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# Impact of Flood Disaster on Rural Community Development: A Case Study of Ugwueke, Bende L.G.A of Abia State, Nigeria in 2019

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**Abstract**
This paper discussed the impact of flood disaster on rural community development, with focus on Ugwueke, Bende Local Government Area, Abia State, Nigeria, in 2019. Primary and secondary data were used but analysed qualitatively with historic and descriptive research designs. Primary data were gathered from personal communication with some members of the community and from oral history as told by the members of the community, especially the traditional custodians of the community. Secondary data were collected from published and unpublished contents from various empirical literature reviewed. The finding of the paper showed that the flood that happened in the community in 2019 reoccurs once every ten years with some traditional early warning signs, which always revealed to the custodians of the traditional institutions and deities of the community. The study argued that the devastating impact of the 2019 flood disaster in Ugwueke could be predicated on non-adherence to the traditional signs by the community due to the influence of Christian beliefs. It was recommended that the custodians of the traditional institutions of the community adhere to the early warning signs preceding the flood in order to, if not stop the disaster, reduce its vulnerability and mitigate the impacts.

**Keywords:**
Climate Change, Flood Disaster, Rural Community, Ugwueke.

## Introduction

Flood, according to Sahrizal (2015), is a state of high-water level along a river channel or on the coast that leads to inundation of land, which is not usually submerged. Floods can form where there is no stream, as for example when abnormally heavy precipitation falls on at terrain at such a rate that the soil cannot absorb the water or the water cannot run on as fast as it falls. In another instance, Luino (2019, p. 344) defines flooding is "a natural process that occurs when the level of a body of water rises until it overflows its natural banks or artificial levees and submerges areas that were usually dry."

Throughout human history, flood has been seen to be beneficial as well as a threat to mankind. Floods have brought enormous wealth and prosperity to civilizations, and yet at the same time, they have caused tremendous losses and resulted in untold suffering for millions of people. Flood risk has been part of peoples' lives in various regions of the world (Ote, 2016). For example, according to National Geographic Society (1996, p. 1), "flood plains have historically been ideal places to develop human settlements. Rivers provide both a natural transportation network and source of water for irrigation and industry. The ancient cultures of Mesopotamia (such as Assyria) thrived in the fertile flood plains between the Tigris and Euphrates Rivers in Southwest Asia." In another report by on the importance of flood, American Rivers (2024) has observed that floods allow a river's water to reach more areas above and below ground.

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This water can be stored and used by nature and people. They also filter pollutants out of rivers and nourishing lands to support ecosystems and fertile areas for farming. "Right from creation, communities have been faced with interminable occurrence of disasters. This is because "hazards of nature and vulnerabilities of socio-economic conditions" (South Asian Association for Regional Cooperation (SAARC), Disaster Management Centre, 2008, p. 126) coupled with "insufficient capacity or measures to reduce the potential negative consequences of risk" (United Nations International Strategy for Disaster Reduction (UNISDR), 2004, p. 17) have made communities extremely prone to disasters.

The impact of climate change has remained one of the global challenges to human existence and the environmental sustainability. Flood is one of the environmental disasters as a result of climate change. Flood is as old as human existence, which is not limited to any particular geographical location. It has remained a global phenomenon, which its negative impacts cannot be overemphasized. In line with this ugly trend, Musah et al. (2013) declare that globally, disasters are seen to have one of the most devastating effects on economic development, livelihoods, agriculture, and health, social and human life. Disasters are said to be sudden, accidental event that causes many deaths and injuries. Many natural disasters in the world today result in significant loss of live and property. These natural disasters include floods, hurricanes and typhoons, earthquakes and tornadoes. Tsunamis, wildfires, volcanic eruptions and landslides are among the other natural forces that sometimes cause disasters. However, not all disasters are caused by the natural forces. Some are man-made, for example, building and dumping of refuses along the waterways.

