36</td>
<td>16</td>
</tr>
<tr>
<td>Where to plant</td>
<td>56</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>What agricultural techniques to use</td>
<td>60</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Sale of surplus crop</td>
<td>46</td>
<td>33</td>
<td>21</td>
</tr>
<tr>
<td>Sale of surplus livestock</td>
<td>73</td>
<td>18</td>
<td>09</td>
</tr>
<tr>
<td>Distribution of agricultural income</td>
<td>38</td>
<td>43</td>
<td>19</td>
</tr>
<tr>
<td>Distribution from crop sale income</td>
<td>41</td>
<td>27</td>
<td>32</td>
</tr>
<tr>
<td>Distribution of livestock sale income</td>
<td>40</td>
<td>30</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>30</td>
<td>27</td>
</tr>
</tbody>
</table>

Note. From “A draft report of the river basin management and small holder irrigation project. PRA and Gender Analysis: Training and Field Work in PRA in PRA and Gender Analysis for Irrigation Department Staff,” by E. Mhina, 1996, Dares-salam, Ministry of Agriculture.

Limited educational opportunities for women and girls. All available literature examined in this study revealed that generally, more men than women enrol in educational programs (FAO, 1992; Forum for African Women, 1998; UNESCO, 1995; The World Bank 2000; USAID, 1990). In 1995, 47% of females as compared to 66% males had access to basic education programs in sub-Saharan Africa. In the age group of 6-11 years, the net enrolment for males was 55% as compared to 44% for females; the 12-17 years age group, the ratio was 46% male as compared to 35% of female; and the 18-23 age group, the ratio was 10% male and 5% female (UNESCO, 1995).

The effects of HIV/AIDS. Two-thirds of the world’s HIV/AIDS positive population live in Sub-Saharan Africa and an estimated 11,000 people contract HIV every day in the sub-region. Of all new HIV/AIDS infections in 2001, 68% were in sub-Saharan Africa. Studies have shown that within the 15-19 years’ age group, the ratio of male to female infection is 1:6. Girls are therefore six times more likely to be infected with HIV/AIDS than are boys their own age (Forum for African women, 2000, UNDP, 2001). HIV/AIDS epidemic affects both the quantity and quality of labour supply in the economies as well as output and Gross national Product (GNP) of sub-Saharan African countries. In practise, this means that there are fewer women teachers, skilled artisans, and farmers. The loss of labour, the loss of household members to care for the very young and the elderly, increasing numbers of orphaned and consequently dependent children, and restriction of the range of crops grown, continue the downward spiral in living standards in the sub-region (FAO, 1995).

The irreversible technological changes in agriculture. Most of the technological innovations in agriculture in sub-Saharan African countries have only eased men’s labor requirements. Besides, the technologies are unsustainable and environmentally damaging. Additionally, agricultural information is not effectively reaching and benefiting women, who are key contributors to food security (FAO, 1996; Wijeratne, 1994; Walt & Walt, 1992).

Strategies for enhancing women’s participation in agricultural development and environmental conservation.

Provide literacy programs, agricultural education and training for women farmers. Literacy is a precondition for women’s access to knowledge and skills, both through informal sources such as extension training and advanced formal education, which improves their overall socio-economic status and especially, their contribution to agricultural and rural development (Crowder, 1996). In addition, the need to improve both agricultural education and extension training for rural women in sub-Saharan African countries is regarded not only as a matter of good sense it is a necessary and a fundamental human right. Cost benefit analyses of educating women by the World Bank (2000), FAO (1996, 1997, & 1998) showed that investment in women’s education has the highest rate of return than any other possible type of investment in the sub-region. Educated women are more likely to use capital more efficiently and more
productively. Women are also more likely to devise new and better forms of agricultural production; and spread the benefits of education to others to make them more productive (UNDP, 1996). Education for women therefore, is viewed as the most important and powerful tool to promote women’s production efficiency and to break their economic and psychosocial dependence on men (Marope, 1994; Crowder, 1996).

**Conduct indigenous agricultural knowledge systems research.** Sustainable agricultural development and production will be attained if greater attention is given to research into local agricultural knowledge systems and technologies that are environmentally friendly, have more socio-economic adaptations and those that can empower traditional farmers through training to develop new technologies (Walt & Walt, 1992). There is need for an indigenous agricultural knowledge systems research agenda that should be problem oriented; meaning that it has to seek, analyze and identify agricultural development priority problems and opportunities that may have a positive impact on the women farmers food production capabilities and efficiency, rural societies, and the environment in the sub-region. The agenda also should be context based; meaning that the research agenda should adopt a systems approach in examining the agricultural production problems and issues in their broader context (Mattrick, 1993).

**Train women agricultural extension and HIV/AIDS agents.** Training women agricultural extension agents will improve their capacity to reach out to women farmers and to school girls with improved agricultural technologies and in the process, serve as role models. Women could also be trained as HIV/AIDS information dissemination extension agents in rural communities, where women tend to be more open to their fellow women about their HIV/AIDS status (Obine, 1992; Rodgers & Burge, 1972; Lionberger, 1968).

**Make women students’ recruitment methods and procedures more flexible.** Currently, entrance requirements for admission into most agricultural education and training programs in the sub-region are based on pass grades in mathematics and other science subjects. As most women were disadvantaged in the past to study science subjects in the majority of the secondary schools, they normally do not meet these entrance requirements. Affirmative action in students’ recruitment in-favour of women candidates and establishing agricultural programs that enable women to cope with domestic responsibilities and their study requirements are some approaches that have been successfully used in some countries (Crowder, 1996; Carl, 1998).

**Enact agricultural education training and employment policies.** National governments in the sub-region should enact polices that will cater for the educational and employment concerns and welfare of women and girls in agriculture. This will enable the women to get appropriate training and employment in the formal agricultural industry and to play their full roles in the social and economic development of their countries.

**Make credit, land and other resources accessible to the women farmers.** Women farmers produce most of the food consumed in sub-Saharan Africa. National governments and non-governmental organizations in the sub-region should therefore enhance women’s full participation in agricultural development and environmental conservation by providing then with the appropriate information, credit, land, and other resources to empower them to invest in agricultural production.

**Conclusion**

In-spite of the many barriers, women continue to play pivotal roles in food production and in preserving the environment, in addition to their unchanging reproductive role in the sub-region. A holistic and integrated approach, including promoting gender equality in: (1) access to educational opportunities and training programs for women and girls, (2) policy, and decision making process at all levels in the national and rural agricultural sectors, (3) access to control over and management of natural resources, including land, credit, farm inputs and agricultural support services, (4) access to HIV/AIDS prevention and control information (5) access to on- and off-farm employment opportunities in rural areas, and (6) to other programs that focus on the needs of women in agriculture and their other multiple roles in sustainable agricultural production and environmental preservation in sub-Saharan Africa.
References
Crowder, L. V. (1996). Enrollment of women in agricultural studies at intermediate and higher levels of education. Rome, FAO.
FAO. (1997). Issues and Approaches for Agricultural Education and Training in the 1990s and Beyond, Rome, FAO.


