## Impact of Flooding in Delta State: A Sociocultural Perspective

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### Abstract

Flooding is one of the most devastating natural disasters in the world, claiming more lives and causing more property damage than any other natural phenomena. Some of the impact of the flooding incident includes socioeconomic, impact of flooding in agriculture, loss of properties and changes in the mode of transportation and the sociocultural implication of flooding on the people. The concept of flooding could be explained using different theories. For the purpose of this paper, Resilience and Functionalist theories where employed to this study. The study adopted a descriptive survey design. Three Hundred and Ninety-Seven (n = 397) participated in the study in a combination of cluster and purposive sampling techniques across the three communities using an instrument of questionnaire for data collection. Focus group discussions and interview were conducted in each of the selected clans in order to ascertain questions related to the objectives of the study. The findings of the study reveal that flooding have significant socio – cultural effect on the people in the study area. Notwithstanding the negative effects, the people were not willing to abandon their ancestral land for socio - cultural reasons of attachments to their traditional home and pattern of livelihoods. The findings reveal that in flooding event, families and communities relax some social and cultural demands on various rites of passage. The people have innovated and adopted a couple of survival strategies that make them adaptable to the occurrence of floods in the study area. Based on the findings of the study, the following recommendations are made: that government should prepare for arising social change that may occur on the social institution due to future flooding and device alternative means to ensure that the sociocultural dysfunction effect caused by flood does not cause a collapse on the social system. Also, there should be more awareness programs on flood adaptation rather than flood control mechanisms, because natural disasters like flood most often do not have permanent solutions.

Keywords: communities, cultural, disaster, flood, sociocultural.

### Introduction

Within a decade of 2012 and 2022, Nigeria as a nation has encountered and suffered two colossal flood disasters which has been perilous to her citizens, affected communities and social institutions. In Nigeria, flood has been reported to affect and displace more people than any other disaster. It also causes more damages to property. Etunonovbe (2011) clearly stated that at least 20 percent of the population is at risk from one form of flooding to another.

From oral tradition some communities within the coastal line of the Niger Delta region particularly have settled close to water bodies with special interest of benefitting from fertile soils, maximize the flat landscape for farming activities, easy access to the volume of water needed to sustain life by adopting fishing as a predominant occupation, and exploring the rivers as means of

transportation. In days gone by, these settlements began to transform into communities through the construction of buildings on higher land, while lower ground was used for farming (Svetlana, Radovan, & Jan, 2015). This is predicated on the ground that the regularity and ensuing impacts of extreme flood events have escalated rapidly worldwide in recent epochs (Gersonius, Ashley, Pathirana, & Zevenbergen 2013; Kron, 2009). Similarly, floods are now regarded as the most frequent natural hazard causing huge fatalities in communities across the globe (Doocy, Daniels, Murray, & Kirsch, 2013).

Flooding can be exacerbated by increased amount of impervious surface or by natural hazards, wild fires or deforestation which reduces the supply of vegetation that can absorb rainfall (Ayooso, 2012). Floods are among the most devastating natural disasters in the world, claiming more lives and causing more property damage than any other natural phenomena. In Nigeria, though not leading in terms of claiming lives, flood affects and displaces more people than any other disaster; it also causes more damage to properties. At least 20 per cent of the population is at risk from one form of flooding or another. Flood hazards occur naturally, but the level of impact, damage and losses are as a result of human activities (Action Aid, 2006).

The threat to lives and property by flood is now becoming an annual event in many urban and rural areas in Nigeria (Olanrewaju & Fadiro 2003). Flooding is basically a natural phenomenon, which can be caused or even intensified in most cases by human activities. Flooding has been identified as one of the major factors that prevents Africa's growing population of city dwellers from escaping poverty and stands in the way of United Nations 2020 goal of achieving significant improvement in the lives of urban slum dwellers (Action Aid, 2006). This is because many African cities lack the infrastructures to withstand extreme weather conditions. Poor urban planning together with other urban governance challenges contributes to making African urban slum dwellers most at risk (Adelekan 2009). It is the unforeseen circumstance, which causes severe damage to lives and properties. Most common and disastrous flooding within the Niger Delta region and Delta State specifically is the coastal flooding in oceans which is driven by storm surges, failures of dams or other structures constructed to retain.

Most recently precisely in 2022, states and communities within the coastal line have been submerged due to flooding and displaced most inhabitants away from their sociocultural and economic heritage. Flood has not only devastated the people, their property and disrupted business activities, communities and residents but also exposed victims to health challenges like cholera, diarrhea, malaria, skin infections and other water-borne diseases epidemic. It resulted in the destruction of bridges, roads, houses, infrastructures and farmlands (Baiye, cited in Etuonovbe, 2011; Akinyemi, 1990; Nwaubani, 1991; Edward, 1997). The recent flood which led to total business collapse and shut down of economic activities, will most definitely increase the poverty level and cause untold hardship especially to the most vulnerable groups such as women and school children whenever there was flood disaster (Oluduro, 1988; Durotoye, 1999; Folorunsho & Awosika, 2001). The stress of overcoming these losses can be overwhelming and capable of

producing lasting psychological impacts which will invariably result to social unrest and social problems (Folorunsho & Awosika, 2001).

