



EXTENSION AND FORESTRY DEVELOPMENT TRAINING FOR RURAL WOMEN ON FOREST EXPLOITATION

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ABSTRACT

This study examined the extension and forestry development training for rural women on forest exploitation with a view to enhancing their participation in forestry activities in the Central agro-ecological zone of Delta State, Nigeria. Three hundred and fifty women involved in forest related activities were randomly chosen from 10 forest communities purposively selected. Structured interview schedule was used to elicit information from the respondents about the necessary preparation, pre-training, training and post-training steps for the improvement of women's participation in sustainable forest activities. Data collected were subjected to descriptive and inferential statistics using frequency counts and percentages. Chi-square was used to test for significant differences between the means. The results showed that the training needs indicated by the respondents included alley farming, controlled bush burning, chemical application, financial management and record keeping. Significant relationships were observed between the degree of involvement in forest activities and preference of training personnel ($\chi^2 = 88.05$; $P < 0.05$) as well as time of training ($\chi^2 = 52.21$; $P < 0.05$). Appropriate recommendations were given along the findings. This study has established that training of women in forest exploitation has a high significant effect on increased forestry development by enhancing their involvement in forest activities.

Keywords: forest, training, rural women, development, exploitation, extension.

INTRODUCTION

With changes in climatic conditions, which is believed to be as a result of man's activities exerting pressure on the global flora and fauna, much attention is currently drawn to forest protection. Women are the closest set of people to the forest as they are direct users and consequently collect almost all the resources that are available in the forests (Agbogidi and Okonta, 2003; Prakash, 2003; Agbogidi *et al.*, 2005). Ajayi *et al.* (1997) stated that the participatory role of women in the collection of non-timber forest resources such as leaves, barks, roots, fruits and seeds of trees make them more vulnerable to clearing the forest and the content therein if they are continuously neglected in conservation strategies. The women are therefore required, to be trained on conservation practices (Ajayi *et al.*, 1997; FAO, 2006).

Training is the responsibility of the participant's organisation/group, the participant and the training institution. Training has phases that are crucial to the success of training by extension agencies for derived change in behaviour of the trainees. Studies (Agbogidi and Okonta, 2003; Agbogidi *et al.*, 2005) have shown that it is always very difficult to bring a rural audience together for any extension services meeting. This is as a result of the fact that the various people have their peculiar social, economic or political aspects which influence their activities (Chavez-Tafur *et al.*, 2007). Bearing this in mind, the opinions of and view points of the target audience (rural women) is needed to gain their participation in forestry extension training sessions. The study is aimed at investigating the extension and forestry development training for rural women on forest exploitation with a view to enhancing their participation in forestry activities and development.

MATERIAL AND METHODS

This study was carried out in 2006 in five local government areas of the Central agro-ecological zone of Delta State, Nigeria. This zone consists of eight local government areas out of which Ethiope-East, Ethiope-West, Ughelli-North, Ughelli-South and Okpe local government areas were selected purposively for the study. The target population consisted of women involved in forestry activities in the area of study. Two (2) villages were randomly selected from each selected local government area to cover a total of 10 villages viz: Eku, Abraka, Jesse town, Ogharefe, Ogor, Orogun, Oginibo, Imode, Ugborhe and Adedje. Thirty-five women involved in forestry related activities were randomly selected from each of the 10 villages to constitute a total of 350 women for the study.

Data were collected from the respondents using structured interview schedule. The data were pre-tested and subjected to reliability test ($r = 0.81$). Data were analyzed using descriptive statistics such as frequency counts, percentages and mean derived from 5-point Likert scale. The hypothesis was tested using Chi-square.

RESULTS AND DISCUSSIONS

Preference for sex of training personnel

The results (Table-1) show that 91.1 percent of the women preferred training by female extension agents. These women were of the opinion that a female extension agent would appreciate their problems than an agent of the opposite sex and female extension agents would be more acceptable to their spouses than the male extension agents. Some 5.7 percent of the women preferred male extension



agents. The reasons given for their choice included the fact that male extension agents would be more hard working and more consistent than their female counter parts who are weighed down by various domestic chores and problems. The results of this study are in consonance with the findings of Adekun and Adereti (2005) on their earlier study on fishery development in Lagos State.

Table-1. Preference for gender of training personnel.

Personnel	Frequency	Percentage (%)
Male extension agent	20	5.7
Female extension agent	319	91.1
Male or female	6	1.7
Undecided	5	1.4
Total	350	100.0

Source: Field survey, 2006.

