

Feasible media mix for dissemination of forest conservation support information (FCSI) in South Western Nigeria

Azeez, Ismail Olabisi

Department of Forest Resources Management

University of Ibadan, Nigeria

azeezismail2000@yahoo.com

+234-80-5512-6144

Abstract

The paper reports the potentials of media mix in use for agricultural information dissemination as applied to dissemination of information on forest conservation and sustainable land use practices in three southwestern states of Nigeria. It covered enclaves in Shasha and Oluwa forest reserves in Oshun and Ondo states respectively, as well as settlements surrounding Old Oyo National Park in Oyo State. The media considered were traditional and electronic/print. Primary data were sourced through administration of open-ended and structured questionnaires and use of focus group discussions (FGDs) and rapid rural appraisal (RRA) technique of 20% of the settlements in and around the study sites. Data generated were analyzed using descriptive and inferential statistics. Result showed that an average of 69.0% of the inhabitants had at least a functional radio set, while 6.5%, 5.6%, and 1.2% had access to pamphlets, newspaper/magazine, and television sets respectively. In the case of traditional media, town criers, was mostly favoured (46%), while 6.0% and 37.1% of the inhabitants favoured the use of folklore, songs and festivals/religious gathering respectively. There is therefore no common medium accessed by all respondents ($F = 4.02$; $df_r = 2536$; $Pr. < 0.02$) although from inhabitants' perspectives, traditional and modern media messages are found to compliment each other ($F = 23.8$; $df_r = 253$; $Pr. < 0.01$). In addition, the mix most favoured by inhabitants for sourcing information on sustainable land use in the study area was found to be community/religious leaders, and radio (34.9%). So also, the most appropriate media mix for the dissemination of forest conservation/sustainable land use practices in the study area is the Village/religious fora and radio (45.8%). Thus, public change institutions, which were found to be important to one-on-one information dissemination, must be beefed up to meet optimal performance standard. Also, other relevant media should be explored to meet the target audience requirements for accessing FCSI.

Keywords: Media mix; conservation support information; Rural Livelihood; Forestry extension; and Sustainable Development.

Introduction

Tropical deforestation has been a topical environmental issue in recent years. The tropical forests which are important as a reservoir of biodiversity and carbon fixation cannot but be accorded this much attention (UNEP, 1997). Apart from this, the current plight and future prospects of forest dependent indigenous people can also not be overemphasized. According to Singh (1993), deforestation is a complete clearing of tree formation (closed or open) and their replacement by non-forest land uses. If the present rates of

deforestation were to continue, most tropical forests would no doubt disappear sometimes during this century, or be reduced to small patches with only a few blocks of primary tropical rainforest remaining in inaccessible or effectively protected areas (Coufield, 1985, Myers, 1989). To guard against such occurrence, there is need for a rational utilization – conservation of the remaining forests and possible reclamation of deforested land area.

In the early times, traditional forest conservation prevailed and they had their history firmly rooted in the culture of the people. The ethics of traditional forest conservation, which are passed from generation to generation, are governed by folklore, taboo, rituals, superstition and physical signs. People, on the other hand can be described primarily by their culture and language. They are further analysed by things set in the culture such as traditional conservation methods, trado-medicine, and traditional communication. However, traditional conservation methods have been overtaken by the development drive. But, the use of conventional conservation methods is also insufficient at halting deforestation drive owing to the complexity of forestry activities. Apart from this, the method is mainly, curative and alien to the rural environment of developing nations such as Nigeria. Matowanyika (1991) argues that the preservation of indigenous management system (IMS) must have top priority in rural development initiative in Africa. These indigenous systems (IS) are characterized by a strong integration of economic, social and cultural institutions and values. The chief unifying attributes of IS are kinship and division of labour (FAO, 1991 a, b). The use of IMS results in sustainable and equitable development, FAO (1991 a, b).

The use of conventional conservation efforts can still not be totally neglected because as reported by Wells *et al* (1991) traditional approaches are not able to reconcile competing environmental issues with the needs of a rural populace. This does not however erase the fact that no matter how well intentioned, protectionist and enforcement strategies offered by conventional conservation approaches cannot be sustainable without local participation (Jacanamejoy, 1996). Hence, the relationship between the officials and local population under conventional conservation methods will not be conducive without a common vision of the need to conserve forest resources (Olalekan, 1990).

According to Opubor (1995), achieving sustainable conservation through participatory approach can be achieved through development communication. Development communication goes beyond the exchange of problem-solving messages: it involves the generation of psychic mobility and empathy; raising aspirations and; teaching of new skill and encouragement activities. This study views conservation of forest resources as a development process and therefore investigated feasible attendee centered media mix for forest conservation support communication.

Towards this end, the study will:

- (a) Examine the social and demographic background of inhabitants of the protected areas under study;
- (b) Analyze the prospect of and/or exposure to various information sources on forest conservation sources; and
- (c) Determine the appropriateness and reliability of media mixes for forest conservation centered information dissemination in the study area.

