



## Role of Agricultural Extension and Advisory Providers in Farm Disaster Management Response, and Recovery in the Face of Changing Climate in Southeastern Nigeria

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**ABSTRACT:** Climate change can disrupt food availability, reduce access to food, and affect food quality thereby creating a challenging condition for farm disaster management. Hence, this paper examines the role of agricultural extension and advisory providers in farm disaster management response, and recovery in the face of changing climate in Southeastern Nigeria using appropriate standard methods by soliciting responses from 452 Agricultural Extension officers with the aid of questionnaire and oral discussions. Results showed that the farm disasters prevalent in the area includes floods (99.5%), landslides (93.8%), pests/diseases (95.1%), man-made disasters (98.4%) among others. The impacts are numerous such as loss of financial resources (93.5%), loss of human lives (99.3%), disruption of extension services delivery (100%), leads to epidemics (99.3%) and many more. The EASPs can render mitigation, preparedness, response, recovery services to smallholder farmers and communities to minimize losses, recovery time, and resources to fill the gap created by the extreme events. A quick recovery/revival to normal life can only be achieved immediately if skilled professional Extension workers are allowed to play their roles effectively.

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News reports on various natural disasters such as floods, cyclones, hurricanes, tornadoes, hailstones, landslides, fires, droughts, earthquakes, and volcanic eruptions are common in Nigeria and throughout the world. We call all of these occurrences catastrophes. FAO (2015) observed that the agriculture sector is most affected by natural catastrophes connected to climate change, including floods, droughts, tropical storms, and even oil spills. Drought causes more than 80 percent of the damage in the agriculture sector,

especially on livestock and crop production. Heavy windstorm, hurricanes and tsunamis cause much damage in the fisheries and aquaculture sectors; floods and others cause economic loss with regard to forestry and related subsectors. Disaster risk reduction and climate change adaptation become closely intertwined, and in agriculture, they should be addressed in an integrated manner (FAO, 2018). Since no two disasters are precisely the same, their effects and repercussions differ from place to place and from

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community to community. About 22% of all damage and loss from natural hazards, including fatalities, occurs in developing nations in the agriculture sector (FAO, 2015). These catastrophes jeopardize the objectives of development and general economic growth, as well as the development of agriculture and the sustainable sector in particular. Most of the nation has been impacted by flooding, which has caused over 1.4 million people to be displaced, over 600 deaths, and over 2,400 injuries (Bayo, 2022). While periodic flooding is nothing new in Nigeria, the current floods were the worst to hit the nation since 2012 (McLean, 2022; Bayo, 2022). In addition to people, their homes and means of subsistence, such as cattle and crops, are also damaged and loss brought on by each of those calamities to differing degrees. As a result, it is imperative that we get ready to handle such situations in a way that minimizes damage, increases readiness, responds appropriately, and helps the affected parties recover. Since Extension and Advisory Services (EAS) are in charge of supporting the farming community, they ought to be the main group involved in providing disaster relief to agricultural communities. It is often recognized that many underdeveloped nations, like Nigeria, are frequently ill-prepared to handle natural calamities. A solid process for preparation might be put in place to prevent the significant loss of priceless human life, animal life, and valuable property that results from the absence of a well-developed and stated disaster management strategy. Can extension specialists make a significant difference in improving disaster and climate change preparedness to lessen suffering among farmers? The response is clear: Extension and Advisory Services (EAS) are crucial in providing communities and individuals with the information and tools they need to enhance their standard of living. People are empowered, economic progress is encouraged, constructive communication is fostered, teamwork is demanded and encouraged, and rural poverty is reduced. Extension works with rural communities to improve resilience in food systems and communities following disasters, as well as to respond to shocks like outbreaks of pests or illnesses that affect people, animals, or plants. Disaster risk management includes planning for, responding to, and recovering from disasters as well as rebuilding after them (Rapeli, 2017; Mavhura, 2020). Because there is a knowledge deficit in this area in the study state, it is important to define the various duties that Extension workers carry out during each step of disaster risk management in order to provide effective practice and guidance. Hence, this paper examines the role of agricultural extension and advisory providers in farm disaster management response, and recovery in the face of changing climate in Southeastern Nigeria

