

Innovations

Influence of media sensitization messages on World Bank-assisted Nigeria Erosion and Watershed Management Project (NEWMAP) on Knowledge, attitudes and practice among residents of South-East Nigeria

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Abstract

The goal of this study was to determine influence of media sensitization messages on World Bank-assisted Nigeria Erosion and Watershed Management Project (NEWMAP) on Knowledge, attitudes and practice among residents of South-East Nigeria. The researcher utilized descriptive survey research design to conduct the study while the sample size was made up of 405 respondents from South-East Nigeria. Multi-stage sampling technique was used to carry out the study with questionnaire as the instrument for data collection. Simple percentages, mean and standard deviation were used to answer the research questions while multiple regression was used to test the hypotheses for the study. The result of the study showed that respondents' knowledge of media sensitization messages on NEWMAP among residents of South-East Nigeria in the area of contents, platform used, time the messages are carried, message elements as well as objective of the message. It was also found that exposure to media sensitization messages was an important determinant for its effectiveness in the area of influencing environmental practice. Accordingly, respondents who reported higher exposure also indicated positive environmental practice than their counterparts who indicated lower exposure. Additional result showed that exposure to media messages on NEWMAP significantly contribute in improving knowledge of environmental practice among residents of South-East Nigeria. Respondents who reported higher exposure also reported better knowledge of environmental practice than their counterparts who reported lower exposure to such messages.

Keywords: 1.environment; 2.erotion; 3.Nigeria; 4.media; 5.sensitization

Introduction

Due to the enormity of Nigeria's environmental problems and paucity of funds to tackle these ecological issues, the Nigerian government has been unable to address the problem sought the assistance of World Bank in seven states on a pilot basis. These states are: Abia, Anambra, Cross River, Ebonyi, Edo, Enugu and Imo. The World Bank responded to Nigeria's request through a US\$500 million intervention fund. The project became effective on September 16, 2013 and has also received \$3.96 million from the Global Environment Facility and \$4.63 million from the Special Climate Change Fund (World Bank, 2013).

Typically, the World Bank is committed to making life better for humanity by reducing poverty, creating wealth and empowering people. It is also committed to making the environment safe, reducing risk factors to health

challenges as well as combating illiteracy. These goals are particularly targeted at low and middle income countries. To achieve these objectives, the World Bank makes budgetary provisions for these countries to promote development. Therefore, the global apex bank plans and executes developmental projects that address ecological problems. Countries that have benefited from such projects include Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Ethiopia, Ghana, Kenya, Madagascar, Malawi, Mozambique, Nigeria, Tanzania, Uganda, and Zambia. In most cases, the World Bank partners with governments of benefiting countries and come up with a plan of action on how to address the problem.

Mass media sensitization messages can set agenda for and increase the frequency, depth or both, of interpersonal discussion about a particular issue within an individual's social network, which, in combination with individual exposure to messages, might reinforce (or undermine) specific changes in behaviour. Secondly, since mass media messages reach large audiences, changes in behaviour that become norms within an individual's social network might influence that person's decisions without them having been directly exposed to or initially persuaded by the campaign (Wakefield, Loken & Hornik, 2010). Media sensitization messages may be helpful in educating the general public about the erosion control project. Such messages could sensitize them on how to prevent, control and manage erosion. The messages may educate them on the activities of the Project, gender based issues, policies on compensation and environment impact assessment. The messages may also educate them on the benefits of NEWMAP as well as guide them on how they can effectively participate in the project. This means that media sensitization messages on developmental issues like NEWMAP are cardinal to the overall success of such projects.

This is so because it is the message that communicates the objectives of the campaign to the target audience. The Action Guide for Advocacy and Citizen Participation (2014) notes that the message is what a person chooses to say about an issue, its solution and who the person is. It adds that to develop a message, information is needed to back up the arguments, clear knowledge of the audience is required, knowledge of the political environment and moment (controversies, big issues, fears, and what is considered in all ramifications) is necessary. Other requirements for message development are: keeping the message simple and brief; using real life stories and quotes; using precise powerful language and active verbs; using clear facts and numbers creatively; adapting the message to the medium; allowing the target audience to reach their own conclusions, encouraging the audiences to take action and presenting a possible solution.

