



Institutional Framework for Disaster Risk Management in Nigeria; Need for a Paradigm Shift

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ABSTRACT: National Disaster Management Framework (NDMF) was designed in 2010 to correct the inadequacies in disaster management efforts in Nigeria. This well designed framework is suffering implementation challenges which make it unable to fulfil its purpose. This paper reviews current NDMF strategies and seeks to promote community-based disaster risk management in line with conventional best practices as a viable alternative to the traditional top-bottom approach enshrined in the NDMF. It identifies communality, one of the principles of permaculture as a heritage that is deeply rooted in many Nigerian cultures and is been promoted internationally as best practice in disaster management. It highlights how vulnerable populations and victims rely more on individual abilities to cope and how their social contacts have played prominent roles to support them. It suggests the need for a redirection in disaster management that will explore communality to promote bottom-top strategies in disaster management in Nigeria using community development associations as a platform.

DOI: <https://dx.doi.org/10.4314/jasem.v28i8.26>

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Cite this Article as: ABDUSSALAAM, S. A; OLATUNDE, K. A; BABAJIDE, E. I; ADEDEJI, O. H; ADEOFUN, C. O. (2024). Institutional Framework for Disaster Risk Management in Nigeria; Need for a Paradigm Shift. *J. Appl. Sci. Environ. Manage.* 28 (8) 2483-2491

Dates: Received: 04 June 2024; Revised: 27 June 2024; Accepted: 11 July 2024 Published: 05 August 2024

Keywords: Hazards; Disaster Risk Reduction; Indigenous Knowledge; Resilience; Community Development Association

The world is increasingly faced with hazards which can potentially impact negatively on the lives of people if not properly managed. A disaster is a product of a community's vulnerability to a hazard. Disasters come from both natural hazards (such as hurricanes, tsunamis, landslides, earthquakes, floods, desertification, gullies, rain and windstorms) and man-made sources (such as technological failures, nuclear pollution, toxic waste emission, dam failure, warfare, outbreak of epidemics). Therefore, following the

Hyogo Framework of Action, governments owe citizens protection from these catastrophes (United Nations International Strategy for Disaster Reduction-UNISDR, 2004). Flooding is the most common and frequently occurring disaster globally (Paterson *et al.*, 2018; Cagla and Leyla, 2023). It is the most important disaster in Nigeria affecting several geographic areas, great number of people, and causing severe economic loss, and the trend is on an exponential because of several factors including climate change (Cirella and

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Iyalomhe, 2018; Olanrewaju *et al.*, 2019). Given the importance of floods in the context of catastrophe in Nigeria, this study heavily relies on flood management to draw implications for disaster management.

History of emergency management in Nigeria: The National Emergency Management Agency (NEMA) documented a history of disaster management in the National Disaster Management Framework (NDMF). Disaster risk management in Nigeria dates back to 1906 with the establishment of the fire brigade (NEMA, 2010). The functions of the brigade were however limited to saving lives and properties, and providing relief. In the 1960s and 1970s, the State Governors' and the Head of State's offices implemented ad-hoc strategies in place of the Fire Brigade's functions (Ibitoye, 2007). Obeta (2009) notes that before then, governmental support for flood victims was highly limited as there were no well-defined policies or response procedures. The three National Development Plans between 1962 and 1980 were the first major interventions of government (Ibitoye, 2007; Obeta, 2014). The mandates of this intervention through the natural disaster department of the ministries of works include creating awareness among citizens, collecting the information required to prevent floods and other disasters, as well as creating effective flood response plans (Anih, 2004; Obeta, 2009; Kolawole *et al.*, 2011).

Furthermore, the National Emergency Relief Agency (NERA) created in 1976 in response to a catastrophic drought that damaged property, life, and the economy, was a monumental step forward (NEMA, 2010). Federal Environmental Protection Agency (FEPA) came into being in 1988 and among other functions, was mandated to develop policies and programmes for ecological disaster management (Obeta, 2009).

