

Strategic communication for climate change awareness and behavioural change in Ado-Odo/Ota Local Government of Ogun State

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Abstract

Background: The use of multi-sectoral communication on human's handling processes of environment is not popular in the literature as crucial factor in winning the war against climate change and its attendant problems of greenhouse pollution, global warming and destruction of lives and properties.

Objective: The study investigates the practices surrounding climate change and its awareness in Ado Odo/Ota local government of Ogun State.

Methods: The survey data obtained from randomly selected 970 residents in Ado Odo/Ota local government was complimented with six key indepth interview with opinion leaders.

Results: The findings show that the current behaviours surrounding climate change in the study location includes burning of waste and bush (41.1%), indiscriminate disposal of waste (18.1%), and the use of kerosene (45.4%), fire wood (6.4%) and coal for domestic purposes (3.3%).

Conclusion: The study recommends multi-sectoral communication strategy (MCS) and the use of television for effective climate change awareness campaign for behaviour medication.

Keywords: Sustainable development, Climate change, Environment, Behaviour, Development Communication.

Introduction

Goals 13, 14 and 15 of the Sustainable Development Goals (SDGs) are about the environment and climate change. The 13th goal focuses on taking urgent steps to fight climate change and its effects. The 14th goal deals with conservation and sustainable use of the oceans, seas and marine resources for ecological development, while goal 15 targets protection, restoration and promotion of sustainable use of terrestrial ecosystems, combat desertification, manage forests sustainably, reverse land degradation, as well as terminate biodiversity loss. It is very clear that sustainable development is directly related to climate change and the environment.

Climate change effect has been phenomenal on the society, the blame which goes to both the most industrialised societies of the world as well as the 'less industrialised' because they are contributory to the factors causing climate change. This means that the responsibility for a safe environment must be borne by all and sundry at all levels- national, regional and community. It is on this basis that it is important

to understand the practices contributory to climate change in order to develop relevant communication interventions to alter people's behaviour in favour of the environment and mitigate climate change effects.

Therefore, this study examines such practices that aid climate change in Ado-Odo/Ota Local Government, Ogun State, Nigeria, with the aim of designing necessary communication interventions to bring about desirable behavioural change. It has been noted that 'there is no universally applicable technology for climate change communication; the type of technology adopted must be tailored to the economic, social and cultural peculiarities of a community' (Mycoo, 2015 p.58). This paper therefore sets out to determine the practices contributory to climate change among Ado-Odo/Ota local government residents, measure climate change awareness and its effects among the residents, ascertain the channels of communication that will enhance climate change awareness among the residents and identify strategies that may be employed in effective

climate change communication in Ado-Odo/Ota communities.

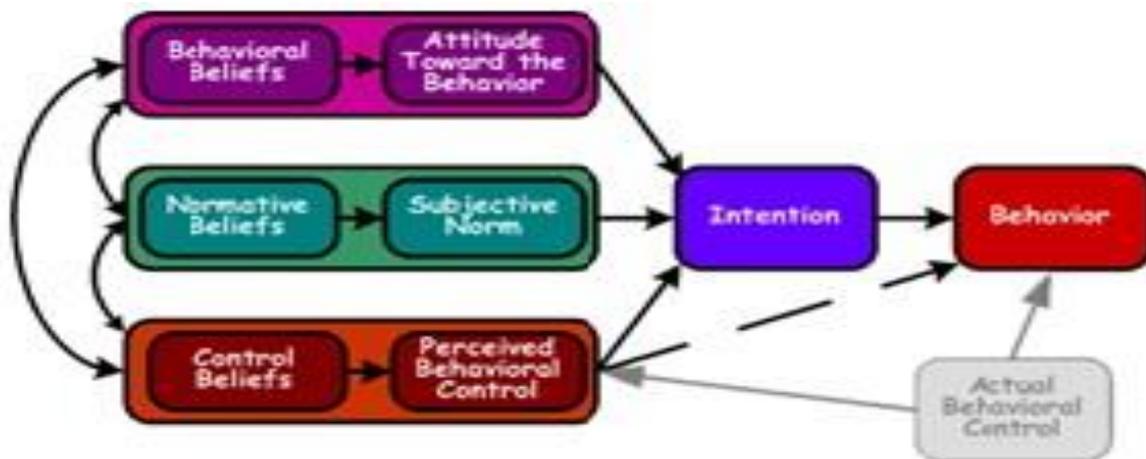
Literature and theoretical framework

The study finds its basis in the theory of reasoned action which focuses on behavioural actions. The theory states that behaviour is caused by intent; that is, there is an expectancy value formulation where there is a corresponding behavioural intent for every (behavioural) action exhibited. In other words, the performance of a given behaviour is mainly influenced by the intention to perform that behaviour (Oyero, 2014). Hence, the most important determinant of a person's behaviour is behaviour intent. However, there are two major factors that can influence behavioural intent - "attitudinal" and "normative" factors. The attitudinal factor is a person's approach towards a s behaviour. This attitude is usually informed by an evaluation of perceived consequences of such actions or behaviour as well as the strength of belief an individual has in these perceived consequences. Normative factor on the other hand is the influence caused by social standards of

behavioural actions as well as the motivation to comply. When attitudes and subjective norms are positive, there is an increased perceived behavioural control; that is, people perceive that they are able to perform a given behaviour.