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## MATERIALS AND METHODS

This study was done in Southeast Agro-ecological Zone of Nigeria. The zone is bordered to the west by the River Niger, to the south by the riverine Niger Delta, to the north by the flat North Central region, and to the east by the Cross River. It is split between the Guinean forest-savanna mosaic in the drier north and the Cross-Niger transition forests ecoregions in the south (Fig. 1). Because of its abundant natural gas and oil resources, as well as its rapidly industrializing economy, the zone plays a significant role in the Nigerian economy. With 36 million residents, the area makes up around 18% of the nation's overall population (WPR, 2022). The zone's principal agricultural products are cocoyam, rice, cassava, and yam. It is made up of the states of Anambra, Imo, Enugu, Ebonyi, and Abia. According to table 1, each state is separated into agricultural zones, each of which has a certain number of Extension Officers. On August 27, 1991, the former Imo State was divided into the new State of Abia, with Umuahia serving as its capital. There are 17 Local Government Areas in the State. Anambra, Enugu, and Ebonyi border Abia State on the north and northeast; Cross River and Akwa Ibom border it on the east and southeast; Rivers border it on the south; and Imo borders it on the west. It receives 2,400 mm of annual precipitation, or heavy rain, from April through October.

**Table 1:** States and Agricultural Zones in Southeast, Nigeria.

States	Agricultural Zones	No of Extension Officers
Abia	Abia, Umuahia, Ohaofia	78
Anambra	Awka, Anambra, Aguata, Onitsha	35
Ebonyi	Ebonyi North, Ebonyi South, Ebonyi Central	170
Enugu	Enugu, Nsukka, Awgu	49
Imo	Owerri, Okigwe, Orlu	120
<b>TOTAL</b>		<b>452</b>

Source - ADP Report, 2022

There are 5,243.7 square kilometers in the state. It is made up of the states of Anambra, Imo, Enugu, Ebonyi, and Abia. Every State has agricultural zones divided into three or four. Each State is divided into agricultural zones with a number of Extension Officers for each zone (Table 1). The respondents were all the Extension Officers in the ADP (Agricultural Development Project). Questionnaire and oral discussions were used and results analyzed using percentages, mean and standard deviation. While objective 3 (roles of advisory services providers in managing farm disaster) was achieved on a 4point likert type scale rating scale of strongly agree, agree, disagree and strongly disagree assigned weight of 4, 3, 2, 1. The values were added and divided by 4 to get the discriminating mean value of 2.50. Any mean value equal to or above 2.50 was accepted as a role

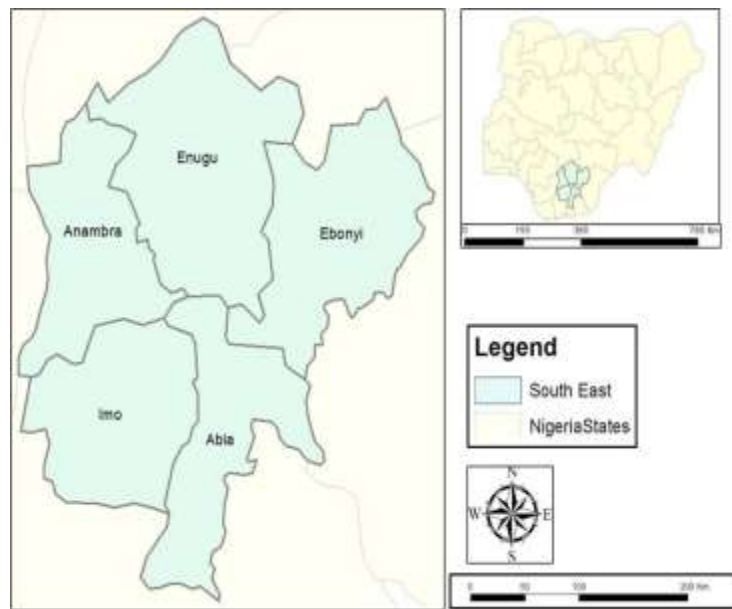


Fig 1: Map of Southeast, Nigeria showing the 5 States

## RESULTS AND DISCUSSION

*Farm Disasters/Risks in Southeast, Nigeria:* The main types of disasters in Nigeria includes the following -