Aside the economic implications on the displaced population, not much attention have been channeled to the sociocultural impact flood has on the people displaced. This study is focused on sociocultural perspectives of the impact on the activities of the affected communities in Delta State before and after the flood.

## **Theoretical Frame Work**

This study is anchored on the Functionalist Theory. A major proponent of the functionalist theory is Emile Durkheim (1858 - 1917). The French sociologist argued that it was necessary to "needs" of the social organism understand the to which social phenomena correspond. Functionalism is a sociological theory which is premise on living organism in which each part of the organism contributes to its survival and in maintaining its stability. In the work of Herbert Spencer and Emile Durkheim, every organism has a structure which consist of interrelated parts. In a similar view, the society is a living structure which consist of part such as politics, education, economy, religion, social e.t.c. The destruction of each of this part with either natural forces or human acts can lead to the distortion of life and properties thereby affecting the smooth running of the system to achieve it consensus. Flooding is a natural or humanly influenced disaster to environment which has affected the social and economic activities of the Niger Delta in a large scale in which people has experience adverse loss of properties, psychological impact, alter settlement patterns, removal of cultural heritage, distortion of schools, religions services and social function and it has also given rooms to many mishap such as stealing, raping, drowning, starvation, collapse of building e.t.c. an individual who is faced with these challenges cannot thrive in any circumstances whether as an individual or society.

According to functionalism, institutions only exists because it serves a vital role in the smooth running of the society and when natural disasters like flooding occurs it no longer serves its role, the institution dies away or is dysfunctional. This automatically spring up new needs to evolve or emerge and new institutions will be created to meet the functional needs of the society. From the functionalist view, if all goes well, the parts of society produce order, stability, and productivity. If all does not go well, the parts of society must adapt to produce new forms of order, stability, and productivity.

Functionalism emphasizes the consensus and order that exist in society, focusing on social stability and shared public values. From this perspective, disorganization in the system, such as flooding, leads to change in the social structure because societal components must adjust to achieve stability. Flooding results to the distortion and break down of most social institution, in other to avoid a shutdown or collapse of the system. When one part of the system is dysfunctional, it affects all other parts and creates social problems, prompting social change.

According to the functionalist theory, it helps to explain the physical and sociocultural events that occurs to man and the society with postulations to prevent future occurrence of death, injuries and

damage on the wellbeing of life and properties. It therefore means that once there is a disorder, the system is capable of readjusting to different situation when being affected by the menace of flooding. The theory helps to explain the latent consequences of flooding and proposes the measure that flood adaptation should replace flood control in order to build resilience to the social and cultural adjustments caused by flood. It further resolves that even when there is a collapse in the social system due to flooding, the society is adaptive in nature and would therefore results to social change across the social institutions.

Critics of this theory have capitalized that functionalist theory always believe that every outcome of an even is believed to have a beneficial outcome to the society which most often is not the true situation. Other critics are also of the opinion that the theory is too parochial and does not sufficiently explain lost of sociological phenomenon.

#### **Flooding in Nigeria**

Floods in Nigeria are usually predictable, occurring in the rainy season as sporadic flash floods, especially along the coastal regions, riverbanks, waterways and estuaries. In 2012 however Nigeria experienced severe flooding across the nation destroying properties, farms and displacing millions of people from their homes (NEMA 2012). The Nigerian Hydrological Services Agency described the 2012 floods as the worst flooding disaster the country had ever experienced and can only be compared in magnitude and scale of destruction with those of 1967/68 (Aderogba 2012). The Agency recorded peak water level of 12.84m and maximum discharge of 31.692 m3/s at the confluence of Rivers Niger and Benue at Lokoja, Kogi State on September 29, 2012. This caused devastating destruction of lives and property together with economic loss in Nigeria.

Developing nations such as Nigeria are at great risks to flooding hazards due to urbanization (Ijeoma, 2012) which triggers flooding through the construction of buildings along flood channels, thereby restricting free flow of water. Also, as urbanization increases, populations of the cities rises, causing even moderate climate changes in storms, winds and rainfall create high flows in rivers due to hard surfaces and buildings (Action Aid, 2006). Farauta, Idrisa, Egbule, and Agu (2011) agreed that low levels of education and poorly developed communication and infrastructures especially in the rural communities who are most vulnerable plays a huge role in the level of impacts of climate change. Management/adaptation strategies, especially for flooding, have to be structured in a sustainable way to meets the present need, socially, economically and environmentally while preserving and protecting the future (WHO, 2012).

