

Full Length Research Paper

Media coverage of nature conservation and protection in Nigeria National Parks

Ogunjinmi, A. A.^{1*}, Onadeko, S. A.² and Ogunjinmi, K. O.³

¹Department of Ecotourism and Wildlife Management, School of Agriculture and Agricultural Technology, Federal University of Technology, P.M.B. 704, Akure, Ondo State, Nigeria.

²Department of Forestry and Wildlife Management, University of Agriculture, P.M.B. 2240, Abeokuta, Ogun State, Nigeria.

³Department of Agricultural Extension and Rural Development, University of Agriculture, P.M.B. 2240, Abeokuta, Ogun State, Nigeria.

Accepted 5 August, 2013

Low level of knowledge and awareness of the conservation efforts and activities of Nigeria National Parks in wider Nigerian public have been observed and prompted this study. Five print media (newspapers) and four electronic media (television and radio) were sampled. The print media were The Punch, Nigerian Tribune, The Nation, The Vanguard and The Guardian newspapers while the electronic media were Edo Broadcasting Service (EBS-Television), Taraba Television Corporation (TTV), Edo Radio and Federal Radio Corporation of Nigeria (FRCN) and Ibadan National Station. The electronic media were selected based on the States where National Parks are located. Articles in the selected print media and programmes on the sampled electronic media which cover nature conservation and protection and other environmental issues were analyzed. The result indicates that 316 articles were published on environmental issues by the print media. The Guardian newspaper has the highest number of articles with 257 articles. Articles on nature conservation and protection had the least number of articles published. Broadcast media had no specific programmes on nature conservation. Synergy between Nigeria National Parks Service and major media establishments is required. With this, there will be an increase in public awareness, knowledge, appreciation of parks' resources, and policy support for biodiversity conservation efforts. These have the tendency to catalyze actions at local and decision-making levels that could halt the degradation of Nigeria's biodiversity.

Keywords: Media, coverage, protected areas, Nigeria National Parks, biodiversity, conservation.

INTRODUCTION

Sustenance of nature has become one of the pressing issues facing humanity today with environmental and conservation education and awareness being regarded as one of the measures of halting the conflict between human and nature. According to Canadian Environmental Grantmakers' Network (2006), solving today's challenging local and global environmental issues and moving society

towards sustainability cannot rest only with "experts" but will require the support and active participation of an informed public in their various roles as consumers, voters, employers, and business and community leaders. Thus, mass media have become an indispensable partner in global biodiversity conservation and management through their various roles of not only increasing

awareness on the problems and challenges towards environmental sustainability, but also in achieving the ultimate goals of changing human perception, attitudes and behaviour towards environmental resources.

Biodiversity conservation issues are beginning to gain prominence in the media. According to Global Sherpa (2011), internationally, media coverage of environmental conservation and biodiversity has experienced a steady increase since 1990, when it hardly showed up in newspapers. The newspapers' usage of the term biodiversity has grown to nearly 0.1 articles per newspaper in 2000 and 0.2 articles per paper in 2010. The role of the media in building environmental friendly civil society and practically assisting in solving local problems by providing the public and decision makers with information for informed participation in decision-making is crucial (CEPF, 2004). Most citizens get their information on the government through the media. According to Hesselink et al. (2007), to have an agency's messages reach the general public, the agency has to build a sound relationship with the media. The press is thus an important channel to reach decision-makers and opinion leaders (GreenCom, 2001). For example, reportedly, newspapers and television news is the best channels for reaching urban opinion leaders, while national and local radios are best for reaching rural audience (GreenCom, 2001).

Engendering positive behaviour towards nature and natural resources requires holistic approach involving collaboration among all stakeholders. Thus, gaining collaboration and cooperation of individuals, organizations and groups in the society to act on the drivers of biodiversity loss is according to Hesselink et al. (2007), the only way to reduce the loss of biodiversity, conserve it and implement National Biodiversity strategies and Action Plans (NBSAPs).

Communication, education, and public awareness (CEPA) play a role in developing this collaboration and change in society. Center for International Media Assistance (2009) stated that the local media in transitioning countries can play a critical role in holding government officials, corporate leaders, and other individuals accountable for their environmental records by collecting information from governments' planning documents, reports on local environmental conditions and pollution records.