Keeping in view the global declaration of 1990s as United Nation International Decade for Disaster Reduction (IDNDR), a more concerted effort at emergency/disaster management began around the 1990s through several government institutions aimed at alleviating the suffering of disaster victims. These efforts included the need to review the limited scope of NERA, which resulted in her becoming a Presidential agency in 1993 (NEMA, 2010). In 1997, NERA's operations was expanded and the order establishing it modified, this led to the establishment of NEMA in 1999 (Obeta, 2014; Adefisoye, 2015). Obeta (2014) highlighted several other government efforts including the establishment of National Commission for Refugees (NCFR) on 29th December, 1989 and Nigerian Metrological Agency – NIMET in 2003. Established in 1999, the Federal Ministry of Environment was tasked with determining the nation's

flood risk and creating suitable flood mitigation strategies (Obeta, 2014).

NEMA has developed several plans and guidelines including the National Disaster Response Plan, the Early Warning System on Epidemic, the Search and Rescue/Epidemic Evacuation Plan, the National Nuclear and Radiological Plan, National Emergency Management Agency Standard Operating Procedures, e.t.c. The agency recognised the need to address challenges encountered in the implementation of previous plans and strategies thus developed the NDMF. The NDMF was specifically developed to correct implementation gaps and increase efficiency and effectiveness of disaster management in Nigeria, thus correct failures of previous strategies of disaster management in Nigeria (NEMA, 2010).

It is important to note that the NDMF is a very robust and flexible institutional framework for disaster management. In line with international best practices, it recognises the need for risk reduction and disaster prevention as against the traditional disaster management that was limited to response and recovery. It emphasises non-structural measures of disaster management and recognizes various relevant institutions/stakeholders within the Nigerian community. The framework stipulates that with the existence of NEMA overseeing disaster management nationally, the State Emergency Management Agency (SEMA) shall function within the state, while the Local Emergency Management Agency (LEMA) will be the closest government structure to the people. Additionally, the relevant Ministries, Departments and Agencies (MDAs), military, police, paramilitary, and civil society organizations (CSOs) will be recognized for their respective roles. It stipulates the acquisition of necessary disaster management capabilities by community institutions (as people affected and first responders) and establishment of Emergency Management Volunteers (EMV). Despite the effort in designing this framework, institutional approach to flood risk management is still been flawed (Obeta, 2014; Nkwunonwo *et al.* 2015; Adefisoye, 2015; Oladokun and Proverbs, 2016 and Olanrewaju *et al.*, 2019).

Obeta (2014) observed that the institutional (government) approach in most cases has been limited to evacuation of victims, providing relief materials (food, clothes, medicine e.t.c) and facilitate recovery. Most of the time, government's assistance has not made Nigerians any better at anticipating and preparing for significant flood dangers (Adelekan, 2010; Akintola and Ikwuyatum, 2012). In fact, most flood disasters that occurred between 2010 and 2012 in Nigeria were attributed to weak institutional

framework for flood risk and disaster reduction (Agbola *et al.*, 2012). Obeta (2014) and Nkwunonwo *et al.* (2015) highlight some of the shortcomings in Nigeria's institutional approach to disaster management. It might be argued that some of the weaknesses have been addressed in the NDMF, but the fact remains that the implementation of this framework is more like a mirage. In Adefisoye (2015) review on the NDMF, it has been noted that the inadequate reaction to Nigeria's emergency situations in recent years, particularly the flood disasters in 2011 and 2012, is a sign of poor coordination resulting from an improper implementation of the framework. Furthermore, the state and local governments lack the financial resources, dishonesty and undemocratic tendencies to provide the legal framework to deliver efficient emergency services have been identified (Adefisoye, 2015 and Olanrewaju *et al.*, 2019). Adefisoye (2015) further notes that except for Lagos States' LASEMA that has been highly rated in terms of organizational effectiveness, the south western states have played more lip service than taking the bull by the horn. States like Ogun and Ondo appear to be asleep, while some others are yet to have established SEMAs many others are still struggling to function at their best since the 2012 flood disaster. Finally, the paper observes that political will and undemocratic tendencies have paralysed LEMAs in the few places where they exist.

