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Abstract

Run-off is high in the study area, due to rapid population growth and associated agricultural and other land use practices together with engineering works, which deprived the soil surface of its vegetation cover. Flooding menace is the major terrorism in Anambra state South East of Nigeria. The list of towns in the South East geopolitical zone with threatening flooding problems stretches every year. No community in the region is exempt from this terror. The entire land surface is dotted and perforated with erosion sites. Flooding is the most common of all environmental hazards and it regularly claims over 1000 lives per year and adversely affects both Agriculture and human capacity development. Data on climate, drainage, population infrastructures, and physical planning regulations were collected and extensively analyzed. The investigation revealed that climate change, or unusually high rainfall is not the only cause of the flooding problems in the studied areas. Rather, the increased urbanization, poor town planning laws in relation to the erection of buildings in flood plains, massive engineering work embarked by state government without proper studies of its environmental impact, the geology of the area, and the lack of inadequacy of storm drainage facilities in the communities are to blame. The anthropogenic and natural factors responsible for the present land use and land deterioration, in the area were evaluated.

KEY WORDS; Flooding, Geology, Rainfall, Land deterioration and Erosion

INTRODUCTION;

The study has a major objective of evaluating flood risk and its remedial measures. In Anambra state study of flooding has revealed that various socio-cultural activities have promoted flooding in Awka urban environments. These activities are characterized by stream or river channels encroachments and abuse, increased paved surfaces and poor solid waste disposal techniques, due to a high level of illiteracy, a low degree of community awareness, poor environmental enlightenment education, and ineffective town planning laws and poor environmental management.

WHAT IS FLOODING

Flood is a large amount of water covering an area that is usually dry, Is caused by rising global temperature which results in heavy downpour, thermal expansion of the ocean, sea and glacier melt, which in turn results in rise of sea level.

In Anambra state flooding is now yearly events, flooding has forced millions of inhabitant of the state away from their homes, posed tremendous danger to peoples' lives and properties, destroyed business, polluted water resources and increased the risk of disease.

LOCATION AND EXTENT OF STUDY AREA:

The study area is the Awka and its surrounding area in Anambra state, southeastern Nigeria. It lies between latitudes 5° 15'N and 4° 55'N, and Longitudes 6° 15' and 5° 55'E. The major places in the area include Unizik temporarily site, enugu /onoitscha express way, Aroma junction, Regina celi road, Amenyi, Umudioka, ukwu oji, Zik avenue. An Area of more than 1000 km^o was investigated.



Figure 1; Map of Anambra state showing the study area.

CAUSES OF FLOODING IN AWKA, ANAMBRA STATE

In the state causes of flooding can be attributed to both natural and anthropogenic activities.

1, NATURAL CAUSES

Awka falls within the Anambra basin, the peculiar geology, geomorphology, hydrogeology parameters at play in the area have contributed immensely to flood menace in the study area. The sandstones are friable, poorly cemented with low depositional matrix which makes prone to flooding

2, ANTHROPOGENIC ACTIVITIES

These are human activities that can lead to flooding; they include structure along and across natural drainage patterns, burst of water main pipes, dam spills, poor agricultural practices, illegal mining, poor altitude to waste disposal, poor engineering practices without regards to environmental impact assessment etc

TYPES OF FLOODING IN THE STUDY AREA

Flooding in Nigeria can be coastal, river, flash, urban, dam burst or failure.

In Awka the type of flooding experience is called urban flooding. These are due to alteration on the natural landscape of the area due to civil construction and urbanizations. Other causes of urban flooding include where existing drainage system have been blocked with all kinds of solid waste from domestic, municipal and industrial sources.

NEGATIVE IMPACTS OF FLOODING IN AWKA

Houses, buildings, business, agricultural farms, have been destroyed and submerged by the angry and raging floods of Anambra state. The state was declared flood disaster state in 2012 by the federal government of Nigeria, with 12 refugee camps scattered to alleviate the suffering of flood survived victims. Others effects are inaccessibility of most roads, lateness to work and school and the loss of lives etc.

BENEFITS OF FLOODING FOR DIVERSIFICATION OF ECONOMY

In Anambra state, hunters and fisher men cashed in on the disaster to make money. They do not paddle their canoe too far to catch fishes; this is because when the level of water increases the fishes swim ashore. Thus creating a boom for fishes hawking business. due to flooding most aquatic and reptiles are chased to inland thereby being caught by hunters raps etc.

PREVENTION OF FLOODING;

We have both short terms and long terms prevention measures

SHORT TERM;

This includes rescue of people whose residential houses/homes, farm lands and industries had been ravaged by the flood here relief materials and money are send to the people affected. they are normally camped in churches and schools,

LONG TERM;

Before building or any civil construction can take place, geologist, hydro geologist, environmental engineers must been consulted and various relevant test conducted .in other words there should be Muti professional approaches to avoid any construction on erosion or flood prone areas. Both state and federal government should constantly monitor the risk of flooding. they should also find means of measuring rivers and stream rise, set up effective information or warning systems and centers for the population.

Conclusion

Government, at various levels, needs to address these issues and the indiscriminate building of structures often in places which are within the natural courses of streams and rivers. Consequently, storm waters from roofs and paved surfaces have no natural channels to follow. The solid waste disposal habits of Awka urban dwellers are relatively poor; people dump their refuse into nearby streams or otherwise prevent the natural flow of rain water. These features, coupled with changes in the rainfall regime often result in extensive flooding in the urban environment

RECOMMENDATION

Some of the socio-cultural activities and human behavior which may be flood-inducing factors should be disencouraged. Relevant governmental bodies and Nongovernmental should evaluates local awareness of flood hazards and makes practical suggestions that could reduce, if not prevent, flooding in the Awka urban environment.

REFERENCES

- Egboka, B.C.E., and Okpoko, E.I. 1984. Gully erosion in the Agulu Nanka region of Anambra State Nigeria. In: Challenges in African Hydrology and Water Resources. Proc. Harare symp. July 1984. 335-347. IAHS Publisher no. 144.
- Egboka, B.C.E., 1994. The Ranging War: Floods erosion, Gullies, and Landslides Ravage Anambra State. God's Time Printing and Publishing Coy., Awka.
- Judson, S., 1968. Erosion of land, or what happening to our continent. American Scientist. 55 pp. 356-374.
- Offodile, M.C., 1988. Water Resources Management and the Nigeria Groundwater systems Journal of NAH vol. 1 No.1 pp 63-74.
- Rohwer, C., 1931. Evaporation from free water surfaces. U.S. Dept. Agr. Tech. Bull. 271.