It is essential to add here that no matter how beautiful a message is, when there is no exposure to such message, it will not achieve its aim. This therefore, implies that people need to get exposed to media messages before they can have effect on them. This is because media messages are like manufactured products; when the messages do not get to the final consumer, then production becomes meaningless. One of the ways, if not the only way, media messages can be consumed, is through exposure. Previous studies (Lin & Lagoe, 2013; Oh, Paek & Hove, 2015; Wei, Lo & Lu, 2008) support this assumption as a significant relationship between exposure and media effect. People cannot respond to media messages if they are not exposed to it.

Okorafor *et al* (2017) note that South-East Nigeria is predisposed to erosion because the population density and least land per capita ranks among the highest when compared to other areas in Nigeria. Chiemelu *et al* (2013) submit that soil erosion is common in South-East Nigeria because the area is prone to flood as a result of high precipitation, which is a fall out of climate change. Based on the background above, the researcher seeks to examine influence of Media Sensitization Messages on World Bank-Assisted (NEWMAP) on Environmental Knowledge, Attitudes and Practice Among Residents of South-East Nigeria.

Objectives of the study

This study sought to achieve the following:

1. Determine the knowledge level of respondents regarding media sensitization messages on NEWMAP among residents of South-East Nigeria.
2. Determine the attitudes of respondents regarding media sensitization messages on NEWMAP among residents of South-East Nigeria.
3. Determine the influence of media sensitization messages on NEWMAP on environmental practice among residents of South-East Nigeria.

Nigeria's environmental burden

Over the years, the world has been battling to address ecological problems caused by both human and natural occurrences. The United Nations' (2019) global environmental outlook says that unsustainable human activities globally have degraded the earth's ecosystems and are endangering the ecological foundations of society. Rockstrom Steffen, Noone, Persson, Chapin, Lambin and Foley (2009) cited in Okpanachi (2016) note that changes in climate are significant aspects of global ecological crisis associated with biodiversity, sustainable food production, availability of fertile land, finite water and energy resources. According to the United Nations (2019), environmental crisis is one of the life-threatening problems which people experience largely due to depletion of the ozone layer and development of the "greenhouse effect." Peeters (2009), cited in Onuh (2018), regrets that the figures on the magnitude of the problem of ecological crisis are frightening. The Living Planet Report (World Wide Fund for Nature, WWP, 2010) shows that in 2007, the global ecological footprint had already gone above the natural bearable standard of the planet by 50 per cent.

Consequently, there is the destruction of habitats by native species that discharge polluting substances into the environment and emission of greenhouse gases into the atmosphere resulting in climatic change (Zvomuya, 2017). The World Economic Forum (WEF) in its 2019 report notes that ecological crisis has continued to pose a serious problem to the world. The report notes that addressing the challenges posed by ecological crisis has remained an area of priority attention to donor agencies and international organizations like the World Bank.

Running (2012), notes that ecological problems have more negative effect on developing countries than their counterparts from developed countries. In the views of Running, developing countries like Cameroon, Ghana, Niger, Nigeria, Zimbabwe, among others are facing serious ecological problems. Ameen and Mourshed (2017) corroborate that developing countries confront significant urban environmental challenges because of rapid urbanization, population growth, inability to properly manage climate and environmental risks, inefficient governance and environmental management, the prevalence of corruption and a chronic shortage of investment.

They carried out a study to determine factors that promote ecological crisis in developing countries and found five principal components such as water, waste, and materials; environmental impact; natural hazard; personal mobility; and transport. They found that 70% of the respondents considered "water conservation" as the most important urban environmental challenge, followed by "increased choice of transport modes". A total of 67.2% of the respondents rated "efficient infrastructure and utilities" as a very important factor, and it was ranked the third.