The theory of reasoned action predicts behavioural intention, that is, both attitude, as well as behaviour using already identified variables—attitudinal and normative factors. It is worthy of note that both factors are able to simultaneously influence behavioural intent, where one's attitude influences him/ her to have an intent to carry out a certain behavioural action. However his/her subjective norms might consider such action (in)appropriate; at this point, volitional control comes to play. But because attitudes are inherently dynamic, behavioural intent may only be accurately measured at the same time with corresponding behaviour.

In sum, according to the theory of reasoned action, intent is a predictor of behaviour; it is a cognitive process which precedes behaviour. The schemata below by Ajzen (1991) captures the process of TRA:



Climate change is “a change in the statistical distribution of weather elements and which is sustained for up to a decade or more.”(Nwankwo & Unachukwu, 2012, p.161). The problem of climate change is an age-old worldwide hazard that has implications for human sustainability. Enete and Amusa (2010) affirm that climate change is probably the most severe environmental threat in the fight against poverty, hunger, malnutrition, and disease in Africa and as such, deserves to be seriously confronted (Ezeh & Mberu 2017).

According to Ogbo, Laretta and Ukpere (2013, p. 221), “climate change has become a global issue in recent times manifesting in

variations of different climate parameter including cloud cover, precipitation, temperature range, sea levels and vapour pressure” (Nwankwo & Unachukwu, 2012). Climate change affects parameters of life such as economy, health, water resources, agriculture, energy, etc. Omoruyi and Kunle (2010, p.204) also note that the consequence is “fiercer, longer-lasting weather; extreme scorching heat, unusually heavy rainfall, increased intensity of storm, hurricane, floods, droughts, outbreak of forest fire, induced earthquake, acid rain; all indirectly connected to malnutrition and poverty”.

Climate change is not just environmental problem; it is also developmental issue because its negative effects severely affect poorer

countries whose economies are largely based on natural resources, leading to unemployment, crimes, insecurity, etc. (Jegade, Adejuwon, Olowookere & Elegbeleye, 2016; Olanrewaju & Joshua 2017). But again, the countries with more diversified economies are equally liable to climate change impacts. It is therefore important that all hands must be on deck by all countries to promote sustainable trends in greenhouse gas emissions (GHG), which is the greatest perpetrator of climate change.

According to UNDP (2011), climate change poses a severe threat to the actualisation of the Sustainable Development Goals. Changes in climate patterns and rainfall and increase in sea levels will worsen present economic, political and humanitarian strains and affect human development. The situation will be more critical for countries that depend largely on climate-vulnerable sectors such as agriculture, water resources, forests and biodiversity to sustain and improve the living conditions of their populations (Alege, Adediran & Ogundipe, 2016).

It is thus imperative to administer climate change hazards as part of Nigeria development projects. Inclusion of climate change as part of total development plans will make for systematic progress in the effort at preserving the present and securing the future in all developmental fronts. Such an integrated approach will make development more resilient by reducing climate impact and identifying development opportunities that may otherwise be overlooked. For example, an integrated approach would underline the hazard of rising sea levels in the development of a national policy on coastal tourism and the methodology for tackling it. There is a significant connection between development and climate change adaptation in that they both aim to reduce the root causes of vulnerability. The inclusion of climate change risks and opportunities in development programmes is a way to engage directly at this intersection. Its objective is not only to facilitate resilience to climate change, but also to guarantee that no mistaken development is implemented and no inappropriate actions are taken (UNDP, 2011).

As noted by Inderberg, Eriksen, O'Brien and Sygna (2015), climate change has serious negative effects people's lives and means of livelihood, including people's beliefs, cultures and identities, as well as infrastructure and institutions; women are severely hit by its impact (Gberevbie & Oviasogie, 2012). There is a rising realisation that the social dimensions of vulnerability and adaptation now need to be at

the centre of development strategies and practices. Development policies and practices germane in addressing climate change, but they need to be systematically placed and implemented to incorporate necessary concerns and issues relevant to the socio-political structures and developmental pathways driving sustainability.

There is an agreement among many researchers that human activities and stress on the environment are the principal cause of climate change (Intergovernmental Panel on Climate Change, IPCC, 2007; Mberu & Ezeh, 2017). Therefore, to change this behaviour, there is the need to investigate what people know, believe and do. A knowledge-attitude-practices (KAP) study is for this reason useful because it evaluates and measures people's lifestyles and behaviours about climate change (WHO, 2008) and in so doing, helps to identify "the most effective ways to teach the public about what has been learned (about climate change) through scientific research and data" (Association of Caribbean Media Workers (ACM). 2005, p. 3). The use of KAP study can help to establish baseline indicators; KAP data are collected before an intervention designed to change knowledge, attitudes and behaviours, and then used for comparison with data collected after the intervention to assess the impact made. Thus, KAP studies form a very important part of evaluation research. Studies that measure people's attitudes and behaviour are not new to climate change.

