



CAUSES OF GLOBAL WARMING FROM THE PERSPECTIVE SOME SELECTED ENVIRONMENTALLY RELATED ORGANIZATIONS IN IBADAN, OYO STATE, NIGERIA

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ABSTRACT

The study was carried out within Ibadan Metropolis where seven (7) organizations, both government owned and Non-Governmental Organizations (NGOs) were selected based on their direct involvement in environmental amelioration. These include Forestry Association of Nigeria (FAN), Centre for Environmental, Natural Resources, Research Administration and Development (CENRAD), Environmental Amelioration Club (EAC), Nigeria Environmental / study Action Team (NEST), Federal Ministry of Environment, Forestry Research Institute of Nigeria (FRIN) and Tropical Forest Network (TFN). Data were collected using oral interviews alongside questionnaires. Data were analyzed using descriptive statistics tools such as frequency distribution and bar charts. The results showed that there is awareness of the respondents on the causes of global warming emanating from increase in population, deforestation, use of household generators, industrialization, fire occurrences, burning of fuel in cars. Also revealed seminars, workshops and conferences previously attended both in Nigeria, Africa and oversea countries and organizations method of combating global warming which include organization awareness campaign, (100%) through seminars, workshops, conferences, media and publications; mitigation through afforestation projects (86%); establishment of plantations (86%) and discouraging exploitation (72%). Also, a 40-year temperature data which was acquired from FRIN meteorological station showed that the average yearly temperature has increased steadily over the forty-year period from 32.3-33.9^oC which proves the existence of global warming. It was recommended that to complement awareness campaign, government, private sectors and individuals should make concerted efforts towards reducing global warming through establishment of plantations for efficient use of Carbon Dioxide (CO₂).

Keywords: Amelioration, Causes, global warming, perspective, selected, environment, organization

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INTRODUCTION

The global environment is being faced with a multitude of threats and none is greater than the changes taking place in the very atmosphere of

the planet (Tolba, 2001). These climatic changes, in turn, give rise to a host of negative global effects, especially global warming. Global warming is the increase in the average

temperature of the earth's near surface, air and ocean since the mid-20th Century and its projected continuation. It is consequently brought about by some gases close to the earth surface which allows ultraviolet radiation to the earth but traps the heat being reflected out, thus causing an increase in the earth's temperature. Intergovernmental panel on climate change (IPCC, 2002) concludes that most of the temperature increase is due to increase in anthropogenic gases. The increasing atmospheric CO concentrations, which are essentially linked to the use of fossil fuels by man, represent a major component of global environmental and climatic changes, the risks of which are now largely measured by the international community. (IUFRO, 1997). To this end, the international community has initiated a shift in energy policy from production of fossil fuel to cleaner and environmentally friendly alternative fuels such as Bio-fuels, solar and wind energy (Kehinde, 2009).

The earth's major greenhouse gasses are identified as carbon dioxide, methane, nitrous oxide, chlorofluorocarbons (CFCs) (Oladiji, 2004). The CFCs are manufactured inert and seemingly harmless gasses invented for industrial purposes such as aerosols, fire extinguishers, solvents, refrigeration, air-conditioning etc. consequently once released, these gasses travel through the atmosphere to the stratosphere where it gradually depletes the ozone layer, causing holes in a layer that is supposed to absorb about 97-99% of the sun's high frequency ultraviolet rays capable of causing damage to life on earth. As a result of the foregoing, only about 30% of the sunlight is deflected by the outer atmosphere and scattered back into space. The rest reaches the earth surface and is reflected back into space as infra-red radiation. Unfortunately, the CFCs already in the atmosphere reach the stratosphere and once there, remain for 50 – 150 years causing damage before finally being destroyed (Oladiji, 2004).

Scientists predicted that the ozone layer will start recovering by 2008, but new research has shown that the aforementioned greenhouse gasses are slowing down the layer's ability to rebound. The pollutant is released into the atmosphere as a result of anthropogenic industrial activities from industries, agriculture, and mining. Transportation, deforestation, etc. consequently, this will have its own effects on human health, and spread to damage crops, ecosystem and materials. As part of efforts to combat global warming, all environmentally inclined organizations in the country need to rally together to determine specific areas of focus and to involve effective awareness programs targeted at different groups and most especially policy makers with a view to getting them fully involved in making sound environmental policies which include mitigation and adaptation as speculated by the 1992 World Conference in Rio, and the Kyoto Protocol of August, 1994. This study was carried out to the causes of global warming from the perspective of the environmentally related global organization.

