

Disaster Management and Relief Operations in Volatile Environments: A Survey of the Niger Delta Region

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Abstract:

Disasters have been described as sudden and unpleasant experience which are rather inevitable to man's existence. Hence, the need to understand the dynamics of disaster management and relief operations is timely considering the massive destruction of lives, properties and infrastructures occasioned by covid'19 pandemic as well as the 2022 flood disaster. This study therefore, examines disaster management and relief operations in volatile environments , the Niger Delta region perspective and the objectives are, to understand the dynamics of disaster management and relief operations, to understand the skills or techniques in managing disasters and relief operations and to create public awareness on the essence of knowing the basic tips of mitigation, preparedness, response, and recovery on disaster management. The paper is considered sequentially as follows; introduction, concept of disaster management, components of disaster management, relief operations techniques and conclusion. This research work will further enhance public sensitization and understanding the dynamics of disaster management. It will serve as a guide to governments and other stakeholders in formulating policies and programmes on disaster management and relief operations in Nigeria.

Keywords:

disaster management; relief operations; volatile environment; Niger Delta; Nigeria

I. Introduction

Disasters are here with us and the frequencies at which they happen across the globe can be likened to recurring decimals in mathematical processes. Such rampant occurrences (nowadays) may be attributed to multifarious activities of man. They may as well be classified as inevitable in human society. Though, Iwele (2022) opines that life itself is a disaster, may be contestable on various grounds. If life is a disaster or assumed to be disastrous, what is the essence of human existence? Life is good and full of pleasures if man adheres to the ordinances enshrined by nature and God. Disasters connote exceptional occurrences or events that are beyond the control of man and may be caused by either man or forces of nature. Man-made disasters include, terrorist attacks, Boko Haram insurgence, militancy, vandalism, kidnapping and covid'19 pandemic while natural disasters are earthquakes, tsunami, floods, landslides, wildfire, etc. Ozabor and Ushurhe (2022), somehow tried to deviate from this major categorization, contending that every or most disaster(s) is /or are caused by acts of man. In the words of Barack Obama "...the effects of climate change are giving rise to a frighteningly new global phenomenon: the man-made natural disasters..." Obama assertion connotes that disasters are mostly occasioned by acts of man in support of the position taken by Ozabor and Ushurhe (2022). Studies have put forward that, due to increasing urbanization, population growth and climate change, environmental disasters are doubling in quantum. It is

also revealed that areas susceptible to volcanic, seismic activities as well as low-lying coastal region (fitting the description of the Niger Delta region) will ultimately experience tropical cyclone, flooding, drought, and intense heatwave (DCDC, 2016). It is the view's of (DCDC, 2016), where humanitarian crises and disasters, whether natural or anthropogenic, are not addressed timeously, may degenerate to acute repercussions. It has been predicted over 2000 years ago that mysterious events - famine, pestilences, earthquakes, and sorrow would happen during the end time period according to Holy Scriptures (Matt 24 vs 5-10). In such scriptural perspective, disasters may as well be happening in fulfilment of this prediction or prophecy which is also an aspect of the forces of nature or acts of God.

ISDR (2007 as cited in UN, 2008) defines " disaster as a serious disruption of the functioning of a community or society causing a widespread human, material, economic and environmental losses which exceeds the ability of affected community or society to cope using its own resources. Iwele (2022) also sees "disasters as sudden catastrophe, accident, natural catastrophe, serious disruption to normal functioning of society that results to colossal damage, loss of lives and properties". With this explanation on the concept of disaster, Iwele contradicts himself by asserting that life in itself is a disaster. When a child is born into life, is it a disaster? When a plant grows from mother Earth, ordinarily, is it a disaster? Ozabor and Ushurhe (2022) define disaster as any event, natural or caused by man's activities which result to a sudden need to rescue lives and properties. The word disaster literally represents a catastrophe, a calamity, a dangerous occurrence within a geographic area that affects people, properties and the environment. Such unexpected events must have caused substantial loss of lives, hardship or sufferings during and after the emergency to man and his habitat (Tas, 2020; Cole et al., 2020; Liern & Perez-Gladish, 2020). The consequences of disasters are at various degrees or magnitudes; grievous damage and destruction of properties, farms are destroyed, shortage of foodstuffs or farm produce, aquatic lives are diminishing, rise in rate of unemployment, astronomical rise in cost of living, economic recession and general degradation of the environment (Paulik et al., 2019). The numerous oil spills or spillages in the Niger Delta region have substantially degraded and polluted the natural ecosystem. The waters are highly polluted, aquatic lives and plants are dying while both domestic and wild animals are disappearing into extinction. In order to revive the Niger Delta ecosystem and ensure some measures of rehabilitation, the Federal government under Mohammadu Buhari officially approved the "Ogoniland Clean Up Programme" but the project (Ogoni Land Clean Up) as result of oil spills for several decades is becoming another mirage. This laudable programme is failing due to the malfunctioning political governance structure and weak institutions in the country.