The 2012 floods which occurred in Nigeria between July 2012 to October, 2012 which was earlier described as one of the most devastating in the country but with havoc wrecked by the recent flood of 2022 it is assumed to have caused more damage. Some of the states affected were Kogi, Benue Edo, Cross Rivers, Rivers, Anambra, Delta and Bayelsa states. The Nigerian government was alerted by the Nigerian Meteorological Agency (NIMET) that there would be above normal rainfall in the country leading to flooding in 12 strategic states in the country but the government ignored the warning. This, coupled with the release of water from the Lagdo dam in Cameroun led to the Rivers, Benue and Niger overflowing their banks resulting in monumental floods (Odeh, 2014).

The impact of the 2012 flood was disastrous. People were made homeless, farmlands were destroyed, drinking water was contaminated, and economic activities were totally grounded while death casualties increased to 95 percent. The only means of transportation in affected communities were speed boats and local canoes which increased the cost of ferrying people. The 2012 flood also brought invasion of reptiles such as crocodiles and snakes into many communities across the country (Odidi, 2012). Farmers all over the country suffered huge economic losses. There were challenges of food storage, processing and marketing. Prices of commodities increased and schools were hurriedly shut down (Famous, 2012). According to Anugwara and Emakpe (2013), the floods damaged over 1.9 million hectares of lands and reduced food production along flood plains. Rice production in the affected areas was reduced by 22.4%, maize was reduced by 14.6%, and soybean, cassava and cowpea were reduced by 11.2%, 9.3% and 6.3% respectively. A total of 12 million goats, 3 million poultry and 136 cattle were killed in the 2012 floods (Anugwara & Emakpe, 2013). The National Emergency Management Agency (NEMA) estimated that a total of N2.29 trillion which represents 2.83 percent of the rebased Gross Domestic Product of N81 million for 2013 was lost as a result of the floods (Okoruwa, 2014).

The floods were described as the worst in recent times because thousands of farmers were not only displaced from their homes but food crops were wiped away threatening food security in the nation. Crops worst hit by the flood included cassava, plantain, yam, maize and pawpaw which are major staples in the region (IITA, 2012). At the peak of the 2012 floods there was public outcry that the Federal government lacked capacity to manage floods. In light of this recent warning, there is the need to look at the strategies currently used by farmers to adapt to flood, efforts made by institutions and government agencies to mitigate flood as well as the measures put in place by the government to manage flood disasters in order to ascertain the level of preparedness of farmers and government in the event of major flood disasters in the country.

The governors of the affected states directed the flood victims to evacuate their communities and provide makeshift relief for them though most of the relief materials were not adequate to cater for the people. Some flood victims refused to vacate their communities for fear of their homes being invaded by criminals (Odidi, 2012).

# Effects of Flooding in Nigeria

Flooding is one of the major factors that prevents Africa's growing population of city dwellers from escaping poverty, and stands in the way of the UN 2020 goal of achieving 'significant improvement' in the lives of urban slum dwellers' (Action Aid, 2006). These effects can be seen in the following point of view;

(a) **Socio-economic Impact:** The socio-economic impacts of flooding are felt as soon as floods occur, as it instantly disrupts day to day businesses and activities (Bronstert, 2003). In their study, Bariweni, Tawari, and Abowei (2012), revealed that the floods of 2012 had a major impact on socio- economic life for days, weeks and even months in some areas. Roads and buildings were submerged and victims were trapped due to blockage of road and damaged bridges. Children could

not go to school; workers couldn't go to work and traders couldn't open their stores at the markets. These automatically took its toll on the economy as businesses were being affected. The damages and destruction of buildings, bridges, dams, embankments, drains, roads, railways, electricity wires/poles, (Etuonovbe 2011) all amounted to billions of Nigerian Naira due to the extent of property damage and infrastructures (NEMA 2012).

Health issues also became higher especially in the north. Cholera due to contaminated water and malaria due to stagnant waters all increased and of course, the most vulnerable are the poor rural areas with women and children affected the most (Agwu & Okhimamhe, 2009). Also, the disruption of electricity and communication lines had its toll on all affected (Bariweni, et al 2012). The year 2011, also had devastating effects on the north eastern states, completely destroying mud houses in the villages and washing away livestock. All together, the impact was overwhelming as day to day lifestyles and trades were put on hold. Farmlands, roads, railways, schools, hospitals (including maternity clinics), loss of lives and properties running into several millions of naira were the results of the 2012 floods (Aderogba, 2012). In an official report by the National Emergency Management Agency (NEMA) in 2012, the following figures were revealed in terms of damages 7,705,378 people were affected, 2,157,419 victims were displaced, 5,800 injured, 32 out of the 36 states affected and homes affected were 597,476.