Preference for training period (time)

The training period here refers to the time of the day the women preferred for the training exercise. Table-2 indicates that 89.1 percent of the respondents prefer the training period to be in the evening, when they would have put paid to the day's business. They preferred it to be in the evening so that it would probably not affect their other socio-economic activities. A hand full of them (6%) expressed preference for training in the afternoon. According to this set of women, evenings would not be convenient for them as they would have been worn-out before the evenings. They utilise the morning period for their economic activities. Again, this finding confirms an earlier study carried out by Adekun and Adereti (2005).

Table-2. Preference for training period.

Period	Frequency	Percentage (%)
Morning	0	0.0
Afternoon	21	6.0
Evening	312	89.1
Undecided	17	4.9
Total	350	100

Source: Field survey, 2006.

Preference for duration of training

Most (48.9%) of the women (Table-3) preferred the training to run for 1-2 hours weekly; 38.6 percent preferred to attend the training fortnightly for 2-3 hours; while 9.1 percent preferred it for 3 hours monthly and 3.4 percent were undecided. Since majority of the women preferred training for 1-2hours weekly, extension services should take cognisance of this in planning the training for the women.

Table-3. Duration of training.

Duration	Frequency	Percentage (%)
1-2 hours weekly	171	48.9
2-3 hours fortnightly	135	38.6
3 hours monthly	32	9.1
Undecided	123	4.4
Total	350	100.0

Source: Field survey, 2006.

Preference for training venue

Majority (53.4%) of the women preferred to receive training at the forest site where forest activities were mostly carried out (Table-4). The result further indicated that 40.9 percent had their preference for their homes as the training venue. Twenty percent expressed preference for the training institute as the venue for training. Most of the women who expressed their preference for the forest site believed that the matter will be better understood in the forest site as the real objects will be used for the training instead of pictures, films and models. This observation supports the reports of Laogun (1991) and Adekun and Adereti (2005) who noted that women farmers preferred training at farm sites and home since they found it difficult to leave their husbands and children.

Table 4. Preference for training venue.

Venue	Frequency	Percentage (%)
Forest site	187	53.4
Home	143	40.9
Training institute	20	5.7
Total	350	100.0
Total	350	100.0

Source: Field survey, 2006.

Training needs

The areas of training needs (Table-5) of these rural women, for better participation in forestry activities include: alley farming ($x = 3.0$), controlled bush burning ($x = 3.5$), agri-sivicultural practices ($x = 3.4$), herbicide application ($x = 3.1$), pesticide application ($x = 3.0$), fertilizer application ($x = 3.1$), financial management ($x = 3.3$), and record keeping ($x = 3.0$). These women in this zone are not used to alley farming. To them it is still a new concept they would like to know why it should be alley farming and how it is done, they also would like to know what they stand to gain from alley farming. The rural women needed training in controlled bush burning as bush burning is a very big problem in this area of Nigeria, especially during the dry season and early part of cropping season. This problem had caused a lot of embarrassment to many of them so they deem it fit to be trained on it. Agri-



sivicultural practices have their own intricacies. As the forest land was allocated to the rural women farmers on a symbiotic arrangement between them and the Forestry Department of the Ministry of Environment. If these tree seedlings are not catered for properly and they die, their plots will be retrieved from them and their livelihood will be adversely affected. The need for training in herbicide, pesticide and fertilizer applications was expressed by these women because of the fact that they want to be competent and efficient in the application of these chemicals. These chemicals cannot be handled any how and cannot be applied by the rule of the thumb. This calls for the need, for the women to be trained in their management.

Finances are very difficult to manage, especially when these rural women had their families to cater for and when many of them were household heads as a result of their husbands' absence. They needed this training so that they would know how to manage the meager financial resource at their disposal. Record keeping is a very important aspect of farming. Most of them lacked the culture of record keeping. Owing to this, most could not account for their operations and transactions.

Table-5. Training need required by rural women.

Training need area	Mean
Alley farming	3.0
Fuel wood exploitation	2.5
Extraction of herbs	1.6
Controlled bush burning	3.5
Agri-sivicultural practices	3.4
Herbicide application	3.0
Pesticide application	3.0
Fertilizer application	3.1
Financial management	3.2
Record keeping	3.0

Source: Field survey, 2006.

Training need: out-off score = 3.0 (≥ 3.0 - training need; < 3.0- not a need).

Types of aid needed

Table-6 indicates that the women needed to be aided in funding their co-operative societies (62.0%) from where they could easily have access to loan. Most of the cooperative societies in the rural areas were poorly funded and they needed funding. They also needed to be empowered through farmer-friendly loan (89.1%). They regarded farmer-friendly loan as the one that would not attract high interest rate. As a result of their past experiences with money lenders, they would not want to face that source of loan and they felt they more or less did all their works for the money lenders as their interest rate and loan refund took a lion share of their income.