*Floods:* Among the most destructive natural disasters worldwide, including in Nigeria, are floods (99.5%). More property is lost and damaged by floods than by any other natural occurrence, and they also claim lives. In Nigeria, flooding poses a threat to a minimum of 20 percent or more of the population. Over 200,000 dwellings were either totally or partially damaged by flooding in the early summer of 2022, and approximately 110,000 hectares of cropland were also devastated (Maclean, 2022). Floods can be advantageous to agriculture, though, in certain situations. Unexpected floods caused by exceptionally heavy rainfall, which can occur hundreds of kilometers away, can be disastrous because they can completely destroy infrastructure, communications, homes, livestock, and human life in a matter of hours.

*Oil Spill:* Tanker clean-up, unlawful discharge, and tanker break-up at sea account for 85.6% of oil spills. When oil is subjected to both chronic and acute pollution, it may have severe effects on the marine environment due to its physical and chemical hazards.

*Drought (87.6%):* About 87.6% of the population is drought It is a sneaky, slow-moving calamity that obliterates food crops, murders people and animals, and has long-term consequences for the ecosystem. Long stretches of dry land caused by no rain cause crops to produce less or even perish; animals and

people travel great distances in search of grazing grounds.

*Bush Fires (88.7%):* Large tracts of forest can be destroyed by fire in a matter of days, causing damage that may take years to repair. They have the potential to seriously harm property, livelihoods, and the environment in addition to taking the lives of people, cattle, wildlife, and crops. In Nigeria, wildfires may be found nearly anywhere there are flammable materials, especially during the dry season. In Nigeria, uncontrolled flames cause massive losses. Of the 12,274 hectares of plantations developed, 1,122 hectares were impacted by fire, and 17,885 hectares were entirely burnt in 1992/1993 alone, according to a thorough investigation conducted across seven states in Nigeria. Over \$20 million was lost in this transaction (NEMA, 2013).

*Landslides:* In regions with moderately steep topographic slopes highlighted by unstable materials, landslides (93.8%) happen. High soil moisture concentrations that lubricate the surface materials frequently result in slides. Structures and systems may sustain significant damage from landslides (buildings may be buried or settlements wiped away). Crops may be impacted by obstructed rivers that result in floods. Crop-producing fields may occasionally disappear completely. The movement of debris—uprooted building remnants—caused by landslides in conjunction with intense rain and flooding can result in significant amounts of damage and devastation.

*Pests and Diseases (95.1%):* These spread quickly over international borders and occasionally experience epidemics that can have catastrophic effects on animals, crops, and forests. Locusts, armyworms, several grasshopper species, and birds are the most damaging plant pests. Across Africa, the Near East, Southwest Asia, and regions north of the equator, the desert locust consistently threatens agriculture. Animals become sick or die as a result of epidemics of infectious cattle diseases like rinderpest and foot-and-mouth, which also impede international trade.

*Tropical Cyclones, Storms and Eruptions (90.2%):* These harm houses, farms, and food supplies in addition to destroying standing crops and killing or maiming livestock. Low-lying coastal regions are devastated by high waves. Storms cause death at sea, destroyed boats, equipment damage, and damage to landing places for fishing communities. Islands are especially vulnerable since it just takes one hurricane to devastate an island's infrastructure and severely impair its economy. Ash and mudflows from eruptions disrupt agriculture across a large region by damaging crops and grazing pasture and obstructing irrigation canals. They could make people leave the local area of a volcano, sometimes taking animals and standing crops with them.

*Man-Made Disasters (98.4%):* These have the highest financial costs in terms of pain caused to people, fatalities, and long-term harm to a nation's economy and potential for productivity. The term "complex emergencies," which refers to situations in which social, political, and economic systems break down due to internal strife or war, has been more and more prevalent in the past ten years.