By providing accurate, high-quality environmental report and engaging the public in a policy dialogue, independent media can also help citizens protect their own environmental interests (Center for International Media Assistance, 2009). The mass media can also ensure widespread distribution of environmental information and thus catalyses action (UNEP, 2006). Because of the dynamic nature of environmental information, environmental report must be concerted, consistent and informed (UNEP, 2006). Environmental information is the crux of environmental action (UNEP, 2006). The media is a central for amplifying environmental

issues and can influence the course of policy (Science for Environment Policy, 2009). According to Novacek (2008), effective linkages between the scientific and conservation community and the public must be made through the main channel of dissemination, namely media in the form of news and educational programming. One of the strategies of IUCN-The World Conservation Union is the direct and tailored communication to specific targeted groups complemented by use of the mass media and reinforces the messages that are being sent to specific groups in order to create and maintain a general awareness of the issues in the wider society (IUCN, 2009).

One of the ways by which sustainable development and environmental sustainability can be enshrined in the minds of the public is through conservation education and awareness. According to Millar (2012), media houses are a useful outlet for the promotion of sustainable development and campaign for social change, however, clear challenges remain. A major challenge in developing countries is balancing economic growth with environmental sustainability (Center for International Media Assistance, 2009). Also, while the focus of environmental education and public awareness programmes has been in the school system, the important roles the media plays have often been overlooked (Ongkili, 2004).

The problem in part has been insufficiency of environmental information in printed and electronic media and the lack of depth of writers on the subject (Ongkili, 2004). Such contributions by the press according to Ongkili (2004) have been ad-hoc and the problem sounding rather than problem solving. Media reports on the environment always focus on crisis or problems. The quality of environmental journalism and broadcasting is usually fairly poor (GreenCom, 2001). The media's appetite for confrontation and bad news continue to make it difficult to reach out with positive messages in editorial media, creating a need for much more direct (unmediated) engagement with stakeholders (Kitchin, 2010).

Notwithstanding the above, mass media had proven effective at sensitizing us to the plights of individual species: seals, pandas, elephants, tigers and whales (Kitchin, 2010). Harnessing the power of the mass media is an important and critical challenge for any environmental organization that wants to effectively change the habits and behavior of a crowd, a nation or even the world (Castro and Wyss, 2004). Effective interaction with the mass media according to Castro and Wyss (2004) can build constituencies; multiply the message and catalyze action. An important interaction, a conservation organization and the media can have is the open and free exchange of information (Castro and Wyss, 2004).

Nigeria's present day national parks were offshoot of forest reserves, first established in the early 1900s by the

colonial administration. Federal Ministry of Environment (2010) posited that one important obstacle to wildlife conservation in Nigeria was that the conservation areas included traditional hunting grounds of communities that live around these areas, thereby denying them their hunting rights. This denial brought to the fore conflicts between conservation goals and local interest, particularly with continuing increase in rural population and their socio-economic activities. This growing population is exerting greater pressures on resources in national parks more than ever before resulting in the breakdown of the traditional relationship existing between the rural communities and the natural resources. Coupled with this, is that, the surrounding rural communities of the national parks are inhabited largely by people with non-formal education (Ogunjinmi et al., 2012), necessitating urgent need to bolster their conservation education and awareness, particularly, as it relates to national parks and their activities in order to encourage positive environmental and conservation behaviour.

Paucity of information pertaining to Nigeria National Parks' policies and activities is a critical problem hindering the effective management of wildlife in Nigeria. If the publics are not well-informed on management conservation interventions, there would be less support from the public. This is because the success of protected areas is often determined by its stakeholders and is based on their understanding of and support for the protected areas (Castro et al., 2004). Hesselink and Goldstein (2003) reported that conservation organizations did not invest in communication sufficiently, and that they do not survey public perceptions in order to measure the impact of their communication. Communication and learning are for most managers, a forgotten priority (Hesselink, 2004). Used strategically and efficiently, communication supports the right to information and ensures that participation can be founded on the knowledge required to make decisions and take day-to-day actions (Hamu et al., 2004).

Studies have indicated that environmentally sustainable practices will not be achieved without the mobilization of the general public (Burgess, 1994) and no suitable management program for the nation's natural resources can succeed without public support (Kimball, 1975). Furthermore, no government agency can fully exercise its authority and responsibility in resource management without the support of the people (Kimball, 1975). Onadeko (2004) argued that wildlife management cannot function without public support, or at least public sufferance, and that the development of favorable climate of public input must accompany or even precede the management of game. Lack of public information in relation to wildlife conservation efforts, the indiscriminate use of wildlife resources, and habitat degradation due to human activities are associated with human related issues of wildlife (Onadeko, 2004). Media roles in enhancing environmental awareness and consciousness

among the public cannot be overemphasized. According to Compas et al. (2007), mass media are among the elements that can greatly contribute to the encouragement of environmental awareness in poor urban and rural based communities.

