

Flood and Ahoada West Local Government Area of Rivers State, Nigeria

Ekine, Data Irene & Talbot, Osaki

Department of Agricultural and Applied Economics, Rivers State University, Port Harcourt, Nigeria

Abstract: - The paper examined flood and Ahoada West Local Government Area of Rivers State. The study was informed by the damages done by flood on agricultural activities as well as environmental degradation which in turn affects the socioeconomic well-being of the people. The objectives of the study were to; examine the causes of flood in the study area; and assess the effect of flood on the socio-economic well-being of the people in the study area. To achieve the objectives, the study utilized library science method and collected information from secondary source. The paper identified that flood could be caused by natural factor such as heavy rain fall and human factors such as deforestation. The identified effect of flooding on in the study area are that; flood destroy farms land, food and cash crops, Flood causes spread of infestations on soil and water, degradation of agriculture land. Also, flood affect health through spread of water borne disease and negatively affects the education of the people. The way forward to these menace of flood amongst others include; construction of flood ways, construction of dams, reservoirs or retention ponds to hold extra water during times of flooding, Planting vegetation to retain extra water, building of rivers and coastal defenses.

Key Words: Deforestation, Ecosystem, Farmland, Flood, Flood warning.

I. INTRODUCTION

Flooding can be of natural or man-made. It is a problem that needs to be given a proper attention, because it can ravage a whole city just like the case of Pakistan, India, Bangladesh, Srelanka, Thailand and even Indonesia which particularly affected their economy. This flooding is capable of evoking a high rate of migration that people flee for safety for their lives and as a matter of fact during this period every economic activities will be put on hold. World Flood Disaster Report in 2014 posited that one of the environmental unfriendly event is flood that its magnitude is very verse that it account for about 44% of death casualties while storm accounts for about 41%. The World-Wide Flood Damages caused to households livelihood, agriculture, infrastructure and public utilities amount to billions of U.S Dollars each year, in addition to loss of human and cattle life (International Federation and Red Cross and Red Crescent Society.

According to Awosika and Folurounsho (2006), by the year 2100 up to 15000km² of land within the Nigerian coastal areas will be given up to flood as a result of one metre of high sea water level either through excess of rainfall or high level of erosion within the region. This was the exact scenario of the year 2012 flood disaster in Nigeria is one of the worst flood to have hit the entire country in the past 50 years and the Niger

Delta in particular (Caroline, C. O., Munyaradzi, C., Oludolapo, A. O. & Elretha, L., 2019). Thus, Magbagbeola (2002) projected that flooding may probably affect up to 18,000Km² land area within the Delta as a result of sea level rise up to 1metre within the next 100 years and this is alarming. Flooding can be of natural or man-made, it is a problem that need to be given proper attention because it can ravage a whole city and as such turn a viable economy to a dead of lifeless economy. One of the agents of flood is deforestation; it contribute to flooding in any given region, considering this people of Ahoada are majorly concentrated in firewood gas for cooking and this gives more concern to the people and seek for alternative measure in order to reduce deforestation because trees or forest prevent excess flooding to an extent and even global warming which is capable of releasing acid rain on the environment that disrupt viability of a given economy or agricultural activities.

Flood is a threat to any economy of the world, because it affect the main stream of the traditional economy, looking at the economy of the study area; the people of Ahoada West were given to real farming and hunting, they supply farm produce sufficiently to the local market. Some of the farm produce include staple food like; garri, fufu, plantain, banana, etc. Thus, the occurrence of flood has continue to threaten the output of farm produce. To Ukpong (1994) low productivity in farm produce is as a result of high degradable state of the environment through flooding activities because farm land are destroyed, stored crop seed were wetted with water which in turn get decayed whereby agricultural activities become disrupted.

It is on this basis, the paper examined the effect of flood on the economy of the people of Ahoada West Local Government Area of Rivers State, Nigeria. The remaining parts of this paper discussed causes of environmental flooding, effect of environmental flooding, the way forward and concluding remarks.

II. CAUSES OF ENVIRONMENTAL FLOODING

Flooding can be cause by numerous factors, but chief of all the factors are human and natural factors which are examined below;

2.1 Human causes: Human factors such as deforestation which is the cutting down of trees to make for either agricultural or industrial purposes causes flooding. The need for increase population and also agricultural activities needs

the attention of cutting and burning of bush, and it contributes to global warming. Also, land disturbance is one of the basic environmental degradation that causes flooding. Disturbance in the environmental surroundings provides a greater threat to the viability of environment, because different species like garlic mustard will reduce the original greenery which affect the satisfactory state of food assets to man.

2.2 Natural Causes: Natural occurrences like, tidal waves and heavy rain fall can lead to the destruction of lives and properties even ecosystem which makes the environment vulnerable and less looked attractive to man. When heavy rain falls for over considerable period of time, the rivers will overflow its bank and this excess water will spread over the land surface and make life unbearable for the people. A good example of this scenario is the 2012 flood in Nigeria, where communities in Ahoada West LGA were over-power by flood. Thus, agricultural activities which is the main stay of the people was jeopardize.