(b) **Impact of Flooding on Agriculture:** Close to a billion people around the globe live in abject poverty characterized by serious hunger (Lobell & Burke, 2010) and majority of this number lies within Africa which is heightened by the conflicts, degradation of resources and poor adaptive skills. With Nigeria being the most populous nation on the African continent (Etuonovbe 2011), and 70% of this population living in poverty, any unrest or disasters such as flooding will have a huge impact, especially on food security which is vulnerable to extreme events such as flooding (Agwu & Okhimamhe, 2009). The annual occurrence of floods in northern Nigeria, especially the magnitude of the most recent one in 2012, will definitely tamper with food security NEMA (2012) and Aderogba (2012) showed that many farmlands have been washed off by the floods. Afolabi (2013) reported that in Lafia, Nassarawa state, a \$90 million rice farm cultivated was inundated by the floods. Previous flood disasters also had similar impacts, washing away, farmlands and destroyed livestock, which is an integral part of agriculture in the north (Ibrahim, David, & Okpanachi, 2010).

(c) **Sociocultural Impact:** The social and cultural impacts of flooding has over time revealed various dimensions of devastating consequences. According to a study undertaken in Scotland, the study suggests that social impacts of flooding are linked to the level of well being of individuals, communities and societies (Okpise, 2013). It includes aspects related to the level of literacy and education, the existence of peace and security, access to basic human rights, systems of good governance, social equity, positive traditional values, knowledge structure, customs and ideological beliefs and overall collective organizational systems. Some groups are more vulnerable than others mainly those less privileged in society (see Living with Risk, 2002: 47). A study by the International Flood Initiative (2003) suggest that floods are the most taxing of water related

natural disasters to humans, material assets as well as to cultural and ecological resources affecting people and their livelihoods and claiming thousands of lives annually worldwide.

According to the Australian experience, the emotional behavior of many flood victims was shocking. The emotional cost of flooding was long lived. Follow-up studies found that about onequarter still had not recovered from the emotional trauma of the event. Factors that contributed to the non-recovery included the severity of the flooding, the degree of the resulting financial hardship, age and socio-economic status. Elderly people on low incomes whose houses were deeply flooded were the most ill- affected (Flood Management in Australia, 1998:81). Thus, a severe flood can impose a range of emotional costs on flood victims, many of them quite severe. Moreover the emotional strain may linger for years after the event. Flood aware communities can be expected to suffer less social and financial disruption than communities with a low level of flood awareness (Flood Management in Australia, 1998:82). Lindsell and Prater (2003) argue that sociocultural impacts can cause significant problems for the long term functioning of specific types of households and businesses in an affected community. A better understanding of disasters' socioeconomic and social cultural impacts, therefore, can provide a basis for prediction and the development of contingency plans to prevent adverse consequences from occurring.

# Methodology

The study was conducted in Delta State using 3 selected flood affected communities which where purposively chosen from the three (3) senatorial district of the state, namely; Kwale, Idheze and Uwheru communities respectively. The study adopted a descriptive survey design. Three Hundred and Ninety Seven (n = 397) participated in the study in a combination of cluster and purposive sampling techniques across the three communities using an instrument of questionnaire for data collection. While focus group discussions and interview were conducted in each of the selected communities in order to ascertain questions related to the objectives of the study. Crosstabulation, verbatim method and content analysis were used for the analysis of data analysis with the application of Statistical Package for Social Science (SPSS).

Senatorial Local Govt Areas		Communities	Population		
District					
Delta North	Ndokwa West	Kwale	20,226		
Delta South	Isoko North	Idheze	14,500		
Delta Central	Ughelli North	Uwheru	16,265		
Total		•	50991		

Source: Geonamess, 2022

#### **Results of the Findings**

#### **Social Demographics**

The data from fieldwork is presented in Table 2, only 370 copies of a structured questionnaire were retrieved out of a total of 397. This indicates that 93% of the questionnaire was recovered, with only 7% lost, which is sufficient for analysis. As a result, this figure is used for data analysis. **Table 2: Socio-Demographic of the Respondents** 

		Frequency	Percentage
	18-35	109	29.5%
Age	36-53	144	38.9%
	54years and above	117	31.6%
C	Male	227	61.4%
Sex	Female	143	38.6%
Family Size	1 – 3	60	16.2
	4 - 6	178	48.1
	7 and above	132	35.7
	No formal education	95	25.7%
Educational background	Primary/Secondary	186	50.3%
	Tertiary	89	24.0%
Marital status	Single	124	33.5%
	Married	246	66.5%
	Farmers/Fishermen	179	48.4%
Occupation	Traders	106	28.6%
	Civil servants	30	8.1%
	Others	55	14.9%
	African Traditional Religion	57	15.4
Religion	Islam	26	7.0
	Christianity	287	77.6
	Total	370	100.0%