This study is aimed at assessing the extent of coverage of Nigeria National Parks' conservation efforts by Nigerian media (print and electronic) with the purpose of determining their level of collaboration with Nigeria's highest conservation agency- the Nigeria National Park Service on nature and conservation education and awareness in Nigeria.

METHODOLOGY

The study centered on the coverage of nature conservation and protection efforts of Nigeria National Parks and other environmental issues by Nigerian media. Five print media (newspapers) and four electronic media (television and radio) were sampled. The print media were The Punch, Nigerian Tribune, The Nation, The Vanguard and The Guardian newspapers while the electronic media were Edo Broadcasting Service (EBS-Television), Taraba Television Corporation (TTV), Edo radio (ER) and Federal Radio Corporation of Nigeria (FRCN) and Ibadan National Station. The electronic media were selected based on the states the national parks are located, hence EBS- Okomu National Park, TTV-Gashaka-Gumti National Park and FRCN Ibadan National Station-Old Oyo National Park were used. Articles in the selected print media and programmes on the sampled electronic media which cover Nigeria National Parks nature conservation and protection efforts and other environmental issues were analyzed. The coverage period was five years, from January 2003 to December 2007. In addition, face-to-face interview was conducted with the programmes or news editors of the respective media organizations in order to identify the challenges of biodiversity conservation and environmental reporting.

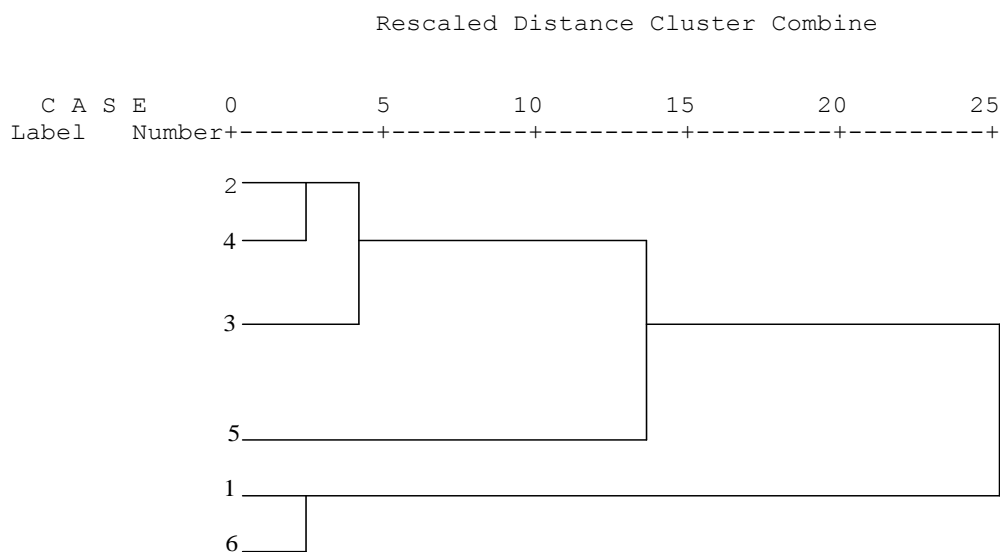
Data on the sources of information on biodiversity conservation and environment were obtained through structured questionnaires administered on the support zone communities of the parks and visitors to the national parks during data collection phase of this study. Ten percent (10%) of the communities in all the ranges of the parks amounting to 117 communities were randomly selected from the list of communities that lie between 0 and 10 km from the parks' boundaries. The total number of communities within 0 and 10 km of all the ranges was based on National Park Service records. In addition, 1170 respondents were randomly selected representing 10% of the total population of the selected communities. The visitors to the parks at the time of this study were randomly selected and their selection was based on their willingness to participate in the study. In all, 350 visitors were sampled in all the parks. Data obtained were presented in tables, frequencies, percentages and charts. Similarities in the coverage of the environmental issues by the media were presented with hierarchical cluster analysis.

RESULTS

In Table 1, 316 articles on the environment were published by the sampled print media (The Punch, Nigerian Tribune, The Nation, The Vanguard and The Guardian newspapers) from 2003 to 2007. The Guardian had 257 articles (i.e. 81.3%) and The Vanguard (2.5%).

Table 1. The coverage of Nigeria National Parks and environmental programmes from 2003-2007 by five print media.

