Journal of Agripreneurship and Sustainable Development (JASD)
Volume 5, Number 1, March, 2022
ISSN (Print): 2651-6144; ISSN (Online): 2651-6365

EFFECTIVENESS OF SHELL PETROLEUM DEVELOPMENT COMPANY'S COMMUNICATION STRATEGIES IN PROMOTION OF ENVIRONMENTAL DEGRADATION MANAGEMENT IN NIGER DELTA, NIGERIA

[1]Okringbo, J. I., [2]Chukuigwe, O. and [1]Sikpi, E. E.
[1]Department of Agricultural Economics, Extension and Rural Development,
Niger Delta University, Wilberforce Island, Bayelsa State.
[2]Department of Agricultural Extension,
Federal University of Technology, Owerri, Imo State.
Corresponding Author's E-mail: okringboinemo@gmail.com
Tel.: 07066781826

ABSTRACT
The study examined the effectiveness of shell petroleum development company's (SPDC) communication strategies in promotion of environmental degradation impact management in Niger Delta, Nigeria. Purposive random sampling technique was used for the selection of 240 community members in SPDC host communities. Data were collected using structured questionnaire, and were analyzed with descriptive statistics, while linear multivariate regression was used to test the hypothesis. The result showed that SPDC provided start pack for trained farmers ($\bar{x}$=3.3), delivery of household health service ($\bar{x}$=3.3), provides safe drinking water ($\bar{x}$=2.9) were the various environmental degradation impact management intervention by SPDC. The further showed that radio advertisement on shell ($\bar{x}$=3.4), bill board promotional campaign of shell's activities ($\bar{x}$=3.4) and advocacy visit by SPDC to royal fathers ($\bar{x}$=3.6) were various SPDC communication strategies in management of environmental degradation community members were exposed to. The study found a significant relationship between the extent of exposure to SPDC communication strategies and impact management intervention by SPDC was rejected at 5% level. The study concluded that Shell Petroleum Development company's communication strategies promoted environmental degradation impact management intervention within host communities. The study recommended that there is need for SPDC to increase her effort to provide conflict prevention strategies among host communities within her clusters in order to ensure uninterrupted exploration of crude oil.

Keywords: Communication, Degradation, Effectiveness, Environmental, Strategies.

INTRODUCTION
In 2005, the Niger Delta communities sued Nigeria National Petroleum Corporation (NNPC), Shell Joint Venture Companies for not letting down gas flaring and taking appropriate measures on remediating polluted lands and water bodies resulting from her exploration and exploitation activities within the region (Okringbo, 2020). According to Environmental Rights Action, Niger Delta still flares more gas than any place in the world though gas flaring had been proscribed under environmental regulations since 1984 (Okringbo, 2020). Nwachukwu and Ekanem (2016) attributed the high percentage of violence, agitation and restiveness due to the neglect of multinational oil companies' operation in the Niger Delta region.

Nwosu and Okringbo, (2016) in their study revealed that farmers within the Niger Delta region complain about loss of arable farm lands and continuous decline in indigenous farming

Journal of Agripreneurship and Sustainable Development (JASD)
Volume 5, Number 1, March, 2022
ISSN (Print): 2651-6144; ISSN (Online): 2651-6365

system and frustration of people whose livelihood directly depend on the environment, thus compensation for environmental damages caused by SPDC remains inadequate especially to the rural farmers.

Considering the level of environmental degradation recorded in the past and present, the Niger Delta is considered as the most exploited and marginalized region in the country, owing to the fact that the major resource upon which the nation's economy depends is gotten from the region without remediating the environmental damage, commensurate human capital and infrastructure development to show for it. Amnesty International in their own view according to Nwachukwu and Ekanem (2016) noted that the people of the region have been living with ongoing pollution and environmental damage which has been attributed to poorly maintained pipelines and 'blow-out' of poorly maintained oil wells.

Shell has embarked on many social corporate responsibility projects in order to alleviate the sufferings of the people as the outcome of its oil exploration and environmental degradation activities in the region. It has also adopted so many measures to remedy impact of environmental degradation such as the Global Memorandum of Understanding, where communities in clusters, determine their developmental needs which are then funded by Shell provision of scholarships for students and health facilities for the communities (Okringbo, 2020).

The specific of the study were to: ascertain the environmental degradation impact management intervention by SPDC and to ascertain the extent of exposure to SPDC communication strategies in management of environment degradation. The study hypothesized that there is no significant relationship between the extent of exposure to SPDC communication strategies and impact management intervention by SPDC.

