

Governance Deficits and Flood-Induced Livelihood Vulnerability in Coastal Communities of Ogbia LGA, Bayelsa State (2013–2023)

¹Apiri, D. A., ¹Dollah, O. C., ¹Gobo, A. E

¹Institute of Geosciences and Environmental Management,
Rivers State University Nkpolu-Oroworukwo
Port Harcourt, Rivers State, Nigeria

Corresponding Email: osademe.dollah@ust.edu.ng
/ david.azibalu@ust.edu.ng

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Abstract

This research investigates Governance deficiencies and livelihood vulnerability induced by floods in coastal communities of Ogbia LGA, Bayelsa State (2013–2023) utilizing a descriptive mixed-methods approach. The study merges household surveys (n = 400), in-depth interviews, and field observations to evaluate the impact of institutional shortcomings on flood management and socio-economic conditions. The evaluation of data was conducted through descriptive statistics and ordinal logistic regression, while qualitative findings were thematically analyzed through a multi-level governance lens. The results highlight significant challenges in governance related to flood management. Findings indicate that drainage systems are generally insufficient, poorly maintained, and often blocked by waste, sediment, and improper construction practices, with an average perception rating of 1.87, reflecting deep dissatisfaction with maintenance efforts. Observations in the field further indicate that many communities lack operational drainage systems, functioning only partly during rain events. There is a lack of institutional cooperation, marked by disjointed communication among local, state, and emergency services, a lack of unified flood databases, and the sidelining of traditional entities in formal decision-making roles. Financial assessments show no established budget for floods, delayed funding disbursements, and insufficient technical resources and tools, with merely one overwhelmed disaster officer overseeing flood-related tasks. On the socio-economic front, 70.3% of households faced income declines surpassing one month, while 84.2% and 80.0% reported damage to agricultural land and fishing resources, respectively. A mere 21.8% of households managed to recover within three months, and 13.9% did not recover at all, signaling prolonged economic injury. Adaptive strategies included borrowing (49.2%), selling assets (37.4%), diminished food consumption (41.1%), and migration (25.8%), indicating adaptations made under duress. Health issues such as malaria, diarrhea, and psychological distress were common. Regression analysis affirms that institutional capacity has a substantial impact on recovery duration ($p < 0.05$), with enhanced funding ($OR = 0.410$), technical skills ($OR = 0.567$), and equipment accessibility ($OR = 0.502$) decreasing the chances of extended recovery. The research concludes that flooding incidents in Ogbia LGA are chiefly driven by governance failures, recommending the establishment of integrated flood governance frameworks, improved institutional resources, and dedicated funding strategies to boost resilience and support recovery of livelihoods.

Keywords: *Governance, Deficits, Flood, Livelihood, Vulnerability, Coastal & Communities*

Introduction

Flooding continues to be a significant environmental and socio-economic issue impacting coastal populations in Nigeria, especially in the Niger Delta area where low ground levels, inadequate drainage systems, and rapid urban expansion heighten susceptibility to flooding. In the Ogbia Local Government Area (LGA) of Bayelsa State, repeated flood incidents from 2013 to 2023 have consistently interrupted daily life, harmed infrastructure, and increased the vulnerability of households. Nevertheless, emerging data indicates that the intensity of flooding effects in these regions is not merely attributed to natural water flow dynamics, but is heavily influenced by governance frameworks, institutional strengths, and the success of policy enactment (UNDRR, 2015; Aerts et al., 2018).

Even with the presence of both national and state-level disaster management strategies, including the National Disaster Management Framework (NDMF), the outcomes related to flood management in Ogbia LGA continue to be ineffective. This ineffectiveness arises from inadequate institutional collaboration, insufficient funding, weak enforcement of land-use policies, and limited technical skills at the local governance level. Drainage systems primarily do not function, waste management is poorly supervised, and urban growth persists in vulnerable areas without proper regulations. These governance shortcomings indicate that flood risks in this region are a product of institutional structure rather than natural occurrences, pointing to significant lapses in environmental planning and institutional agility (Pelling, 2003; Cutter et al., 2008).

At the individual household level, these governance weaknesses lead to serious socio-economic repercussions. Floods frequently devastate agricultural land, fishing resources, and small businesses, resulting in extended periods of income loss, food insecurity, health issues, and educational disruptions. Observations indicate that many families face lengthy recovery times or struggle to completely regain their footing after flooding episodes, perpetuating cycles of poverty and vulnerability. Such results align with global findings that climate-induced disturbances accentuate disparities and confine at-risk groups in continuous hardship when institutional assistance is lacking (Hallegatte et al., 2017; World Bank, 2017; IPCC, 2022).