2.3 Over Population: Increase in population growth pose a strenuous pressure on the natural resources within the environment which result in environmental degradation, because more spaces will be needed to grow food and shelter which leads to deforestation i.e. cutting down forest. An increasing population has adverse effect on the land and excess exploration of the natural resources, it creates a lapses in the form of demand for goods and services in the face of limited resources. It also affect agricultural activities which is the main stream of having raw materials for industrialization and other economic activities, because more land that should be used for economic output will be allocated for shelter. By so doing, economic output will decrease and our foreign earnings will also drop, which leads to the cracking of the internal or domestic economic activities. Though, population plays an integral role in development, but it is a major stream of environmental degradation when it surpasses its-limits of supportive system.

III. EFFECTS OF ENVIRONMENTAL FLOODING

3.1 Effects on Human Health and Education of the People

According to Axelord, Kilam, Gaston and Stinson (1994), Schatz (2008), flood has a negative effect on the provision on health services. It reduces the supply of health services and as such change the demand in health services. The period of flood is a terrifying time whereby patients lack the access to health services which in turn leads to high mortality rate posited (Curry, Larson, Mansfield, & Leonardo, 2001). There is tendency that during the flood disasters transportation to rural areas for adequate health care delivery service was defeated thereby many pregnant women cannot be given proper medical care and some even deliver their new babies outside the eyewash of medical personnel. Also, Sajini (2011) posited that one of agent that causes increase in environmental degradation is an increase use of energy, and it affect the human health and well- being of the people. Statistics in Nigeria reveals that approximately 67 percentage of Nigerians

falls within the low income category, and therefore among the poor (Nigeria Bureau of Statistics, 2018) that these low income categories of people are more exposed to induced environmental diseases which leads to environmental degradation without compensation from the appropriate organizations or even from the government. These adversely affect quality of life, health, productivity and development capacity. Environmental flooding has a great impact on the health of its residence, because the degradation induced poor productivity in agricultural and all other relevant status of life supportive activities, which may leads to malnutrition which at the long run break down their immune system. This may also expose the populaces into health challenges.



Figure 1: Effects of Environmental Flooding on Land in Ahoada, Nigeria

Moreover, flood has effect on the education of the people in such that children couldn't go to school, school workers and others couldn't go to work. Altogether, the impact was overwhelming as day to day lifestyles and education were put on hold. Public and private school building schools were submerged and this results to loss of lives and properties running into several millions of naira (Aderogba, 2012).

3.2 Effect on Agricultural Activities

Flood destroy farms crops and causes spread of infestations on soil and water: Agricultural production are affected during flooding. Previous flood disasters also had similar impacts, washing away, farmlands and destroyed livestock, which is an integral part of agriculture. Researchers and reports have shown the impacts on agriculture products such as food and cash crops. Aderogba (2012) showed that many farmlands have been washed off by the floods. Also, floods usually come with polluted water, this causes soil and water to be infected with all form of diseases which eventually will affect the yield of crops.

Flood causes degradation of agriculture land and environment: Environmental degradation is the deterioration and the depletion of the environment. It encompasses the forms of degradation that are induced by natural processes and accelerated by human. Farmlands both arable and agro-forestry were swept away when schools and market places were submerged for weeks by resulting in the frequent loss of lives, livelihoods, and property.

Destruction of Farmland: The effect of flood is capable of affecting farm land allocated to farming activities, thereby agricultural produced is being reduced. Flood affect farmland in depositing debris after flooding, which makes it difficult for farmers to harvest their crops. Flood makes farmland over-moist which is not good for farming activities because it leads to over - decomposition of crops, and as such extend the time of sowing of crops and in the long run affect the time of harvesting which skyrocket the prices of farm produce within the market.



Figure 2: Effect of Flood on Farmland in Ahoada, Nigeria

Food Insecurity: Flood has negative effect on food supply because agricultural productivity will reduce to a barest minimum, there will be an increase in unemployment, decrease in family income which affect their purchasing power. This food insecurity is a major challenge to any flood affected areas because transportation system will also fall thereby food supply means will be deteriorated which paves way for migration to other nearby communities or state for refuge and provision for food. Government is expected for fully participation for the wellbeing of the people affected, while proffering solution to curb out the menace.

Devastation of Ecosystem: The careless approach to the exploration and usage of crude oil leads to the release of its contents from its confine, thereby leads to the suffocation of the entire ecosystem within a short period of time, which creates a vacuum to the destruction or death of many environmental species.



Figure 3: Effects of Flooding on Wild Life

IV. THE WAY FORWARD

Below is the brief discussion of methods of controlling flooding in Ahoada West LGA

Construction of flood ways: Floods ways are the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. Thus, flood ways are constructed to solve the problem of floods.