The current institutional measures for flood disaster management is unsustainable because it is dependent on hurriedly developed response and assessment techniques, which are typically inefficient and ill-organized as a result of which they have achieved limited results, hence are usually a waste of resources (Kolawole *et al.*, 2011; Obeta, 2014; Adefisoye, 2015 and Nkwunonwo *et al.*, 2015b). Therefore, Nkwunonwo *et al.* (2015) recommended that the vulnerable population be more involved in flood risk reduction, citing the Netherlands as a model. The Netherlands which has half of its landmass at or below sea level has been reputed in terms of sustainable flood management. The government and her people have shown great commitment, indicated by high sense of responsibility in financial commitment towards flood risk reduction (Nkwunonwo *et al.*, 2015). Considering the continuous failure of different government strategies and the global trend of encouraging active participation of communities at risk, this paper explores the potential of driving a bottom-top approach towards disaster management in Nigeria.

Community-based disaster risk management: Traditionally, disaster risk management is driven by top-down approach, with the impacted communities'

input and participation being minimal (Jha *et al.*, 2012). A critical look at the NDMF reveals this ineffective approach. Recent studies have faulted the top-bottom approach to Disaster Risk Reduction (DRR) because they often do not meet the priorities and specific needs of the vulnerable population, ignore indigenous adaptation strategies and local capabilities and resources, which have occasionally resulted in disputes among communities and heightened susceptibility (Azad *et al.*, 2019). No matter how detailed and accurate the assessment and planning done by external bodies (engineers, meteorologists, disaster managers, etc.) they cannot efficiently reduce vulnerability without the active participation of the vulnerable population (APFM, 2017). Community groups and organizations are essential in planning sustainable risk reduction programmes because they are the primary beneficiaries. Usually, when donor agencies, government and NGOs initiate and implement flood risk management measures, such initiatives may be neglected once the external support stops. This has been identified as possibly a result of lack of involvement of the local community (APFM, 2017)

Community-based disaster risk management (CBDRM) covers a broad range of interventions or actions, such as assessment, mitigation, early warning, evacuation, providing relief and building resilience which are primarily designed and implemented by vulnerable communities and are based on their urgent needs and capacities, this can lower the price of additional actions like building neighborhood defences or helping to keep drainage systems in good working conditions (Jha *et al.*, 2012). The participatory method employed in community-based water management employs a multidisciplinary approach that identifies more dimensions to the problem; makes decisions more widely accepted; is cost effective; builds cohesion of community and employ's individual and community resources towards mitigation (Azad *et al.*, 2019). Therefore, involvement of the community is pertinent to designing both non-structural and structural measures for disaster risk management. The participation of the community all through the project cycle of risk management (assessment, design, implementation, monitoring and evaluation) is a prerequisite for effective and equitable risk management that takes into account the goals and aspirations of the vulnerable people. The measures are community specific because they are initiated, designed, carried out, sustained, monitored and evaluated by the community themselves (Sharma *et al.*, 2022). They are dependent on community's indigenous resources and capacity to access external technical and financial assistance.

According to Jha *et al.*, (2012), involving the vulnerable population in disaster risk reduction involves assigning them tasks that could have been completed by the public, private, or non-governmental sectors. Furthermore, since communities are used to their local hazards and have developed indigenous knowledge overtime, hence have either adapted to live with the hazards or have various coping strategies that can be helpful in designing a hazard risk reduction programme, it is believed that with proper training and information the communities could be transformed to be more resilient thereby safeguard and minimize the disaster risks. Indigenous knowledge may not always be scientific, but their richness in skill and experience remains a very vital resource to be an input into any successful risk reduction programme (ADPC, 2003; APFM, 2017). In communities that rely on indigenous knowledge and have high level of participation in flood risk reduction, the adverse effects of floods, time taken to recover, and the number of casualties are reduced and are more resilient, as compared to communities with less participation or motivation to cope with flood (APFM, 2017). Therefore, it is pertinent to strengthen local capacities based on their human, financial and material resources in order to achieve a successful disaster risk reduction.