MATERIALS AND METHODS

Study Area

The area of this study was in Ibadan of longitude and latitude 7° 23' 47"N, 3° 55' 0"E. All the five selected environmentally inclined organizations have their offices in different locations in the city (Fig 1.) which include CENRAD Consulting office at second floor, Premium House, Jericho; NEST located at No. 1 Olubokun street, Awolowo Avenue, Bodija; Environmental Amelioration Club located at Zoological Garden, University of Ibadan; Tropical Forest Network located at second floor Adogba Complex, Iwo Road; FAN in their office at FORMECU, Federal College of Forestry Jericho; FRIN located at Idi-Ishin Road Jericho; Federal Ministry of Environment, Federal Secretariat Agodi, Ibadan.

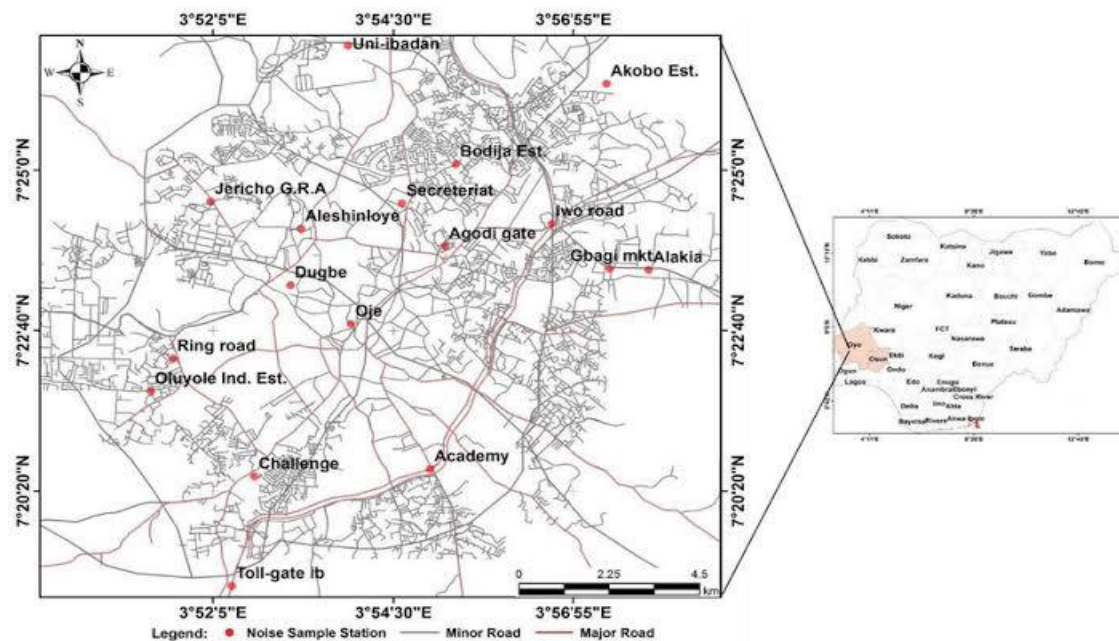


Figure 1: Map of Ibadan

Data Collection and Analysis

The data on the study were collected using questionnaire and Oral interview in order to achieve maximum results from the respondents in the organizations. Temperature data were also obtained from FRIN to consolidate the data obtained through the questionnaires which were administered to the very line executives who were directly involved in the field work or project. A total number of 160 respondent's questionnaire were retrieved out of 280 administered at the rate of 40 questionnaires per organization.

Data analysis

The data collected from the respondents were analyzed using descriptive statistical tools such as frequency distribution.

RESULTS

Table 1 showed the socio-economic characteristics of the respondents considered which include Gender, Age bracket, Educational background and working experience.