In Nigeria, ecological crisis has also constituted a serious environmental problem. Ibimilua and Ibimilua (2014) corroborate that Nigeria faces serious ecological problems. The researchers added that the most common environmental problems in Nigeria are anthropogenic in nature. This is because they result from human interference (interaction) with the environment. They happen because of human intent, negligence, error or failure of human-made system. The South-East Nigeria is not left out of these serious ecological problems.

Okorafor, Akinbile, and Adeyemo (2017) submit that many life-threatening gullies and other forms of erosion have become the greatest environmental hazard and disaster in South-East Nigeria. Okorafor *et al* (2017) add that this situation has significant negative impact on agricultural productivity, sustainability and management of food and security in this region. Agency Report (2018) says that there are 2,800 active erosion sites in South-East, Nigeria. The Nigerian government has in the past made efforts to control erosion. For example, on July 25th, 2006, the Federal Government launched the National Policy on Erosion and Food Control (Nzech, 2006). It is essential to add here that the constitution of the Federal Republic of Nigeria 1999, as amended, provides for environmental matters in Section 20 as one of the fundamental objectives and directive principles of state policy. This is the first time that environmental issue is captured in the constitution.

To underscore its critical status, the constitution also places the subject-matter on the legislative list by virtue of item 60(a) which empowers the National Assembly to make laws for the establishment, regulation and enforcement of the fundamental objectives of environmental matters in any part of the Federation. It is noteworthy that legally, environmental issues are above the control and management of state governments. This partly explains why they have done little or nothing in that regard. It is pursuant to the said Section of the Constitution and the powers conferred on the National Assembly under the exclusive legislative list, that the National Assembly has enacted laws aimed at protecting the environment; prominent among those laws are National Environmental Standards and Regulation Enforcement Agency (Establishment) Act, 2007 (NESREA Act) and the National Oil Spill Detection and Response Agency (Establishment) Act 2006 (NOSDRA Act).

The World Bank intervention on environmental challenges in Nigeria

Over time the World Bank has assisted in projects in South-East, Nigeria. Examples of such projects include: Rural Access and Mobility Project (RAMP) which was launched in 2008; Nigeria Erosion and Watershed Management Project (NEWMAP) which was launched in 2012; Agro-Processing, Productivity Enhancement and Livelihood Improvement Support (APPEALS) Project which launched implementation in 2017 and Regional Disease Surveillance Systems Enhancement (REDISSE) project which was launched in 2018. The current study will focus on the NEWMAP.

According to its Product Appraisal Document (PAD), NEWMAP is designed to address gully erosion in the South-East. The project is designed with the thinking that erosion in the South-East is caused by (a) improper road design and construction, particularly inadequate drainage; (b) poor solid waste management in urban and semi-urban areas that chokes the already inadequate drainage meant to prevent erosion; and (c) destructive and unsustainable land-use practices that remove protective vegetation cover including protective biodiversity and carbon rich areas, or disturb the fragile soil and uncontrolled mining for building materials.

NEWMAP is expected to have highly positive environmental impacts. It has been classified by the World Bank as an Environmental Category A project, in view of its scale, the types of problems it addresses, the possibilities of significant adverse impacts if interventions are not correctly designed and implemented, and the challenges of bringing federal, state and local environmental agencies up to a level. The partners in the project include the Federal Ministry of Finance, Federal Ministry of Environment, Federal Ministry of Works, Federal Ministry of Agriculture and Rural Development, Federal Ministry of Water Resources, Nigeria National Space Research and Development Agency (NASRDA), Nigeria Hydrological Services Agency and Nigerian Environmental Standards and Regulation Agency and other relevant state agencies (NEWMAP, 2013).

To engender positive attitude from the beneficiaries, the media are critical players in creating awareness and mobilizing stakeholders about projects. It is through the media that people get informed and educated about these projects as well as take actions as may be required by the project. Suffice it to say that World Bank projects are meant to make life better for the masses, then it follows logically that these crucial roles of the media are essential in creating awareness about such projects. There is consensus in literature (Onuh, 2018; Ngene, 2016; Nabi, & Oliver,

2009; Preiss, Gayle, Burrell, Allen, & Bryant, 2007; Pater & Sharafa, 2013) regarding the role that the media play in awareness creation and behaviour change.