Communality a fast eroding African culture: From the foregoing, it has been established that the traditional top-bottom approach to disaster management has not always yielded the best results. The African culture presents an alternative in communality enshrined in the permaculture principle of integration and not segregation. Communality underscores the importance of, and strength in togetherness. Several systems and strategies are enshrined in the African culture that promotes communality. For example, in Nigeria, cooperation, togetherness, binding and solidarity are common features of communality found in many traditional cultures (Aderinoye *et al.*, 2007; Madukwe and Madukwe, 2010; Egbunu, 2014; Ogbujah, 2014; Oyeshile 2017). Before colonisation, communities across the nation had employed communal efforts to mobilize individual resources to provide facilities and physical improvement to the social, political and economic aspects of their communities (Akpomuvie, 2010). Traditional community-based organisations include neighbourhood councils, community youth organizations, women organizations, socio-cultural organizations established in different cultures in the country (Abegunde, 2009; Ibem, 2009). Solidarity achieved through these associations enables individual problems and challenges receive collective action and support. *Aaro* a traditional system of cooperation in farming operations whereby farmers rotate working on

each other's farm is a traditional system to ensure food security (Olukoju, 2021). Egbunu (2014) highlights *Udamain* the Igala cultural tradition that is "gingered through the spirit of *"awadede"* (solidarity or togetherness)" as a tradition that supports solidarity in the face of disaster. The paper notes that this principle promotes celebrating joy and empathising during the pain caused by variation in weather. In the traditional Yoruba society, *Ifowosowopo* (co-operation) and *Agbajoowo* (solidarity) are key elements from which democratic tendencies can be inferred (Oyeshile, 2017) and from which disaster management can benefit immensely. The demerits of communality may include ethnic bigotry that impedes inter-communal peaceful coexistence Ogbujah (2014). However, individualistic orientations that have become prevalent in Africa are an improper mastery of alien values and concepts by African elite (Oyeshile, 2007). Communality that had been the cornerstone in our cultural heritage, and promoted public interest is been eroded by foreign values. It is therefore not out of place to state that the political and economic fabric of Africa has been modified by the colonial invasion thereby promoting individual interest at the detriment of common good. Oyeshile (2007) further explains how pursuit of individual interests at the expense of common good has led to neglect of the environment thereby causing environmental degradation which threatens food security. The paper emphasizes the need to revive the sense of communal living in a bid to achieve sustainable development and posit that joint survival is the most plausible alternative for man. Individuals need an enabling environment to achieve their most valued goals, and it is important to understand that an enabling environment that encompasses all spheres of human life is beyond the reach of a single individual to create, hence his dependence on others to create such an environment. Where environmental hazards or disasters become the bane towards achieving individual or common good, and government failure to effectively and adequately come to the rescue, it is imperative for communal action to be set in place to mitigate or ameliorate the pain such a hazard may cause. Relying on our heritage of communality that is fast been eroded will be handy and will not only ensure disaster risk reduction but foster good relationship that can provide enabling environment for sustainable development. This is not only keeping with conventional disaster management practices, but adopting a principle of permaculture and revival of an eroding custom and heritage.

Informal community efforts and potentials for community-based disaster management in Nigeria: It is instructive to note that individuals and community-based social contacts have provided the greatest form

of support to disaster victims in Nigeria. Findings of Adelekan (2016) and Soneye (2016) are quite striking with regards to communality in the face of flood risk in Lagos. In a 3-years survey of humanitarian support received by flood victims in Lagos State, Soneye (2016) reported that government organisations, CBOs, NGOs, individuals, corporate organisations and FBOs were identified as major sources of relief for victims between 2010 and 2012. The assistance rendered included clearing, construction and dredging of drains, demolition of buildings, financial support, rescue of victims, provision of relief materials, provision of temporary shelters, evacuation of flood and mud and prayer and counselling. Private individuals ranked highest (35%) in delivering support to victims, although, the possibility that this form of support can be uncoordinated and rowdy as a result of which victims can be further strained has been established (Jha *et al.*, 2012). This emphasises the need for coordination which can best be achieved when community-based disaster management is adopted to provide skilled and organised assistance to victims. Government was next (22%) while religious groups (15%) and community based organisations-CBOs (13%) closely followed. The study further examined the ease of access of victims to the aid providers' on a 10-point likert scale. The study revealed that CBOs were most accessible followed by private individuals and religious bodies. This supports the argument that the community should be strengthened to take the lead in disaster management because they are more accessible.