MATERIALS AND METHODS

The Study Area

The study was conducted in Niger Delta Region. The Niger Delta is one of the 10 most important wetlands (Niger Delta Technical Committee's report, 2008 cited in Nwachukwu and Ekanem, 2016). The Niger Delta is the world's third largest wetland. Administratively, it is made up of nine states being Abia State, Akwa Ibom State, Bayelsa, Cross River State, Delta State, Edo State, Imo State, Ondo State and Rivers State. The nine states of the Niger Delta cover approximately112,110 km² or 12 percent of Nigeria's land mass. It lies between longitude 6.2509 and Latitude 5.2373.

The Niger Delta 2006 population of about 31 million people or 22% of the National population is comprised of around 40 ethnic groups speaking 250 Languages and dialects with the major groups being Ijaw people who predominate across the coastal region.

Sampling Procedure

Purposive and multi-stage random sampling techniques were used in selection of Abia, Bayelsa and Rivers States. In the first stage, three senatorial zones were randomly selected from the Region, while in the second stage, 24 communities that are host to SPDC were selected from the senatorial zones. In the third, stage, ten community members were randomly selected from each host community, giving a sample size of 240 community members. Data collected through structured questionnaire were analyzed with descriptive statistic, such as mean, while linear multivariate regression was used to test the hypothesis. The questionnaire was a 4-point rating scale of Strongly agree, Agree, Disagree and Strongly disagree to which numerical values of 4, 3, 2 and 1 were assigned respectively and when added gave us 10 and a mean of

Journal of Agripreneurship and Sustainable Development (JASD)
Volume 5, Number 1, March, 2022
ISSN (Print): 2651-6144; ISSN (Online): 2651-6365

2.5 when divided by 4. Hence, the cut-off point of 2.55 as the upper limit was used to determine a positive response (i.e., 2.5+0.005=2.55).

Model specification

Multivariate regression was used to estimate the relationship between the extent of exposure to SPDC communication strategies and impact management intervention by SPDC is specified as follows:

$Y_i = f(X_i) + e_i$ …(1)

where;

Y_1 = Impact management intervention by such i^{th} parameter as
1 = Provide conflict prevention in the community
2 = Provision of start pack for trained community members
3 = Provides energy supply 'electricity'
4 = Delivery of household health care service
5 = Provision of safe drinking water
6= Adequate provision of compensation after oil spillage
7 = Provision of farm inputs
8 = Provision of scholarship to SPDC cluster communities
9 = Construction of inter community roads
10 = Renovation of dilapidated town hall

X_1 = Communication strategies used by SPDC
1= Radio advertisement on SPDC
2 = Radio talk show on Shell
3 = Television talk show on SPDC
4 = Bill board promotional campaign of shell's activities
5 = Feature article in news paper
6 = Feature articles in magazine
7 = SPDC news letter
8 = Advocacy visit by SPDC to royal fathers
9 = Town hall meeting with men leaders
10 = Town hall meeting with youth leaders
11 = Town hall meeting with women
12 = Community liaison officers
E = error term

Decision: if $F_{cal} > F_{tab}$ at ($P \leq 0.05$) we reject the null hypothesis and accept the alternative hypothesis and vice versa

RESULTS and DISCUSSION

Table 1 shows the mean scores distribution of the environmental degradation impact management intervention by SPDC. Table 1 shows that the environmental degradation impact management intervention by SPDC means: provides conflict prevention in their host communities ($\bar{x}$=2.8); provides start pack for trained farmers ($\bar{x}$=3.3), provides energy supply (electricity) ($\bar{x}$=2.8), delivery of household health service ($\bar{x}$=3.3), provides safe drinking water ($\bar{x}$=2.9), enterprise development programme (Live Wire for youths) ($\bar{x}$=2.1), improved sanitation facilities (toilet or a latrine) ($\bar{x}$=2.3), and adequate provision of compensation after oil spillage ($\bar{x}$=3.4), provides farm inputs, i.e., micro credit scheme ($\bar{x}$=3.2).