Item	Number of articles in the selected print media					Total	Percentage
	The Punch	Nigerian Tribune	The Nation	The Vanguard	The Guardian		
Loss of biodiversity (wildlife, forests, fisheries)	6	5	2	0	60	73	23.1
Pollution of water resources	4	1	2	0	37	44	13.9
Air pollution	1	1	3	1	43	49	15.5
Waste management	4	1	2	2	37	46	14.6
Nature conservation and protection (national parks, game reserves, wildlife sanctuary, etc)	1	4	3	1	20	29	9.2
Soil and agricultural pollution	4	4	3	4	60	75	23.7
Total	20	16	15	8	257	316	
Percentage	6.3	5.1	4.8	2.5	81.3		

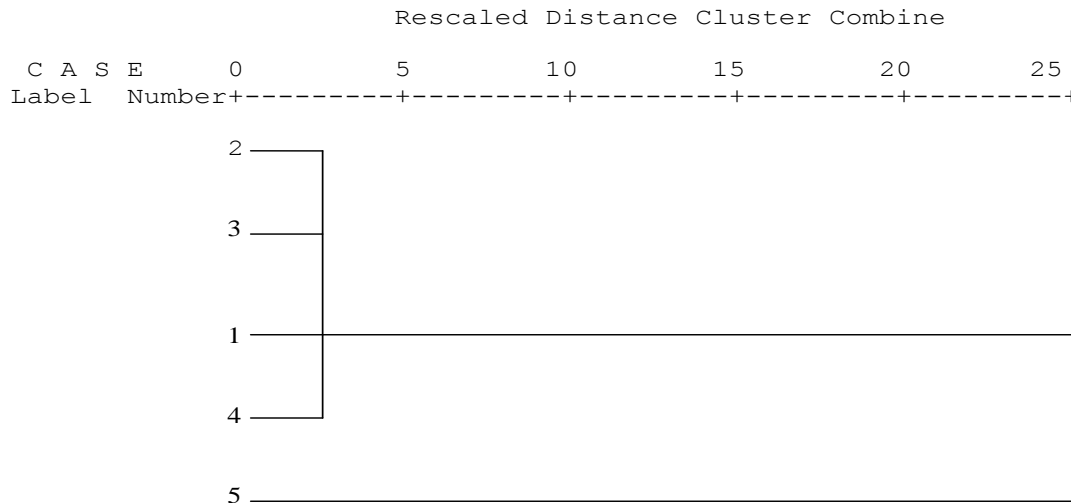


1= Loss of biodiversity (wildlife, forests, fisheries), 2= Pollution of water resources, 3= Air Pollution 4= Waste management, 5= Nature conservation and protection (National Parks, game reserves, wildlife sanctuary etc), 6= Soil and agricultural pollution

Figure 1. Hierarchical cluster analysis (with dendrogram using average linkage between groups) of similarity of the national parks/environmental issues according to their coverage by the selected print media.

Furthermore, soil and agricultural pollution dominated 23.7% of the articles, followed by loss of biodiversity (wildlife, forests and fisheries) (23.1%). The nature conservation and protection (national parks, game reserves, wildlife sanctuaries, etc.) had the least number of articles (9.2%). Articles on nature conservation and protection were not particularly centred on Nigeria National Parks and Game Reserves, but were on national parks in other countries. Hierarchical cluster analysis with dendrogram using average linkage between groups

shows that loss of biodiversity (wildlife, forests and fisheries) and soil and agricultural pollution are similar in their coverage by the five print media; pollution of water resources and waste management were also similar (Figure 1). Furthermore, The Punch, Nigerian Tribune, The Nation and the Vanguard were very similar in their coverage of environmental issues, but different from The Guardian (Figure 2). Furthermore, Edo television aired programmes on pollution of water resources twice quarterly and waste management was aired daily, parti-



1= The Punch, 2= Nigerian Tribune, 3= The Nation, 4= The Vanguard, 5= The Guardian

Figure 2. Hierarchical cluster analysis (with dendrogram using average linkage between groups) of similarity of the print media in their coverage of national parks/environmental issues.

Table 2. The coverage of Nigeria National Parks/environmental issues by sampled television stations.

