Environmental Policy Compliance Status of Oyo East Saw-Mill Location, Nigeria

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Abstract
Environmental policy is a course of action deliberately taken to manage human activities with a view to mitigate harmful occurrences. This research identified the level of policy compliance in Oyo east sawmill location of Oyo state, Nigeria as well as identified the various facilities to gauge the prospect of compliance in the location. Survey method was used with thirty respondents or 45% of sampling intensity. Simple percentages and logistic regression model was used to analyze the result. The basic equipments for policy compliance measurement were fire: extinguisher, incinerator, silencer and environmental impact assessment report. The compliance levels based on equipment assessment were: fire extinguisher, 30%; incinerator, 33.3%; silencer, 63.3% and EIA, 90%. Taking significant value at $p<0.05$; Finance (0.01) and managerial training (0.00) affected the prospect of compliance in the sawmill location. Awareness creation on environmental matters is imperative to boost compliance in the study area.
Keywords: Sawmill, Environmental policy, Compliance, Tangible equipments, Pollution.
Wordcount : 146

Introduction

Waste generation is a concomitant aspect of living; it cannot be banished but can only be managed (Dosunmu and Ajayi, 2002). Effects of sawmill wastes does not only manifest on the water and soil but even on the health of sawmill workers (Cormier *et al,* 2000). Environmental policy statements are only beneficial if there is implementation. For a proper policy implementation, there should be adequate strategies in place. Environmental policy objectives should include the reduction in the amount of fuel used in transport and increase efficiency of and return from transport fleet and the necessity to install wood biomass boiler (Harlow, 2012). This research identified and analyzed the strategies used for environmental policy in Oyo East local government area, Nigeria. Environmental policy according to Adab (2005) is a course of action deliberately taken to manage human activities with a view to preventing/reducing or mitigating harmful occurrences, improve the quality of resources and ensuring that man made changes to the environment do not bring reverses. It is useful to consider that environmental policy comprises two major terms; Environment and policy. Environment primarily refers to the ecological dimension (ecosystems) but can also take account of social dimension [quality of life and in economic dimension) Shukla *et al,* (1990). Policy can be a course of action or principle adopted or proposed by a government party, business or individual. Environmental policy focuses on problems arising from human impact on the environment which retroacts on to human society by having (negative) impacts on human values such as good health or the clean and green environment, Grunt *et al*, (1991). Environmental issues, generally addressed by environmental policy include but are not limited to air, water pollution, soil pollution and waste management in an ecosystem, biodiversity protection and the protection of natural resources, wildlife and endangered species conservation.

Methodology

Survey method was used for this research with the use of questionnaire. However, field verification was carried out to authenticate specific claims. The target population were the sawmill manager, saw doctors and plank sellers. Fifteen sawmills were selected within the location. The sampling intensity was 30 respondents or 45 %. Data for the research consisted primary and secondary data. The instrument of the data collection consisted of well structured interview schedule that contains close –ended and open-ended questions. The interview schedule was divided into two sections. The method use is synonymous with that used by Young, (1985). The first section consisted of questions relating to socio- economic characteristics of the respondent while the second section consisted of information on measures put in place to control environmental pollution in line with the policy statements.

Statistical tools.

Logistic regression model was used to determine prospect of compliance based on available dependent variables.
Regression model is given as: $Z = ßo + ßiXi + ß_2X_2 \ldots\ldots ßnXn$
Where ßo = Constant

ßi – ßn = change in forest policy compliance that is brought about by element 'i' to element 'n'

The expanded logit equation line is given as:

$$Ln = \left[\frac{\Pr(T1=1)}{1-\Pr(T1)}\right] b_0 + b_1(FIN) + b_2(MGR) + b_3(VEH) + b_4(ACC) + b_5(PAR)$$

Where FIN is Finance, MGR is managerial training, VEH is vehicles, ACC is accommodation and PAR is partnership with other sawmillers in the sawmill location.