*Thunder storms/heavy lightening (84.9%):* Every thunder storm produces lightening. There are mostly wet and dry sometimes, sometimes the weather may rain or not rain. Due to warm humidity, cause thunderstorms.

**Table 1:** Farm Disasters in the study zone

Disaster types in the Area	*Frequency	Percentage
<b>Floods</b>	450	99.5
Oil spillage	387	85.6
Droughts	394	87.1
Bush fires/ forest fires	401	88.7
Landslides	424	93.8
Pests and Diseases	430	95.1
Tropical cyclones/ Wind storms/eruptions	408	90.2
Thunder storms/Heavy lightening	384	84.9
<b>Man-made disasters/wars/conflicts</b>	<b>445</b>	<b>98.4</b>

\*Multiple response

*General Impact of Farm Disasters on the Environment, Humans and General Livelihoods:* Farm disasters have dire consequences on both the environment, humans and general livelihoods. Table 2 showed that farm disasters lead to loss of financial resources (93.5%), lead to and deepens poverty (95.1%), this happens when humans are disposed of their livelihood. It leads to stress and post-traumatic disorder (92.9%), results to forced migration (90.7%) as people will be made to relocate to safer grounds and even live in internally displaced camps.

**Table 2:** General Impacts of Farm Disasters in the Study Area

General impacts	*Frequency	Percentage
Leads to loss of financial resources	423	93.5
Leads to and deepens poverty	430	95.1
Leads to development of post-traumatic disorder	420	92.9
Results into forced migration	410	90.7
Loss of precious human lives	450	99.5
Results to depression and emotional illness	424	93.8
Loss of economic and productive resources	413	91.3
Disorganizes economic/productive opportunities	403	95.1
Presence of cultural shift	394	89.1
Disruption of extension service delivery	452	100
Loss of infrastructure/social amenities	440	97.3
Loss of livestock/animals	354	89.9
May lead to epidemic	449	99.3
Loss of crops in stores/field	413	91.3
Loss of coral reefs useful to man	350	77.4
Reduction of edible fish supply	431	95.3
Depletes forest level/resources	447	98.8
Total damage of the ecosystem	418	92.4

\*Multiple response Field survey data, 2022

The height of the menace is the loss of precious human lives (99.5%), results to depression and emotional illness (93.8%), loss of economic and productive resources (91.3%), disorganizes economic or productive resources (89.1%), this happen when resources are not assembled in a place, but scattered all over at different locations. Presence of cultural shift (87.1%), occur when the people's way of life and farming system changes due to national disaster

occurrences. Loss of infrastructure and social amenities (97.3%), loss of farm animals and livestock (84.9%), outbreak of epidemics (99.3%), loss of crops in stores and fields (91.3%), loss of coral reefs (77.4%), reduction of edible fish supply (95.3%), depletion of forest level/resources (98.8%) and total damage to the ecosystem (92.4%) and disruption of extension service delivery (100%). The above shows clearly that disasters can be very detrimental to crop growth, livestock health and survival, fisheries and production of aquaculture, and even undermine the forest sector and resources (FAO, 2018; Joshi, 2008; CBSE, 2006; Khan, 2010). Disasters destroy farm facilities and building machinery, tools, and other key infrastructure related to agricultural production. Before, during and after natural disaster occurrence, farmers keep thinking and become worried about their crops, animals, assets, farm equipment and other facilities. They thus become emotionally and psychologically disturbed. The loss of precious human lives causes them pains and irritates their emotions (Mohammed et al, 2018; IFRC, 2002; UNDP, 2008; WHO, 2007).