Journal of Agripreneurship and Sustainable Development (JASD)
Volume 5, Number 1, March, 2022
ISSN (Print): 2651-6144; ISSN (Online): 2651-6365

Table 1: Mean score responses of the community members on the environmental degradation impact management intervention by SPDC

Impact Management intervention	Abia (n = 80)		Bayelsa (n = 80)		Rivers (n = 80)		Niger Delta (n = 240)	
	$\bar{x}$	RM	$\bar{x}$	RM	$\bar{x}$	RM	$\bar{x}$	RM
Provides conflict prevention in the community	3.5	Intervention	2.5	Intervention	2.3	Non-intervention	2.8	Intervention
Provision of starter pack for trained community members	3.8	Intervention	3.2	Intervention	2.8	Intervention	3.3	Intervention
Provides energy supply (electricity)	2.9	Intervention	3.0	Intervention	2.4	Non- intervention	2.8	Intervention
Delivery of household health care service	3.4	Intervention	3.5	Intervention	2.9	Intervention	3.3	Intervention
Provision of safe drinking water	2.8	Intervention	3.2	Intervention	2.9	Intervention	2.9	Intervention
Enterprise development programme (Live WIRE for youths)	1.6	Non- Intervention	2.1	Non- intervention	2.5	Intervention	2.1	Non- intervention
Improved sanitation facilities (toilet or a latrine)	1.9	Non- intervention	2.9	Intervention	2.9	Intervention	2.3	Non-intervention
Adequate provision of compensation after oil spillage	3.6	Intervention	3.1	Intervention	3.5	Intervention	3.4	Intervention
Provision farm inputs, i.e., micro credit scheme	3.4	Intervention	2.9	Intervention	3.3	Intervention	3.2	Intervention
Construction of inter community roads	3.7	Intervention	3.2	Intervention	3.3	Intervention	3.4	Intervention
Provision of scholarship to SPDC cluster community	2.8	Intervention	3.5	Intervention	3.3	Intervention	3.2	Intervention
Provide information on oil spill	3.6	Intervention	2.9	Intervention	3.2	Intervention	3.2	Intervention
Respond adequately to oil spill	3.2	Intervention	2.8	Intervention	3.2	Intervention	3.1	Intervention
Train community members on how to handle oil spills	1.9	Non- intervention	1.2	Non- intervention	1.6	Non- intervention	1.6	Non- intervention
Provision of relief materials to flood victim by SPDC	2.0	Non- intervention	3.2	Intervention	3.2	Intervention	2.8	Intervention
Renovation of dilapidate town halls	3.7	Intervention	3.4	Intervention	3.5	Intervention	3.5	Intervention
Provision of funds to support contractors in their host communities	2.4	Non- intervention	3.3	Intervention	2.9	Intervention	2.9	Intervention
Grand mean score	**2.9**	Intervention	**2.9**	Intervention	**2.9**	Intervention	**2.9**	Intervention

Note: $\bar{x}$ = Mean response of Community members: RM = Remark; Intervention = SPDC impact management, Non-intervention = Non SPDC impact management; Decision mean cut-off point (2.5)

Source: Field survey data, 2018

Journal of Agripreneurship and Sustainable Development (JASD)
Volume 5, Number 1, March, 2022
ISSN (Print): 2651-6144; ISSN (Online): 2651-6365

Table 1 also shows construction of inter community roads ($\bar{x}$=3.4), provides scholarship to SPDC cluster community ($\bar{x}$=3.2), provide information on oil spill ($\bar{x}$=3.2), respond adequately to oil spill ($\bar{x}$=3.1), train community members on how to handle oils ($\bar{x}$=1.6), provides relief materials to flood victim by SPDC ($\bar{x}$=2.8), renovation of dilapidate town halls ($\bar{x}$=3.5) and provides funds to support contractors in their host communities ($\bar{x}$=2.9). The result implies that SPDC environmental degradation impact management intervention was very impactful in her social corporate responsibility. This is in agreement with Ekanme and Nwachukwu (2014) who reported that SPDC's interventions in the Niger Delta region focuses on projects and programmes on economic empowerment of the youth and the people of the region.

Table 2 shows the mean scores distribution of the extent of exposure to SPDC communication strategies in management of environmental degradation. The Table shows that the extent of exposure to SPDC communication strategies in management of environmental degradation means: radio advertisement on shell ($\bar{x}$=3.4), radio talk show on shell ($\bar{x}$=3.5), television talk show on shell ($\bar{x}$=3.5), bill board promotional campaign of shell's activities ($\bar{x}$=3.4), feature article in newspapers ($\bar{x}$=2.9), feature articles in magazine ($\bar{x}$=2.7), SPDC newsletter ($\bar{x}$=2.6), advocacy visit by SPDC to royal fathers ($\bar{x}$=3.6), town hall meeting with men leaders by SPDC ($\bar{x}$=3.6), town hall meeting with youths leaders ($\bar{x}$=3.6), town hall meeting with women by SPDC ($\bar{x}$=3.6) and community liaison officers (CLO) of Shell ($\bar{x}$=3.2).