Table 1 : Demographic Characteristics of the respondents

Variable	Frequency	Percentage (%)
Gender Distribution		
Male	16	76.2
Female	05	23.8
Total	21	100
Age Distributions		
11-20	0	0.0
21-30	5	23.8
31-40	6	28.6
41-50	6	28.6
50 and above	4	19.0
Total	21	100
Educational Background		
ND	-	0.0
HND/PGD/BSC		
MSC		
Ph.D.		
Others		
Total	21	100.0
Working Experience (years)		
1-5	3	14.4
6-10	7	33.2
1-15	4	19.0

Table 1 above revealed that the majority of the respondents (76.2%) are males while only 23.8% were females. This is followed by the more youthful 21 – 30 years’ age group (23.8%). Then, followed by the aged 51 years and above accounted for only 19%. None of the respondents was between the ages of 1 – 20years. From the table, it could be inferred that while the older age group (51 and above) are not left out, the middle aged (31 – 40), and even the more youthful 21 – 30 years are also very actively involved in

forestry, and other environmental amelioration activities. Educational background presents the educational qualification of the respondents. From the table above, M.Sc. makes up the majority of the respondents (42.9%). This followed by the HND/PGD/B.Sc. class which is (33.3%), followed by the N.D (19.0%) and lastly the Ph.D. (4.8%). This tells us that the respondents are very educated and that their information and opinions can be trusted to be true and credible.

Table 2: Frequency and percentages of respondents on anthropogenic causes of global warming

Name of organization	F1	F2	F1(%)	F2(%)
Industrialization				
FRIN	0	3	0	14.3
NEST	0	3	0	14.3
CENRAD	0	4	0	19.1
TFN	0	4	0	19.1
EAC	0	4	0	19.1
FAN	0	2	0	9.52
FME	0	1	0	4.76
Total	0	21	0	100

Fire Occurrences				
FRIN	2	1	16.7	12.5
NEST	2	1	16.7	12.5
CENRAD	1	3	8.33	37.5
TFN	2	2	16.7	25.0
EAC	3	0	25.0	0.00
FAN	2	0	16.7	0.00
FME	0	1	0	13.5
Total	12	8	100	100
Population				
FRIN	0	3	0	14.3
NEST	0	3	0	14.3
CENRAD	0	4	0	19.1
TFN	0	4	0	19.1
EAC	0	4	0	19.1
FAN	0	2	0	9.52
FME	0	1	0	4.76
Total	0	21	0	100
Deforestation				
FRIN	0	3	0	14.3
NEST	0	3	0	14.3
CENRAD	0	4	0	19.1
TFN	0	4	0	19.1
EAC	0	4	0	19.1
FAN	0	2	0	9.52
FME	0	1	0	4.76
Total	0	21	0	100
Use of house hold generation				
FRIN	0	3	0	14.3
NEST	0	3	0	14.3
CENRAD	0	4	0	19.1
TFN	0	4	0	19.1
EAC	0	4	0	19.1
FAN	0	2	0	9.52
FME	0	1	0	4.76
Total	0	21	0	100
Burning of fuel in vehicles				
FRIN	0	3	0	14.3
NEST	0	3	0	14.3
CENRAD	0	4	0	19.1
TFN	0	4	0	19.1
EAC	0	4	0	19.1
FAN	0	2	0	9.52
FME	0	1	0	4.76
Total	0	21	0	100

The table above shows that industrialization is on the increase with all the 21 respondents confirming that particular verdict. This reinstates that global warming is on the increase because industrialization goes along with serious

deforestation activities to pave way from construction of industries. We can also deduce that fire incidence has not been on the increase therefore fire did not contribute to global warming as far as the above tabulated results are

concerned. Population has also been concluded to be on the increase by 100% of the respondents. This goes with deforestation for farming activities and urban settlement. Exploitation of trees is also on the increase. This is the removal of both merchantable and non-merchantable sizes of trees illegally, especially without replacement.

Use of household generators and burning of fuels in vehicles were also found to be increasing. All the respondents agreed it was increasing. This

brings about carbon monoxide increase in the atmosphere and consequently increases the risk of global warming. from the results drawn so far from the number of respondents on the increasing and decreasing responses, it is obvious that the 21 respondents unanimously agreed that burning of fuels in vehicles, use of household generators, exploitation of trees, population, industrialization, invariably confirms varieties of assertions made that Global warming is in the increase.