Source: Fieldwork, 2022

As shown on Table 1, the sociodemographic composition of the respondents reveals that 61.4% of the respondents are males, while 38.6% of them are females. The distribution of the respondents by age 18 - 35 were 29.5%; 36 - 53 accounted for (38.9%); while 31.6% of the respondents were of the ages of 54 and above. This invariably implies that the age range of 36 - 53 among the participants has the largest percentage of respondents. This also implies that this age range of the respondents are adult who undoubtedly have experience about the study area to give appropriate information about the subject of investigation. With regards to household composition, the study revealed that 16.2% were of 1 - 3 members, 48.1% are of 4 - 6 members, while 35.7% are of 7 members and above respectively. This implies that family composition of between 4 - 6 members had the largest percentage of respondents. Educationally, 25.7% of the respondents have no formal education, 50.3% have primary or secondary education, while 24.0% of them have tertiary educational qualification. This implies that a smaller percentage of the respondents have no formal education. This implies that 74.3% have basic education which shows that a good number of the study participants are educated to certain level. However, despite the 24.0% of respondents who

have tertiary educational qualification, larger percentages of the respondents were able to interact with field researchers in English Language and Pidgin. This in turn could not have affected the effectiveness and validity of the study findings. On the basis of the respondents' categories of occupations, 48.4% of them are predominantly into farming/fishing, 28.6% engaged in petty trading and other entrepreneurial activities, 8.1% are engaged in Civil Service, while 14.9% of the participants engaged in other means of livelihood; this also included students. Thus, the largest percentage (48.4%) of the respondents were engaged in farming/fishing which has been the predominant occupation in most rural or riverine communities in Delta State, while those in small scale businesses representing 28.6% followed suit. In religious affiliations of respondents, 77.6% of the respondents practice Christianity, 15.4% of them practice African Traditional Religion, while 7% practice Islamic religion. The higher percentage of Christianity may have been so since the study area is dominated by those practicing Christianity as religion.

## Respondents view on Sociocultural Practices in the Study Area

The sociocultural perspective of victims who resides in flood affected areas is of necessity in understanding, assessing and evaluation of the effectiveness of responses by appropriate authorities in controlling the monumental damage wreck on communities and individuals by flood. Irrespective of the fact that there are numerous negative impacts of flooding on the inhabitants of the study area, with a vast percentage of the respondents agreeing that the disadvantages of flooded areas are monumental on their economic and social life but are unwilling to live elsewhere for cultural reasons and attachments to their traditional home and pattern of livelihoods. This is as a result of their belief system that 'home is home. This is based on their personal cultural conviction that no matter how good a visitor's house is comfortable, it never gives lasting peace as ones ancestral home. Hence, they are willing to continuously manage, adapt and devise means of combating flood just to remain in their community of origin.

	Sample	ed Areas						
Sociocultural effect of flooding	Kwale		Idheze		Uwheru		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Adjustments of religious and cultural belief system	62	42.2	55	52.4	58	49.2	175	143.8
Change in social and cultural function patterns such as marriage rites, funeral demands, market days e.t.c	41	27.9	21	20.0	24	20.3	86	68.2
Change in norms and values	44	29.9	29	27.6	36	30.5	109	88.0

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Table 2: Sociocultural	perception of res	pondents in the study area

In Table 2, the highest percentage (143.8%) of the respondents were of the opinion that flooding has more sociocultural effect on the religious and cultural belief system of the people. This explains why a Christian priest can conveniently accommodate a traditional religion priest in his worship centre during flood disaster, vice versa. During cases of flood, people are more liberal, less

religious and more relative in adapting and coexisting peacefully amongst one another. From this study 68.2% of the respondents attributed flooding to social change that alters the social and cultural functions of the community. Most people hold a strong view that in cases of flood, families and communities bend some social and cultural demands on various rites of passage. While 88.0% attributed the change in a couple of norms and values on flooding, this further explains some of the adjustments on the Delta tradition especially from the extraction of the Urhobo and Isoko origin which frowns at a married woman been held by a man who is not her husband. During flood cases, communities and government agencies make provision for rescue teams especially to areas that are almost submerged with water, in the cause of these rescue mission some of the Urhobo and Isoko women are held firmly in sensitive areas such as their waist or arms just to get them of the raving water, this is not captured as a case of infidelity as it would have been.