Input supply at subsidized price (100%) was also needed by the women. In most rural areas, these inputs were not available and when bought from the urban areas where the procurement agency's offices were located, they were always very costly, just as they bought in the open markets. These women also expressed their desire for the forest land allocation fee to be reduced (100%). They felt that since it was a kind of beneficial arrangement between them and Forestry Department, fee should not be paid, more so, when they plant and care for the tree seedlings given to them for their plots.

Table-6. Needed aid.

Type of Aid	Frequency	Percentage (%)
Funding of cooperatives	217	62.0
Farmer-friendly loan	312	89.1
Input supply at subsidized rate	350	100.0
Reduction in forest land allocation fee	350	100.0

Source: Field survey, 2006. There were multiple responses.

Perceived constraints to training by women in forest activities

Majority (79.1%) of the women were of the opinion that inadequate time would be a problem (Table-7). This was for the fact that most of them were mothers and household heads-who had little or no time to spare for training exercises. It was usual for them to wake up and leave for their various farms very early in the mornings and returned late to take care of their children. Some (67.1%) perceived government's inability to organize training programmes as a problem. The government, had not at any time organized any training programmes where they were invited to participate, but that they needed such training programmes to participate better in forest activities as their source of livelihood. Inadequate number of extension personnel (64.6%) was likewise perceived as a constraint by the women. They indicated that the few ones that were available were mostly males when most of them preferred to interact with female extension agents. This had made it impossible for most of them to take advantage of even the inadequate extension service available.

**Table-7.** Perceived constraints to training.

Constraints	Frequency	Percentage (%)
Inadequate time	277	79.1
Government's inability		
To organize training		
Programmes	235	67.1
Inadequate extension personnel	226	64.6

Source: Field survey, 2006.

Test of hypothesis

Ho. There is no significant relationship between training variables like preference for training personnel, time of training, frequency of training, constraint to training and involvement in forest activities.

The results (Table-8) indicated significant relationship between preferences for training, personnel, gender-wise and involvement in forest activities ($\chi^2 = 88.05$, $P < 0.05$). The implication is that the right choice of training personnel by sex will enhance the training process, thereby improving the women's involvement in forest activities and consequently improving their livelihood.

There was also a significant association between time of training and involvement in forest activities ($\chi^2 = 23.43$, $P < 0.05$). The results further indicated a significant relationship between frequency of training and involvement in forest activities ($\chi^2 = 35.10$, $P < 0.05$). This implies that the more consistent the process of training, the greater the involvement by the women and improvement in forest activities of the women. This means that wrong timing will mar any of such training programmes. The results also showed that a significant relationship existed between constraints to training and involvement in forest activity ($\chi^2 = 52.21$, $P < 0.36$). This implies that the absence of the constraints will bring about improvement in forest activities involvement of the women.

Table-8. Relationship between training variables and involvement in forest activities.

Training variables	χ^2	df	P	contingency	Decision
Preference for training personnel	88.05	3	0.00	0.45	Significant
Time of training	23.43	3	0.01	0.25	Significant
Frequency of training	35.10	3	0.00	0.31	Significant
Constraints	52.21	4	0.00	0.36	Significant

Source: Field survey, 2006.

CONCLUSIONS

This study was conducted to evaluate the preparatory, pre-training, training, and post training steps that are necessary to improve rural women's participation in forestry activities in the Central agro-ecological zone of Delta State Nigeria. The results showed that women were interested in receiving training necessary to acquire knowledge, skill and experience in forestry activities. They indicated interest in training in the areas of alley farming, controlled bush burning, agri-sivicultural practices, chemical application, financial management, and record keeping. The women also identified perceived constraint to training as including inadequate time, government's inability to organize training programmes, and inadequate extension personnel.

Based on the findings, it is therefore recommended that forestry Department of the Ministry of Environment should organize training programmes that are related to the areas of training needs of the women in forest activities. Such training programmes should be relevant to the reality of the women's farming systems and should also be done in a flexible manner to enhance understanding and confidence between the women and the training personnel. Since these women prefer female training personnel, arrangements should be made by

government and non-governmental organizations to recruit adequate number of female extension personnel to handle women's problems or matters.

Training should be seen as part of the grand design to promote greater empowerment of women's involvement in forest activities. Besides, government should also provide materials and financial resources to tackle the training needs of women to empower them to participate in forest activities. The training by extension agents should be done for 1-2 hours every week at the forest sites where most of their activities are carried out. Conclusively, efforts should be made to reduce the constraints perceived or envisaged by the women to allow for greater participation of women in sustainable forest activities.



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