Empirical Literature

Under this sub-heading, the researcher reviewed relevant literature that will provide insight into existing knowledge on the subject matter.

Knowledge Level and Audience Attitude

Another important variable that has been considered in the study of the influence of media messages on media audience is the role of knowledge. This is because the attitudes that people demonstrate concerning an issue are expressions of their level of knowledge of that issue. Lin (2013) did a study to ascertain if knowledge was associated with attitudes of respondents and found that knowledge was significantly related to practice. Based on this result, the researcher argues that knowledge is an important predictor of attitudes. Chanda, Mchombu, and Nengomasha (2008) reported that respondents who have knowledge are likely to exhibit the right attitudes than those with less knowledge. The researchers added that those with higher knowledge reported positive attitudes regarding HIV than those with lower knowledge. Magadi (2013) found that knowledge alone was not enough but having the right knowledge about the issue.

Rosanne and Lyon (2019) conducted a study to determine if television is an effective medium for communicating environmental information to the general public. The study made use of a “two-way television” cable system to evaluate knowledge and attitude changes among viewers of a new Cousteau documentary. The experiment consisted of a televised pretest, posttest, and delayed posttest among randomly selected viewers and non-viewers of the documentary. Viewer knowledge increased significantly and remained high for two weeks. Viewer attitudes shifted toward the attitude goals of the producers, but within two weeks returned to pretreatment levels. No significant changes occurred among the control group. The simple implication is that TV could be an effective channel for information exchange on environmental issues and that an association exists between knowledge and attitudes.

Studies Related to Environmental Practices

Over the years, researchers have also examined issues related to environmental practice. Idamah (2015) conducted a study to examine the influence of broadcast media messages on environmental practice with particular attention to solid waste management. The researcher conducted the study in the South-South geo-political zone of Nigeria and used three research instruments to collect data. The instruments were interview, guide, programmes schedule of broadcast media and questionnaire. The responses obtained from the interviews were used as part of the discussion of findings.

Two sampling techniques were adopted for the study. They were the purposive and cluster (multi-stage) sampling techniques. These techniques enabled the researcher to select the target respondents from a large group. The Taro Yamani formula for sample size was employed to obtain the sample size. Two thousand and four hundred (2,400) copies of the questionnaire were administered to the South-South states with the help of research assistants and the researcher. Four hundred copies were administered to each of these states; Akwa-Ibom, Bayelsa, Cross River, Delta, Edo and Rivers. However, two thousand, three hundred and fifty seven (2,357) copies were retrieved. Results obtained showed irregular and poor enlightenment campaigns by the broadcast media on solid waste management in all these states. This manifested in poor attitude to waste management by inhabitants. This study was found to be useful to the current study because it examined the relationship between media messages and environmental practices.

Nmere, Okolo, Abugu, Alio, and Aneto (2020) carried out a study to determine how whether public relations' media enlightenment campaign has any significant influence on waste management. They also studied

whether public relations' community participation had any significant influence on environmental. The population of the study consisted of residents of Enugu metropolis. Survey method was adopted for the study, and the sample size of 384 residents was determined using Cochran's method. Cronbach's Alpha was used to determine the reliability 0.980. Using the convenience sampling technique, the questionnaires were distributed to 384 residents, and 295 of them were duly filled and validated. Using simple linear regression for data analysis, the findings revealed that public relations' media public enlightenment campaign strategy has a significant influence on environmental practice ($r = 0.933; t = 76.736; F = 5888.365; p < 0.05$). Similarly, it was revealed that public relations' community participation strategy has a significant influence on waste management ($r = 0.930; t = 76.280; F = 5667.029; p < 0.05$). The study recommended that there is a need to improve on media public enlightenment campaign strategy towards educating and encouraging waste management behavior among residents through an adequate traditional and social media awareness campaign. Also, residents should be encouraged to participate actively and meaningfully in environmental waste management issues in Enugu metropolis. This study is relevant to the current study because it examined how media messages are associated with environmental practices.