Also, in-depth interview responses were coded and sorted out in line with the sub-themes of the study. Similar responses were treated together and considered as same and others that had variations were treated separately. On how flood impacts the study areas socio-culturally, interviewees were of the opinion that it has effects on the religious, cultural, norm, belief and value system. Particularly, one of the respondents was of the view that

### CASE A:

An Urhobo man can be free with many things but not with his wife, this is as serious as another man rendering financial assistance to a married woman by paying her transport fare in a public vehicle. It is mandatory that she must as a matter of importance and urgency reveal this to her husband when she gets home. Else the Urhobo deity called 'Erhivwin' might harm her children and her husband. This is because, it is believed that a man's wife is his assert and must be protected at all cost. During this flood, nobody cares if your wife is touched in the process of rescue or been loaded in boats along other men, what is paramount in cases of flood is survival. (Trader, Uwheru Community, Delta State).

A civil servant interviewee in Isoko South LGA, Delta State maintained that:

#### CASE B:

During flood we don't know who is a pastor, who is a witch doctor, who is a landlord or who is a tenant; we are all stranded and affected by the flood. Within these period we are all IDP's hence we must manage and bend most of our rules and cultural practice till the flood is over.

Another interviewee from Idheze, Delta Statecorroborated the above statements by arguing that:

### CASE C:

Flood has a strong sociocultural impact on religious and cultural activities. When someone dies sometimes the church or communities have a long list or dues for family members to pay or when one dies in a certain way, he or she is left in the mortuary with claims of family members making spiritual consultations that someone might be responsible for his or her

death. During this current case of flood, mortuaries have been submerged; keeping the corpse for long is a problem. Hence religious and cultural demands must be adjusted to hurriedly bury anyone who dies within this period.

In summary, Case A, B and C reveals that flood does not only have social economic impact on the victims, it goes further to alter their existing religious, social, cultural and belief system.

### **Respondent Views on Flooding and Material Culture**

The people's knowledge of flood incidence in the study area and its temporality for a couple of weeks or months would have a significant direction on the nature of their responses and sociocultural adjustments. Year 2012 and 2022 are unforgettable events of flood disaster within the millennium era in Nigeria. The people have innovated and adopted a couple of survival strategies that make them adaptable to the occurrence of floods. In Table 3, 68.9% of the respondents from all the selected communities shared a similar perspective that flood does not only wreck economic havoc but also washes away their cultural heritage i.e artifacts, most of which has core traditional significance to the community. This explains the cultural loss for communities with totems (i.e natural object or animal that is believed by a particular community to have spiritual significance) that are not aquatic in nature. 44.6% emphasized the cultural loss incurred on their attire and dietary pattern due to flood, while 21.6% attributed loss of their material cultural heritage to theft by hoodlums who hijack the situation of flood to burgle homes, sacred traditional centres and local community museums, though 65.7% debunk that theft is secondary issue of loss of cultural items. This aligned with the responses that flooding washes away most community artifacts, affect usage of cultural attires and changes dietary pattern.

	Sampled Areas							
Impact of flooding on material culture	Yes		No		Neutral		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Washing away of artifacts	255	68.9	80	21.6	35	9.5	370	100
Change in attire & dietary pattern	165	44.6	111	30.0	94	25.4	370	100
Theft of cultural materials	80	21.6	243	65.7	47	12.7	370	100

Table 3: Impact of flooding on material culture in the study area

On interviewee discussion on how knowledgeable respondents are on traditional cultural materials, majority of the respondents agreed that no matter how civilized a community claims to be, there are certain cultural heritage which plays the role of identity to the community and must be preserved at all cost. The wife of a famous tradomedical doctor from Kwale Delta State presented the following report: According to her:

#### CASE E:

There are many roots and herbs that are distinct to our culture, these where specially made by our ancestor for healing purposes. With the constant issues of flood, I fear for this next generation as they might have nothing to use in healing and protecting themselves because flood is gradually washing them away (Traditional Healer, from Kwale Delta State).

Supporting the above point, a farmer from Delta State has this to say:

# CASE F:

Aside speaking your language, your attires and your meals are major identity of your origin. Each culture and community have a unique food they were trained with. I for one don't eat eba I prefer fufu, but since this devastating flood incidence, we have been squatting with my elder sister, if my children select meals I as an adult shouldn't because I understand that times are tough, so I eat whatever they serve. This flood has altered my dietary pattern and even moderated my clothing style, I have to cover up with sweater always because of mosquitoes and cold.