Construction of dams, reservoirs or retention ponds to hold extra water during times of Flooding: Many dams and their associated reservoirs are designed completely or partially to aid in flood protection and control. Dams are artificial waterways that carry excess river water during heavy rainfall.

Planting vegetation to retain extra water: Planting vegetation are natural flood-control structures to fight river flooding and water surges restrain rivers during floods by providing natural coverage of land that prevent runoffs from bursting floodplains.

Building of rivers and coastal defenses: In many countries, rivers prone to flood are often carefully managed. Defenses as levees, bunds, reservoirs and weirs are used to prevent rivers from overflowing their banks. When these defenses fail, emergency measures such as sandbags or portable inflatable tubes are used. Similarly, coastal flooding has been addressed in Europe and the Americas with coastal defense, such as sea walls, beach nourishment and barrier islands. Tide gates are used in conjunction with dykes and culvers. They can be placed at the mouth of streams or small rivers, where an estuary begins or where tributary streams, or drainage ditches connect to sloughs.

Flood warning: Flood warning is the provision of advance warning of conditions that are likely to cause flooding to property and a potential risk to life. The main purpose of flood warning is to save life by allowing people, support and emergency services time to prepare for flooding. The secondary purpose is to reduce the effects and damage of flooding. This can be done through environmental education at every level of education; on radio, television, newspaper and magazines, and in every public forum. In a study conducted by Fabiyi & Oloukoi (2013) among the Ilajes, Itshekiris and ijaw tribes who live incoastal rural communities discovered that these communities have undocumented knowledge of local meteorologist which are based on observation and traditional practices and belief systems. This local knowledge helps them to predict flooding on seasonal and long term basis.

V. CONCLUDING REMARKS

The study examined the effect of flood on Ahoada West LGA of Rivers State. The findings showed that flood is caused by both human and natural factors. But the identified effect of flooding on are that; flood destroy farms, food and cash crops,

degradation of agriculture land and environment. Also, flood affect health through spread of water borne disease as well as the education of the people. Meanwhile, the methods of flood control are; construction of flood ways, construction of dams, reservoirs or retention ponds to hold extra water during times of flooding, Planting vegetation to retain extra water, building of rivers and coastal defenses and flood warning. In conclusion, the study showed that flood is not desirable, therefore, measures to avert flooding must be adhere to strictly in order to avert the negative effects of flood in the study area and country at large.

REFERENCES

- [1]. 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*, 1(3), 26-36
- [2]. Awosika, L. & Folorunsho, R. (2006). Natural anthropogenic hazards in African coastal and ocean environment; Need for holistic and pragmatic early warning system and management approach. <http://ieeexplore.ieee.org>. Retrieved on 22nd May, 2018.
- [3]. Axelrod, C., Killam, P. P., Gaston, M. H., & Stinson, N. (1994). Primary health care and the Mid-west flood disaster. *Public Health Reports* (Washington, D.C.: 1974), 1 09(5), 601-605.
- [4]. Caroline, C. O., Munyaradzi, C., Oludolapo, A. O. & Elretha, L. (2019). Impacts of flood disasters in Nigeria: A critical evaluation of health implications and management, *Jamba*, 11(1), 557.
- [5]. Curry, M. D., Larsen, P. G., Mansfield, C. J., & Leonardo, K. D. (2001). Impacts of a flood Disaster on an ambulatory pediatric clinic population. *Clinical Pediatrics*, 40(10), 571.
- [6]. Fabiyi, O.O., & Oloukoi, J. (2013). Indigenous Knowledge System and local adaptation strategies to flooding in coastal rural communities of Nigeria. *Journal of Indigenous Social Development*, 1(2), 1-19.
- [7]. Magbagbeola, I. (2002). Environmental underdevelopment in the Niger Delta; An electric vie in the petroleum industry, economy and the Niger Delta environment (Eds), Orubu, C., Ogisis, D.O and Okoli, R.N., 32-40
- [8]. National Bureau of Statistics(NBS, 2018). *Statistics Bulletin of Statistics publication*, Abuja Nigeria
- [9]. National Emergency Management Agency (NEMA), (2012). Flood: more than 25, 000 displaced in Benue as many communities remain adamant. Accessed online on the 10th of May 2014 via: <http://www.nema.gov.ng/emergency-zones/floods.aspx>
- [10]. Sajini, F.I. (2011): Population growth, Environmental degradation and human health in Nigeria: *Pakistan Journal of Social Sciences*, 8 (4), 187-191.
- [11]. Schatz, J. J. (2008). Floods hamper health-care delivery in southern Africa. *The Lancet*, 371(9615), 799-800.
- [12]. Ukpong, S.J. (1994). Global and Nigerian Environment Problem analysis SIRF, Calabar #rd November.