Ezenyilimba et al., (2018) identified human trafficking, fire outbreaks and violent terrorist attacks as common disasters in ECOWAS subregion of Africa. It states that about 7000 fire outbreaks with deaths over 1000 were reported in Nigeria. The recent flood (ie 2022 flood) has been adjudged as the worse in the chronicles of natural disasters in Nigeria. Records state that, over 800 persons died and 1.4 million lost their homes. Farmlands and crops covering 70,566 hectares were damaged (UNICEF,2022 as cited in Ozabor & Ushurhe, 2022). States like Anambra, Bayelsa, Cross-River, Delta and Jigawa were partially submerged and major highways devastated beyond use. In similar vein statistics showed that, in Kaduna State, 9,500 people were affected and 2,300 persons were rendered homeless; in Niger State, 37,000 persons were affected and 35,600 displaced; in Anambra State, 729,000 people were grievously affected while 526,000 were rendered homeless; in Jigawa State, 166,000 people were affected by the ravaging flood and 68900 persons were displaced. Also in Borno,

Adamawa, and Yobe States, 210800 people were affected while 87,700 were displaced. In Bayelsa State, 257,000 people were affected and 219,400 were displaced (Ozabor & Ushurhe, 2022).



Figure 1. 2022 Flood Disaster, Anambra State



Figure 2. 2022 Flood Disaster, Delta State



Figure 3. 2022 Flood Disaster, Lagos State



Figure 4. 2022 Flood Disaster, Bayelsa State

Similarly, in 1998, there was a man-made disaster named " Jesse Fire Outbreak" in Delta State, Nigeria, where a leaking oil pipeline exploded and gut fire for over five days non stop. The sudden explosion burnt 1000 persons who were illegally scooping fuel for personal use. This is a call for disaster preparedness strategy.



Figure 5a. 1998 Oil Pipeline Explosion, Jesse Delta State



Figure 5b. 1998 Oil Pipeline Explosion, Jesse Delta State



Figure 5c. 1998 Oil Pipeline Explosion, Jesse Delta State



Figure 5d. 1998 Oil Pipeline Explosion, Jesse Delta State

Disaster preparedness is geared towards saving lives and livelihood. Preparedness is key to disaster management because current projections are suggesting that climate related disasters will continue to happen. It will affect the pattern of drought, desertification and vulnerability growing in many countries. Urbanization and unplanned settlement, unsafe environment, exposure to coastal areas, poverty, and most importantly, inadequate attention by governments and other stakeholders to changing risks trend are placing human population to disaster-prone areas. According to records in 2005, after the Asian Tsunami, over 168 governments vowed to implement the Hyogo Framework's three strategic goals - to integrate disaster risk reduction into sustainable development policies, to develop and strengthen institutions, mechanism and capacity to build resilience to hazards and to incorporate risk reduction approaches (UN, 2008). More so, the Niger Delta region is the host to the natural depot of crude oil and gas reserves in Nigeria, criss-crossed with several oil pipelines is prone to oil spill, massive oil explosion, illegal bunkering and recurrent flood disasters. Hence, the need to conduct research on disaster management skills and relief operations techniques cannot be overemphasized in modern times.