Akpoghiran and Ferdinand (2014) carried out a study to determine how broadcast media sensitization messages on solid waste management influence environmental practices of broadcast media audience. The design that was used in the study was the survey research design. The researchers made use of questionnaire as the instrument for data collection. The result of the study showed that the broadcast media have carried out sensitization campaigns on solid waste management, but the extent and inhabitants' attitudes towards solid waste management were still poor.

Theoretical framework

The study was anchored on the theory of reasoned action. The theory of reasoned action (TRA) was postulated by Ajzen and Fishbein in 1980 (Ajzen, 1985; 1991). The basic assumption of the theory is that individual behaviour is determined by behavioural intentions where behavioural intentions are a function of an individual's attitude toward the behaviour and subjective norms surrounding the performance of the behaviour. Attitude toward the behaviour is defined as the individual's positive or negative feelings about performing the behaviour. It is decided through an assessment of one's beliefs regarding the consequences arising from behaviour and an evaluation of the desirability of these consequences. The TRA was related to voluntary behaviour. However, behaviour was later found not to be 100% voluntary and under control, thus, the inclusion of perceived behavioural control. This inclusion led to the theory of Planned Behaviour (TpB). The theory of planned behavior is a theory which predicts deliberate behaviour, because behaviour can be deliberative and planned (Ajzen, 2008).

Based on this theory, human behaviour is guided by three types of considerations: beliefs about the likely consequences of the behavior (behavioral beliefs), beliefs about the normative expectations of others (normative beliefs) and beliefs about the presence of factors that may facilitate or impede performance of the behavior (control beliefs). This theory is related to the current study because it provides the framework for understanding how beliefs system may influence the effectiveness of media messages on erosion related issues.

Methodology

Research Design: To conduct this study, the researcher made use of descriptive survey research design. The choice of descriptive survey was based on the fact that it is normally the most appropriate design for data collection when the objective of a study is to describe, explore and explain a phenomenon. Consequently, the researcher made use of descriptive survey to describe, analyze as well as explain the Influence of Media Sensitization Messages of World Bank-Assisted Nigeria Erosion and Watershed Management Project (NEWMAP) on Environmental Knowledge, Attitudes and Practices Among Residents of South-East Nigeria.

Population of the Study: The population of this study was all the residents of South-East Nigeria. However, considering the fact that the last available population statistics of the zone was in 2016, and 2016 being too far

behind, a projection was made using an annual growth rate of 3.2 per cent according to the United Nations Development Programme (UNDP, 2014). The projection formula provides that:

$$P_p = G_p \times P_i \times T$$

Where P_p = Projected population

G_p = Given population (as at last census)

P_i = Population increase index

The table below shows the population forecast up to 2019 in figures.

Table i: Study population

State	Population	Projected to 2019
Abia	3,727,347	4,350,807
Anambra	5,527,809	6,452,425
Ebonyi	2,880,383	3,362,174
Enugu	4,411,119	5,148,950
Imo	5,408,756	6,313459
Total	21,955,412	25,627,815

Source: National Population Commission and National Bureau of Statistics Estimates, 2016-2019 population estimates. Note: 3.2% was used for each of the years for the number of years that the population has been projected. It is important to note here that there is an official projection from National Bureau of Statistics Estimates using data from National Population Commission. The projection is up to 2016 (NBS, 2017). The researcher then projected from 2017-2019.

Sample Size: The sample size for the study was calculated in two broad segments. These segments, are, thus, explained:

Segment I

Under this segment, the Cochran formula (1963, p.75) was used to ascertain the sample size. The researcher made use of 95 percent level of confidence (confidence interval - $\pm 5\%$), population estimate of 50% (.5) and a permitted margin of error at .05 (5 percentage points), the Cochran Equation ‘1’ which yielded a representative sample for populations that are large. It is as follows:

$$n_0 = \frac{[Z_{\alpha/2}]^2 (p q)}{e^2}$$

$$e^2$$

$$n_0 = \frac{[Z_{\alpha/2}]^2 (P) (1-P)}{e^2}$$

$$e^2$$

Where: n_0 = sample size, Z^2 = confidence level (the abscissa of the normal curve that cuts off an area α at the tails), p = rate of occurrence or prevalence (the estimated proportion of an attribute that is present in a population), q = complement of p and e = margin of error. Therefore;

$$n = \frac{[1.96]^2 \cdot 0.5 (1 - 0.5)}{0.05^2}$$

$$n = 3.8416 \cdot (0.25)$$

$$0.0025$$

$$n = 385$$

It should be noted that because of absence of assurance of 100% response rate, the researcher oversampled. The calculation is presented below:

A return level of 95 percent will be applied. This is demonstrated thus:

$$n_2 = \frac{\text{minimum sample size}}{\text{expected response rate}} \times 100$$

Where expected response rate is 95%

n^2 Sample size adjusted for the rate

Where Minimum sample size = 385

$$\frac{385}{95} \times 100 = 405$$

The sample size for the study is 405 respondents.

Segment II

The essence of segment II was to select respondents from the five locations of the study area. This is guided by proportionate sampling technique shown thus:

$$\text{Abia: } \frac{4,350,807}{25,627,815} \times 405 = 69$$

$$\text{Anambra: } \frac{6,452,425}{25,627,815} \times 405 = 102$$

$$\text{Ebonyi: } \frac{3,362,174}{25,627,815} \times 405 = 53$$

$$\text{Enugu: } \frac{5,148,950}{25,627,815} \times 405 = 81$$

$$\text{Imo: } \frac{6,313,459}{25,627,815} \times 405 = 100$$

Based on the calculation above, the sample size of the study is represented in the table below:

Table 2: Sample size from the five study locations

State	Sample
Abia	69
Anambra	102
Ebonyi	53
Enugu	81
Imo	100
Total	405

Sampling Technique: The sampling technique that was used for this study was multi-stage. The researcher made use of multistage so that the process of selecting respondents will be scientific. This process is reflected thus:

Stage I

In the first stage of the sampling process, the researcher considered the five states as clusters. The clusters are: Abia State, Anambra State, Ebonyi State, Enugu State and Imo State. As a follow-up, the researcher subsequently divided the clusters based on the existing senatorial districts as: Abia North, Abia Central and Abia South; Anambra North, Anambra Central and Anambra South; Ebonyi North, Ebonyi South and Ebonyi Central; Enugu East, Enugu West and Enugu North; Imo East, Imo West and Imo North.

Stage II

At the second stage of the sampling, the researcher used purposive sampling to select the state capitals of the five states. The researcher made use of state capitals because there is higher media literacy in state capitals than other areas. This assumption is supported by the study of Pateman (2010). Finally, by using state capitals, the researcher is likely to reach a mix of people from different parts of each state. This is because people from different parts of a state live in state capitals than they do in other parts of the state.

Stage III

This stage involved the sampling of the respondents who took part in the study. For the purposes of this study, the researcher delineated each of the five states capitals into five clusters as shown in the tables below:

Table 3: Delineated areas for the study

State capital	Areas
Enugu	Independence Layout, New Haven, Abakpa Nike, Emene and Garden Avenue
Awka	Zik Avenue, Okpuno Awka, Ifite Awka, Nawfia axis and Enugwu Agidi axis
Owerri	Owerri nta axis, Egbu axis, Samek axis, Egbada-Orlu axis and Okigwe axis
Abakaliki	Ezamgbo axis, Ekerigwe axis, Ezzagu axis, Alex Ekwueme Federal Teaching Hospital axis and Ekerigwe axis
Umuahia	National war Museum axis, Amachara axis, Umudike axis, Amakama axis and Amaeke axis.

Therefore, to sample the individual respondents for the study, the researcher visited the delineated areas from 10am-4pm daily and randomly select respondents who will take part in the study.