The attitude of people is very important in behavioural change programme. When people have positively attitude about the environmental, coupled with strong awareness of climate change, it translates to a strong support to achieving policy programmes (Amodu, Alege, Oluwatobi & Ekanem, 2017). However, emphasis on awareness alone should be cautioned in order to avoid the 'information deficit' model which is prevalent in climate change. The 'information deficit' also called 'ABC' model believes that behavioural change is caused by attitudes (A), which also informs the kind of behaviour (B) people exhibit and subsequently adopt (C). (Shove, 2010). The 'ABC' Model is useful in changing people's attitudes and, to some extent, their behaviour; but it has its limitation because it does not take into consideration other factors, such as habits, social norms, culture, etc. that can serve as constrain to individual, social and institution in the process of behavioural change (Blake, 1999; Jackson, 2005).

More particularly, it fails to recognise the social embeddedness of decision-making, which affect peoples' choices as they are constantly shaped and reshaped by the social contexts in which they take place (Moloney et al., 2010:). It also does not recognise how people become so constrained into specific behavioural patterns as a result of institutional factors that are beyond them (Jackson, 2005). Pro-environmental behaviour is also determined by the complex interconnection among several factors such as time, convenience and comfort (Lavelle & Fahy, 2012). The foremost approach falls short because there is no simple relationship among attitudes, engagement and behaviour change (Upham et al., 2009). It has been noted that environmental attitudes have different, usually very small impact on pro-environmental behaviour. This is not surprising because it is often assumed that people live according to their values (Kollmuss & Agyeman, 2002: 252). In this way, increased climate-change awareness or positive attitudes do not necessarily lead to increased energy efficiency behaviour.

Paucity of records encourages the assertion that there had been poor awareness among Nigerians about climate change implications especially in the environment. Human activities have made the problem wider in the society. Therefore, it is a "phenomenon that is currently in dire need of a wide range of publicity and other measures . . . creation of awareness and proper understanding of the phenomenon" (Owolade and Adebayo, 2012, p.1). The involvement of non-governmental organisations (Odiboh, Omojola, Ekanem et al., 2017) has not been well activated in mobilising public awareness on climate challenges. Harris (2014, p.77) notes that "awareness and education about its effects, especially among vulnerable communities, is lacking, due to language and cultural barriers." Hence, the need for government to take sole responsibilities in ensuring a safe environment from the effects and long-time implications of climate change.

The Building Nigeria's Response to Climate Change (BNRCC) Project (2011, p.1) notes that climate change is already having an impact in Nigeria. Weather-related disasters have become more frequent in the past four decades and the trend continues. The nation's natural and agricultural ecosystems, including fresh water and coastal resources are highly susceptible to the effects of climate change.

With this little effort, Harris (2014, p.78) stresses that "communities are unlikely to respond to government policies promoting mitigation and adaptation strategies without an

improved perception of climate change risk at a local level". This proper perception is only made possible through rigorous publicity, mass education and creation of awareness applying appropriate communication tools (Odiboh, 2002; (Williams, Ekanem, Sobowale & Amodu 2017)) and using the language that the people could conveniently relate with.

The importance of communication and media in increasing awareness about the outcomes of climate change has been recognised by governments and a few civil society organisations (Harris 2014). Thus, information dissemination is significant in bringing people to understand the imports of climate change. Stressing this significance further, Ariyo, Ariyo, Okelola et al (2013, p.19) opine that dissemination of information via the use of media technology is crucial to understanding the hazard, effect and adaptation alternatives that climate change presents to the livelihood of farmers in Nigeria in particular and the entire world in general.

The media of mass communication are veritable instruments to deliver efficient and effective messages on climate change to the generality of the audience. Their strength lies in their pervasiveness and ability to change people's behaviours. Unfortunately, media content have not given attention to disseminating information on the causes of climate change, and are generally not providing opinions based on verifiable and fully identified scientific source (Castilla & Rodriguez, 2014; Lopera, 2014). This needs to change because the media cannot be left out as they occupy an important and powerful position that can be used for societal benefit in order to create awareness and educate people about climate change in the world.

It is also important that media practitioners learn how to reduce various terminologies to level comprehensible by mass audience in order to make the message achieve desired purposes. Plessis (2015) notes the problem of lack of interdisciplinary collaboration which results in inability of journalists to interpret scientific concepts necessary in their reportage of climate change situations. He believes that collaboration should exist between scientists in climate change field and journalist and suggests further that literacy level be improved, media messages should be explicit in a way people can easily relate with and more media reportage should see climate change as an area that holds great significance in the lives of people. Journalists should acquire valid knowledge in order to report with precision issues of climate change and their

behaviours need to be favourably influenced so as to increase awareness and dissemination of climate change news (Amu & Awgu 2012, p. 52).