This result of Table 2 further revealed that, community members were exposed to SPDC communication strategies in management of environmental degradation. This finding is in line with the assertion of Adekola and Oyebamiji (2012) who noted that SPDC through her Community Relation Department has been sensitizing community members on the construction of roads, bridges, hospitals, schools and school furniture, training of the youths on skill acquisition, and provision of employment through the Local Content Initiative introduced by the Nigerian government.

Journal of Agripreneurship and Sustainable Development (JASD)
Volume 5, Number 1, March, 2022
ISSN (Print): 2651-6144; ISSN (Online): 2651-6365

Table 2: Mean score responses of the community members on the extent of exposure to SPDC communication strategies in management of environment degradation

Exposure of SPDC communication strategies	**Abia (n = 80)**		**Bayelsa (n = 80)**		**Rivers (n = 80)**		**Niger Delta (n = 240)**	
	$\bar{x}$	RM	$\bar{x}$	RM	$\bar{x}$	RM	$\bar{x}$	RM
Radio advertisement on shell	3.5	AE	3.4	AE	3.4	AE	3.4	AE
Radio talk show on shell	3.6	AE	3.4	AE	3.5	AE	3.5	AE
Television talk show on shell	3.6	AE	3.4	AE	3.4	AE	3.5	AE
Bill board promotional campaign of shell's activities	3.6	AE	3.2	AE	3.3	AE	3.4	AE
Feature article in news papers	3.1	AE	2.7	OE	2.8	OE	2.9	OE
Feature article in magazine	2.9	OE	2.5	OE	2.7	OE	2.7	OE
SPDC news letter	2.8	OE	2.5	OE	2.5	OE	2.6	OE
Advocacy visit by SPDC to royal fathers	3.8	AE	3.4	AE	3.6	AE	3.6	AE
Town hall meeting with men leaders by SPDC	3.8	AE	3.4	AE	3.7	AE	3.6	AE
Town hall meeting with youth leaders by SPDC	3.7	AE	3.4	AE	3.7	AE	3.6	AE
Town hall meeting with women by SPDC	3.7	AE	3.4	AE	3.7	AE	3.6	AE
Community liaison officers (CLO) of shell	3.3	AE	2.8	OE	3.4	AE	3.2	AE
Grand mean score	**3.5**	**AE**	**3.1**	**OE**	**3.3**	**AE**	**3.3**	**AE**

Note: $\bar{x}$ = Mean Response of community members; RM = Remark; AE = Always exposed, OE = Often exposed, SE = Seldom exposed, NE = Never exposed; Decision mean cut-point 2.5

Source: Field survey data, 2018

Journal of Agripreneurship and Sustainable Development (JASD)
Volume 5, Number 1, March, 2022
ISSN (Print): 2651-6144; ISSN (Online): 2651-6365

Table 3 shows the linear multivariate regression result of the test of significant relationship between the extent of exposure to SPDC communication strategies and impact management intervention by SPDC. The regression coefficient of (0.405) provide conflict prevention in the community as environmental degradation impact management of SPDC had a positive relationship with bill board promotional campaign of shell's activities as a communication strategy was significant at 1% level. This indicates that there is an increase in the use of bill board promotional campaign of shell's activities as communication strategies in the promotion of environmental impact management intervention by SPDC.

The regression coefficient of (0.472) provides conflict prevention in the community as environmental degradation impact management of SPDC had a positive relationship with newspaper as a communication strategy was significant at 1% level. This also implies that there is an increase in the use of newspaper as communication strategies in the promotion of environmental impact management intervention by SPDC.

The regression coefficient of (0.683) provides conflict prevention in the community as environmental degradation impact management of SPDC had a positive relationship with SPDC magazine as a communication strategy was significant at 1% level. This implies that there is an increase in the use of SPDC magazine as communication strategies in the promotion of environmental impact management intervention by SPDC. The regression coefficient of (0.827) provision of start pack for trained community members as environmental degradation impact management of SPDC had a positive relationship with SPDC newsletter as a communication strategy was significant at 1% level. This indicates that there is an increase in the use of SPDC newsletter as communication strategies in the promotion of environmental impact management intervention by SPDC. This is conformity with Anatsu and Adekanye (2015), mass media in bringing about increase consciousness, awareness, education and knowledge about the environment.