II. Review of Literature

2.1 Concept of Disaster Management Defined

Ezenyilimba et al., (2018) define disaster management as the organised actions summoned in response to sudden occurrence that has negatively affected people, resources and threatening the existence of a given population. This entails developing recovery plans, mitigating the risks and implement relief or rehabilitation plans. The authors also describe disaster management as a process of managing natural catastrophes such as fire outbreaks, flooding, earthquake and so on. A process which embodies crisis management, contingency management and risk management approaches. However, in this latter definition of disaster management in respect natural factor, the authors failed to incorporate the man-made component of disaster by concentrating on the management of natural disasters only. Ibitoye (2012) explains disaster management to mean, the act of coordinating and integrating several relevant activities to build, sustain and improve the capability for preventing, mitigating, preparing, responding and recovery from disaster. The strategic planning and procedures deployed to protect critical assets from both man-made or natural disasters refers to disaster management (Haddow & Bullock, 2003). It is also an articulated process taken by group of persons, organisations, or governments before, during and after catastrophic events occur (John, 2004).

According to Iwele (2022), disaster management is synonymous with emergency management- the framework upon which companies, communities, non-profit organisation and government agencies respond to natural, man-made and technological hazards as well as diverse incidents that cause exposure and vulnerability of people, communities and the State. Blanchard (2007) itemizes eight principles of managing emergencies such as; comprehensive approach, proactive approach, risk-driven approach, sustainable approach, collaboration approach, coordination approach, flexible approach and professional approach.

2.2 Components of Disaster Management

The term "Management" is the art and science of planning, organising, staffing, coordinating, budgeting and directing (briefly comprehended in the acronym, PORSCORB-D) the affairs of both private and public institutions. Therefore, disaster management is the appropriate application of management skills or tools towards, addressing, arresting and rescuing victims from precarious or dangerous conditions. Management of disaster is usually stratified into four or five components or rather strategies depending on author's point of view.

Hitherto, emergency or disaster management in Nigeria has always adopted the "contingency planning approach" or rather called "fire brigade" in meeting exigencies of disasters. Such plan or strategy may not be holistic and therefore, the need for paradigm shift. Subsequently, as time evolves concrete measures were taken to entrench issues arising from disasters as core security policy to be regarded as Executive functions assigned to or handled by ad hoc committees. In 1972/73, due to the devastating drought that caused the nation huge loss of lives and properties, the Federal government established the National Emergency Relief Agency (NERA) in 1976. The defunct agency was empowered to collect and distribute relief materials to victims of disasters. And in 1999, NERA was transformed into National Emergency Management Agency (NEMA) by an Act of the National Assembly and is charged with the management of disasters in all their ramifications. Based on the omni bus powers and responsibilities in disaster management, NEMA developed several plans and guidelines to address disasters related issues, among which are; National Disaster Response Plan, the Search and Rescue/Epidemic Evacuation Plan, the National Nuclear and Radiological Plan, the Early Warning System on Epidemics. Despite these cogent efforts put in place by NEMA, there were challenges and several lessons learnt while executing them (Monye, 2022). In response to the surmountable issues that the National Disaster Management Framework (NDMF) was put together to address or correct the implementation gaps and enhance efficiency in disaster management in the country.

Monye (2022) contends that there can be no effective and efficient disaster management in Nigeria, where the agencies saddled with such mandate are not collaborating in responding to emergency situations. It was discovered that a number of agencies do not know their specific or core roles and most times, carry out duplicated services. This is because they tend to respond to emergency calls on individual ground therefore frustrating the expected synergistic effects. Thus, to avoid a repeat of such lacuna, the "three Cs" of emergency management (coordination, Cooperation and Communication) should be put into use by the appointed agencies. In Nigeria, relevant stakeholders in the management of emergencies and disasters (apart from NEMA) include, the Nigeria Armed Forces, the Nigeria Police, Federal Maintenance Agency (FERMA), Federal. Road Safety Corps (FRSC), Nigeria Fire Service (NFS), National Security and Civil Defence Corps (NSCDC), the Red Cross, and the United Nations High Commission for Refugees (UNHCR). Monye (2022) concludes that no single agency can adequately provide all the solutions to the multi-dimensional problems thrown up by disasters, hence multi-sectoral and multi-disciplinary efforts are earnestly