Methodology

The study area

The study covers southwestern Nigeria (Fig. 1), which lies between longitudes 2° 30' and 6° 00'E and latitudes 6° 20' and 8° 37'N. The area is bounded in the East by Rivers and Anambra States; in the North by Kwara and Kogi States; in the West by Benin Republic; and in the South by the shoreline of the Eastern part of the Gulf of Guinea. It is one of the most densely populated parts of Nigeria and the Yorubas mainly inhabit it. The total population of the people in the study area was projected at 28,767,752 in the year 2002 (NPC, 1991). The bulk of this population resides in the rural areas with farming being their main occupation.

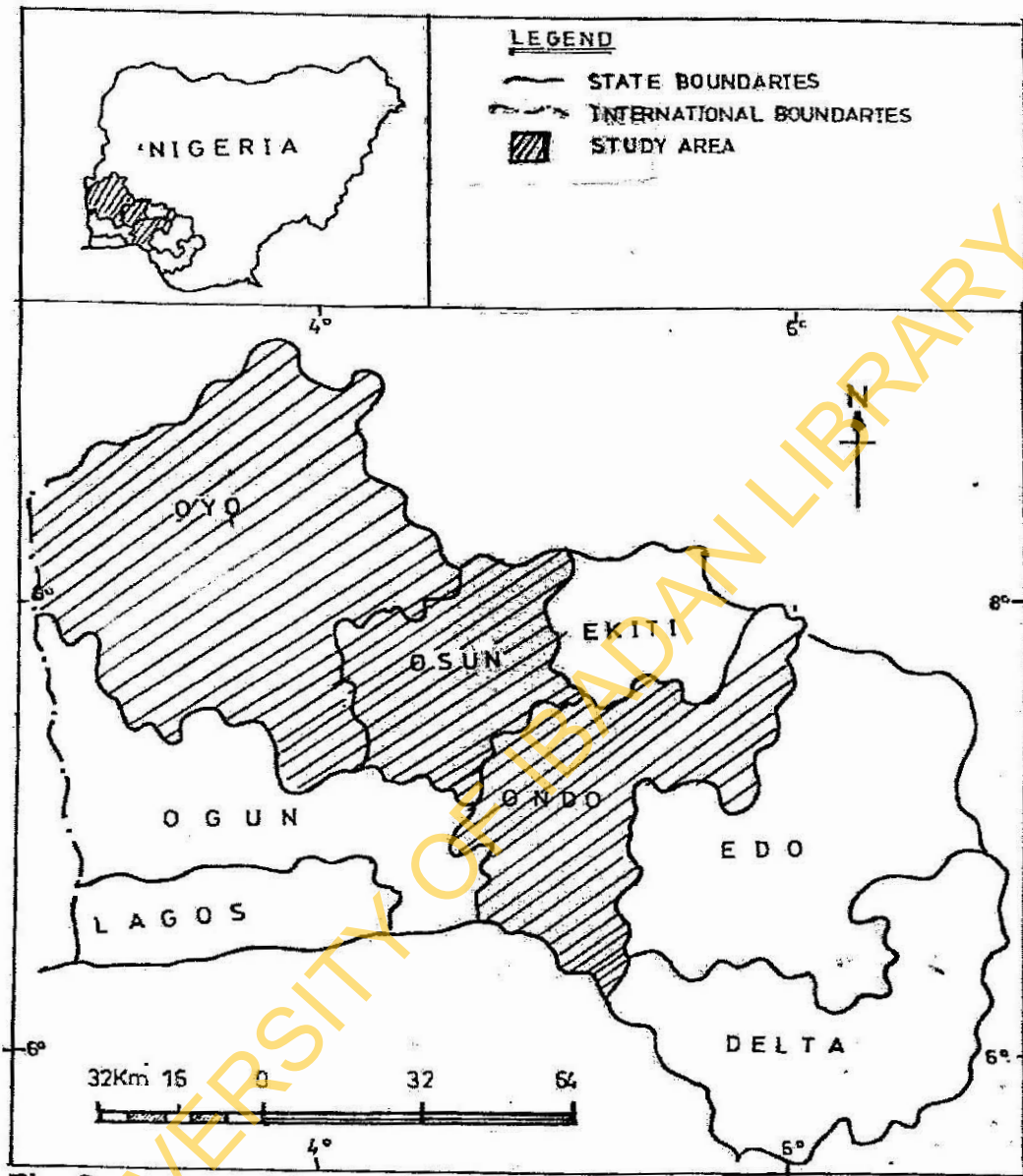


Fig. 1: Map of Southwestern Nigeria showing the study area

Population and sampling

The target population for the study was the inhabitants of enclaves and settlements around, Old Oyo National Park (OONP), Oyo State, as well as, Shasha and Oluwa Forest Reserves in Oshun and Ondo States.

Multistage random sampling techniques were used for the study. By virtue of Old Oyo National Park being the only National Park in south western Nigeria, and the relative impact of Oyo State Agricultural Development programme's (OYSADEP) extension agents in that zone (Azeez *et al*, 2000), the park was purposively selected for this study. The selection of Oluwa forest reserve is due to its timber yield per hectare, which when compared with that of commercial indigenous species from the natural forest over a period exceeding 100 years, is almost ten fold (Ogunlade and Odunlami, 1989). Apart from this, the importance of Oluwa forest reserve to the economy of Ondo State cannot be overemphasized. At least, 20% of the settlements in and around each of the selected sites were randomly selected using the statistical table random numbers. Thus, three hundred and fifteen questionnaires were administered to randomly selected inhabitant based on the number of farming households in the study sites. However, only 254 (OONP (86), Shasha (88) and Oluwa (80) Forest Reserves) questionnaires were recovered.