Item	Television station			
	EBS		TTC	
	Programmes	Fillers	Programmes	Fillers
Loss of biodiversity (wildlife, forests, fisheries)	0	0	0	Twice weekly
Pollution of water resources	Twice weekly	0	0	Once weekly
Air Pollution	0	0	0	0
Waste management	0	Once daily	0	0
Nature conservation and protection (National Parks, game reserves, wildlife sanctuary etc)	0	Thrice weekly	0	Twice weekly
Soil and agricultural pollution	Twice weekly	0	0	0

cularly on environmental sanitation days. There was no programme on loss of biodiversity (wildlife, forests and fisheries); and documentaries on nature conservation and protection (national parks, game reserves, and wildlife sanctuaries) were aired thrice weekly to fill free airtime when no programme was scheduled or planned. Okomu National Park was used for some of the independent programmes presented on Edo Broadcasting Service (EBS), but there was no particular programme that focused on the park. On Taraba Television Corporation (TTC), there were no programmes on the environment. Apart from this, result in Table 2 showed that there was general lack of database on past programmes by the two stations. In Table 3, the sampled radio stations (FRCN, Ibadan and EBS Radio) did not have programmes on nature conservation and protection but issues on the

national parks and other protected areas were occasionally presented, particularly, issues relating to bush burning during the dry season. The study further observed that about 37.1% of the respondents indicated that the main source of information to national park visitors on biodiversity conservation was TV (Figure 3). However, most of the information according to the visitors was obtained through TV documentaries centred on protected areas in other countries, particularly the Eastern and Southern Africa, and were not specifically on Nigeria. Conversely, in the support zone communities, radio was adjudged the main source of information with 36.7%. More than half of the respondents from the support zone communities of the parks have no access to information through the conventional media channels (Figure 4). The challenges inhibiting biodiversity conser-

Table 3. The coverage of Nigeria National Parks and environmental programmes by the sampled radio stations.

Environmental issues	Radio Stations			
	FRCN Ibadan	National Station	Edo Broadcasting Service-Radio	
	Programme	When occasion demands	Programme	When occasion demands
Loss of biodiversity (wildlife, forests, fisheries)	0	0	0	Thrice weekly
Pollution of water resources	0	Twice weekly	0	Thrice weekly
Air pollution	0	0	0	Twice weekly
Waste management	0	Daily	0	Twice weekly
Nature conservation and protection (National Parks, Game Reserves, Wildlife Sanctuary)	0	Occasionally	0	Occasionally
Soil and agricultural pollution	0	0	0	0

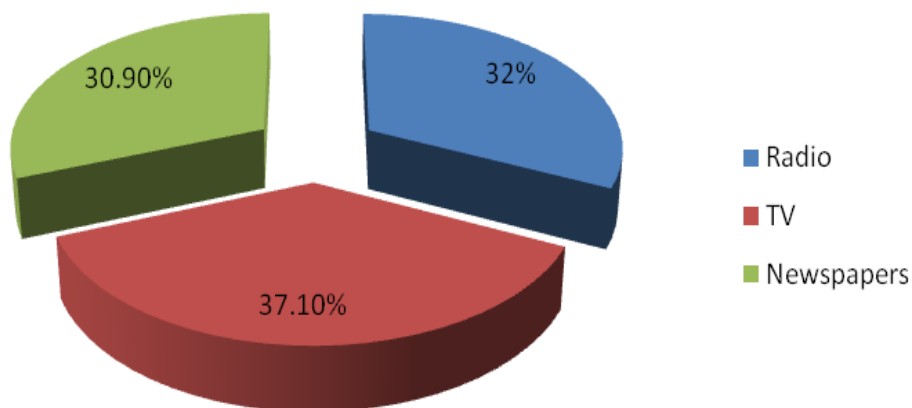


Figure 3. Parks visitors' sources of information on biodiversity and environmental conservation.

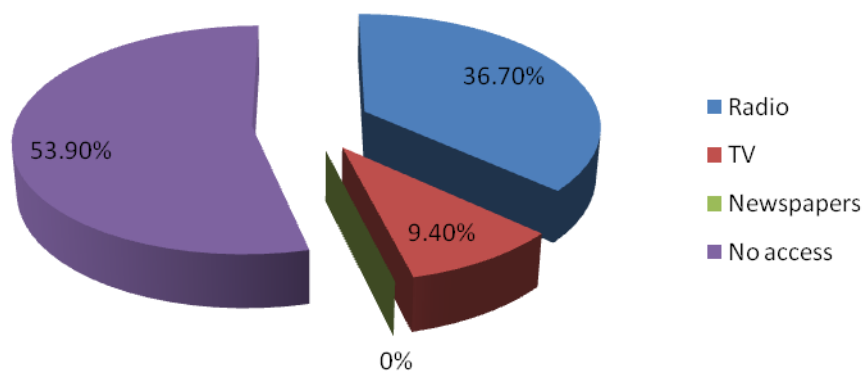


Figure 4. Support zone communities' access to information on biodiversity and environmental conservation through the media.

vation and environmental reporting as identified and ranked by programmes or news editors in order of magnitude include commercialization of programmes, profit orientation of media organizations, lack of

biodiversity conservation and environmental programs' sponsorship, low contact with conservation agencies and inadequate information to the media organisations on biodiversity and environmental conservation activities

Table 4. Challenges of biodiversity conservation and environmental reporting by Nigerian media.