There are myriads of works in literature both at international and national discourses, and engagements on the impacts of flood disaster on communities in Nigeria in recent times. For example, Aja and Olaore (2014), have observed that flooding is the most common disaster in Nigeria. The majority of Nigeria's states are increasingly suffering from annual flooding during the rainy seasons caused by increased precipitation linked to climate change. Agbonkhese et al. (2014) and Nkwunonwo, Malcolm and Brian (2015), explain that flooding is occurs in wide spread dimension in Nigeria, from the south-western states to the Niger Delta communities, further down to the downstream dammed rivers in the north. Nkeki, Henah and Ojeh (2013), OCHA (2012) and Toure (2014) recount that in 2012, Nigeria experienced the worst flooding in recent history. It has been reported that over 2.3 million Nigerian were displaced by flood with over 363 lives lost and another 16 million people impacted in various ways and years of development gained lost (Nwigwe & Emberga, 2014; Oladokun & Proverbs, 2016). The monetary lost as a result of flood disasters in Nigeria has been estimated at US$16.9 billion (Security, 2013). In this vein, Cirella and Iyalomhe (2018) and Nkwunonwo et al. (2015) have lamented that in reality, the extent and nature of Nigeria's flooding are such that the actual figures for displacements, losses, and fatalities cannot be truly ascertained.

But none exists on the flood disaster in Ugwueke community over the years. The objective of this paper therefore, is to discuss the impacts of 2019 flood disaster on rural community development with focus on Ugwueke Community in Bende Local Government Area of Abia State, Nigeria.

Abia State is not officially recognized as a flood prone state in Nigeria, but it is recognized as one of the erosion prone states by the National Emergency Management Agency (NEMA). Whether the disaster is flood or erosion, central to either of the two is that, they are all outcomes of climate change and one major cause of erosion is flood. Due to the magnitude of 2019 flood in Ugwueke community following a heavy downpour between the 28th August and 11$^{th}$September 2019, the attention of Abia State Emergency Management Agency (Abia-SEMA) was drawn to the community through the effort of Hon. Chijioke Chukwu formally representing Bende North State Constituency in the Abia State House of Assembly (2019 -2023), who is an indigene of Ugwueke community.

## Literature Review

## Conceptual Review

### The Concept of Flood

A flood according to Ward (1978, p. 15) is the "build-up of too much water which rises to overflow land which is not normally submerged. It comprises of a river as a result of long-lasting seasonal rain falls, accumulation of rainwater in low areas and excessive runoff caused by absence and inadequate storm drainage." Idoko (2016) on his part, defines flooding as the over flowing of water either as a result of torrential rainfall, a broken Dam, a high rise in the volume of water in rivers, ocean or seas as a result of melting ice caps or prolong rainfall, there by flooding its neighbouring environment and beyond. Floods can be very dangerous depending on the nature and level of water volume involved.

Most times when flowing water is termed 'flood', danger or disaster is implied. Indeed, floods have been associated with huge economic loses, disruption and loss of lives. Wisner et al. (2004) submit that floods accounted for the largest share of economic loses and fatalities from all natural hazards experienced in the late 1980s and throughout the 1990s. According to Smith (1991, p. 33) "more than any other environmental hazard, floods bring benefits as well as loses. They are a natural phenomenon that has always existed, and people have tried to use them to their advantage to the extent possible."

It has been observed that floods affect healthcare system of the environment where they happen. For example, their negative impact reduces access to health service and can cause changes in the demand in health services as stated by Axelrod, Killam, Gaston and Stinson (1994) and Schatz (2008). Floods contaminate source of water of the rural community, which can cause the outbreak of such waterborne diseases, according to Pianetti et al. (2004), include escherichia coli, diarrhea and other diseases, and can also increases the risk for communities and farm workers. Casteel, Sobsey, and Mueller(2006, p. 175) state that faecal contamination of livestock and crops can also lead to the spread of infectious diseases.

### The Concept of Disaster

Although the word *disaster* may suggest a readily apparent meaning, it is actually difficult to define the term precisely. The original derivation of the word came from the Latin *dis astro*or "bad star" and implied a calamity blamed on an unfavourable position of the planet (Mcfarlane & Norris, 2006). Prince (1920) is generally credited with conducting the first systematic disaster study, although issues of definition and context awaited introduction by Carr (1932). At the community level, disaster could be a flood, a fire, a collapse of buildings in an earthquake, the destruction of livelihoods, an epidemic or displacement through conflict. The Oxford English Dictionary (1987) defines disaster as a "sudden or great misfortune; calamity; complete failure." Although consistent with the day-to-day informal usage of the term, this definition is highly inadequate because it fails to distinguish disasters from other adversities (Green, 1996). The United Nations (2012) defines disaster as the occurrence of sudden or major misfortune which disrupts the basic fabric and normal functioning of the society or community.