Indigenous opinions were sought through the administration of three hundred questionnaires and Focus Group Discussions (FGDs) involving opinion leaders and local inhabitants. Data generated were analyzed using frequency distribution, analyses of variance, Pearson's Likelihood ratio and linear by linear chi-square statistics.

Results and discussion

The results generated in the course of the study are presented below on the basis of the individual parameters assessed.

Demographic background of respondents

Data generated showed that an average of 74.8% of the inhabitants are male with the highest frequency of 93.02% around Old Oyo National park (Figure 2). On marital status, Figure 3 revealed that an average of 80.20% of the inhabitants interviewed were married. However, married cases were highest (92.5%) among the inhabitants of Oluwa Forest Reserves enclaves. In addition, Majority of the inhabitants interviewed had family sizes of between 6 and 10, with the highest frequency (61.25%) in Oluwa forest reserve enclaves and the lowest (35.23%) in Shasha forest reserve. Only some respondents from old Oyo National park area (6.97%) had family sizes greater than 15 (Table 1).

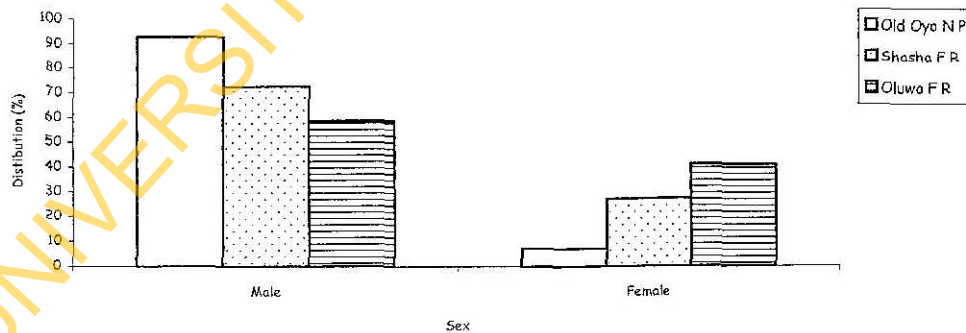


Figure 2: Sex distribution of residents in the study area

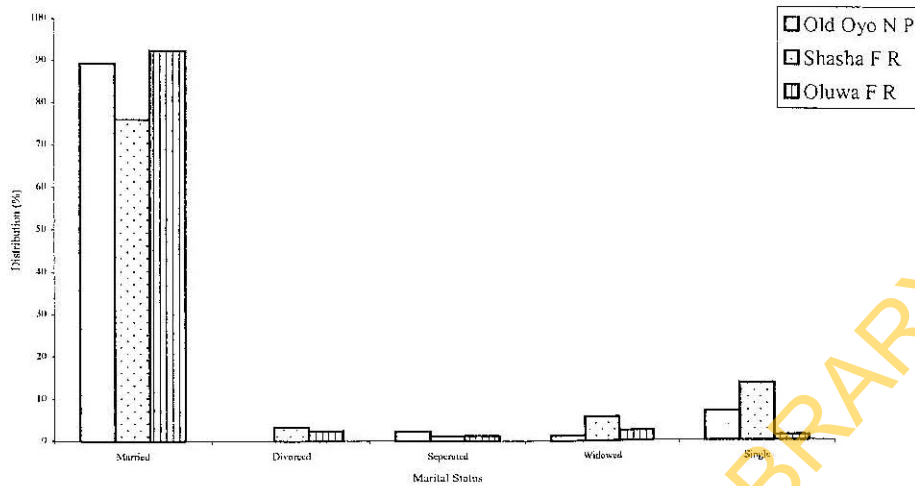


Figure 3: Marital status distribution of respondent in the study area

Table 1: Family size of inhabitants

Family size distribution	Old Oyo N.P		Shasha F.R		Oluwa F.R		Mean (%)
	Frequency	%	Frequency	%	Frequency	%	
1 – 5	15	17.4	26	29.6	24	30.0	25.7
>5 – 10	49	57.0	31	35.2	49	61.3	51.2
>10 – 15	14	16.3	04	04.6	07	08.7	20.6
>15	06	07.0	-	-	-	-	02.3
No response	02	02.3	27	30.7	-	-	11.0
Total	86	100.0	88	100.0	80	100.0	

Source: Field survey, 2001.

Socio economic background of respondents

On the average, 77.97% of the inhabitants interviewed were mainly farmers with the highest frequency (81.4%) in Old Oyo National Park environment and the lowest (64.77%) in Shasha forest reserve enclaves. Only a very few inhabitant, if any at all, in the study sites does not practice agriculture either primarily or as a secondary

source of income (Table 2). From Table 3, an average of 65% of the inhabitants interviewed were farming on the commercial scale while only 32.6% were mainly subsistence farmers. Commercial farming is however most prominent in Old Oyo National Park area where over 76% of the farmers interviewed were producing more than their subsistence needs.