Data and method

Survey research method was used for the study and complemented with non-participant observation and unstructured in-depth interview. These are appropriate for communication research (Salawu, Oyero, Moyo, & Moyo, 2016). The population for this study comprised of residents of Ado-Odo/Ota Local Government Area, Ogun State, Nigeria. The sample size for the survey is 1,000 respondents but the analysis was based on 970 questionnaires duly filled and returned. Community leaders, traditional rulers and social mobilisers of the community were also interviewed to generate data to complement those obtained through questionnaire. A multistage sampling technique was applied. From the four zonal districts in the local government, two zones-Ota and Sango were randomly selected. Again, five communities

were randomly selected from each of the two zones where 100 questionnaire copies were administered per community. The data were analysed with percentages and presented in tables.

Results

Table 1 gives an idea of the composition of the respondents as regards their age, gender and level of education. Majority of the respondents (40.8%) are young people between ages 15 and 24. Respondents between ages 28 and 34 are the second largest group (28.9%). Those in middle age range of 35 to 44 are 17.6%, while the rest were between 45 and 54 (9.4%). 55 to 64 (2.4%) and 65% and above (0.9%). Also, there were more female respondents (52.8%) and males were 47.2%. Furthermore, majority of the respondents had been to secondary school with 40.7% having Ordinary level certificate. Those with first degree were 28.5%, Basic 6 was 12.7% and those with Postgraduate were 10.4%. 8.8% had no formal education.

	Items	Percentage
Age	15-24	40.8
	25-34	28.9
	35-44	17.6
	45-54	9.4
	55-64	2.4
	65 & above	0.9
	Total	100% n=970
Gender	Male	47.2
	Female	52.8
	Total	100% n=970
Education	No Education	8.5
	Basic Six	12.7
	O' Level	40.7
	First Degree	28.5
	Postgraduate	9.7
	Total	100% n=970

The term climate change is not new to most of the respondents. Table 2 clearly indicates that a very high percentage of respondents (89%) have heard of climate change at one time or the other. This implies that climate change is not a strange term to the respondents. The table above indicates that many of the respondents are aware of the changes in weather condition of the country in the past 5-10 years. As high as 69% respondents confirmed that they noticed changes in weather condition. Though majority

has heard about climate change, most of the respondents did not really understand what it is all about. Only 11% of the respondents have a very deep knowledge of the risk associated with climate change and as high as 33% of the respondents are not even sure of these risks. This implies that in spite of the fact that many of the respondents have heard of the term climate change, they have little knowledge of the community risk associated with it.

Items	Responses	Percent
Having heard of 'climate change'	Yes	89
	No	11
	Total	100, n=970
Change in the environment over the past 5-10 years	Yes	69
	No	19
	Not sure	12
	Total	100, =970
Knowledge of risk associated with climate change	Don't know/Not sure	33
	Hardly anything	11
	Not much	29
	A fair amount	16
	A great deal	11
	Total	100, =970

Table 3 shows that 74% of the respondents strongly agree and agree with the statement that climate change is due to carbon monoxide from industries and vehicles. This implies that many respondents are aware of the fact that climate change could be caused by carbon monoxide. In order to find out if respondents know if climate change leads to over flooding and lives of property, 61% of the respondents strongly and agree with the statement. This indicates that a high percentage of respondents are aware that climate change leads to over-flooding and loss of lives and property.

Items	Caused carbon monoxide from industrial and vehicles	Over flooding and destruction of lives and properties
Responses	Percent	Percent
Strongly Agree	32	33
Agree	42	38
Disagree	17	18
Strongly disagreed	4	8
Undecided	5	3
Total	100 n=970	100 n=970

It could be seen from Table 4 that the act of refuse burning topped the practice of waste disposal in the local government area. Almost half of the residents (41.4%) engage in the practice refuse burning. Only 27.7 % give them to refuse collectors. 11.8% throw them into bush and 12.9% take them to dump site. Others pack them by road side or throw them into gutter. Also, the use of kerosene to cook is the

dominant practice among the respondents. The table also reveals that 45.4% respondents use kerosene to cook their food, 32.2% use gas and the remaining people use electric stove, fire wood and coal.

	Responses	Percent
Disposal of refuse	Burn them	41.4
	Throw them into bush	11.8
	Pack them beside the road	4.0
	Throw them into gutter	2.3
	Take them to dump site	12.9
	Give them to refuse collectors	27.6
	Total	100 n=970
	Cooking Behaviour	Responses
Kerosene		45.4
Fire wood		6.4
Coal		3.3
Gas		32.3
Electric stove		11.4
Others, Specify		1.2
Total		100 n=970

Table 5 shows the channels that the people receive information from. Television emerged as the most patronised medium with 41.4% responses, followed by radio with 32.9% responses. The internet gains more recognition than it used to with 14.7% responses. Respondents (45.4%) receive information occasionally on climate change. We see that 8.9% has never heard of climate change at all

from any media channels while 4.9 % are not sure. This is an indication of inadequate publicity about climate change through media of mass communication. The prevalence of behaviours that encouraged climate change thus requires strategic communication to bring about behavioural change. This is what informed the development of Multi-sectoral Communication Strategy (MCS) Model as shown in Fig.1.