required as at when due. Munonye (2022) observes that, in Nigeria, at the Federal level, the National Emergency Management Agency (NEMA) is statutorily saddled with the enormous duty to plan and respond to disasters while at the State level, the State Emergency Management Agencies are expected to be set up too. In response to this clarion call, the Delta State government established the Delta State Emergency Management Agency (DELSEMA). It is also observed that the 774 local government areas in the country need a Local Emergency Management Agency (LEMA) or Unit to complement the efforts of NEMA and SEMA. It is believed that this tripartite coordination, cooperation and communication strategic approach will enhance effective and efficient disaster management system thus emphasizing the importance of synergistic impact on arresting or addressing emergency calls.

Disaster management are usually in phases and literature agreed on four (or five) phases which are, mitigation, (or prevention), preparedness, response and recovery as demonstrated in diagram below;



Figure 6. Disaster Management Cycle, Adapted from UN, 2008

III. Discussion

3.1 The Mitigation Stage

In ISDR (2007 as cited in UN, 2008), mitigation process encompasses both structural and non-structural measures undertaken to either limit or address the adverse effects of natural disasters, environmental pollution, and technological hazards. Such structural measures are engineering works, and hazards resistance construction and the non-structural measures include raising awareness, developing knowledge, land use policies, resource management and facilities operation procedures.

Munonye (2022) explains three the mitigation phase as:

1. any activity that prevents an emergency, reduces the chances of an emergency happening, or reduces the damaging effects of unavoidable circumstances.
2. buying flood and fire insurance for homes and other valuable assets
3. it involves activities that takes place before and after emergency actually occurs.

3.2 The Preparedness Stage

According to OCHA, (United Nations Office for Coordination of Humanitarian Affairs' quote in ISDR, 2007), " pre-disaster activities are undertaken within the context of disaster risk management and are based on sound risk analysis. This includes the development of a comprehensive preparedness strategy, policy, institutional structure, warning and forecasting capabilities and plans. These measures are geared towards helping at-risk

communities, safeguard lives and assets by being alert to hazards and taken appropriate actions in the face of an imminent or actual disaster".

Munonye (2022) explains measures or activities in the stage of preparedness as follows;

1. plans or preparations made to save lives and to help response and rescue operations.
2. evacuation plans, stocking food and water are examples of preparedness
3. having emergency kit ready for quick flight and such kit may be small but strong enough to contain essentials for survival journey.

3.3 The Prevention Stage

This strategy entails actions or activities that provide total avoidance of the adverse effect of hazards and means to minimize related environmental, technological and biological disasters. Investments in disaster prevention measures depend on socio-technical feasibility and cost-effective factors which are justifiable in localities prone to disasters. Basically, in aspect of public sensitization/awareness and education, changing orientation, (attitude and behaviour) will contribute to the promotion of culture of preventing disaster.

3.4 The Response Stage

This strategy provides assistance or quick intervention during or immediately after a disaster to preserve lives, basic subsistence needs and properties of those people affected. Response or relief operations can be short-term or long-term (ISDR 2007 as cited in UN, 2008). Munonye (2022) explains response to disaster as actions taken to save lives and prevent further damage to properties. The act of putting preparedness plans or strategies into full actions. Such acts of seeking shelter from a tornado or turning off gas valves in an earthquake and certainly, all response activities take place during the emergency.

3.5 The Recovery Stage

It entails decisions and actions taken with a view to restoring and improving the pre-disaster living conditions of affected persons and communities. Thus, encouraging necessary adjustments that will reduce risks during emergencies or disasters. Recovery strategy embodies rehabilitation and reconstruction processes as opportunity to develop risk reduction measures to address disastrous conditions (ISDR 2007 as cited in UN, 2008). It has been seen that actions of recovery take place after an emergency which include, activities embarked on to return victims to normal or safer living condition following emergency, and getting financial assistance for repairs and other meaningful life sustenance ventures (Munonye, 2022).

