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CONSTRAINTS TO WOMEN FARMERS' INVOLVEMENT IN CULTURAL AND BIO-DIVERSITY CONSERVATION

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ABSTRACT

This study investigated constraints to women farmers' involvement in cultural and bio-diversity conservation. The findings indicate that the women farmers were involved in bio-diversity conservation of crops, animals and forest species, combination of which they use for their home needs. Their involvement in the tasks was generally high as revealed by their involvement scores.

Constraints to women farmers involvement in cultural and bio-diversity conservation include control over farming decisions, control over actions, control over productive resources, lack of government support, extension activities, lack of credit, diminishing living standard and level of awareness of conservation practices. Efforts at removing these constraints, it is believed, will aid women farmers in their cultural and bio-diversity conservation practices..

INTRODUCTION

The survival of man depends on the diversity of the ecosystem. Evidence of the accelerating depletion of natural resources, and other social and environmental problems has resulted in a global consensus on the need to see development in terms of long-term sustainability. The interest in "sustainable development" has been accompanied by an interest in important related issues, such as the conservation of natural resources (e.g. bio-diversity), indigenous knowledge systems (cultural diversity) and gender (Quiroz, 1994).

There is a large body of evidence to show that in most cultures and societies, indigenous peoples have successfully cultivated and inhabited areas with a high degree of diversity. This was possible in part because they were practitioners of environmental processes designed to transform, manage, and use nature, in order to conserve it. They knew that in many cases, their survival- especially in tropical forest, desert and Savannah short-grass areas -- depended on the diversity of the ecosystems. (Alcorn, 1994; Shiva, 1993; Warren, 1992). The indigenous knowledge accumulated by these peoples and communities according to Prain (1992) constitute a reservoir of adaptations which are of great importance for long-term sustainability.

Women's skills and needs as a focal issue in mainstream sustainable development have often been ignored due to the general misconception and marginalization of women's role in conservation strategies. According to Awa (1989), when development efforts are discussed, women are usually depicted as "peripheral contributors to the social and economic transformation of their society". One

implication of this is that half or more of indigenous ecological science has been obscured by the prevailing invisibility of women, their work, their involvement, their interests and especially their knowledge.

Women , especially farmers, in many parts of the world have traditionally played, and still play a key role in preserving diversity. It has been reported that women's role in seed selection and vegetative propagation has been, and still is crucial in many areas of the world, not only in the conservation and enhancement of genetic resources (bio-diversity) but also in agricultural production in general (Jiggins, 1994). Also reported are examples which show that when women have a high degree of control over their means of production, their own labour, and their forms of organizations, and if they are able to influence the development agenda, they usually opt for a diversity of animals, crops and varieties, even when the family's main field have been turned over to the production of a single crop (Jiggins, 1994; Shiva and Dankelman, 1992).
This is because they usually cultivate varieties of food crops, tend animals and put in so much energy into forest conservation since they get food and medicinal materials there for their entire households. Unfortunately, their interests are usually not respected when "virgin" forests are often destroyed for "developmental activities". Their involvement in the cultivation of several food crops and spices also enrich their knowledge in the production of the crops. In the same vein, their neglect for a long time by extension has helped them retain their cultural (indigenous) knowledge in those practices that they have been involved over the years. Also, in the preservation and use of knowledge and bio-diversity, they always consider varieties that will be useful to the entire family in all respects as for food varieties, medicinal, social and cultural needs and not just materials that will bring money alone to the family as their male counterparts do. If they are not effective in their cultural and bio-diversity conservation, the family spends more of what it generates from its income generating materials in acquiring those that should have been provided by the women. The effect of inefficient cultural and bio-diversity conservation on the environment too is usually too much for communities to bear.

