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The Causes and Effects of Flooding in the Metropolitan City of Lagos

 Occurrences and reoccurrence of prolonged rain shows and the resultant floods all over the world in the recent time are becoming concerns to research and governments. Particularly in the rainy seasons, it is usually a common story to read about in the dailies and magazines in Nigeria. There are three schools fought about the preponderance of floods all over the globe especially in the tropics. The first is of the opinion that there is global warming and climate change that is directly and or indirectly increasing the amount of rain and ice melting that is increasing the amount of sun off. In this case, the only source of water that results in great sun off (floods), in West Africa, and indeed, south Western Nigeria will be rain water. The second school of thought is of the view that there have been a lot abuses heaped on the physical environment and it is only responding to the abuses heaped on it. The abuses include indiscriminate refuse dumping and Oil spillages. The third school has it that it is the combination of both global warming and climate change, and the abuses of man on the environment that are the causes of prolonged and torrential showers of rains and the resultant run off that lead to devastating floods in Nigeria.

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 The work of Aderogba(2011) on the challenges of global warming and floods in Lagos Metropolis, Nigeria is an expositing of the poor planting of the physical environment of Lagos Metropolis and poor living habit of the residents Vis-à-vis the resultant floods. The region contains about 20% of the nation’s population; and about 47% of industrial establishments, (National population commission, 2007 and Mabunje, 1968). It is the growth pole of the nation; its growth and development needs to be sustainable. Therefore, the objective of this work is to study the peculiarity of the incidences of floods and identify the substantive causes and effects in south Western region of Nigeria with a view to induce solutions for sustainable development in the region emphasis is on the cities and towns of the region.

 The rest of the region is dominated by high rain forest with stratified vegetation, derived savannah with all grasses and thick backed trees, and guinea savannah to the extreme north, in that order. However, the vegetations have been cleared for cultigens; and in the cities and towns for roads, railways, airports, industrial development and other urban activities and functions. The assembly and manufacturing industries, schools, colleges and research institutes, markets and commercial centers, hospitals and maternity homes, recreation centers, hotels, motels and brothels, restaurants and bars, chemicals and food processing plants, households and others release and dump solid (degradable and non-degradable) and liquid wastes into the imamate and distance neighborhoods indiscriminately. In these ways, the drainage channels, canals and erosion passages are blocked inadvertently and or deliberately. In these ways, the drainage channels, canals and erosion passages are blocked inadvertently and or deliberately. Waste generation and management are challenges to both government and urban dwellers. Potable water is also a challenge. This thus calls for bottles and sachet of which are indiscriminately disposed in quantities by households, recreation centers, parks, public places and other places where there are used. The quantities and spreads in every community are good indications of the extent of deity habits of the urbanities. According to them, these have adverse environmental consequences at both urban and rural areas. The drainage channels, erosion passages and canals have been most affected.

Causes of flooding in Lagos

 Generally, causes of flood in Lagos could be as a result of natural cause or human cause.

Flooding occurs throughout Lagos in following forms: Coastal flooding, River flooding, flash floods, urban flooding, Dam burst leave failures, and dam spills e.t.c.

Urban flooding occur in towns located on flat or low lying terrain especially where little or no provision has been made for surface drainage, or where existing drainage has been blocked with municipal waste, refuse and eroded soil sediments, extensive urban flooding is a phenomenon of every rainy session in Lagos. Virtually every Lagosian is vulnerable to disasters, natural or man-made.