The International Federation of Red Cross and Red Crescent Societies (IFRC) (2000) and the United Nations International Strategy for Disaster Reduction (UNISDR) (2009), have the same definition for disaster. They defined a disaster as a sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope using its own resources. Though often caused by nature, disasters can have human origins. While collaborating this definition Wisner et al. (2004), argue that disasters are a complex mix of natural hazards and human action. According to India National Institute of Disaster Management (NIDM) (2012) disaster is an event or series of events, which gives rise to casualties and damage or loss of properties, infrastructure, environment, essential services or means of livelihood on such a scale which is beyond the normal capacity of the affected community to cope with. Disaster is also sometimes described as a "catastrophic situation in which the normal pattern of life or

eco-system has been disrupted and extra-ordinary emergency interventions are required to save and preserve lives and or the environment.

NIDM (2012) further explains that disaster is an event of nature or man-made that leads to sudden disruption of normal life of a society, causing damage to life and property to such an extent that normal social and economic values available are inadequate to restore normalcy after a disaster. Disaster may also be defined as a "catastrophic situation in which the normal patterns of life have been disrupted and extraordinary emergency interventions are required to save and preserve human lives and the environment".

**The Concept of Rural/Community Development**

The concept of rural/community development is "a multi-dimensional process involving such areas as agriculture, health, education, provision of rural infrastructures, social life, political and economic issues, commerce and industry, among others, and their integration with the national economy." The United Nations (1976, p. 4) defines rural development as "a composite or comprehensive programme for rural development in which all relevant sectors such as agriculture, education, housing, health and employment are conceived as interlinking elements in a system having horizontal as well as vertical linkage in operational and spatial terms. "Aziz (1999) argues that rural/community is a complex one that comprises the interaction of economic, social, political, cultural, technological and other situational factors. It is on this fact that Mabogunje, (1981) defines rural development as self-sustaining improvement of rural areas, which entails a broad-based re-organization and mobilization of the rural masses in order to enhance their capacity to cope effectively with the daily task of their lives and with the changes consequent upon this.

**Theoretical Framework**

There are many theoretical frameworks that can be applied to explain the behaviours of people that will help to reduce the risk of natural disasters like floods. These theories include Person Relative to Event Theory (PrE) (Mulilis, J. P., & Duval, 1995; Mulilis, 1996), Protective Action Decision Model (PADM) (Lindell& Perry, 2000; Lindell& Perry, 2012), Social-Cognitive Preparation Model (Paton, 2003), Protection Motivation Theory (PMT) (Mulilis & Lippa, 1990; Floyd, Dunn & Rogers, 2000), and Theory of Planned Behaviour (TPB (Ajzen, 1985; Ajzen, 2012).

For the purpose of this study, Theory of Planned Behaviour (TPB) as propended by Ajzen (1985) was adopted as the theoretical framework in analysing the disaster preparedness behaviours (DPB) of the people of Ugwueke community over the early warning signs that were revealed to the custodians of their traditional institutions and deities before the disaster between August and September 2019 flood, which was known to happen once about every ten years in that magnitude. The TPB also helped to explain the usefulness in explaining and predicting the factors related to DPB of the community.

The TPB is a useful framework for investigating antecedents of behaviour (Figure 1). A central factor in the TPB is the individual's intention to perform a given behaviour. Intentions are assumed to capture the motivational factors that influence a behaviour (Ajzen, 1991).