It is however noteworthy that women are increasingly disadvantaged when dealing with issues of involvement in cultural and bio-diversity conservation because in general, they have a low status in their societies and are often not directly represented at political decision-making structures where cultural and bio-diversity conservation are discussed. The bottom line, as Shiva (1993) puts it, is "control". Their lack of opportunity and the means to develop their capacities and obtain control (empowerment) of the decisions regarding their knowledge, innovations and practices has drastically affected their involvement in cultural and bio-diversity conservation (Rocheleau, 1991). They are thus often at the mercy of male decision makers, extension agents and farmers in matters that affect them more than any other member of the community. This study therefore attempts to highlight and describe constraints to women farmers involvement in cultural and bio-diversity conservation to complement global efforts towards sustainability in development efforts. The objectives of the study therefore include determining women's awareness and involvement in bio-diversity conservation as

well as identifying the gender biased constraints to their involvement.

JUSTIFICATION

Women constitute a very high proportion of the farming population in many parts of Nigeria. They are involved in the production and conservation of crop, forest and animal species with the aim of providing for the food, medicinal, social and cultural needs of the entire members of their household. Despite all these, they are often neglected during development efforts in terms of having access to knowledge as well as productive resources. This is because their skills and needs have often been ignored due to general misconception and marginalisation of women's role in conservation strategies. The invisibility of women, their knowledge, works, interests and involvement in bio-diversity conservation has obscured the indigenous ecological science of women in the global drive at ensuring bio-diversity conservation. The problem has led to their being neglected in developmental efforts at bio-diversity conservation. There is thus the need to women's level of awareness and involvement in bio-diversity conservation as well as the constraints to those involvement. Both men and women in Akinyele Local Government Area are extensively involved in farming and forest tending as the area has enduring forests.

METHODOLOGY

The data used was obtained from 6 of the 12 rural communities in Akinyele Local Government Area of Oyo State. Twenty women farmers were randomly selected from each of the 6 communities. A total sample of 120 women farmers were eventually used. The instrument used was an interview schedule which sought information on women farmers' involvement in cultural and bio-diversity conservation as well as constraints to such involvement. The test-retest method (administering of questionnaire twice on the same respondents i.e match group with a time interval of 2 months – Egbugara, 1993) was used for determining the reliability of the instrument, which gave a r – coefficient of 0.80 i.e. correlation between the 2 set of the data obtained from 20 women farmers. The data collected from the respondents were subjected to descriptive and inferential statistical analysis.

In order to determine the relative importance of each independent variables, the net contribution of each variable and total variance explained by all the variables on constraints to women's involvement in bio-diversity conservation, multiple regression analysis was conducted. Of all the various combinations entered, the one with the highest predicting values was adopted. The regression equation is:

$$Y = K + AX_1 + BX_2 + CX_3 + DX_4 + EX_5 + FX_6 + GX_7 + HX_8$$

Where Y is the constraints to women's involvement in bio-diversity conservation.

K = Intercept which is constant

A,B,C,D,E,F,G and H are the net contribution of each of the variables.

X_1, X_2, X_3, X_4, X_5, X_6, X_7 and X_8 respectively to the dependent variable Y

X_1 = Lack of credit

X_2 = Level of awareness of conservation practices.

X_3 = Diminishing living standard

X_4 = Control over productive resources

X_5 = Control over farming decisions.
X_6 = Control over actions.
X_7 = Extension activities
X_8 = Lack of government Support.

Measurement of Variables

Awareness: This was measured by asking respondents to respond to whether they are aware or not about bio-diversity conservation practices of crop, animal and forest species. Ten each of crop, animal and forest species conservation practices were presented, and a farmer scores a point for being aware of each of the activities. Maximum score was thus 30.

Involvement: Respondents indicated their level of involvement in bio-diversity conservation activities through a 3 – point scale of not involved (1), partially involved (2) or seriously involved (3). They responded to conservation practices on the 10 practices each for crop, animal and forest species. The maximum score was 90(3X3X10).

Control over Productive resources was measured by asking respondents to indicate if they had control over their productive resources, or they had to take permission from others.

Control over farming decision was measured through indication of whether they make decisions on their own about conservation practices or they have to follow other people's decision (including that of their husbands).