Table 1: Humanitarian support received by flood victims in Lagos

	%age Support provided by institutions	Accessibility of institutions
CBO	13	2.52±2.551
Corporate Organisations	1	1.13±0.398
Government agencies	22	1.38±1.227
Non-governmental Organisations	3	1.39±1.959
Private individuals	35	1.90±1.377
Religious groups	15	1.56±1.452

Source: Soneye (2016)

Adelekan (2016) in a similar study reported (Table 2) that the percentage of respondents that received support from family and friends 9.0% was highest. Next to this were local government (5.5%), community members (4.6%), and community associations (3.1%). The State emergency management agency (0.3%) had the least percentage of respondents. This is alarming because in Adefisoye (2015) LASEMA was rated as highly efficient in quality service delivery as compared to other SEMAs. This underscores the need for a revamp of the implementation strategy for NDMF. The Percentage

of respondents who received support from federal, state and local governments (9.6%) was marginally above those who received support from family and friends alone (9.0%), yet majority of respondents (71.3%) received no support from any quarters.

About 9.9% of respondents received supports from different strata of government including LASEMA, while 18.2% receive support from community based organisations (comprising community members, family and friends, community associations and religious bodies). It was reported that 0.7% received support from NGOs and CSOs which could be within the community or not. The study equally reported that 7.7% of respondents relied on flood risk management strategies adopted by the community (community members and community based association).

Table 2: Institutional sources of disaster management support for flood vulnerable communities in Lagos

Source of Support	Percentage
Federal government	1.3
State government	2.8
Local government authority	5.5
Community members	4.6
Family and friends	9.0
State emergency management agency	0.3
NGOs/Civil Society Organisations	0.7
Local Community Associations	3.1
Religious institutions	1.5
None	71.3
Total	100

Source: Adelekan (2016)

This study underscores the confidence and trust first responders have in the government, which have not been met with a proportional effort. It emphasizes the need for a change in the narrative of disaster management strategies in Nigeria.

It can be argued that CBOs, private individuals, family and friends, and religious bodies as used in the studies of Adelekan (2016) and Soneye (2016) are all social contacts and can be broadly classified as the community of first responders when disasters occur, while NGOs/CSOs and corporate organisations can be grouped as non-government external institutions. In summary, support from community and her derivatives were highest, the findings of Adelekan (2016) and Soneye (2016) underscore the importance of community and give credence to global best practices in disaster management (in the Nigerian context) that emphasises the need to encourage community participation in disaster management. Institutionalising a paradigm shift that empowers the community as first responders is likely to pay off in Nigeria.

Strengthening community-based organisations to take the lead and coordinate disaster management in

Nigeria: Community-based organisations aimed at sustainable development of communities are becoming more popular in Nigeria and are generally referred to as “Community Development Association” (CDA). The roles of these CDAs have been documented to include; sponsor trainings, raising fund for and financing community projects (which may include construction of culverts and drainages, provision of social amenities such as water, health care, access roads, electricity etc), liaison with government, economic empowerment, cooperation with other organizations, mobilization of members, partnering with other organizations, security for community and government projects (Akinsorotan and Olujide, 2007; Abegunde, 2009; Ibem, 2009; Akpomovie, 2010; Shaibu, 2014 and Bamiwuye and Adisa, 2015). Abegunde (2009) noted that a community in Lagos built a primary school, bank, court hall, community hall, post office and opened up several roads and earned itself the best “Community-based organization award” in 1998. If Nigerian communities have delivered the aforementioned through self-help, it can be argued that with the right institutional framework, we would have more disaster resilient communities leveraging on the existing community development association. Thus, a paradigm shift to a bottom-top approach in disaster management in Nigeria is worthy of exploration.

Since governments have consistently failed to provide adequate security and social amenities to the citizenry (Anyadike, 2013; Uzoh, 2013; Azodo, 2014 and Nwangwu and Ononogbu, 2014). Many Nigerians do not depend solely on government for some amenities that in time past were the prerogative of government especially at urban centres. They spend fortunes to put these amenities in place. Not only are these amenities at risk to disasters that have consistently been poorly managed by the institutional framework, but their lives that are more important. This justifies the need for an alternative implementation strategy for the institutional framework for managing disasters in Nigeria. Furthermore, government is also combatting other critical challenges demanding immediate attention such as poverty; insecurity occasioned by insurgents, bandits, herdsmen crisis, hostage taking and kidnapping amongst others that can best be tackled by government and government alone. Reducing the burden on government by communities taking up the challenge to spearhead disaster management will be beneficial. The United Nations international strategy for disaster management defines a disaster in respect of a vulnerable community (van Niekerk, 2011). Bringing to fore the importance of community in this definition, since the focus of disaster risk management is not managing the disaster