Challenge	Ranking (1 = most; 5 = least)
Commercialization of programmes	1
Profit orientation of media organisations	2
Lack of biodiversity conservation and environmental programmes sponsorship	3
Low contact with conservation agencies	4
Inadequate information to the media organizations on biodiversity and environmental conservation activities	5

(Table 4).

DISCUSSION

From the results, articles were published by the selected national newspapers on environmental issues, although the level of coverage differs. However, specific articles on Nigeria National Parks nature conservation and protection efforts had the least prominence. This could limit the efforts of the Nigeria National Parks at reaching the largely urban and peri-urban literate who might have not had the opportunity of visiting the parks and could offer political and policy supports for funding and overall development of the parks. Similar studies in India by Sekar (1981) showed that leading English dailies brought into focus specific environmental problems in sufficient intensity with scope and time.

Maceviciute (2000) also observed that there were no articles on nature conservation and protection in Lithuania major newspapers. According to Letto (1995), the coverage of environmental issues by mainstream media has been largely inadequate. Nitz and Javis cited by Letto (1995) observed that 2% of the newscast addressed environmental themes and concluded that environment is not a critical issue for television news. Chan (1999) also observed that environmental issues failed to compete with other prominent issues directly affecting the public in Hong Kong media from 1983 to 1995. In their study of environmental reporting in Georgia in 2011, Tskitishvili et al. (2012) found that environmental issues and topics were considered to be of secondary interest in Georgian Press. Studies by Chagutah (2010) also indicated that environment issues had the least coverage in Zimbabwean Press and was subordinate to other societal concerns. May et al. (2011) observed that issues regarding deforestation occupied little space in the Brazilian Press and 9 and 1% media coverage of ecology and science issues, respectively.

In addition, there was low level of coverage of Nigeria National Parks nature conservation and protection efforts by the selected national and state electronic media. However, more emphasis was on documentaries on national parks in other countries such as Eastern and Southern African countries. This could be an indication of

inadequate partnership and collaboration between Nigeria National Parks and the media. It might have emanated from lack of access to documentaries on Nigeria National Parks which might be due to inadequate efforts by the parks to produce and make these documentaries available to the electronic media. Furthermore, the main source of information to national park visitors was TV, these information, as stated above were on national parks from other countries while large percentage of the support zone communities lack access to nature conservation and protection information from conventional mass media. The implication of this is the lack of adequate knowledge of resources and conservation activities of Nigeria National parks among the public. This could probably be one of the reasons for low appreciation of the parks resulting in Nigerians preference for visitation to national parks in other countries particularly the Eastern and Southern African countries with adequate media coverage. Findings by Union for Ethical BioTrade (2011) indicated that globally, TV programmes and documentaries play an overwhelming role in informing people about biodiversity with 55% respondents, whereas 38% learnt from newspapers and magazines, and only 16% cited government statements and campaigns. European Commission/DG ENV (2008) reported that 52% of their respondents stated that TV was the main source of information on biodiversity-related issues, this was followed by the internet with 42%, and newspapers and magazines with 33%.

Commercial orientation of programmes by news media constituted the biggest obstacle to environmental reporting by the selected electronic media. This could be as a result of programmes commercialization policy of government that owns most media establishments in the country. The policy entails that the media houses generate funds through their programmes since government subventions could no longer cater for their needs. With this, there is little impetus for the media organizations to invest on programmes, particularly, environmental programmes, which could not yield high returns in terms of accruing revenues. Similar studies by Chagutah (2010) found competence of assigned reporters, gatekeepers' discretion and the commercial imperative of the press because environmental reporting

competes less favorably with other news specialty areas for space on the media agenda. The absence of a dedicated environment correspondent in the newsroom also added to the neglect of environmental news and the uncritical nature of the little coverage (Chagutah, 2010). UNDP/UNEP (2010) reported that media practitioners identified limited source of information, lack of political will, government red tape, limited rapport between government and the media, editors' tendency to go for those who pay for slots, shortage of reporters/desks and government officers' reluctance to give out information as their reasons for not effectively reporting on issues of the environment. Millar (2012) further highlighted the challenges reported by journalists in environmental reporting in Malawi to be profit motive and that if a newspaper is to sell, it must have a political story on the front page. Also reported was the hierarchical newsroom structure, which prevents journalists from acting based on the story idea they have because they have to be approved and financed by news organization. Journalists concerned with nabbing a front-page byline would have less motivation to report environmental issues, the belief that the majority of people will not bother to read an environmental story, unless they have nothing better to do, also hinder reporting of environmental issues (Millar, 2012).