Journal of Agripreneurship and Sustainable Development (JASD)
Volume 5, Number 1, March, 2022
ISSN (Print): 2651-6144; ISSN (Online): 2651-6365

Table 3: Result of linear multivariate regression for the significant relationship between the extent of exposure to SPDC communication strategies and impact management intervention by SPDC

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Constant	3.306 (11.983)***	3.434 (14.072)***	2.725 (10.275)***	3.407 (12.819)***	3.048 (10.511)***	3.704 (19.007)***	3.777 (18.439)***	3.891 (19.639)***	4.109 (4.214)***	3.021 (9.428)***
Radio advertisement on Shell	0.339 (1.611)^{ns}	534 (3.183)***	0.378 (1.869)^{ns}	0.766 (3.315)***	0.543 (2.646)**	0.122 (0.823)^{ns}	0.068 (0.438)^{ns}	0.345 (2.961)***	0.774 (3.099)***	0.272 (3.116)***
Radio talk show on shell	0.279 (1.327)^{ns}	0.386 (2.464)^{ns}	0.338 (1.670)^{ns}	0.647 (3.233)***	0.491 (3.413)***	0.076 (0.509)^{ns}	0.297 (1.903)*	0.063 (0.416)^{ns}	0.595 (2.262)**	0.059 (0.243)^{ns}
Television talk show on shell	0.140 (0.710)	0.668 (3.393)***	0.093 (0.491)	0.220 (2.105)**	0.229 (2.142)**	0.08 (0.576)^{ns}	0.470 (3.160)***	0.256 (1.811)^{ns}	0.992 (3.131)***	0.185 (4.810)***
Bill board promotion	0.405 (3.040)***	0.117 (0.993)	0.148 (1.154)^{ns}	0.011 (0.085)^{ns}	0.070 (0.499)^{ns}	0.895 (4.012)***	0.074 (0.748)	0014 (0.146)^{ns}	0.235 (0.498)^{ns}	0.060 (0.385)^{ns}
News paper	0.472 (3.063)***	0.244 (1.793)	0.387 (3.585)**	0.302 (2.353)**	0.623 (3.143)**	0.019 (0.178)^{ns}	0.412 (3.104)***	0.446 (2.324)***	0.319 (0.586)^{ns}	0.083 (0.466)^{ns}
SPDC Magazine	0.683 (4.503)***	0.030 (0.837)^{ns}	0.036 (0.229)^{ns}	0.092 (0.576)^{ns}	0.005 (0.027)^{ns}	0.643 (3.224)***	0.001 (0.009)^{ns}	0.043 (0.358)	0.102 (0.175)^{ns}	0.250 (2.301)**
SPDC news letter	0.143 (0.204)	0.827 (4.269)***	0.742 (4.320)**	0.021 (0.198)^{ns}	0.920 (4.004)**	0.014 (0.178)^{ns}	0.010 (0.115)^{ns}	0.599 (3.226)***	0.230 (1.975)**	0.037 (0.281)^{ns}

Note: ≥1***, 1.1 – 5.0 = 5%**, 5.1 -10.0 = 10% * significant levels; Figures in parenthesis are t = value; Models 1 = Provide conflict prevention in the community; 2 = Provision of start pack for trained community members 3 = Provides energy supply 'electricity, 4 = Delivery of household health-care service, 5 = Provision of safe drinking water, 6 = Adequate provision of compensation after oil spillage, 7 = Provision of farm inputs, 8 = Provision of scholarship to SPDC cluster communities, **9** = Construction of inter community roads and 10 = Renovation of dilapidated town hall.

Source: Field survey, 2018.

Journal of Agripreneurship and Sustainable Development (JASD)
Volume 5, Number 1, March, 2022
ISSN (Print): 2651-6144; ISSN (Online): 2651-6365

Table 3: Result of linear multivariate regression for the significant relationship between the extent of exposure to SPDC communication strategies and impact management intervention by SPDC **Cont'd.**