# Conclusion

Flooding has been a major and recurring disaster that affects resident in flood prone areas. Over the years, the socioeconomic impacts of flooding are experiencing a surge with highly devastating effect on the have not's who are living in the coast line and rely predominantly on agricultural and fishing activities for their livelihood. Overtime, much attention has been giving to the socioeconomic impact or effect of flooding on residents within flood prone areas. Much attention of the sociocultural impact of flooding has not been looked into. Hence, awareness of the sociocultural impact of flooding and the level of disaster preparedness of floods on victims is very important because of the current silent and slow social change occurring in flood affected communities especially on the cultural values, norms, belief system, adjustments on rites of passage e.t.c

# Recommendations

Based on the findings of the study the following recommendations were made:

i. More awareness programs on flood adaption rather than flood control mechanisms, needs to be pursued because natural disasters like flood most often do not have permanent solutions.

ii. Government should consider dredging of water bodies in flood affected areas towards enhancing its capacity to contain more water and its navigability

iii. There is need for the introduction of tree planting and adaptation of improved varieties of crops that are highly water-resistant to farmers in the study area.

iv. The Government should prepare for arising social change that may occur on the social institution due to future flooding and device alternative means to ensure that the sociocultural dysfunction effect caused by flood does not cause a collapse on the social system.

vi. Government should not only make use of electronic media in issuing flood awareness and warning campaign, most of the affected communities of the recent flood are rural in nature,

the government must be deliberate at employing traditional methods of market sensitization, door to door awareness, town hall meetings, and other actions aimed at minimizing the effects of flooding amongst the vulnerable population.

### References

- Action Aid (2006). Climate change, Urban Flooding and the Rights of the Urban Poor in Africa. A report by Action Aid International
- Adelekan, I.O. (2009). Vulnerability of Poor Urban Coastal Communities to Climate Change In Lagos, Nigeria. Fifth Urban Research Symposium 2009.Pdf
- Aderogba, K.A. (2012). Qualitative Studies of Recent Floods and Sustainable Growth and Development of Cities and Towns in Nigeria. *International Journal of Academic Research in Economics and Management Sciences June 2012*, Vol. 1, No. 3 ISSN: 2226-3624
- Afolabi, B. (2013). Nigeria made \$900M from cocoa export in 2012, says Aganga. Accessed online on the 4th of February 2015 via www.thenationonline.net/new/news/nigeria-made-900m- from-cocoa-export-in-2012-says-aganga/
- Agwu, J. & Okhimamhe, A. (2009). 'Gender and Climate Change In Nigeria': A Study Of Four Communities In North- Central And South-Eastern Nigeria. ISBN: 978 - 978 - 904 - 502 - 0. Copyright ©Heinrich Böll Stiftung (HBS), 2009.
- Akinyemi, T. (1990). Stemming the Tide of Lagos Floods, in: The Guardian, Friday, July 20, pp: 7.
- Anugwara, B., & Emakpe, G. (2013). Will FG save Nigerians from another` Tsunami'? [Online] Available: http://www.mynewswatchtimesng.com/will-fg-save-nigerians-anothertsunami/
- Ayooso, S. (2012). How to Check Floods in Nigeria, The Tide [Online] Available: http://www.thetidenewsonline.com/2012/07/05/how-to-check-floods-in-nigeria/

Baiye, E. (1988). Numan in the Throes of Floods, in: The Guardian, Thursday, October 8, pp: 9.

Bariweni, P.A., Tawari, C.C. and Abowei, J.F.N. (2012). Some Environmental Effects of Flooding in the Niger Delta Region of Nigeria. *International Journal of Fisheries and Aquatic Sciences 1*(1): 35-46, 2012 ISSN: 2049-8411; e-ISSN: 2049-842X © Maxwell Scientific Organization, 2012. Pdf Bronstert, A. (2003). 'Floods and Climate Change: Interactions and Impacts'. Risk Analysis, 23(3)

- Doocy, S., Daniels, A., Murray, S. & Kirsch, T.D. (2013). The human impact of floods: A historical review of events 1980-2009 and systematic literature review. PLoS Currents, 5. https://doi.org/10.1371/currents.dis.f4deb457904936b07c09daa98ee8171a
- Durotoye, B. (1999). *Human Occupation of Hazard Areas in Nigeria*, in: Oshuntokun, A. (ed.) Environmental Problems of Nigeria. Lagos: Friedrich Ebert Foundation.

Edward-Adebiyi, R. (1997). The Story of Ogunpa, in: The Guardian, Saturday, May 17, pp: 5.