Research Instrument: A self-administered questionnaire was used in this study. The questionnaire was used because it is capable of generating a large volume of quantitative data. The researcher developed the questionnaire after a review of existing literature. The questionnaire had two parts. The first part solicited bio data like age, gender and educational qualifications. The second part sought information on the research questions and hypotheses for the study.

Method of Data Collection: The data for this study was collected by sorting out the responses to the research instrument. The instrument was administered to the respondents on a face-to-face basis. The researcher made use of four research assistants. The research assistants administered the instrument in Umuahia, Awka, Abakiliki, and Owerri while the researcher administered in Enugu.

Validity of the Instrument: The validity of the instrument was determined by the supervisor of the researcher. Also, the instrument was given to three experts from the Department of Mass Communication, University of Nigeria, Nsukka. The researcher adhered to the observations of the experts to produce a final copy of the instrument.

Reliability of the Instrument: To determine the reliability of the instrument, the researcher used the test-retest approach. Therefore, 30 copies of the instrument were administered to respondents in Nsukka, Enugu state. After two weeks, the instrument was administered to the respondents again and the correlation coefficient showed 0.78, an indication that the instrument was reliable.

Method of data Analysis: The researcher made use of both descriptive and inferential statistics in analyzing the data generated from the study. Among the descriptive statistics, simple percentages, mean and standard deviation were used, while among the inferential statistics namely correlation analyses were used to test the hypotheses at 0.05 level of significance. All analyses were done with Statistical Package for Social Sciences version 22.

Results

The return rate for the study was found to be 92%. This is because among the 405 copies of the questionnaire that were administered to the respondents, 373 copies were returned and found useful. The attrition rate was insignificant, hence could not negatively impact on the outcome of the study.

Table i: knowledge level of respondents regarding media sensitization messages on NEWMAP among residents of South-East Nigeria

S/N	Item statements	\bar{x}	SD	Remarks
1	I know the media platforms that carry such messages	3.2	.45	Accepted
2	I know the time that messages on NEWMAP are often carried	3.1	.56	Accepted
3	I know the message components (example texts, audio, video) that are used to carry the messages	3.2	.67	Accepted
4	I know the sponsors of the messages	3.2	.34	Accepted
5	I know the objectives of the messages	3.1	.55	Accepted
6	I know the actors in the messages	3.2	.67	Accepted
7	I know the importance of the messages	3.1	.87	Accepted

The researcher computed the table above to determine respondents' knowledge of media messages regarding NEWMAP. It was found that all the items had the required mean score of 2.5. Based on this, therefore, it can be said that all the items had the required benchmark and are accepted as evidence that the respondents had knowledge of media messages related to NEWMAP. To determine the attitudes of respondents regarding media sensitization messages on NEWMAP among residents of South-East Nigeria, the below table was computed:

Table ii: Attitudes to media sensitization messages on world Bank assisted projects

S/N	Item statements	\bar{x}	SD	Remarks
1	I ignore such messages	2.2	.47	Rejected
2	I pay close attention	2.6	.67	Accepted
3	I make personal efforts to know more about such projects	2.0	.55	Rejected
4	I act based on the contents of the message	2.8	.76	Accepted
5	I tell others about such projects	2.2	.45	Rejected

The researcher computed the table above to determine respondents' attitude to media messages on NEWMAP. The result of the study revealed less engagement attitudes among regarding media messages as such messages are largely do not tell others about such messages. The researcher then ascertained the environmental practices of the respondents and the result is presented in the Table below:

Table v: Regression analysis of exposure to media messages and positive attitudes to environmental practice

Social media use	Constant	β value	R square	F. value	P. value
Low exposure	3.013	.102	.431	13.422	.124
Moderate exposure		.282			.002
High exposure		.881			.001

The result of the study as presented in table six above sought to determine if exposure to media messages predict environmental practice among the participants. The researcher achieved this by conducting a multiple regression analysis. The result showed a grand p-value of 0.001 with R. Square value of .431. The implication is that our model explained 43. 1% variance in environmental practice because of exposure to media messages. However, our results suggest low use exposure to media messages on environmental practice did not significantly predict environmental practice. The result further showed that high use exposure had a higher beta value ($\beta=.881$).