Women's involvement (roles) in cultural and bio-diversity conservation: Women farmers are aware of most of the practices of bio-diversity conservation presented to them.

Their bio-diversity conservation involvement include exploring crop, animal and forest species crop, animal and forest species (70 percent), discovering (62 percent), use of biological resources (91 percent), taking stock of biological resources (49 percent) and conserving the resources (87 percent). Their involvement in bio-diversity conservation is thus diversed. Respondents level of involvement in conservation activities was high scoring between 71 and 90% (60 percent) as revealed in their involvement scores.

Only 6 percent had low level of involvement (scoring between 30 & 50%) in bio-diversity conservation while 35% had medium level (scoring between 51 & 70%). Control over actions (74 percent) was given as the greatest constraints with respect to their level of involvement in cultural and bio-diversity conservation as shown in Table 1. Low knowledge in cultural and bio-diversity conservation (11 percent) was given as the least important constraint to their involvement in the activities.

Regression Analysis:

Multiple regression analysis show that control over farming decisions (Beta = 0.28) was the greatest predictor of women farmers constraints to involvement in cultural and bio-diversity conservation. Contribution of other constraints in diminishing order are: control over actions (Beta = 0.15), control over productive resources (Beta = 0.13), lack of government support (Beta = 0.07), extension activities (Beta = 0.03), lack of credit (Beta = 0.02), diminishing living standard (Beta = 0.02) and level of awareness of conservation practices (Beta =

Table 1: Constraints to Women's Level of Involvement in Cultural and Bio-diversity Conservation*

Constraints	Frequency	Percentage
Lack of Credit	17	14
Level of awareness of conservation practices	13	11
Diminishing living standard	32	27
Control over productive resources	62	52
Control over farming decisions	82	68
Control over actions	89	74
Extension activities	37	31
Lack of government support.	32	27

*Multiple response

Table 2: **Contributions of variables in the regression equation to the dependent variable.**

Regression	Beta values	S.E. Beta	T	Sig. T
Lack of credit	0.02	0.06	5.54	0.59
Level of awareness of conservation practices	0.01	0.01	3.37	0.71
Diminishing living standard	0.02	0.09	4.08	1.08
Control over productive resources	0.13	0.02	-4.7	0.1
Control over farming decisions	0.28	0.09	6.86	0.38
Control over actions	0.15	0.01	2.35	0.08
Extension activities	0.03	0.04	1.27	1.14
Lack of government support	0.07	0.001	4.32	1.01

0.01). All the variables entered could predict 72 percent of the variations in the constraints to women farmers involvement in cultural and bio-diversity conservation ($R^2 = 0.72$). They all have linear relationship with the dependent variable. It gave a constant of 3.26 and a standard error of 0.19, F-value = 3.3. Thus, the variables in the regression equation are good predictors of the variations in constraints to women farmers involvement in cultural and bio-diversity conservation.

CONCLUSION

The study shows that the women farmers are greatly involved in cultural and bio-diversity conservation. This underscores the fact that they realise the role their indigenous knowledge and bio-diversity conservation plays in their efforts at providing for the food and medicinal needs of their households. They are however not as involved as they loved in the conservation activities because of the constraints they had to contend with. Neither do they receive the full support of their husbands nor that of the government/development agencies.

The women farmers are involved in exploring, discovering, taking stock of, conserving and using biological resources (crop, animal and forest species) in a sustainable manner. Their level of involvement in all these is high.

Constraints to their involvement include control over farming decisions, control over actions, control over productive resources, lack of government support, extension activities, lack of credit, diminishing living standard and low conservation knowledge.

The current global efforts at encouraging cultural and bio-diversity conservation must thus help remove women farmers constraints to their involvement in the activities. This becomes important because of the enormous roles they play in the area of cultural and bio-diversity conservation. Women farmers should have better control over their farming decisions to ensure bio-diversity conservation and thus sustainability.

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