Table 2: Main occupation of inhabitants

Identified occupations	Old Oyo N.P		Shasha F.R		Oluwa F.R		Mean (%)
	Frequency	%	Frequency	%	Frequency	%	
Farming	70	81.4	57	64.8	63	78.8	75.0
Unskilled worker	-	-	03	03.4	02	02.5	02.0
Civil servant	06	07.0	06	06.8	04	05.0	06.3
Petty trading	02	02.3	12	13.6	07	08.7	08.2
Others	08	09.3	09	10.2	04	05.0	08.2
No response	-	-	01	01.1	-	-	00.4
Total	86	100.0	88	100.0	80	100.0	

Source: Field survey, 2001.

Table 3: Scale of farming of respondents'

Scale of farming	Old Oyo N.P		Shasha F.R		Oluwa F.R		Mean (%)
	Frequency	%	Frequency	%	Frequency	%	
Mainly subsistence	20	23.3	37	42.1	26	32.50	32.60
Subsistence / commercial	64	74.4	36	40.9	52	65.00	60.11
Commercial	02	02.3	10	11.4	02	02.50	05.39
No response	-	-	05	05.6	-	-	01.89
Total	86	100.0	88	100.0	80	100.00	

Source: Field survey, 2001.

The study also revealed about 27% of the inhabitants, on the average, cultivating less than a hectare of land (Fig. 3). In Old Oyo National park area, only 12.79% of the inhabitants are using less than one hectare while over 45% were cultivating more than 4 hectares. However, more than 40% of the inhabitants of Shasha Forest Reserve enclaves

cultivated less than one hectare (Fig. 4). On crop types, the study shows cultivation preference to be high for food (62.35%) and cash (24.84%) crops, on the average. However, preference for cultivation of tree crops (9.61%) in the study area is averagely low (Fig. 5).

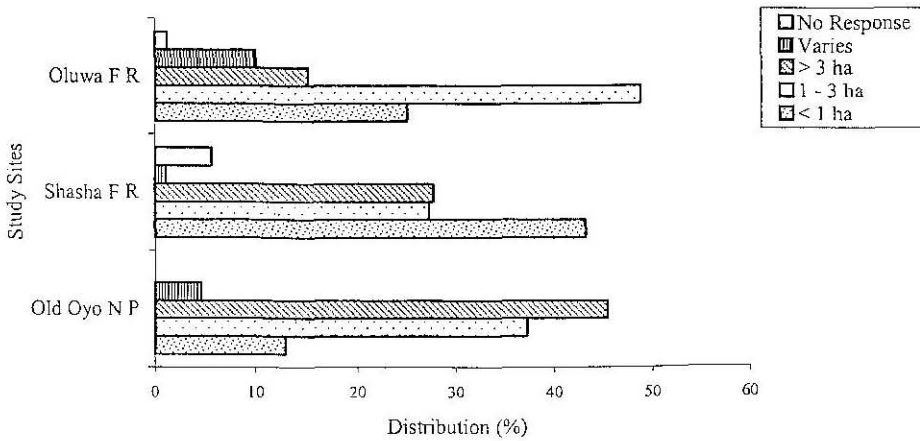


Figure 4: Farm size of inhabitants in the study area

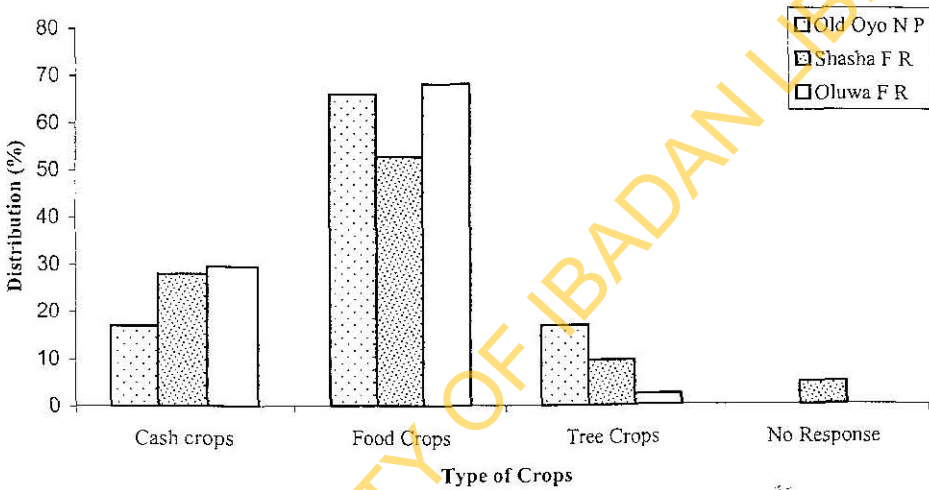


Figure 5: Type of crop(s) cultivated by inhabitants

Data generated on residents' acquisition of western education (Table 4) revealed that many (42.25%) of the residents have First School Leaving Certificate, but an average of 44.01% of the respondents interviewed did not respond (having consented to not having formal education). Furthermore, 23.94% were educated through the Adult Literacy School, while the rest had Diplomas, Certificates and Degrees. None of the inhabitants interviewed in Oluwa Forest Reserve enclaves had a degree.