*The Veritable Role of Agricultural Extension Advisory Workers:* Regarded as a social worker, the Agricultural Extension and Advisory Services Provider (AEASP) helps vulnerable individuals access resources and services that will improve their functioning while also attending to their psychological and social needs under difficult circumstances. They work with people on an individual, group, and community level as well as in a range of settings, such as marketplaces and schools. They have a strong desire to assist the poor, the oppressed, and the in need. Then, how can EAS suppliers overlook the millions of vulnerable and in need people affected by disasters? The social issues that the EAS provider is interested in include, but are not limited to, hunger, poverty, unemployment, disability, gender discrimination, child labor, criminality, and health. Following a disaster, one may notice all of these societal problems since disasters cause all of the problems. Therefore, the Extension worker can engage in Disaster Management to rebuild lives at the following areas- mitigation/ prevention, preparedness, response and recovery/ rehabilitation.

*Mitigation and Prevention Roles:* This means the lessening or limitation of the adverse impact of hazards and related disasters (UNISDR, 2015). It means preventing future emergencies or minimizing their effects either for people, animals, environment, property and even cultural heritage. The Extension workers can play their role in mitigation activities as follows; Advisory services providers identify people's need and problems (M = 3.64), identify local resources

and skills (M=3.47). This helps to know where and when to render help or the need manpower to use for a specific task. Arrange community awareness to reduce hazards (M=3.51), identify vulnerable people and areas (M=3.67), and early development of emergency management plan (M=3.23). Extension agents may educate their rural and urban clients on building rules, which are essential measures to reduce the impact of disasters. For example, no farmer is permitted to build a home or even reside in a river plane to prevent flooding-related damage. They advise farmers on safe living practices and issue warnings. Extension agents witness people's wants and issues firsthand since they visit individuals in their homes and natural environments. In times of calamity, they therefore identify susceptible individuals and susceptible locations. They spread knowledge on mitigating the effects of disasters. They also impart welfare education to the populace. They provide knowledge about the methods, techniques, and assessment process to the illiterate and uninformed populace in an effort to reduce casualties. One useful tool for teaching people how to manage their lives before, during, and after catastrophes is disaster risk management education. These turn out to be the most useful tools for individuals to deal with disasters.

**Table 3:** Extension Advisory Services Roles in Rebuilding Lives: Mitigating/Prevention

Roles in Rebuilding Lives	Mean	SD
Mitigating/Prevention Roles		
Identify people's needs/problems	3.64	0.87
Identify local resources and skills	3.47	1.01
Arrange community awareness to reduce hazards	3.51	0.74
Identify vulnerable people and areas	3.67	0.64
Early development of emergency management plan	3.28	0.54

*Preparedness Roles:* This means a state of readiness and capability of human and material means, structures and communities to ensure rapid and effective response to disasters (EU, Civil Protection Mechanism, 2013). They do the following: early planning activities (M=3.70), Stocking of equipment/supplies (M=3.56), public information sharing (M=3.45), training and field exercise (M=3.64), recruitment of volunteers (M=3.59), and teaching of basic precautions (M=3.70). EAS prepare communities of farmers for negative events as they serve as a bridge between information sources and the stakeholders with which they engage. They operate as intermediaries and channels of communication for the numerous participants and stakeholders in the communities. They accomplish this by holding seminars and workshops where they cover early warning indicators, awareness, preparations, and different sorts of disasters. At the beginning of each

agricultural season, they plan walks and campaigns to raise awareness about floods and other disasters in their service regions. They educate and instruct themselves as well as the farmers. They want volunteers to step up in order to transmit and exchange knowledge in order to empower others. Farmers should get thorough instruction regarding dangers, disaster reduction, disaster management, and potential obstacles in their attempts to control their circumstances during these seminars (NAAS, 2004; Chambers, 2019). EAS providers can employ phones, radios, and other devices to distribute customized climate predictions and thus help the farmers overcome shocks. It was discovered that Extension workers are essential instructors. Educating people about catastrophes and climate change is crucial. It was mentioned that Extension agents as social workers must have a thorough understanding of the areas they serve in order to provide location-specific information in this capacity. According to Mhlanga et al. (2019), in order to provide better education, Extension workers who specialize in disaster relief must be familiar with the institutions and processes within the community. They also said that awareness efforts alerting people to the impending threat of natural catastrophes serve as the primary means of enforcing education. The above findings are supported by Mpambela and Mabvurira (2017) who posited that social workers have a significant role to play in educating and informing communities about the causes and effects of climate change-related disasters. It was commented that education by social workers include conveying information about circumstances which makes disasters such as drought manifest and how best the community can prepare in time even using indigenous knowledge systems. Social workers as educators in disaster management equip communities with relevant information pertaining to disasters which increases the level of awareness and preparedness as people will be fighting with a phenomenon which they are well informed about. This involves educating people about the dangers of settling in flood plains of rivers and dams to prevent loss of lives and properties to flooding occurrences.