Devastating effect of flooding

 In the last three decades, the impacts of flooding have increasingly assumed from significant to threatening proportions resulting in losses sustained by the urban dwellers and flood victims that irreparable havoc have been sustained by the citizen of Nigeria due to what has become perennial natural disaster in our cities. Apart from houses that collapse by flooding, school buildings and bridges sometimes collapse as well. Market places(For example, the current flood going on in Alaba International Market, Lagos) and farmlands are submerged for weeks and sometimes are washed away .The region has come to a long way with multiplicity of functions of the cities and towns as centers of administration, commerce, educations, tourism, trade, culture, industry, finance, economy and others, but not with commensurate infrastructural development. Hitherto, the cities and towns experienced floods that come and last for weeks on roads, streets, lanes and crescents; and communities. The pattern changed in the recent past to flash floods whereby the flood will come and disappear in less than three to four hours in few locations. There is a third phase: following torrential rains, floods now come leading to threats to urban lives, loss of lives and property and rendering thousands of residents homeless; changing the face of the earth and disrupting the unsustainable traffic and others. It may certainly not have been as enormous as it were if the drainage channels were adequate and there were no blockages of the existing drains. It has not been recognized by all that each house or drainage in any street or along any road is part of that community. The last 30 years have experienced considerable physical development. Construction and reconstruction of roads, offices, markets and stores, manufacturing industries and others without any appreciable infrastructures such as drainage, roads and canals to support them.

 Towards averting the annual tragedy of floods often occasioned by torrential rains and living habits of the residents, the three ties of governments should step up rehabilitation activities that would ensure major roads and drainage channels across the cities and towns are free of encumbrances and serviceable. The ministries of works and infrastructure of each state should be tasked by their respective state governments to ensure adequate free drainage channels and erosion passages in all the nooks and crannies of the states. The ministry may have to enforce the drainage clearing through “persuasive approach” while the city government beet up supervision of any identified problem areas. Residents, manufacturing industries and assembly plants, offices, market and stores, hospitals and maternity homes, schools and colleges and others should be compelled to ensure that their surroundings, the drainage channels and erosion passages are clean, clear and free of refuse before, during and after rainy seasons. That is everyone must cultivate the habit of weekly clearing of drains in his surroundings. Specifically, it is imperative that the national month’s environmental sanitation exercise is enforced and sustained. The exercise may be observed at more regular intervals. To rid homes, works environments and others of filth made up of waste foods, abandoned/condemned home utensils and appliances, unserviceable tools and equipments and others, and properly disposed of them without necessarily hindering free flow of water along erosion passages, gutters, drainage channels and canals. There must be urgent government interventions to remedy the situations in the cities and towns to save them from more serious calamity. There must be dreading and re-dreading of canals and drainage channels.

 The government is the only authority that can identify illegal structure and dismantle them, it is better late than never; and the time is now to clear the drainage channels, canals and erosion passages of illegal structures and sites. Green areas, besides urban rivers, streams, canals and other drainage channels should be encouraged and enforced. The management of river basin developments authorities should be magnanimous enough to provide the engineering and technical solutions that can take care of floods in their respective areas of jurisdiction. Following from above, urban physical planning departments should not be obvious of global warming and consequences on climate change more torrential rains, increased run offs more floods; and the inadequate drainage channels. Weather forecasts and forecasters should be more pro active to weather events that could lead to torrential rainstorms that may subsequently result in floods, and havocs. There must be legislations that must deal with the use of plastic bottle and cans, sachets such as pure water sachets, carrier bags and other non degradable material not only in the urban centers throughout the region and in the whole country. Residents, as groups and as individuals, and corporate bodies should be implored and encouraged to embark on some palliative measures such as dredging and re-dredging of drains, erosion passages and so on; and construction of embankments and channelization of some routes that are prone to flood. While channels may be further opened and widened, side drains and gutters could have removable precast concrete or steel cover for ease of maintenance. Government should deploy reasonable human and material resources to free all floodable areas across the built up area from incessant floods before during and after rains, and should be conscious of floatability of new suburbs.

 Physical planners and policy makers should also know that natural disasters such floods have destructive power, could be very sudden, occasional and so on. These therefore are pointers to appropriate planning and forecast. For the region to achieve improvement in environmental management and accelerated development for sustainable growth and development, there must be redoubled effort to scale up flood control and management, climate change irrigation and adaptation initiatives. Environmental education is imperative and it is now a must. At every level of education; on radio, television, newspaper and magazines, and in every public forum, these must be stressed; and research and development efforts should not be relented either.

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