- Etuonovbe, A.K. (2011): The Devastating Effect of Flooding in Nigeria. Hydrography and the Environment. Accessed online on the 8th of February 2015 via: http://www.fig.net/pub/fig2011/papers/ts06j/ts06j\_etuonovbe\_5 002.pdf
- Famous, F.O. (2012). Mitigating the impact of flood disasters in Nigeria. Pointblank News. [Online] Available: http://pointblanknews.com/pbn/articles-opinions/mitigating-theimpact-of-flood-disasters-in-nigeria/
- Farauta, B.K., Egbule, C.L., Agwu, A.E., Idrisa, Y.L. & Onyekuru, N. A. (2012). 'Farmers' Adaptation Initiatives to the Impact of Climate Change on Agriculture in Northern Nigeria' Journal of Agricultural Extension, 16(1).
- Farauta, B.K., Idrisa, Y.L., Egbule, C.L. & Agu, V.C., (2011):.Climate Change and Adaptation Measures in Northern Nigeria: Empirical Situation and Policy Implications. *African Technology Policy Studies Network. Working Paper Series*: No. 62.
- Federal Ministry of Environment (2004). Abuja. Accessed online on the 29th of January 2013 via www.nigeria.com.ngcichng.org/ccinfo.php
- Flood Management in Australia (1998). In Disaster risk Management Study Guide for DIM 605: Module 2. Bloemfotein: University of the free state.
- Folorunsho, R. & Awosika, L. (2001). Flood Mitigation in Lagos, Nigeria Through Wise Management of Solid Waste: a case of Ikoyi and Victoria Islands; Nigerian, *Paper presented at the UNESCO-CSI workshop, Maputo* 19-23 November 2001).
- Gersonius, B., Ashley, R., Pathirana, A. & Zevenbergen, C. (2013). Climate change uncertainty: Building flexibility into water and flood risk infrastructure. *Climatic Change*, *116*(2), 411–423.

- Ibrahim, M.K., David, A.M. & Okpanachi, G.U. (2010). 'Climate Change, Agriculture and Food Management In Nigeria' *Journal of Environmental Issues and Agriculture in Developing Countries*, 2(2 & 3).
- Ijeoma, S. (2012). Nigeria & Climate Change Adaptation. International Society of Sustainability Professionals. ISSP Insights, May 2011. Accessed online on the 20th of January 2015 via: http://www.sustainabilityprofessionals.org/nigeria-climate- change-adaptation
- International Flood Initiative (2003). Retrieved on the; 10/09/2012 from; www.If-home.info. László, E. (1972). The Systems View of the World. New York: George Brazilier.
- International Institute for Tropical Agriculture. (2012). Seeds of hope for flooded regions of Nigeria. [Online] Available: http://www.iita.org/2012-press-releases/-/asset\_publisher/CxA7/content/seeds-of-hope-for-flooded- regions-ofnigeria?redirect=/2012-press-releases#.VZie6kYhwgQ
- Kron, W. (2009). Flood insurance: From clients to global financial markets. *Journal of Flood Risk Management, 2*(1), 68–75.
- Lindsell, K.M. & Prater, S.C. (2003). Abstract on "Assessing Community Impacts of National Disasters": 176 178. *National Hazard Review*, 4(4).
- Living With Risk (2002). A global Review of Disaster Reduction Initiatives, Geneva, Switzerland.
- Lobell, D. & Burke, M. (2010). Climate Effects on Food Security: An Overview. Advances in Global Change Research, 37, DOI 10.1007/978-90-481-2953-9\_2, © Springer Science+Business Media, B.V. 20 0 Accessed online on the 30th of November 2014 via: http://www.ocf.berkeley.edu/~marshall/papers/Chap2\_overvie w.pdf
- NEMA (2012). Annual report on Flood, National Emergency Management Agency, Official Gazette, Abuja.
- Nwaubani, C. (1991). Ogunpa River Leaves Bitter Aftertaste in Tragic Course Through Abeokuta; in: The Guardian, October 21, pp: 9.
- Odeh, O. (2014). 2012 flood disaster: Nigeria still not free. Daily Independent. [Online] Available: http://dailyindependentnig.com/2014/03/2012-flood-disaster-nigeria-still-not-free/
- Odidi, G. (2012). Flood disaster: Many pains, few solutions. The Nigerian Voice. [Online] Available: http://www.thenigerianvoice.com/news/99681/1/flood-disaster-many-pains-few-solutions.html

- Okpise, B.E. (2013). The menace of natural disaster (a case study of flooding and its effect in Isoko South LGA of Delta State). Department of Sociology, Delta State University, Abraka. Unpublished.
- Okoruwa, E. (2014). FG Installs 307 flood warning systems nationwide. Leadership. [Online] Available: http://leadership.ng/news/378685/fg-installs-307-flood-warning-systemsnationwide
- Olanrewaju, D.O. & Fadairo, G. (2003). Flooding as an Induced Environmental Problem. Journal of the Nigerian Institute of Town Planners XVI (1)85-95.
- Oluduro, C. (1988). Grappling with the Problem of Flood, in: Daily Times, Tuesday July 5, pp: 11.
- Svetlana, D., Radovan, D. & Jan, D. (2015). The economic impact of floods and their importance in different regions of the world with emphasis on Europe. *Procedia Economics and Finance*, 34, 649–655.
- UN Integrated Regional Information Networks. (2006, September 5). Lagos, the mega-city of slums. Africa News
- WHO, 2012, Public Health Risk Assessment and Interventions. Flooding Disaster: Nigeria, viewed 20 August 2018, from http://www.who.int/hac/crises/nga/RA\_Nigeria\_1Nov2012a.pdf.