Table 3: Summary of Temperature Data (1978 – 2018)

Year	Mean Min. Temp. (°C)	Mean Max. Temp. (°C)
1978 – 1988	32.3	23.1
1988 – 1998	33.6	23.5
1998 – 2008	33.7	23.5
2008 – 2018	33.9	23.9

The Table above shows how the maximum temperature and the minimum temperature have increased steadily over the years. Over the period of 1978 – 2018, the maximum temperature has increased from 32.3°C-33.9°C which makes a

difference of 1.6°C while the minimum temperature has also increased from 23.1°C-23.9°C this also impresses a difference of 0.8°C to tell us that the global temperature is increasing.

Table 4 : Organizations method of combating global warming

Method	No of Organization	Percentage (%)
Awareness		
Seminars	7	100
Conferences	7	100
Workshops	7	100
Talk lecture	7	100
Media	5	72
Publications	7	100
Mitigation		
Afforestation project	6	86
Establishment of plantation	6	86
Discouraging exploitation	5	72
Environmental sanitation	2	28
Waste management	2	28

Table 4 shows the major methods in which the organizations contribute to the combat against global warming. These include awareness campaigns, mitigation and adaptation. From the table above it is evident that the respondents do

awareness campaigns by seminars, conferences, symposium, workshop, talk, media and different publications. They also combat by tree planting campaign, encouraging afforestation and discouraging exploitation.

Table 5 : Number of seminars/workshops attended by respondents

Organization	Seminar	Conference	Workshop
TFN	6	12	4
FAN	12	18	8
NEST	5	9	4
FRIN	13	18	4
FME	6	4	2
EAC	7	9	5
CENRAD	5	6	3

Table 5 reveals that the respondents have attended seminars, conferences and workshops in relation to environmental issues regularly. These were found to be within Nigeria, Ghana, South Africa, the US, Germany, Finland etc. However, this tells us that the respondents have an in-depth knowledge of the state of global warming

DISCUSSION

The finding revealed that the majority of the respondents were males. This implies that men are more involved in environmental amelioration issues than women. This agrees with Ogunmokin (2008) who reported that the drudgery nature of agriculture has discouraged women's utmost participation. The under study and analysis of the data obtained from different environmental related organizations on the causes of global warming revealed that the anthropogenic causes related to industrialization, population, deforestation, use of house hold generator and burning of fuels are on increase as shown in the frequency and percentage. The increase effect of global warming caused by industrialization goes along with serious deforestation activities that pave way for construction of industries. In a well establish scientific consensus on global warming miller, (2012) notes that the earths global average temperature has been rising over the past century and much of this increase has been attributed to human activities, primarily the burning of fossil fuels during the era of industrialization, while population also enhanced global warming due to deforestation for farming activities and urban

settlement. The aspect of exploitation of merchantable and non-merchantable sizes of trees illegally without replacement expose the environment to increase temperature resulting to climate change, these research findings on anthropogenic causes of global warming resulting into deforestation also correlate with the findings of (Bell, 2011). Carbon monoxide emission from burning fuels in cars and house hold generators was found to be on increase side and as part of causes of global warming which led to climatic change and rapidly increasing atmospheric temperature, these also agree with the discovery of canadell *et al.*, 2007. Results shows the various methods were adopted by the organizations to combat global warming which include creating awareness through attending of seminars, conferences, workshop, talk lecture and through media and publication. Findings showed that methods of mitigation of global warming are afforestation projects, plantation establishment, discouraging exploitation, environmental sanitation and waste management which conform with the results of (canadell *et al.*, 2008)

Conclusion and Recommendation

The study showed that respondents in the selected organization are aware of the causes of global warming emanated from increase in population, deforestation, use of household generators, industrialization, fire occurrences, burning of fuel in cars and seminars. Workshops and conferences that were attended both in Nigeria, Africa and oversea countries by some members of the organizations on the methods of combating global warming which include organization awareness campaign through seminars, workshops, conferences etc. and global warming mitigation through afforestation projects, establishment of plantations, discouraging exploitation, waste management and environmental sanitation. There should be further strict adherence to environmental policies afore mentioned to enhance continuous amelioration of global warming and improvement in environmental control globally.

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