Also worthy of note is that, while 73.26% of inhabitants interviewed in Old Oyo National Park environment have been resident in the site for over 15 years, only 46.59% and 35% have similar experience in Shasha and Oluwa forest reserve enclaves respectively (Table 5). In addition, it is only in the two forest reserves that inhabitants have been observed to be resident for between 2 and 5 years.

Table 4: Educational status of inhabitants'

Educational Status	Old Oyo N.P		Shasha F.R		Oluwa F.R		Mean (%)
	Frequency	%	Frequency	%	Frequency	%	
Adult literacy school	12	14.0	10	11.4	12	15.0	13.4
First school leaving certificate	21	24.4	14	15.9	25	31.3	23.9
Secondary school certificate	07	08.1	07	08.0	07	08.8	08.3
OND / NCE or equivalent	10	11.6	05	05.7	02	02.5	06.6
First degree / HND or equivalent	02	02.3	08	09.1	-	-	03.8
Higher degree	-	-	-	-	-	-	-
No response	34	39.5	44	50.00	34	42.5	44.0
Total	86	100.0	88	100.0	80	100.0	

Source: Field survey, 2001

Table 5: Years of residence of inhabitant'

Duration of residency	Old Oyo N.P		Shasha F.R		Oluwa F.R		Mean (%)
	Frequency	%	Frequency	%	Frequency	%	
2 – 5 Years	-	-	14	15.9	04	05.0	07.0
>5 – 10 Years	19	22.1	17	19.3	28	35.0	25.5
>10 – 15 Years	04	04.7	15	17.1	20	25.0	15.6
>15 Years	63	73.3	42	47.7	28	35.0	51.6
Total	86	100.0	88	100.0	80	100.0	

Source: Field survey, 2000

Sources of information in the study area

From Figure 6, attendance to agricultural extension agents as a source of information on farming systems was nil (0%) in Oluwa forest reserve enclave, 14% in Shasha forest reserve enclave, and 61.17% in Old Oyo National Park environment. This was due to the strong network of OYSADEP around OONP compared to the other two study sites, which are forest reserves. The most subscribed information source in the study area was radio with an average of 30.62% subscribers followed by community/religious leaders with an average of 28.22%. For information on forest conservation radio, forestry workers, community/religious leaders and friends received attention in the three study sites (Table 6). An average of 52.57% of the respondents subscribed to radio as a source of information on forest conservation. Community/religious leaders are

next to radio as the next sure source (19.54%). Forestry workers were also attended to by an average of 11.88% of the total number of respondents in the study area (Table 6).

Reliability of information sources among inhabitants

The study showed that agricultural extension workers and forestry staff were not seen as reliable information sources in Oluwa forest reserve enclaves (Fig. 6). However, 47.11% of respondents around Old Oyo National Park favoured agricultural extension agents as their most reliable information source. On the average, in all study sites pulled together, radio was favoured as the most reliable information source by 39.1% of all the respondents interviewed with the highest subscription (53.26%) coming from Oluwa Forest Reserve enclave.

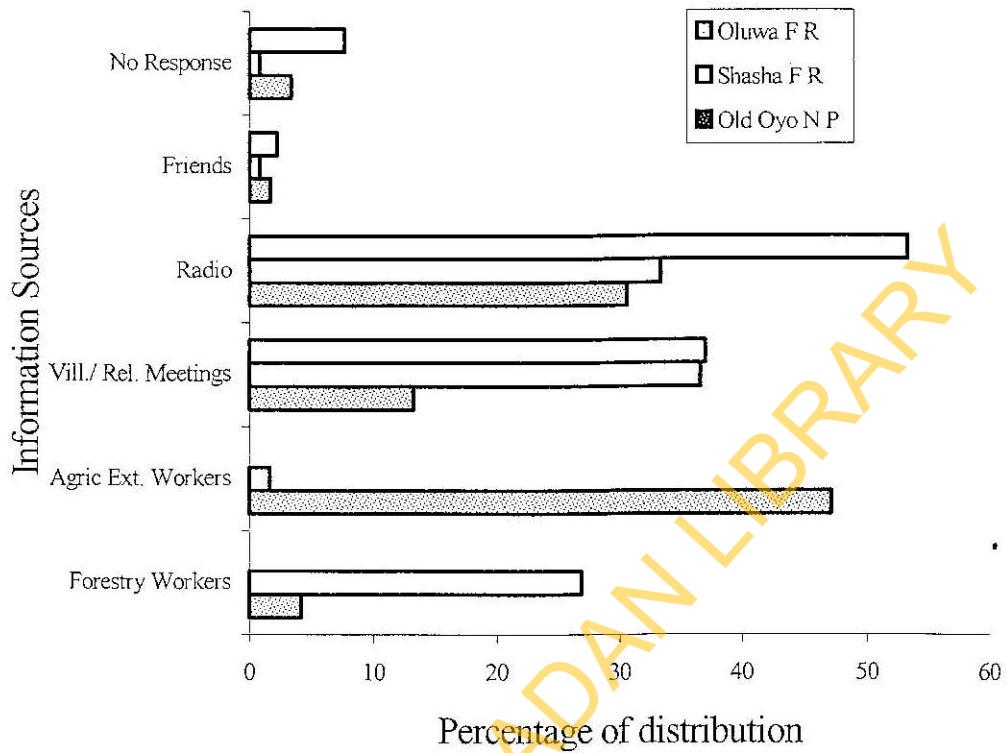


Figure 6: Most reliable sources of information among inhabitants in the study area