after occurrence; vulnerable communities can leverage on their strengths to reduce the chances of a hazard becoming a disaster through self-help. They can equally increase their adaptation and coping capacity and put in place machinery to hasten recovery from disaster if their efforts aimed at disaster prevention fail. Disaster management efforts in Nigeria have been more dependent on government. Studies have however shown that victims have relied more on individual strengths and social contacts which may not be equally distributed and can lead to haphazard or disorganised delivery of support that in some cases may increase the sufferings of some victims. Harnessing community knowledge, skills and resources in managing disasters communally have rarely been formally explored. Evidence from the foregoing suggests that great feats could be achieved if communities are reoriented to understand that they are the primary victims and thus, first responders to disasters and should therefore be prepared to tackle the challenge in unison by harnessing local strengths and capacities. The current framework provides for the establishment of community structures that are well informed and empowered to take charge of Disaster Management activities at the Local government level while support is provided from the state and national emergency management agency (NEMA, 2010). The framework recognizes the need to empower at-risk communities to be participants in disaster management and not initiators. However, following best practices in disaster management, at-risk communities should be empowered to initiate and implement disaster management programmes while they seek aid from NGOs and CSOs and government plays the supervisory role, providing technical support through relevant agencies and departments. The supervisory role of government cannot be deemphasised. As communality itself can be detrimental to sustainable disaster management since it is capable of promoting ethnic bigotry (Ogbujah, 2014) which can encourage transfer of the hazard from one community to another (Jha *et al.*, 2012). This paper acknowledges several challenges limiting effective and efficient disaster management as highlighted in previous studies (Nkwunonwo *et al.*, 2015; Adelekan, 2016; Oladokun and Proverbs, 2016 and Olanrewaju *et al.*, 2019), but argues that many of these challenges can be better addressed if the victims of disasters are at the forefront in managing their vulnerabilities and risk. This paper therefore suggests the need for empirical studies that will encourage and evaluate the performance of community-based disaster management in Nigeria.

The focus of empirical studies may be divided into three as proposed in Jha *et al.* (2012) as follows;

1. Pre-disaster activities: Communities can initiate activities such as orientation programmes, providing effective early warning, waste management, construction and maintenance of drainage systems, hazard mitigation and enforcement of sustainable practices. In mitigating the hazard, nature based solutions have proven to be effective, affordable, ecofriendly and in most cases community-driven (Miles *et al.*, 2021). They may be slow, thus may not achieve immediate results, and may require more technical expertise or an interdisciplinary approach because of the complex nature of the working relationships between various components of the environment, they have proven to pay off in the long run.

2. Disaster Response: Studies should equally determine how communities can be deliberate about leveraging on local strengths and capacities to respond and give relief by planning evacuation and rescue, plan safe havens and relief camps, prepare to provide food, clothing and other relief materials.

3. Disaster Recovery: Communities can equally be strengthened to plan quick and more resilient recovery after the event of a disaster.

In the long run, benefits from community-based strategies for disaster management are not likely to be limited to hazard and disaster management but on a larger scale the ecosystem and entire environment. Recall that environmental management is interdisciplinary and collective responsibility with every individual as a relevant stakeholder.

Conclusion: This paper has established that the institutional approach to disaster risk management has not increased Nigerians capacity to prevent and respond to disasters better than pre-institutional arrangement. Vulnerable communities still suffer similar fates of becoming victims of circumstances they could have improved given the right orientation, knowledge and skill. While a paradigm shift in disaster management can draw attention to the strengths and opportunities in communal efforts, applying this strategy to disaster management could spur communities to apply to other aspects of environmental management thus building a more resilient and sustainable ecosystem. However, the limitations must be emphasized to caution against abuse or misuse.

Declaration of Conflict of Interest: The authors declare no conflict of interest

Data Availability Statement: Data are available upon request from the corresponding author.

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