Conclusion

The coverage of Nigeria National Parks nature conservation and protection efforts by Nigerian media (both print and electronic) was low. Most of the coverage of national parks was not on Nigeria National Parks, but on national parks in other countries. Furthermore, no specific programmes were targeted at Nigerian National Parks by the sampled electronic media (television and radio), and no database on environmental issues that had been aired in the past. This might be one of the reasons for the paucity of information regarding Nigeria National Parks' activities and conservation efforts among Nigerian public. The implication of this is the lack of general knowledge about the resources and understanding of conservation efforts and activities of Nigeria National Parks. There is need for development of concise and specific programmes on National Parks as well as on other environmental issues in general by Nigerian media to enhance coverage and knowledge on them. Nigeria National Park Service should embark on conscious and sustained efforts at production and distribution of documentaries on resources and conservation efforts of all the national parks in the country. Also, synergy between Nigeria National Parks Service and major media establishments is important. This could involve collaborations in conservation programme production with Nigerian Television Authority (NTA), Federal Radio Corporation of Nigeria (FRCN) and other notable media organizations, including television and radio stations and

local print media in all the states where parks are located. With this partnership, there will be an increase in public awareness, knowledge, appreciation of parks' resources, and policy support for biodiversity conservation efforts. These have the tendency to catalyse actions at local and decision-making levels that could halt the degradation of Nigeria's biodiversity.

REFERENCES

- Burgess J (1994). Making the Abstract Real: A Comparative Study of Public Understanding of Global Environmental Change in the UK and the Netherlands. Department of Geography, University College, London.
- Canadian Environmental Grantmakers' Network (2006). Environmental Education in Canada. An overview for grantmakers. CEGN Briefing Papers No. 3. CEGN. p.17.
- Castro H, Abadia R, Quesada S (2004). Strategic intentions: Using communications and education to support biodiversity conservation and protected areas. In: Hamú, D., Auchincloss, E., Goldstein, W. (eds.) *Communicating Protected Areas*, Commission on Education and Communication, IUCN, Gland, Switzerland and Cambridge, UK. 14:312.
- Castro H, Wyss J (2004). Mass media and engaging journalists: supporting biodiversity conservation. In: Hamú, D., Auchincloss, E., Goldstein, W. (eds.) *Communicating Protected Areas*, Commission on Education and Communication, IUCN, Gland, Switzerland and Cambridge, UK. 14:312.
- Center for International Media Assistance (2009). Green Journalism: Environmental reporting in developing countries. Retrieved on 12 June, 2012 from <http://cima.ned.org/events/past-events/2009-events/green-journalism>
- CEPF (2004). Opening remarks. CEPF Project completion report. www.cepf.net. Accessed on 19th August, 2010.
- Chagutah T (2010). Communicating sustainability: The apparent and latent features of environmental reporting in the Zimbabwean Press. *J. Sustain. Develop. Afr.* 12(2):352-367.
- Chan K (1999). The media and environmental issues in Hong Kong 1983-95. *Int. J. Public Opin. Res.* 11(2):135-151.
- Compas E, Clarke B, Cutler C, Daish K (2007). Murkey waters: Media reporting of marine protected areas in South Australia. *Marine Policy*, 31:691-697.
- European Commission/DG ENV (2008). Scoping study for an EU wide communications campaign on biodiversity and nature. Final Report. Gellis Communications. Retrieved on 11 June 2012 from http://ec.europa.eu/environment/pubs/pdf/biodiversity/biodiversity_scoping_study.pdf
- Federal Ministry of Environment (2010). Fourth National Biodiversity Report. Federal Ministry of Environment, Abuja. p. 79.
- Global Sherpa (2011). News trends in sustainability and development issues. Retrieved 14 June 2012 from <http://www.globalsherpa.org/category/environment>
- GreenCom (2001). Environmental Education and Communication (EE&C) for behaviour change. Its role in forest, water and biodiversity resource management for sustained economic growth in Bolivia. Environmental Education and Communication (GreenCom) Project. p. 106.
- Hamu D, Pallerano M, Ramos GP, Castro HF, Costano L, Brenes O, de Rivera CD, de Leon Barrios F, Mata JI, Vidal RM, Lira MS, Brusco A, Percossi AM, Toribio AE, Andelman M, Giaccardi M, Catania M, Molinari R, Ferrufino U, Durigan CC, Santo PE, Carvalho R, Fuentealba V, Encalada M, Puyol A, Sanabria S, Fernandez-Davila P, Sanchez S (2004). Strategic communication to build support for protected areas: principles, lessons and recommendations. In: Hamú D, Auchincloss E, Goldstein W (eds.) *Communicating Protected Areas*, Commission on Education and Communication, IUCN, Gland, Switzerland and Cambridge, UK. 14:312.
- Hesselink F, Goldstein W (2003). Developing capacity for communication-managing change for biodiversity results. In:

- Proceedings of the Norway/Un Trondheim Conference on Technology Transfer and Capacity Building, Dandhind OT, Schei PJ (eds.), June 23-27, Trondheim, Norway, 2003.
- Hesselink F (2004). How to manage change? How to manage people? Skills and knowledge for effectiveness in communicating protected areas and biodiversity values. In: Hamú, D., Auchincloss E, Goldstein W (eds.) *Communicating Protected Areas*, Commission on Education and Communication, IUCN, Gland, Switzerland and Cambridge, UK. 14:312.
- Hesselink F, Goldstein W, van Kempen PP, Garnett T, Dela J (2007). Communication, Education and Public Awareness (CEPA). A toolkit for National Focal Points and NBSAP Coordinators. Secretariat of the Convention on Biological Diversity and IUCN: Montreal, Canada, 2007. p. 310.
- IUCN (2009). IUCN Caribbean Initiative: Communication Strategy. IUCN, Gland. Kimball TL (1975). Foreword: In Natural Resources and Public Relations by Gilbert, D.L. The Wildlife Society, p.320.
- Kitchin T (2010). Assuring Biodiversity-A brand building approach. The Glasshouse Partnership. www.glasshousepartnership.com/branding.pdf. Retrieved on 18 August, 2010.
- Letto J (1995). TV lets corporations pull green wool over viewers' eyes. FAIR. www.fair.org/index.php?page=1309. Retrieved on 6 January, 2010.
- Maceviciute A (2000). The Influence of the Media on the Development of Publics Environmental Consciousness: Case study of Lithuanian Press. Master's Thesis, Lund University.
- May PH, Calixto B, Gebara MF (2011). REDD+politics in the media: a case study from Brazil. Working Paper 55, CIFOR, Borgor. p.26.
- Millar P (2012). Fighting for the front page: The challenges of environmental reporting in Malawi. Field notes. Journalists for Human Rights. Retrieved on 11 June, 2012 from <http://www.jhr.ca/blog/2012/05/fighting-for-the-front-page-the-challenges-of-environmental-reporting-in-malawi/>
- Novacek MJ (2008). Engaging the public in biodiversity issues. *PNAS*, 105:11571-11578
- Ogunjinmi AA, Onadeko SA, Adewumi AA (2012). Empirical study of the effects of personal factors on environmental attitudes of local communities around Nigeria's protected areas. *The J. Transdisciplinary Environ. Stud.* 11(1):40-53.
- Onadeko SA (2004). Home on the range: crises, consequences and consolations. *Unaab Inaugural Lecture Series University of Agriculture, Abeokuta, Nigeria.* 17:86.
- Ongkili M (2004). Mass media can change public awareness on biodiversity conservation. *Current News.* www.pbs-sabah.org. Retrieved on 19th august, 2010.
- Science for Environment policy (2009). Communication for sustainable policy: connecting science, society and government. *Science for Environment policy Issue 17.* Retrieved on 11 June, 2012 from http://ec.europa.eu/environment/integration/research/newsalert/index_en.htm
- Sekar T (1981). Role of newspapers in creating mass concern with environmental issues in India. *Inter. J. Environ. Stud.* 17(2):115-120.
- Tskitishvili A, Achba S, Lathathia S, Topuria T (2012). Reporting about environmental issues in Georgian media. *Media Monitoring Report. Human Right Center.* Retrieved on 11 June, 2012 from http://www.humanrights.ge/admin/editor/uploads/pdf/HRC_Environment_ENG.pdf
- UNDP/UNEP (2010). Media and environment training workshop. UNDP/UNEP Poverty and Environment Initiative, Botswana. November 24th, 2010. Retrieved on 11 June, 2012 from www.unepi.org.
- UNEP (2006). Environmental Reporting for African Journalists. A Handbook of key environmental issues and concepts. UNEP, p.166.
- Union for Ethical BioTrade (2011). Key findings of the UEBT Biodiversity Barometer. Retrieved on 12 June, 2012 from http://www.ethicalbiotrade.org/dl/BAROMETREpourWeb_2011_EN.pdf