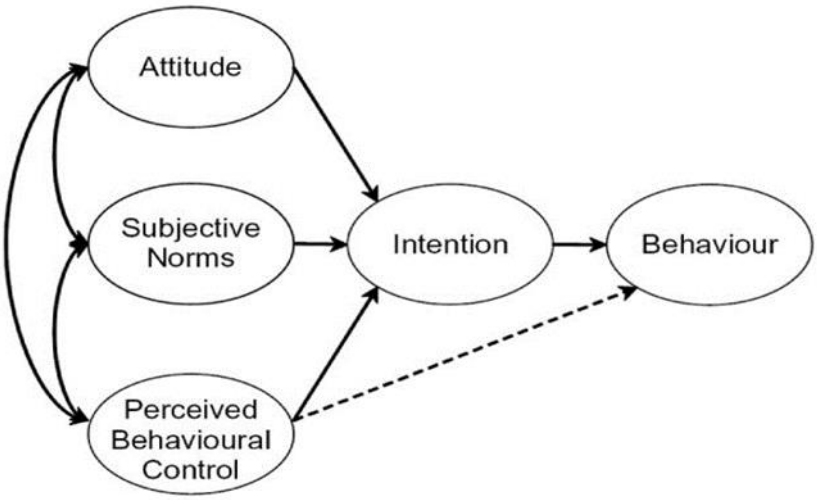


**Figure 1:** Theory of Planned Behaviour

**Source:** Ajzen (1991, p. 180)

Intentions are determined by three preceding motivational factors. The first is the attitude toward the behaviour and refers to the degree to which the individual or individuals have a favourable or an unfavourable evaluation of the behaviour in question. The second predictor is a social factor termed subjective norm; it refers to the perceived social pressure to do or not to do the behaviour. The third predictor of intention is the degree of perceived behavioural control which refers to the perceived ease or difficulty of performing the behaviour. As a general rule, the more favourable the attitude and subjective norm toward a behaviour, and the greater the perceived behavioural control, the stronger should be a person's intention to perform the behaviour under consideration. Intention, in turn, is viewed as one direct antecedent of actual behaviour. However, the level of success will depend not only on one's intention, but also on such partly non-motivational factors as availability of requisite opportunities and resources that represent people's actual control over the behaviour (Ajzen, 2002). The relative importance of attitude, subjective norm, and perceived behavioural control in the prediction of intention, and the relative importance of intention and perceived behavioural control in the prediction of behaviour are expected to vary across behaviours and populations (Ajzen, 1991).

The relevance of the Theory of Planned Behaviour (TPB) to the 2019 flood disaster in the study area can be predicated on the fact that traditionally, it is believed by the members of the community that flood of 2019 magnitude happens once about in every ten-year interval. Fortunately, or unfortunately, the influence of Christianity has to a great extent affected or altered the behaviours of the members of the community. Fortunately, on one part, Christianity has removed some harmful traditional believes and practices in the community. For example, before the advent of Christianity, when a woman gave birth to twin children it was seen as a taboo (*Aru* or *NsoAla*) by the woman and not the man who was responsible for the pregnancy. The twin children would be killed or thrown into an evil forest to die. Unfortunately, on another part, peoples' Christian believes have not been able to stop this type of flood disaster. Greater number of the members of the community are assumed to be Church members, the supposedly custodians of the community traditional institutions and deities inclusive. But this has not been able to erase the long-age traditional norms, beliefs and attitudinal behaviours towards some things, which the early warning signs of the flood are one of them. This is because, it is believed by the community that the cause of the disaster was spiritual notwithstanding the flood happened during rainy season.

For example, one respondent believed that the flood has a spiritual undertone. According to him, "my father and grandfather lived here. We experienced this in 1975, we prayed and the flood left, it still happened 1985 and we prayed and it left but this present one in 2019, it came twice, we did all we could it refused." Nobody could anything to stop the disaster unlike previous years because their disaster preparedness behaviours were lacking.

## Methodology

This study examined the impact of 2019 flood disaster on rural communities with focus on Ugwueke community in Bende Local Government Area of Abia State, Nigeria. Data collection was from primary and secondary sources. The primary data were the author's personal collections and personal communication with the members of the community during his visit especially, the part of Ugwueke the flood affected, which were Ndielu Ugwueke and Etiti Ugwueke, which have the population of about 2,000 and 1,600 people respectively. The primary data were one-on-one discussion with 10 among the affected members of the community and the traditional ruler. These collected were analysed descriptively. At the time of collecting the primary data, the quantitative valve of the losses caused by the flood could not been ascertained.

The author is an indigene of the study area. Discussion on the study area was based principally on personal observations and oral history, which the author acquired as an adult member of the community as was told by the elders and custodians of the traditional institutions of the community. Secondary data were collected from published and unpublished contents from books, academic journals and other writings, and internet-based information. Data were analysed through the use of historically and descriptively. Historically, on the oral history of the community as known by the author, and descriptively, based on the relevance of their content to the study.

