Chapter 70
Global Natural Hazard and Disaster Vulnerability Management

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ABSTRACT

This chapter examines both concept of global hazard and disaster and its management in the lights of its vulnerability. It categorized the different types of hazards and disasters and their components. From the research findings, it is observed that hazards and disaster are two sides of a coin. They occur at the interface between human systems and natural events in our physical environments. This chapter highlights that the major environmental changes driving hazards and vulnerability to disasters are climate change, land-use changes, and degradation of natural resources. After presenting a typology of disasters and their magnitude globally, management of disaster has transited from just being a "response and relief"-centric approach to a mitigation and preparedness approach.

INTRODUCTION

From previous researches, it is on record that past actions that led to the destruction of properties, displacement of population across various states of the country(Nigeria) and loss of lives ranged from ethnic differences, land-use conflicts, communal violence to mention but a few. In recent times the negative effects in the country ranging from loss of lives to displacement of persons are due to climate change irregularities such as abnormal rise in precipitation, rising sea levels, unprecedented desertification, biodiversity loss and in addition to these climate changes, large parts of the country are being subjected to over population resulting to over-exploitation of natural resources such as air, water, soil pollution, hazards, disasters amongst others, the challenges are numerous (YandeMwape, 2009). These disasters to

a very large extent are responsible for the loss of lives and properties in Nigeria and therefore pushed a very large number of people into abject poverty. Disasters and Hazards are becoming a major developmental and economic issue of urgent concern to the government, various related agencies, organizations, stakeholders and the people, hence the essence for this paper. For the purpose of this study, we shall be concentrating on flooding as the major natural hazard/disaster because, of all the environmental hazards, flooding is the most common which on a regular basis claims over 20, 000 lives yearly and has tremendous negative impacts on about 75million people world-wide (Smith, 1996). Urbanization means more development and by implication, it means the area is more equipped in terms of infrastructures, good level of commercial activities, manufacturing ports in the country, great businesses coupled with just moderate rainfall have contributed immensely to flooding by simply replacing vegetation and soil with parking lots and buildings, highways, of which leads to quick water runoff by exposing the earth surface. Urbanization therefore, results in high concentration of residential, industrial, commercial, educational and military facilities which automatically causes growth in population. Thereby making housing more expensive and limited to the low income earners, consequently making the poor/low-income earners relocate to floodplains areas where they can afford, and these areas are highly susceptible to flooding most especially the urban poor who seem not to have anywhere else to stay except along the coast and flood plain areas. These areas experience increased likelihood of flood events and consequently, storm surges frequency may be increased by sea-level rise, therefore, resulting in high concentration of residential, industrial, commercial, educational and military facilities which automatically causes growth in population. In general, about 20% of the country's population face the risk of one form of flooding or another because flooding does not discriminate, it just act because it usually occurs when a normally dry land is suddenly covered up with water from either an overflowing river or from heavy rains without signals/warnings, worse hit especially are those communities which does not prepare for its occurrences (Kesiena, 2011). This disaster has been witnessed in different parts of the country. These are examples of past flood attacks in different states in Nigeria with its corresponding levels of impacts and effects, such as: destruction of bridges, roads, houses, farmlands, infrastructures, polluted water resources, increased risks of diseases and even loss of lives especially in the Northern and Western states of the country (Etuonovbe, 2011):

1. In 2012, Nigeria was one of the most challenging in recent history due to unprecedented flood that ravaged several states in the country, Benue, Adamawa, Tarabaand Plateau states were the worse hit. According to the National Emergency Management Agency (NEMA), 30 out of 36 states were affected by the floods. It affected well over 7million people, displaced 2.3million people, killed over 363 people, destroyed over 597,476 buildings, damages and losses caused by this floods that was termed the worst in 40years was estimated at N2.6 trillion. This to a large extent showed how unprecedented it was in saving the lives of its people and a drastic measure is thereby anticipated. While we cannot do away with natural hazards/disasters, we can help to eliminate those caused by human factors, minimize those we individuals exacerbate and try to reduce our vulnerability levels.

2. It would be recalled that there was heavy amount of rainfall on July 10, 2010 in Lagos that led to over 140,000 people being displaced in Gaza province and several lives were lost as a result of flooding in the region. Various results in Nigeria, showed that most of the wetlands had been severely disorganized as a result of human factors which most times lead to negative effects such as; Malnutrition, Starvation, Displacement etc.(Clark et al., 1984).

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