Results and Discussion

Table 1: Environmental policy compliance status

S/N	FIRE EXTINGUISHER	INCINERATOR	SILENSER	EIA
1	0	0	0	0
2	1*	0	1	1
3	0	0	1	1
4	0	1	1	1
5	0	0	1	1
6	0	0	1	1
7	0	1	1	1
8	1	0	0	1
9	0	0	0	0
10	0	0	1	1
11	0	0	1	1
12	0	0	1	1
13	0	0	1	1
14	0	1	1	1
15	0	0	1*	1
16	0	0	1	1
17	1	0	0	1
18	1	0	0	1
19	0	0	1	1
20	0	0	1	1
21	0	0	1	1
22	0	0	1	1
23	0	0	0	0
24	1	1	0	1
25	0	1*	0	1
26	1	1	0	1
27	1	1	1	1
28	1	1	0	1*
29	0	1	0	1
30	1	1	1	1

Source: Field verification 2011

1*: The compliance measurement equipment is in active use and the expiry date is still far from being over.

EIA = Environmental Impact Assessment

Table 2: Environmental policy compliance level based on tangible equipments

FIRE EXTINGUISHER
Availability: 9
Non availability: 21
Compliance availability: 30%
Compliance non availability: 70%

INCINERATOR
Availability: 10
Non availability: 20
Compliance availability: 33.33%
Compliance non availability: 66.66%

SILENSER
Availability: 19
Non availability: 11
Compliance availability: 63.33%
Compliance non availability: 36.67%

EIA
Availability: 27
Non availability: 3
Compliance availability: 90%
Compliance non availability: 10%

Source: Field finding analysis 2011

Discussion

Fire extinguisher is of utmost importance when it comes to sawmilling, however only 30% of sawmillers complied. This portends a potential danger if there is fire outbreak. The use of silencer for the machines is to limit the decibel of noise that will come out of them. The compliance level is just 36.6% (Table 2) and this is a clear indication of the level of ignorance when it comes to the health of workers in this sawmill location. EIA if prepared before the start of operation of a sawmill will not take care of the future damage to the environment only, but will spell out opportunities for remediation if and when there is environmental damage. In table 2 above, EIA is so low (10.00%) in compliance therefore suggesting that environmental officers in the study area are not well and up to the task of environmental protection. Incinerator availability in the sawmill location is high in compliance (66.66%). The need to get rid of sawmill effluent is the drive for practitioners to procure them rather than being environmentally conscious. From personal interviews, most practitioners procure the environmental equipments as a route of escape from picketing not as a matter of environmental requirement necessity.

Logistic regression line for compliance prospect based on available variables.

	Z =	1.22CON	– 1.49FIN	+ 1.45 MGR	+ 1.08 VEN	+ 0.33ACC	+ 1.32 PAR
P- Level		0.00	0.01	0.00	0.22	0 .21	0.21
Odd Ratio	=	3	1	3	2	1	1

Taking significant value at $p<0.05$, finance and managerial training had significant values. The two variables are crucial to policy compliance. The odd ratio showed that, availability or non availability of managerial training has three times likelihood effect on environmental policy compliance and availability or non availability of vehicles have two times likelihood effect on environmental policy compliance.

Summary and Recommendation.

This study examined environmental policy compliance level of sawmills of Oyo east local government area of Oyo State, Nigeria. Thirty people were interviewed in the study area through the use of structural interview schedule. Data collected through the use of interview schedule was analyzed using descriptive statistics such as frequency and percentages, while logistic regression was used to test the compliance variables/facilities. The major findings showed that:

Majority of the people in the sawmill location are adults. Majority (70%) of the respondents did not have fire extinguisher. Majority of sawmills within the location (90%) have environmental impact assessment report (Table 1). This may be as a result of the fact that EIA is a mandatory document before approval for establishment of sawmills in the location. Finance and managerial training are crucial for compliance on environmental policy statements in the sawmill location.

Based on the findings, the following recommendations were drawn: The use of power generators by the operators as a result of lack of electricity contributes immensely to noise pollution in the sawmill location; there is therefore the need to improve electricity supply to the area. Credit facilities should be made available for operators so that compliance level can be improved upon. Awareness rather than punitive threat should be employed as a means of encouraging practitioners to comply with

environmental policies.

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Logistic Regression Analysis Table

Dependent Variable: Whether the sawmill location is Policy compliant as a result of available facilities.

Independent Variable	Coefficient	Standard error	Odd Ratio
Whether Finance is of significant effect:	-1.881	0.965	0.153
Whether Management is of sig. effect:	1.879	0.851	1.794
Whether Partnership is of sig. effect:	-0.920	0.891	0.399
Whether Vehicles are of sig. effect:	-1.970	1.110	0.379
Whether Accommodation is of sig. effect:	0.200	0.873	1.221
Constant:	1.598		

Significant at $P<0.05$;