## The Study Area: Ugwueke Community

Ugwueke is a rural community in Bende Local Government Area of Abia State, Nigeria. It is located in the Northern part of the Bende L.G.A. The community Ugwueke had existed over 200 years before the coming of the white men in the 19$^{th}$ century. It was known as Ugwueke-Alayi till 1939 when Ugwueke became an autonomous community and separated from Alayi community and has remained the name 'Ugwueke' till date. Ugwueke is bounded on the North by Akaeze community in Ebonyi State and on the South by Alayi in Abia State. On the North-West of Ugwueke is Item community and on the North-East is Ezeukwu community also in Bende L.G.A of Abia State. There is Eze River which flows from Isukwuato through Ugwueke and down to Akaeze community. From there, the river flows to River Benue then to the Atlantic Ocean.

According to Okorie (2012), the population of Ugwueke based on the 1993 population census was close to 20,000 and has now grown to about 45,000. The only source of drinking water is the Eze River which transcends across all the five autonomous communities that make up Ugwueke. By its look, the Eze water can be described as unfit for human consumption, but it is the water that has sustained the population since creation, producing academic and business gurus and industrialists. The major occupation or economic activity of the community is farming. This is because the Uguweke has thick and green falls, rich and fertile grounds. Hence, food crops and plants of different kinds are cultivated by the community. Their agricultural products include yam, cassava, rice, okra, pepper, melon, corn, green vegetables (*Ugu*) etc. Ugwueke community is known as the food basket of Abia State as the highest producer of food crops.

During the administration of the Governor Orji Uzo Kalu (1999 to 2007), Ugwueke community was divided into five different autonomous communities namely: Amaeze, Ndielu, Etiti, Amaokai, Umungere, and Amaba.

The climate of Ugwueke shows that the community is on the low level of Abia State. The land is flat land with little hills. The community does not suffer from erosion. There are two major seasons experienced

in Ugwueke. They are dry and rainy seasons. The dry season occurs between late October and early April with the harmattan (known as *Ugurui*n Ugwueke dialect) sandwiched in between December through to the second or third week of February of the New Year. The rainy season sets in from latter part of April and lasts up to mid-October. There is a temporary break of rain in the middle of the rainy season within the second and third week of August during which dry weather prevails for about seven to nine days or more or less. This cessation of rains is known as August Break, which happens before the New Yam festival of the community.

One remarkable landmark in Ugwueke is the presence of Royal Cross Methodist Hospital, which attracts patients in their hundreds on daily basis from Abia, Imo, Ebonyi, Enugu, Anambra States and beyond (Okorie, 2012).

**Picture 1**: Some of the submerged buildings

**Picture 3**: Submerged Etiti Ugwueke square

**Source:** Author's survey (2019)

**Picture 5**: Internal displaced persons (IDPs) at at the

Methodist Church, Amaeze Ugwueke.

**Source:** Author's survey (2019)

**Picture 6**: Another cross section of the IDPs

Methodist Church Amaeze Ugwueke.

**Source:** Author's survey (2019)

**Discussion Of Findings**

**The Cause and Impact of the Flood Disaster in Ugwueke Community**

The categories and causes of disasters may differ, their impacts are common; therefore, a disaster plan should address disaster impacts (Lindell & Prater, 2000). The people of the Ugwueke community have

been rendered homeless and their residential, livestock and farmlands washed away following a heavy downpour between 28th of August and 11th of September, 2019. The flood affected mainly Etiti, Ndielu and Amaokai Autonomous Communities. Properties worth millions of Naira were destroyed, and over five hundred people were rendered homeless and became internal displaced persons (IDPs) in various locations within the community and the neighbouring communities.

The findings of the paper were majorly on my personal communication with the members of the community especially, the victims of the flood, the traditional and political elites of the community. The study found out that the type of flooding in 2019 reoccurs about every ten years with some early warning traditional signs, which were always revealed to the custodians of the traditional institutions and deities of the community before the flood. The study concluded that the devastating impact of the 2019 flood disaster in Ugwueke could be predicated on none adherence to the traditional early warning signs by the community due to the influence of Christian believes. The paper believes that the vulnerability would have been reduced and the impacts mitigated if these early warning signs were abided by. The IDP camps were located at Methodist Church Etiti-Ugwueke, Central School Ugwueke, and Community Secondary School Amaeze-Ugwueke.