risk associated with it while a few others do not know. There seems to be inadequate knowledge among people on vital sustainable development issues as shown in previous studies (Abioye, Oyesomi, Ajiboye, Omidiora & Oyero, 2017; Okorie, Oyesomi, Oyero, Olatunji & Soola, 2013)). On the general note, it means that serious knowledge of the implications of the climate change is currently lacking among the study population. In other words, the people's knowledge of climate change is low and this calls for a greater campaign. Since climate change is a reality as shown by the changes noticed by the respondents in the weather situation; this could be the starting point for creating the required awareness about the climate change. In other words, fulfilling goal 13 of SDGs which is about taking urgent action to combat climate change will require creating awareness about its impacts in order to get the necessary behavioural change.

Table 5: Communication behaviour on climate change

Items	Frequency	Percent
Sources of Obtaining Most Information	Radio	32.9
	Television	41.4
	Newspapers	9.9
	Internet	14.7
	Others, specify	1.0
	Total	100, n=970
Frequency of listening or watching stories on climate change media channels	Frequently	21.9
	Occasionally	45.4
	Infrequently	19.1
	Nevers	8.9
	Don't Know/Not Sure	4.8
	Total	100, n=970

Further findings show the engagement of residents of Ado-Odo/Ota LG in practices that are contributory to climate change. Many still do their cooking with kerosene and burn their waste, thus adding to the carbon dioxide in the atmosphere and contributing to climate change, as well as adding other air pollutants. Burning of refuse or incineration contributes to the climate change and poses health risks to the populace. This is because burning of refuse leads to the release of carbon molecules, primarily carbon monoxide, causing air pollution and contributing to global warming and eventually climate change (Anselm, Eneh, & Ohigbo 2012; Ahmed 2012; Adejobi & Olorunimbe 2012). Similarly is the use of coal, firewood and kerosene for cooking. Lam et al (2012) report that kerosene-fuelled wick lamps used in millions of households in developing countries are sources of black carbon (BC) emissions. They noted that black carbon from kerosene use is twenty times higher than is currently assumed. Black carbon contributes significantly to global warming and glacier melting (McDermott, 2012).

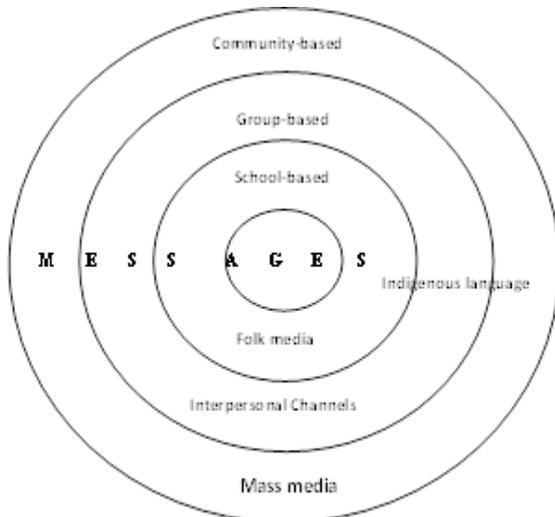


Fig.1: Multi-sectoral Communication Strategy Model-Source: Author

Discussion

It is clear from the data generated that most respondents have heard of climate change. A good number of them have also observed some changes in the environment and as a matter of fact they have a good understanding of some causes and effects of climate change. However, many did not really understand the risk associated with climate change. Insignificant number of people had appreciable knowledge of

The residents also engage in indiscriminate disposal of waste. Wastes are dumped at major roads, inside the gutters and in erosions when it rains. These practices not only damage the environment but could cause epidemic in the communities and flooding when it rains heavily. Our findings show that there is no concrete policy in place about waste disposal in the local government; so people have to find a means of disposing their wastes. Wastes are dropped by road sides with the expectation that government waste management team would pack them but this does not happen often and thus constitute

nuisance to the communities. These practices, which contribute to climate change need to be changed through massive public education.

Our finding shows that television has wide spread reach among Ado-Odo/Ota LG residents contrary to the belief that radio is the medium for developing countries (Oyero, 2003). This may be as a result of the semi-urban nature of the communities in Sango and Ota zones selected and its closeness to the city of Lagos. This then is an opener when communicating about climate change to give television top priority in such campaigns. Unfortunately, people do not get to hear about climate change often in the media. From the interviews, it is clear that most television viewers seek out entertainment rather than edifying information. This poses a challenge to media producers and environmentalists to raise the tempo of campaign about the environment and climate change and have appropriate blend of entertainment to make the message attractive.