**Table 4:** Extension Advisory Service roles in Rebuilding Lives: Preparedness

Preparedness Roles	Mean	SD
Early planning activities	3.70	0.67
Stockpiling of equipment/supplies	3.50	0.81
Public information sharing	3.45	0.91
Training and field exercise	3.29	0.74
Quick and easy location of disaster areas	3.64	1.01
Recruitment of volunteers	3.59	1.02
Teaching of basic precautions	3.70	0.78

*Responses, Recovery and Rehabilitation:* Response is the provision of emergency services and public assistance during or immediately after the disaster to help both man and animal reduce health impact. Because Extension staff have established a long-standing relationship with their clientele, they can join in the safe evaluation of victims- women, children, old people and the disabled, with suspicion. Assisting refugees with transport/evacuation (M=3.42), Providing temporary shelter (M=3.20), repairs of damage infrastructure (M=4.41), provision of food and money (M=3.36), arrange for first aid and field care (M=3.34) and provision of mental health support (M=3.32). They can also provide direct services such as food items, shelter, clothing/bedding materials to victims to fill the emergency basic needs of affected. They can mobilize communities for support to vulnerable people by donations and fund raising campaigns to alleviate the pains of victims. The Extension staff play the role of a volunteer worker by feeling and analyzing the pains of victims and contributing their part in rehabilitating them. They act as healers, by minimizing the fears, anxiety, and emotional stress of victims by providing them emotional support and grief counselling to victims. This refers to the attempt to lower catastrophe risk factors as well as the repair and enhancement, when necessary, of the agricultural communities' infrastructure, means of subsistence, and living circumstances. It is appreciated that EAS providers assist communities in healing and constructing resilience against unforeseen disasters. They promote the provision of food, housing, sanitization, compensation, and other necessities for the impacted population.

They advocate for policies that would enhance the lives of farmers impacted by disasters. Some of these policies include disaster insurance and the ban on building and residing on river plains. In addition to organizing and teaching victims the fundamentals following a tragedy, they can also initiate short-term educational programs for them and begin religious activities to provide solace. They provide self-help education to the communities on topics such as health, sanitation, disaster management, and rehabilitation. Restoring their life to normal is the main goal. They serve as a point of contact between the public and the government. By communicating farmers' voices to the authorities and informing farming groups about government activities, reactions, and regulations, they serve as a bridge between vulnerable people and governmental authorities.

They serve as intermediaries, facilitators, or encouragers to get the agricultural community and its

members involved in disaster management. Referral services on government programs for victims of disasters are provided by EAS providers. They inform farmers about benefit packages and how to take advantage of them; these could not have been accomplished without the assistance of Extension workers who operate in areas lacking in basic necessities. EAS informs victims about microfinance. Catastrophes negate all advancement. Individuals lose their jobs, homes, possessions, and jobs altogether. Microfinance schemes can change the whole scenario. They direct victims to financial opportunities and openings. The EAS providers are much concerned about rebuilding social, physical, economic lives/ infrastructure of the community, with community, by community and for community. They empower citizens through social development and reintegration. These efforts are gained towards rebuilding lives.