One of the victims during my personal communication on September 15, 2019 said, "I was inside my house when the flood came, I tried to stretch out my leg, all I saw was water everywhere, and I came out and called everyone that water has come. All the properties I have here have been carried away by water. All I want the government to do for me now is to help so that I can feed, all I have has been taken away by the flood." Another indigene of the community who is also a victim of the disaster related her experience. "Two weeks ago, the flood came here with heavy flow and it happened in the night, the latest happened two days ago and no one was able to save his or her properties. The level this water got to was what I haven't seen before. The water chased everyone away from his or her house". Responding to the question on what kind of assistance she needs now, one respondent said: "Anything the government knows they can do to stop the flood from chasing us out again. As you can see us now, we don't have a house to sleep in again, we are just squatting around."

Further discussion with a farmer in the community whose farm land and farm produce were affected explained thus: "Last week we experienced a lot of floods, and I stored a lot of garri here. The flood came around 1:00am last time, our neighbours beckoned on us and we ran out of the house. My kids and my wife are in the hospital as a result of the flood incidence last week; I took them to Igbere, the neighbouring community. Two days ago, the flood came in with speed, the whole house was flooded up, and we ran out of the house. The government should come to my help."

One of the elderly men and one of the custodians of Ugwueke traditional institutions was of the view that the flood had a spiritual undertone. According to him, "my father and grandfather lived here. We experienced this in 1976, we prayed and the flood left, it still happened 1985 and we prayed and it left but this present one in 2019, it came twice, we did all we could it refused. This present one that came on the 28th of August 2019 chased all of us out of our houses before this present one that came two days ago. Please, the government should come to our rescue."

The traditional ruler of an autonomous community (personal communication, September 15, 2019) said: "This flood is the worst. We want the state and the federal governments to help us. According to ABN TV (September 15, 2019) Hon. Chijioke Chukwu has tried a lot for us, but this is beyond one person's contribution, we need government assistance, both state and federal governments." ABN TV further reported that he who was at the scene of the flood disaster, said: "I have done my best, as a person and also coming from this village, and representing them in the State Constituency. Unlike the first flood that over 500 persons were displaced, this one affected a greater number of people, and we have over 2000 persons displaced. I have been able to send foodstuff and few beddings to make sure that people who are displaced at least have a place to put their heads. This is a Methodist Church Amaeze Ugwueke; we have

over 500 people that are camped here. We have people that are camped at the Central School Ugwueke; we have people at the Community Primary School, Amaze. From the level of what I saw, even if I put my one-year salary here, it will not be enough."

ABN TV (September 15, 2019), furthermore explained that over 80 houses were submerged and one person lost his life. I am calling on both the state and the federal governments to intervene. I am going to follow it up in Abuja. Some of them here have fish ponds, and most of them have lost their source of the livelihood along the waterways. Their rice farmlands have been washed away. In addition, they need medical intervention because the epidemic can break out. Children have been displaced. "For now, the state government has not done anything but am sure with their state representative, Sunny Jackson, he will take the report back to the secretary to the state government who is in charge and I am sure, the governor, Dr Okezie Ikpeazu who is a very compassionate person, will intervene immediately if such is brought to his notice."

My personal discussion with the representative of the Honourable Member representing Bende Federal Constituency at the Federal House of Representatives, who was available to see things for himself explained that "when this incidence occurred, Honourable Rep. Member was informed. We have gone round and saw the level of devastation and it is monumental. We must synergize with him and the donor agencies and these pictorials we have taken will be sent to him to also further strengthen his arms in his discussion with these donor agencies to see how we can lift the people from where they are. We are appealing to the people not to give up because help is on the way. For those who know him, he is a man that is full of character and passion for his people."

**Conclusion and Recommendations**

This study has shown the relationship between climate change and the flood disaster as it happened in the study area in 2019. The disaster resulted in the loss of sources of livelihoods like residential buildings, livestock, farming and the community was impoverished. The disaster could have also worsened the hardship of the community as a result of lack of government presence from the local, state and federal levels in a community where over 99% of the people are into subsistence farming as their main source of livelihoods.

The study recommended that the custodians of the traditional institutions of the community should adhere to those early warning signs preceding the flooding in order to, if not stop the disaster, reduce the vulnerability and mitigate the impact. The study also recommended that the government of Abia State and the National Emergency Management Agency (NEMA) should joint efforts to relocate the parts of the community that were affected by the flood disaster to an upland area to avert the incidence of 2019 in the future.

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