However, it is a delight to know that majority of the respondents are aware that waste can be recycled to useful products and equally know it is normal for them to separate their waste to different types, and in fact would be ready to separate their waste for proper disposal. However, we gather from the interview that while people express personal readiness to separate their wastes for proper disposal, they doubt that others will practice it: *'Why not? If government says we should separate out wastes and they will come and collect them, I will do it. But our people, I don't think they can do it o. They will say it's too much wahala for them'*.

To be able to combat climate change in Ado-Odo/Ota Local Government, the adoption of Multi-Sectorial Communication Strategy (MCS) is the way to go. The MCS is a strategic approach that has the capacity to reach every person with less capital. It builds on the existing community structures and channels to pass climate change information to the residents. The strategy is community-based, group-based, school-based, and family –based. Ado-Odo/Ota LG has strong Community Development Association (CDAs) that are well organised and interlinked. The primary CDAs comprise maximum of 50 buildings in a community. Representatives of primary CDAs form the Joint Community Development Associations (JCDAs). The JCDAs are also organised into Zonal CDAs (ZDAs) and then the local government. This structure makes possible the passage of information to reach the least and in fact every house in the community.

Besides, there are also various groupings in the local government that can be explored for any social change campaign. There are various professional groups especially at the informal sector such as the market women, artisans groups such as Welders, Tailors, Auto-Mechanics, Bricklayers, etc. These groups are cohesive because they maintain a structure from the very grass-root to the state level. Religious groups also form another community cluster that can be used to get any message across the people.

The school system is also another viable component through which communication on climate change could be spread. The schools, both public and private, afford the opportunity for children and young people to be inculcated with the necessary information to cater for the environment (Oyero & Salawu, 2018). These young people are in particular very germane to this effort because they are the future which would really require environmental sustainability. It is thus very important to catch them young and they will even be in position to influence their families positively and also sustain the message beyond their own generation, thus achieving the Sustainable Development Goals.

The content of the message to be communicated must contain three elements. First must be the meaning of climate change and its evidences. The second will be the consequences of climate change and the impact it has on the mother earth and its people. The third is behavioural practices that people should embrace and practice. These messages must be carefully and skilfully packaged in a creative manner to blend with whatever narrative is adopted. The language of communicating the message is also very important. Studies have shown that people's indigenous languages exert a lot of influence on the reception of development messages (Oyero 2003; Wallace 1996; Oyesomi, Soola, Abioye, Oyero, 2014). This should be taken to serious consideration when developing messages on climate change. In addition to this is that appropriate words that convey the original intent of such messages (such that the audience can relate with) should be used for effective communication and proper understanding.

The channels of communicating the message should also be media-mix approach- the mass media, interpersonal channels and the folk media. The mass media content on climate change is currently low; there is therefore the need for media responsibility in giving systematic attention to climate change considering its development nature. As seen in

the result, television stands out as the dominant medium as such should be effectively used along with other mass media. However, there is the need to blend information on climate change with entertainment programmes such as music and movies since many seek out such media content.

Interpersonal channels will mostly be useful at the community, group and schools levels. Religious fora, Community Development Association meetings, youth clubs meetings, public seminars in market places, schools, packs, etc. could be used to educate the people about climate change and environmental sustainability. The folk media are still very popular in the community; not only do they bring people together, they are credible and the messages there-from are believable. They do have a significant place in getting the people persuaded about social issues. Government agencies in charge of this task should encourage school clubs where issues on the environment and climate change could be endeared to the young people; this will not only serve the purpose of the present but also of the future in awareness creation and behavioural change. When the MCS is adopted and properly applied, communication will thus work to change people's attitudes towards environmental practices as stipulated in theory of reasoned action and motivate them to develop intentions to perform desirable behaviours that will curb climate change and enhance environmental sustainability. The model below is a representation of Multi-sectoral Communication Strategy (MCS).

Conclusion and Recommendation

This study has found that practices contributing to climate change are still prevalent in Ado-Odo/Ota communities. Most residents engage in refuse burning in open spaces, a practice inimical to environmental and human wellbeing; others get involved in burning wood for cooking, use of kerosene and improper disposal of wastes. This situation calls for rigorous campaign against such practices and the need to create awareness and educate the residents about climate change, its effects as well as environmental sustainability. The campaign about the environment and climate change is currently low in the local government and there is need for government agencies and non-governmental organisations to get involved in more impactful public education and awareness-raising for climate change mitigation, behavioral adaptation and environmental sustainability.