Also, modern mass media (radio in most cases) messages on forest conservation were perceived as educating by an average of 43.19% of the inhabitants in the study area (Table 7). About 24% regarded forest conservation messages from the modern mass media as explaining forest conservation concepts, while 7.40% considered

forest conservation messages from modern mass media as sounding admonishing. On the other hand, traditional communication channels were more noted (47.9%) for information dissemination in the study area. Apart from this they also play reminder (28.39%) role and have re-enforcement (16.84%) capabilities (Table 8).

Table 6: Prevailing sources of information on forest conservation

Sources of information	Old Oyo N.P		Shasha F.R		Oluwa F.R		Mean (%)
	Frequency	%	Frequency	%	Frequency	%	
Radio	55	45.8	69	56.1	58	55.8	52.4
Television	-	-	03	02.4	-	-	00.9
Forestry extension workers	22	18.3	13	10.6	07	06.7	12.1
Community/religious leaders	18	15.0	17	13.8	31	29.8	19.0
Through friends	13	10.8	06	04.9	06	05.8	07.2
Others	12	10.0	13	10.6	-	-	07.2
No response	-	-	02	01.6	02	01.9	01.2
Total	120	100.0	123	100.0	104	100.0	

Source: Field survey, 2001.

Table 7: Function(s) of mass media in encouraging forest conservation practices

Identified functions of the mass media	Old Oyo N.P		Shasha F.R		Oluwa F.R	
	Frequency	%	Frequency	Frequency	Frequency	%
Instructional	17	15.7	26	27.7	-	-
Explanatory	34	31.5	07	07.5	30	33.7
Admonishing	01	00.9	01	01.1	18	20.2
Educational	39	36.1	53	56.4	33	37.1
Others	13	12.0	-	-	01	01.1
No Response	04	03.7	07	07.5	07	07.9
Total	108	100.0	94	100.0	89	100.0

Source: Field survey, 2001.

Table 8: Inhabitants' perception of the role(s) of traditional communication

Expected role(s)	Old Oyo N.P		Shasha F.R		Oluwa F.R	
	Frequency	%	Frequency	%	Frequency	%
A. Information dissemination	36	35.3	54	45.8	64	62.8
B. Reminder	50	49.0	23	19.5	17	16.7
C. Re-enforcement	04	03.9	33	28.0	19	18.8
D. A – C	12	11.8	05	04.2	-	-
No response	01	1.0	03	02.5	02	02.00
Total	102	100.0	118	100.0	102	100.0

Source: Field survey, 2001.

Relevance of media mix

The study revealed a significant ($Pr. < 0.02$) variation ($F = 4.02$; $df_T = 253$) in media attendance (Table 9), and perception of inhabitants on whether in traditional and modern media messages are complimentary ($F = 23.79$; $df_T = 252$) in the study area (Table 10). But, chi square analysis (Table 11a), indicates the relevance of media mix to information dissemination in the study area. In addition, there is a linear relationship (Table 11a) between subscriptions to "the usefulness" and "relevance" of media mix throughout the study area (Table 11b).

In the same vein, 48.83% of the respondents around Old Oyo National park attested to the relevance of media mix, while 40.70% also agreed that media mix is quite relevant for forest conservation communication (Table 11b). In Oluwa forest reserve enclaves and environment, 63.75% adjudged media mix as quite relevant while 12.5% affirmed the relevance of media mix (Table 11b). In Shasha forest reserve enclaves, only 5.68% of the inhabitants of viewed media mix as irrelevant to forest conservation support communication (FCSC)

while 1.14% saw it as less relevant (Table 11b). The study also showed that the mixes of radio and forestry personnel (15.8%), Radio and Community/religious leaders (34.9%), and Radio with interpersonal Communication among friends (9.1%) were feasible for disseminating FCSI throughout the study area (Table 12). But while radio and some other traditional media (12.4%) were the mix mostly favoured in Shasha forest reserve enclaves, the inhabitants of Oluwa forest reserve enclaves (18.0%) and Old Oyo National Park area (7.9%) preferred radio and community/religious leaders.

Further, the perceived reliable media mix generally in the study area (Table 13) was radio and village/religious meetings (55.4%). However, radio and interaction with agricultural extension agents are the most reliable mix in Old Oyo National Park Area (23.0%) while the mix of village/religious meetings and radio is more reliable in Shasha (27.0%) and Oluwa (16.2%) forest reserves enclaves.

Table 9: Summary of the ANOVA in media attendance in the study area

	Sum of squares	Degree of freedom	Mean square	F Value	Significance
Between groups	173.6	2	86.8	4.0	0.02
Within groups	5426.4	251	21.6		
Total	5599.9	253			

Source: Computed from field data using SPSS (10) software, 2001.