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Advocacy visit by SPDC to royal fathers	0.004 (0.021)^{ns}	0.386 (2.571)**	0.163 (3.997)**	0.053 (0. 323)^{ns}	0.973 (2.412)**	0.434 (2.282)**	0.545 (2.358)**	0.065 (0.534)^{ns}	0.322 (0.536)^{ns}	0.500 (2.538)**
Town hall meeting with men leaders	0.207 (0.657)^{ns}	0.262 (0.941)	0.506 (1.673)^{ns}	0.600 (3.659)**	0.581 (1.757)^{ns}	0.081 (0.366)^{ns}	0.534 (2.284)**	0.104 (0.460)^{ns}	0.219 (0.197)^{ns}	0.601 (2.644)**
Town hall meeting with youth leaders	0.282 (0.778)^{ns}	0.061 (0.192)	0.008 (0.023)^{ns}	0.579 (3.811)**	0.116 (0.310)^{ns}	0.045 (0.178)^{ns}	0.352 (1.326)^{ns}	0.292 (1.957)*	0.444 (2.114)**	0.112 (0.269) ^{ns}
Town hall meeting with women leaders	0.178 (0.618)^{ns}	0.340 (1.316)	0.322 (1.149)^{ns}	0.285 (2.303)**	0.577 (1.882)^{ns}	0.082 (0.397)^{ns}	0.405 (2.484)**	0.149 (0.713)^{ns}	0.004 (.004)^{ns}	0.213 (0.630)^{ns}
Liaison CLO	0.344 (4.278)**	0.344 (3.132)**	0.314 (2.956)**	0.324 (2.037)**	0.198 (1.512)^{ns}	0.550 (3.570)**	0.628 (4.305)***	0.413 (2.151)**	0.650 (3.114)***	0.225 (2.561)**
R^2	0.528	0.722	0.675	0.894	0.791	0.546	0.759	0.631	0.654	0.666
Adj R^2	0.513	0.513	0.660	0.879	0.776	0.531	0.744	0.616	0.639	0.651
F-ratio	25.408***	44.602***	39.555***	54.774***	50.671***	27.426***	47.639***	34.511***	36.534***	38.546***

Note: ≥1***, 1.1 – 5.0 = 5%**, 5.1 -10.0 = 10% * significant levels; Figures in parenthesis are t = value; Models 1 **=** Provide conflict prevention in the community; 2 = Provision of start pack for trained community members 3 = Provides energy supply 'electricity, 4 = Delivery of household health-care service, 5 = Provision of safe drinking water, 6 = Adequate provision of compensation after oil spillage, 7 = Provision of farm inputs, 8 = Provision of scholarship to SPDC cluster communities, **9** = Construction of inter community roads and 10 = Renovation of dilapidated town hall.

Source: Field survey, 2018.

CONCLUSION AND RECOMMENDATIONS

The study concluded that Shell Petroleum Development company's communication strategies promoted environmental degradation impact management intervention within her host communities in the Niger Delta Niger, coupled with creating more awareness programmes captured in her Global Memorandum of Understanding with host community in the Niger Delta. It further concluded that community members were exposed to SPDC communication strategies in management of environment degradation. Based on the findings, the following recommendations were made:

1. There is need for SPDC to increase her effort to provide conflict prevention strategies among host communities within her clusters in order to ensure uninterrupted exploration of crude oil.
2. There is also need to increase the level of infrastructures such as electricity supply, safe drinking water etc., so as to improve the standard of living of community members in the Niger delta region.
3. There is need to increase the use of mass media communication such as radio advertisement, radio talk show, television talk shows, bill board promotional campaign to create more awareness on SPDC activities in reducing environmental degradation as it affects livelihoods of community members.

REFERENCES

Adekola, G. and Oyebamiji, M. A. (2012). Need Identification as Determinant of Success in Shell Petroleum Development Company (SPDC) Community Development Projects in Rivers State, Nigeria. *International J. Soc. Sci. and Education*, 2(4): 5-10.

Anatsui, T. C. and Adekanye, E. A. (2015). Environmental Sustainability for National Development in Nigeria: The role of mass media. *European Journal of Educational and Development*, 3(1): 31-43

Ekanem, J. T. and Nwachukwu, I. (2014). Impact of Shell's Sustainable Community Development Approach on the Delta Niger. *Nigeria Journal of Sustainable Society*, 3(2): 7-14.

Nwachukwu, I. and Ekanem, J. (2016). *Oil Exploration, Environmental Degradation and Sustainable Agriculture in the Niger Delta.* SCCDR Publication http://sccdr.org

Nwosu, I. E. and Okringbo, J. I. (2016). Effects of Oil Spillage on Livelihood Activities among Rural Farmers in Bayelsa State, Nigeria. *Journal of Community and Communication Research*, 1(2): 121-124.

Okringbo, J. I. (2020). *The Effectiveness of Shell Petroleum Development Company's (SPDC) Communication Strategies in Promotion of Environmental Degradation Impact Management in Niger Delta, Nigeria.* A Ph.D dissertation submitted to the Department of Agricultural Extension and Rural Development, Micheal Okpara University of Agriculture Umudike, Abia State, Nigeria. Pp.1-10.