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References

- Abioye, T., Oyesomi, K., Ajiboye, E., Omidiora, S. & Oyero, O. (2017). Education, Gender, and Child-Rights: Salient Issues in SDGS Years in ADO-ODO/OTA Local Government Area of Ogun State, Nigeria in Okorie, N., Ojebuyi, B. & Salawu, A. (eds.) *Impacts of the Media on African Socio-Economic Development*. (pp. 141-154) Hershey PA, USA: IGI Global
- Adejobi O. S. & Olorunnimbe R. O. (2012) Challenges of Waste Management and Climate Change in Nigeria: Lagos State Metropolis Experience. *African Journal of Scientific Research*.
http://www.journalsbank.com/ajsr_7_3.pdf
- Ahmed Y.A. (2012) Potential Impacts of Climate Change on Waste Management in Ilorin City Nigeria. *Global Journal of Human Social Science* Volume 12 Issue 6. Version 1.0. https://globaljournals.org/GJHSS_Volume12/6-Potential-Impacts-of-Climate-Change.pdf
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Alege, P. O., Adediran, O. S. & Ogundipe, A.A. (2016). Pollutant Emissions, Energy Consumption and Economic Growth in Nigeria. *International Journal of Energy Economics and Policy*, 6(2), 202-207.
- Amodu, L.O, Alege, P. B, Oluwatobi, S.A, & Ekanem T., (2017), 'The effect of human capital development on employees' attitude to work in insurance industry in Nigeria' In *Proceedings of the 29th International Business Information Management Association Conference on Education Excellence and Innovation Management through Vision 2020: From Regional Development Sustainability to Global Economic Growth 2017*, Vienna, Austria, May 03-04, 2017, pp. 4152-4162
- Anselm E.O. Eneh and Stephen N. Oluigbo (2012). Mitigating the Impact of Climate Change through Waste Recycling. *Research Journal of Environmental and Earth Sciences* 4(8): 776-781, 2012. <http://maxwellsci.com/print/rjees/v4-776-781.pdf>
- Association of Caribbean Media Workers (ACM). 2005. Mainstreaming Adaptation to Climate

- Change (MACC) Project: A Handbook for Concepts and Issues in Climate Change, Global and Regional Perspectives. Retrieved from <http://www.acmediaworkers.com/archive/publications/20050000-ClimateChangeHandbook.pdf> Bloomquist, K., Machila, R. (2009).
- Azjen, I., & Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behavior*. Englewood Cliffs, NJ: Prentice Hall.
- Blake, J. (1999), 'Overcoming the "Value-action Gap" in Environmental Policy: Tensions between National Policy and Local Experience', *Local Environment: The International Journal of Justice and Sustainability*, 4(3): 257-278.
- Castilla, E. B. and Rodriguez, L. T. (2014) Political polarization and climate change and the editorial strategies of the New York Times and El Paris Newspaper. *Interactions: Studies in communication culture*. 5(1). Pp. 71-91
- Enete, A. A., & Amusa, A. T. (2010). Challenges of Agriculture Adaptation to climate change in Nigeria: a synthesis from the literature. *The journal of field actions field Actions science reports*. Vol 2. Pp 1-22.
- Ezeh, B. U. M. & A. C. (2017). World Population Estimates and projections 1800-2100. *African Population Studies*, 31(2), 3833–3844.
- Gberevbie, D.E., and Oviasogie, F.O. (2012). Women in governance and sustainable democracy in Nigeria, 1999-2012. *Economics & Sociology*, 6 (1). pp. 89-107.
- Harris, U. (2014). Communicating climate change in the pacific using a bottom-up approach. *Pacific journalism Review*. 20(2) pp. 77-95
- Inderberg, T.H, Eriksen S, O'Brien K. Sygna L. (2015). *Climate change adaptation and developmet: Transforming Paradigms and practices*. Routledge
- Jackson, T. (2005), *Motivating Sustainable Consumption: A Review of Evidence on Consumer Behaviour and Behavioural change*, Guildford: Centre for Environmental Strategy, University of Surrey.
- Jegade, A. E., Adejuwon, G. A., Olowookere, E. I. & Elegbeleye, A. O. (2016). Ecological approach to Nigerian youths cyber fraud participation. *The Social Sciences*. 11 (22): 5284-5293
- Kollmuss, A. & Agyeman, J. (2002), 'Mind the Gap: Why do People Act Environmentally and What are the Barriers to Pro-environmental Behavior?', *Environmental Education Research*, 8(3): 239-260.
- Lam NL, Chen Y, Weyant C, Venkataraman C, Sadavarte P, Johnson MA, Smith KR, Brem BT, Arineitwe J, Ellis JE, Bond TC. (2012) Household light makes global heat: high black carbon emissions from kerosene wick lamps. *Environ Sci Technology* 46(24):13531-8. doi:10.1021/es302697h
- Lavelle, M. & Fahy, H. (2012), *ConsEnSus Lifestyle Survey - Fact Sheet No. 9 – Summary and Conclusions*, TCD, NUI Galway, EPA, Dublin: ConsEnSus.
- Lopera, E. and Moreno, C. (2014) The uncertainties of climate change in Spanish daily newspaper: content analysis of press coverage from 2000 to 2012. *Journal of science communication*. 01 a02. Pp 1-19.
- McDermott (2012, November 29). Kerosene Lanterns an Overlooked Source of Global Warming Pollution. *Tree Hugger*. <http://www.treehugger.com/climate-change/kerosene-lanterns-overlooked-source-global-warming-pollution.html>
- Mberu, B. U. & Ezech, A. C. (2017). The population factor and economic growth and development in sub-saharan African countries. *African Population Studies*, 31 (2), 3833-3844
- Moloney, S., Horne, R. & Fien, J. (2010), 'Transitioning to Low Carbon Communities: From Behaviour Change to Systemic Change: Lessons from Australia ', *Energy Policy*, 38(12): 7614-7623.
- Mycoo, M. (2015). Communicating climate change in rural coastal communities. *International Journal of Climate Change Strategies and Management*, 7(1), 58–75. <https://doi.org/10.1108/IJCCSM-04-2013-0042>
- Nwankwo, C. A., & Unachukwu, G. O. (2012). Rjopes Rjopes Change and their classroom management strategies In *Climate Change Era*, 1(3), 161–167.
- Odiboh, O., Omojola, O., Ekanem, O., & Oresanya, T. (2017). Non-Governmental organizations in the eyes of newspapers in Nigeria: 2013–2016 in Focus. *Covenant Journal of Communication*, Vol. 4(1), 66-92.
- Odiboh, O. (2002). *Integrated marketing communication*. APCON: Lagos.
- Ogbo, A. Laurretta, E.N. and Ukpere, W. (2013). Risk management and challenges of climate change in Nigeria. *Journal of Human Ecology*. 41(3). Pp. 221-235
- Okorie N., Oyesomi K., Oyero, O., Olatunji R., W. and Soola E. O. (2013). Effective use of information sources for breast cancer care: Interplay of mass media and interpersonal channels. *Creating Global Competitive*