Discussion of Findings

This study was conducted to determine the influence of media sensitization messages on World Bank-assisted Nigeria Erosion and Watershed Management Project (NEWMAP) on Knowledge, attitudes and practice with particular reference to South-East Nigeria.

In the first objective, the researcher sought to determine the knowledge of respondents regarding media sensitization messages on NEWMAP among residents of South-East Nigeria. The result of the study revealed that the respondents who took part in the study reported knowledge of such messages in the area of media platforms that carry such messages; time that messages on NEWMAP are often carried; the message components (example texts, audio, video) that are used to carry the messages, the objectives of the message, knowledge of the actors in the messages as well as knowledge of the importance of the messages. Knowledge of media message as well as its components are important because they will contribute in determining message interpretation as well as eventual

behaviour change. This assumption is supported by the study of Lin (2013) who reported that knowledge is associated with attitudes of respondents. Chanda *et al.* (2008) in a study also found that knowledge is cardinal in influencing people's behaviour. According to Magadi (2013) though knowledge is important, such knowledge has to be correct before it can be regarded as important. Whichever way one sees it, knowledge messages on NEWMAP is essential so that it can effectively guide the actions and inactions of people.

The second objective of the study determined the attitudes of respondents regarding media sensitization messages on NEWMAP among residents of South-East Nigeria. It was found that the respondents reported that they pay attention to such messages while also acting based on such messages. However, the respondents do not tell others about such messages, they also do not make efforts to get further information regarding the content of the media messages. The attitudes which people have regarding mass media messages plays a role in determining the effect of such messages on their behaviour. When people have positive attitudes towards mass media messages, it will impact significantly on their behaviour and vice versa. This assumption is supported by the study of Happer and Philo (2013), Uthman, Amouzou, and Bishwajit (2018), and Onuh (2018). Therefore, the implication here is that the attitudes of the respondents regarding media messages on NEWMAP will play a role in influencing their attitudes towards such messages.

Finally, the researcher ascertained the influence of media sensitization messages on NEWMAP on environmental practice among residents of South-East Nigeria. The environmental practice that were measured included: proper waste disposal; recycling and reuse practices; choosing environmentally appropriate materials, with criteria of choice that consider their environmental impact and choice of products that are free of toxic substances that do not pollute the atmosphere or water resources. The result of the study showed that the only environmental practice which the respondents agreed to be complying with is proper waste disposal, others were not complied with. Environmental practice requires a holistic approach and comprehensive actions aimed at ensuring that the environment is safe enough. The result of this study is consistent with that of Idamah (2015) who reported that there is currently poor attitude and environment practice among the Nigerian populace. Nmereet *al* (2020) did a study and reported that it is due to lack of commitment to good environmental practice among most Nigerians.

Conclusion

Based on the result of this study, the researcher concludes media messages are very important in combating the current environmental challenges facing south Nigeria. Through the media messages will be crafted and disseminate to the general public. Another conclusion in this study is study exposure to media messages is an important requirement for media messages to be effective. What this means is that when campaigns are planned, efforts should be made to ensure that such messages reach to the general public. If people are not exposed to media messages, it will be difficult for such messages to change their behaviour. This conclusion places a huge responsibility on experts who are desirous of changing the behaviour of people. Such people will have to pay greater attention to exposure by coming up with strategies that will aid exposure to media messages.

Recommendations

Based on the result of this study, the researcher makes the following recommendations:

1. There is the need for World Bank to intensify efforts with a view to ensuring that more people get exposed to media messages on environmental projects. This is important because of the result of the study showed that exposure is an important requirement for message effectiveness.
2. It is also recommended that World Bank should put in more effort with a view to ensuring that the audience get engaged in campaigns aimed at combating the challenge of environmental hazards. This is important because the result of the study showed that respondents are not engaged in such messages like tell others about it, or mobilizing others to address the problem of environmental challenges.

3. The researcher also recommends that further studies should be conducted in other areas where World Bank is sponsoring projects to determine the impact of the such projects vis-à-vis their objectives.

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