**Table 5:** Extension Advisory Service Roles in Rebuilding Lives

Response, Recovery and Rehabilitation	Mean	SD
Assisting refugees with transport/evacuation	3.42	0.94
Providing temporary shelter	3.25	0.84
Repairs of damaged infrastructure	3.41	0.79
Provision of food and money	3.36	0.92
Arrange for first and field care	3.34	1.01
Provide mental health support	3.32	0.65

Accepted mean score = 2.50

*Conclusion:* Disasters linked to climate change are wreaking havoc on developing nations, leaving rural people vulnerable and unsettled. As a profession focused on welfare and development, Extension work is crucial in supporting these kinds of communities. The main goal of disaster risk management is to mitigate and even eliminate the catastrophic impacts of natural catastrophes like floods, droughts, and tropical storms have on human society. Consequently, the goal of this work was to identify and classify the many roles that Extension workers play in disaster risk management during the phases of planning, responding, and recovering. Extension and Advisory Services, educate, aware and facilitate the people, by disseminating correct information about safe places, rescue operations, ways to safeguard lives of man and animals. It is uniquely positioned to assist with community disaster preparedness, mitigation and response efforts. By increasing literacy among farmers and stakeholders, and building capabilities, EAS can rebuild lives of victims.

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*Data Availability Statement:* Data are available upon request from the first author or corresponding author or any of the other authors

## REFERENCES

- Bayo, W (2022) Why a Dam in Cameroon causes Devastating Floods in Nigeria Every Year. Pulse Explainer, Pulse Nigeria.
- Chanderis, M (2019) Natural Disaster and Extension and Advisory Services (EAS). AESA Secretariats Blog 91. India
- CBSE (2006) National Hazards and Disaster Management. Central Board of Secondary Education, Preet Vihar, Delhi.
- FAO (2015) The Impact of Disaster on agriculture and food security. Food and Agriculture Organization, Rome.
- FAO (2018) Disaster Risk Reduction in Agriculture Policy Support and Governance. Food and Agriculture Organization, Rome
- IFRCS (2003) World Disaster Report. International Federation of Red Cross Security, Genova
- Joshi, SR (2008) Natural Disaster in North. East Region and its Management: An Essay, Centre for Science Education. North Eastern Hill, University Bijni Complex, Laitumkhrah, Meghalaya
- Khan, H (2010) Disaster Management Cycle- A Theoretical Approach, Institute of Information Technology, Abbottabad, Pakistan.
- Maelean, R (2022) Nigeria Flood Kul Hundreds and Displaced over a million. The New York Times.
- Mavhura, E (2020). Learning from the Tropical Cyclones that Ravaged Zimbabwe: Policy Implications for Effective Disaster Preparedness. *Nat. Haz.* 10: 2261- 2275.
- Mohammed, A; Norsida, M; Farrah, M (2018) Impacts of Natural Disasters on Farms and Farmers in Malaysia. Available at [www.researchgate.net/publication/32860589](http://www.researchgate.net/publication/32860589)
- Mhlanga, C; Muzingili, T; Mpambela, M (2019). Natural Disasters in Zimbabwe: The Primer for Social Work Intervention. *Afr. J. Soc. Work.* 9(1), 46-54.
- Mpambela, M; Mabvurira, V (2017). Effects of Climate Change and Their Indelible Impact on Social Work Profession in Zimbabwe. *Afr. J. Soc. Work.* 7(2): 30-35

- NEMA (2013) Disaster Management and Data Needs in Nigeria National Emergency Management Authority, Abuja. Available at <https://www.humanitarianlibrary.org>
- UNDP (2008) Disaster Management - Preparedness Methodology in Assam. United Nations Development Programme, New York
- Obaro, I (2006). History, the historian and the Nation: The voice of a Nigerian. Heinemann Educational Books
- WHO (2007) Risk Reduction and Emergency Preparedness: WHO six year strategy for the health sector and Community Development Geneva, Switzerland.
- Rapeli, M (2017). Assessment of Social Services' Disaster Risk Management: *Case Finland J. Conting. Crisis Manage.* 25(4) 25(4) DOI: [10.1111/1468-5973.12160](https://doi.org/10.1111/1468-5973.12160)
- WPC (2022) World Population Review (2022) Population of Cities in Nigeria (2022)". World Population Review. Retrieved 11 May 2022.