- Economies: 2020 Vision Planning and Implementation - Proceedings of the 22nd International Business Information Management Association Conference, IBIMA 2013
- Olanrewaju, F. O. and Joshua, S. (2017). The AU's Progress and Achievements in the Realm of Peace and Security. *India Quarterly*, 73(4), 454-471.
- Omoruyi, E. P., & Kunle, O. A. (2010). Effects of Climate Change on Health Risks in Nigeria. *Asian Journal of Business and Management Sciences*, 1(1), 204–215. Retrieved from http://www.ajbms.org/articlepdf/ajbms_2011_1136.pdf
- Owolade, and Adetayo (2012). Climate change and mitigation awareness in small farmer of Oyo State in Nigeria. Open Science Repository. (Open access). Dio: 10.7392/Agriculture.70081902
- Oyero, O., & Salawu, A. (2018). Building media capacity for children sustainability in Africa: Educational and partnership imperatives. *SAGE Open*, 8(1), pp.1-10 doi:10.1177/2158244018763930
- Oyero, O. (2014). Where Lies the Answer? HIV/AIDS Prevention Campaign and the Rising Prevalence in South Africa. *Mediterranean Journal of Social Sciences*, 5(23), 2026–2034. <https://doi.org/10.5901/mjss.2014.v5n23p2026>
- Oyero, O. S. (2003). Indigenous Language Radio for Development Purposes. In Soola, E. O. (ed.) *Communicating for Development Purposes*. Ibadan: Krafts Books. Pp 185-195.
- Oyesomi, K. O., Soola, E., Abioye, T., Oyero, O. (2014). Perception of women on the role of indigenous communication in politics: A study of Ado-Odo/Ota, Ogun State, Nigeria. Source of the Document Vision 2020: Sustainable Growth, Economic Development, and Global Competitiveness - Proceedings of the 23rd International Business Information Management Association Conference, IBIMA 2014 1, pp. 2622-2644
- Plessis, H. (2015). The media and science communication: Exploring the complexity of communicating science in South Africa. *China Media Research*. 1(1). Pp.46-54
- Salawu, A., Oyero, O., Moyo, M., & Moyo, R. (2016). A survey of research foci and paradigms in media and communication master's dissertations and doctoral theses in south africa. *Communicatio*, 42(1). <https://doi.org/10.1080/02500167.2016.1140667>
- Shove, E. (2010), Beyond the ABC: climate change policy and theories of social change. *Environment and Planning A*, 42(6): 1273-1285.
- UNDP (2011). *Mainstreaming Climate Change in National Development Processes and UN Country Programming: A guide to assist UN Country Teams in integrating climate change risks and opportunities*. United Nations Development Programme: New York, NY, USA.
- Upham, P, Whitmarch, L, Poortinga, W, Purdam, K, Darnton, A, McLachlan, C & Devine-Wright, P. (2009), *Public Attitudes to Environmental Change: A selective review of theory and practice*, Living with Environmental Change, London: Research Councils UK
- Wallace, L. (1996). Media, writers, arts session summary. In G. Cantoni (ed.). *Stabilizing Indigenous Languages*. Flagstaff: Northern Arizona University.
- Williams, L. Ekanem, T. Sobowale, I, and Amodu, L., (2017), 'Influence of audience's disposition towards web adverts on product awareness and patronage' In *Proceedings of the 29th International Business Information Management Association Conference on Education Excellence and Innovation Management through Vision 2020: From Regional Development Sustainability to Global Economic Growth 2017*, Vienna, Austria, May 3-4, 2017, pp. 4227-4238