3.6 Relief Operations and Rehabilitation Process

Relief is the absence of stress or discomfort (Okpor, 2022). Different types of stress can befall anyone during disaster period which can cause loss of lives and valuables if there are no relief and humanitarian operations. Relief operations include, evacuation of victims from scene of emergency, provision of medical care, locating safe camps for victims, provide food, and other essentials to restore hope, etc. Okpor (2022) sees rehabilitation as central to relief operations. Rehabilitation is that aspect of relief operations which is geared towards restoring hope and integrating victims of disaster into normal lifestyle. It is a humanitarian service borne out of love, kindness and sacrifices during and after emergencies.

Relief operations also involve distribution of relief materials- perishable and non-perishable items to disaster's victims. Relief operations are determined by crisis mapping strategy. Crisis mapping helps to gather, display and analyse data in real time during emergencies. An emergency situation will require relief and rehabilitation operations to

ensure the reconfiguration, scale up or down, change location of victims (provide IDP camps) and focus on response to evolving circumstances.

When disaster strikes, government agencies and non-governmental organizations (NGOs) and volunteers with required knowledge on relief or humanitarian services are mobilized to provide assistance in the form of temporary shelter, food, water, and power. The cost of such operations is not borne by the victims of disaster but rather by the society. Relief organizations across the world- (the Red Cross, Red Crescent Societies), Faith Communities and Governmental Agencies (US Federal Emergency Management Agency, UN Disaster Relief Organization, National Emergency Management Agency, NEMA, Delta State Emergency Management, DELSEMA, etc), assist in recovery and rebuilding of devastated communities (Cutler & Mitchell, 2001).

IV. Conclusion

Disaster is a grave and sudden disruption to normal human existence in any society that is beyond man's capacity to either prevent or control. They may be natural or anthropogenic and the rate of occurrence is increasing at alarming proportion due to climate change and human activities. Based on their rampant occurrences, disasters are here with us. It is crystal clear that disaster management and relief operations are not the jobs of an individual, or a single organization, or a government agency alone but a collaborative effort of all relevant stakeholders; the three tiers of government, non-governmental agencies, communities and well-meaning individuals who have the requisite skills on rescue operations and rehabilitation. It is also evident that disasters are recurring events, that is, they maintain specific cycle of occurrence. On this basis, the need for citizen's and government's preparedness is paramount to managing disasters. A thorough grasp of the acts of preparedness, response and recovery will help to mitigate the inevitable consequences of emergencies. The study is therefore, bold to recommend the following measures;

1. Staff of NEMA and SEMA should undergo regular training to update them with modern knowledge (skills and techniques) on disaster management since climate change and technological innovations affect the dimensions or magnitude in which disasters are occurring nowadays.
2. Local Emergency Management (LEMA) should be established at the 774 local government areas in Nigeria. Such local disaster management agencies will give quick response to disasters or emergencies at the local level while complementing the efforts of NEMA and SEMA simultaneously.
3. Relevant stakeholders who are statutorily mandated to address disaster issues should hold meetings at regular intervals to consider and review matters/guidelines in the Emergency Management and Development Framework (EMDF) and make necessary adjustments or total overhaul. This stakeholder's meeting will definitely activate the synergistic partnership efforts required to arrest emergencies and distribute relief materials to victims and also avoid duplication of services/ waste of scarce resources.
4. Government should also address the problem of funding the three-tiers disaster management agencies strategy (NEMA-SEMA-LEMA disaster management approach) to give swift response to rescue operations, research and development (R&D) on disaster management and related issues since the "fire brigade approach" is suffering from serious setbacks of inefficiency and waste of resources.
5. There should partnership between private and public media outfits in raising the tempo of sensitization, enlightenment on global warming, climate change and other activities that can lead to emergencies. Such public information/knowledge on the

inevitability of emergencies will increase the level of preparedness of the people, NGOs and government against disasters or emergencies.

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