Table 10: Summary of variation test on the perceptions of inhabitants on the complimentarity of mass media contents and extension workers' messages

	Sum of squares	Degree of Freedom	Mean Square	F Value	Significance
Between Groups	91.1	2	45.5	23.8	0.0
Within Groups	478.5	250	1.9		
Total	569.6	252			

Source: Computed from field data using SPSS (10) software, 2001.

Table 11a: Summary of Chi square analyses of Table 11b

Test Titles	Values			Degree of freedom			Significant values		
	Oyo	Shasha	Oluwa	Oyo	Shasha	Oluwa	Oyo	Shasha	Oluwa
Pearson's	15.9	28.2	42.3	3	3	5	0.0	0.0	0.0
Likelihood Ratio	14.00	21.1	29.8	3	3	5	0.0	0.0	0.0
Linear by linear assoc.	12.0	17.7	23.5	1	1	1	0.0	0.0	0.0

Source: Computed from field data using SPSS (10) software, 2001.

Table 11b: Cross tabulation analysis of the usefulness versus the relevance of media mix to forest conservation communication

Relevance of Media Mix	Subscription to the usefulness of media mix									
	Yes			No						
	Old Oyo	Shasha	Oluwa	Old Oyo	Shasha	Oluwa	Old Oyo	Shasha	Oluwa	
Relevant	Old Oyo	45.9		2.4						48.2
	Shasha	28.6	2.4							31.0
	Oluwa	13.9								13.9
Quite Relevant	Old Oyo	32.9		8.2						41.2
	Shasha	51.2	2.4							53.6
	Oluwa	66.7				2.8				69.4
Less Relevant	Old Oyo	-								-
	Shasha	3.6	6.0							9.6
	Oluwa	5.6				2.8				8.3
Not Relevant	Old Oyo	4.7					4.7			9.4
	Shasha	-								-
	Oluwa	-				5.6				5.6
Undecided	Old Oyo	-					1.2			1.2
	Shasha	2.4	3.6							6.0
	Oluwa	1.4				1.4				2.8
		83.5	85.7	87.5	87.5	16.5	14.3	12.5	300.0	

Source: Computed from field data using SPSS (10) software, 2001.

Table 12: Appropriate media mix for sourcing information on sustainable utilization of forest resources

	Media mixes	Old Oyo NP	Shasha FR	Oluwa FR	Σ
1.	Radio & forestry workers	3 (3.4)	7 (7.9)	4 (4.5)	14 (15.8)
2.	Radio & community/ religious leaders	7 (7.9)	8 (9.0)	16 (18.0)	31 (34.9)
3.	Radio & friends	2 (2.3)	4 (4.5)	2 (2.3)	08 (9.1)
4.	Community/ religious leaders & friends	-	1 (1.1)	2 (2.3)	03 (3.4)
5.	Radio & television	2 (2.3)	-	-	02 (2.3)
6.	Radio & others	3 (3.4)	11 (12.4)	-	14 (15.8)
7.	Forestry workers & friends	2 (2.3)	-	-	02 (2.3)
8.	Community / religious leaders & others	2 (2.3)	-	-	02 (2.3)
9.	Friends & others	2 (2.3)	-	-	02 (2.3)
10.	Radio, television & forestry workers	3 (3.4)	-	-	03 (3.4)
11.	Radio, community / religious leaders & friends	3 (3.4)	1 (1.1)	-	04 (4.5)
12.	Radio, community / religious leaders & others	2 (2.3)	-	-	02 (2.3)
13.	Radio, forestry workers & community / religious leaders	-	2 (2.3)	-	02 (2.3)
	Σ	31 (34.8)	34 (38.2)	24 (27.0)	89 (100.0)

* Percentages of frequency distribution in brackets

Source: Field survey, 2001.

Table 13: Reliable media mixes for sourcing information on sustainable utilization of forest resources

	Media Mixes	Old Oyo NP	Shasha FR	Oluwa FR	Σ
1.	Forestry workers & village / religious meetings	-	2 (2.7)	-	02 (2.7)
2.	Forestry workers & radio	-	2 (2.7)	-	02 (2.7)
3.	Forestry workers & others	-	1 (1.4)	-	01 (1.4)
4.	Village / religious meetings & radio	9(12.2)	20(27.0)	12(16.2)	41(55.4)
5.	Forestry workers & agric. extension workers	1 (1.4)	-	-	01 (1.4)
6.	Agric. extension workers & radio	17 (23.0)	-	-	17 (23.0)
7.	Radio & friends	2 (2.7)	-	-	02 (2.7)
8.	Village / religious meetings & others	-	1 (1.4)	-	01 1.4
9.	Forestry workers, Village / religious meetings & radio	-	2 (2.7)	-	02 (2.7)
10.	Forestry workers, village / religious meetings & others	-	2 (2.7)	-	02 (2.7)
11.	Radio, agric. extension workers & village / religious meetings	3 (4.1)	-	-	03 (4.1)
	Σ	32 (43.2)	30 (40.5)	12 (16.2)	74 (100.0)

* Percentages of frequency distribution in brackets

Source: Field survey, 2001.

Conclusion and recommendations

Given the present state of the forest estates, the economic and social background, as well as the level of awareness among the users and custodians of forest resources, the need to accord forestry extension the needed attention becomes imperative. However, communication is the backbone of extension hence, employing conservation support communication (CSC) towards propagating forest conservation efforts will not be out of the way. But for whom such efforts are intended will be of utmost importance.

According to the respondents, the reliability of agricultural extension agents EAs at diffusing sustainable land use information was demonstrated around OONP where OYSADEP was still effective. This emphasized the impact of one-on-one communication. In forest reserve enclaves, where inhabitants are not availed the service of EAs, the attendance of radio, community/religious leaders and friends (neighbours) were more favoured. Even at that, radio is the only non-interpersonal media favoured for FCSC in the study area. Different mixes of these media were also favoured as attendee-centred mix in the study area.

Radio is a media, which is highly acknowledged as a source of reliable information in the study area and as was demonstrated by inhabitants. However its being assisted by some interpersonal media will bring remarkable results because of the culture of interdependency in the study area. The non-personal information gotten from the radio will be better explained and hence devoid of mystery, if well interpreted and elaborated on using genuine-intended interpersonal media. These findings were in agreement with Moemeka (1987) and Brieger *et al* (1990) submissions that the effectiveness of the mass media is a function of their being cheap and relatively easy to apply. However, Brieger *et al* (*op. cit.*) was quick to add that sustaining message acceptability and effecting behavioural change demands interpersonal communication strategies.

At this time when the ever-increasing population is dependent on a fixed land area, the delineation of a vast array of land for forest plantation is unrealistic. The need to adopt environmental-friendly multiple landuse becomes highly important. Therefore, the importance of a green environment should be impacted on rural dwellers, whose major concern is food production. To achieve this, it is recommended that:

- Forestry extension, which is the key link in the transfer of forest conservation

References

- Azeez, I. O., L. Popoola, and L. A. Adebisi 2000. Impact Assessment of Unified Agricultural Extension System on Agroforestry Development in Oyo State, Nigeria, *Journal of Tropical Forest Resources* (vol. 16 (1)), pp. 91 – 106.
- Brieger, W. R., R. Jayashree, S. D. Adeniyi, M. K. C. Sridhar and O. O. Kale 1990. 'Guinea worm Control Case study – Planning a Multi-Strategy Approach', *British Social Science Medicine*, Vol. 32, No. 12, pp. 1319 – 1326.
- Coufield, C. 1985. *In the Rainforest*. Pan books, London, 29 pp.
- FAO 1991a. Sustainable Agriculture and Rural Development in Sub-Sahara Africa in FAO Regional Document No. 1.
- _____ 1991b. Social and Institutional Aspects of Sustainable Agriculture and Rural Development, in FAO Background Document No. 5.
- Jacanamejoy, G.M. 1994. Community Participation in the Conservation of Biodiversity in Widening Perspectives on Biodiversity, IUCN / NRIAE, 1994, Glands, Switzerland, pp. 229 – 232.

centered information demands urgent attention. To this end,

- (a) there is need to establish a separate agroforestry extension unit or re-orientate the agricultural EAs towards natural and sustainable rather than high external input (HEI) agriculture;
- (b) all field staff of the forestry departments in the study area must imbibe the concept of participatory forest management.
 - The socio-cultural tastes of target beneficiaries should be taken into consideration in the preparation of forest conservation centered messages for airing on electronic media;
 - Timing of mass media messages should also consider and be in line with the daily routine of the target beneficiaries. This will reduce social and psychological noise in such messages and improve the chance of its being understood; and
 - Since village/religious meetings are the most favoured interpersonal medium in the study area, community/religious leaders should be empowered with knowledge on sustainable land use practices.

- Matowanyika, J. Z. Z. 1991. In Pursuit of Proper Content for Sustainability in Rural Africa, in *The Environmentalist*, vol. 11 (No. 2).
- Moemeka, A. 1987. Perspectives in Development Communication, Ahmadu Bello University press, Nigeria, pp. 201-222.
- Myers, N. 1989. Deforestation Rates in Tropical Forest and their Climatic implications, Friends of the Earth publication, London, 78 pp.
- NPC. 1991. Nigeria's Census Summary, 1991, from the office of National Population Commission, Abuja, Nigeria, 87 pp.
- Ogunlade, A. B. and F. K. Odunlami 1989. monitoring systems for forestry plantation projects in Nigeria – A practical approach, Ondo State Afforestation project, Nigeria, x + 55 pp.
- Olalekan, A. 1990. Policy Guidelines for the Democratization of TV and Video Systems in Nigeria, Lai Oso and A. Lanre (eds.) Communication and Rural Development in Nigeria, Pp. 91-105.
- Opubor, A. E. 1995. "Mass Communication and Modern development in Nigeria" in Onuora Nwuneli (ed.) Mass Communication in Nigeria - A book of reading, Fourth dimension publishers, Enugu, Nigeria.
- Singh, K. D. 1993. The 1990 Tropical Forest Resources Assessment in *Unasylva*, volume 44, No. 174.
- UNEP (United Nations Environment Programme – 1977. Draft Plan of Action to Combat Desertification, United Nations Conference on Desertification, Nairobi, 29 August – 9 September, Doc. A / CONF., 74/L.36.
- Wells, M., K. Brandon, and L. Hannah 1991. People and Parks: linking protected area management with local communities, The World Bank, Washington.