While there are policies aimed at reducing disaster risks, their success in Ogbia LGA is limited by poor execution capacity, inadequate funding sources, and insufficient involvement of local stakeholders such as traditional institutions and community-based organizations. This gap between the creation of policies and their implementation highlights the critical need to evaluate how governance systems affect both the exposure to flood risks and the resulting effects on livelihoods within the area of study.

Consequently, this research is conducted to investigate governance shortcomings and the vulnerability of livelihoods due to flooding in the coastal communities of Ogbia LGA from 2013 to 2023. It specifically aims to: (i) pinpoint the governance obstacles that impede efficient flood management, (ii) evaluate the socio-economic impact of governance shortcomings on households, and (iii) examine how institutional capacity influences the duration of livelihood recovery following flooding. Through addressing these aims, the study aspires to produce empirical data that can guide more effective flood governance, bolster institutional capacity, and elevate resilience among at-risk coastal communities.

Methodology

This research employs a descriptive research design to offer a methodical and evidence-based overview of governance frameworks, institutional setups, and flood management strategies within Ogbia Local Government Area (LGA) in Bayelsa State. The reason for choosing this design lies in the aim to analyze current situations without altering any variables, which allows for a true depiction of practical governance interactions. Flooding in Ogbia LGA is viewed not just as a physical threat, but as a governance issue influenced by the relationships between federal, state, local, and community stakeholders. The descriptive strategy supports a thorough examination of these relationships, focusing on the processes involved in policy creation, coordination, execution, and grassroots-level effects. The research is grounded in a multi-level governance framework that acknowledges effective flood management relies on coordination both vertically, among national, state, and local bodies, and horizontally, between local institutions, traditional leaders, and civil society groups. This analytical perspective is woven throughout the study to identify governance weaknesses such as fragmented institutions, inadequate capacity, and low levels of community engagement. Additionally, the design incorporates mixed methods, fusing quantitative survey data with qualitative information derived from interviews and field observations. Quantitative data provide quantifiable indicators regarding the frequency and intensity of floods, as well as their socio-economic impacts, while qualitative information sheds light on institutional obstacles and difficulties in policy execution. Direct observations further enhance these methods by presenting tangible evidence of environmental conditions and community reactions. The research utilizes both primary and secondary data sources to guarantee broad coverage and methodological triangulation. Primary data is gathered directly from participants across four governance levels, including households, local government representatives, traditional institutions, and civil society members engaged in flood management efforts. The data collection timeframe is limited to 2013–2023 to maintain relevance and consistency in temporal analysis. Surveys conducted in households form the main source of quantitative information, focusing on adult individuals residing in selected communities like Otuoke, Okodi, Ologi, and Anyama. These surveys gather data on flood events, including how often they occur and their intensity, in addition to their effects on livelihoods such as agriculture, fishing, and small-scale trading. Information regarding damage to infrastructure, access to early warning systems, availability of relief services, and views on governance effectiveness is also obtained. Key informant interviews yield qualitative insights from individuals with substantial institutional knowledge, such as local government officials, community leaders, and representatives from non-governmental and community organizations. These discussions delve into governance structures, coordination processes, and operational issues that have emerged over the decade of study. Direct observations made during field visits record environmental circumstances, including drainage systems, housing modifications, waste management practices, and local mitigation strategies, thereby corroborating self-reported information. Secondary data sources consist of official government documents, scholarly articles, publications from international organizations, and reliable media sources. Official records from both federal and state departments supply contextual information regarding policies and institutions, while research that has been peer-reviewed provides both theoretical frameworks and practical insights related to flood management and reducing disaster risks. Publications from international entities deliver standardized information and comparative analyses, especially concerning significant flooding incidents reported in the years 2012, 2018, and 2022. Media outlets and grey literature play a role in developing timelines of flood occurrences and capturing

experiences at the community level. Each secondary source is thoroughly assessed for its credibility and relevance, with a preference for current and validated information. The population targeted for the study consists of individuals living in Ogbia LGA, estimated to be 179,926 according to the national census conducted in 2006. With an application of an annual growth rate of 2.8 percent, the anticipated population figure for the year 2026 reaches around 312,521. The sample size, determined using Yamane's formula with a margin of error set at 5 percent, results in a calculation of 399.5, which is then rounded up to 400 respondents. This sample size is deemed statistically sufficient to ensure that findings are representative and applicable to a broader context. A multi-stage sampling method is utilized to correspond with the hierarchical governance framework in flood management. The initial step involves categorizing Ogbia LGA into communities that are vulnerable to flooding, such as Otuoke, Ologi, Okodi, and Anyama. The selection of these communities is based on their historical instances of flooding from 2013 to 2023. Proportional allocation is utilized to distribute the total sample according to population estimates, resulting in 100 respondents each from Otuoke and Anyama, 124 from Okodi, and 76 from Ologi, culminating in a total of 400 respondents. In the subsequent stage, households are selected within each community through systematic random sampling. The intervals for sampling are established by dividing the estimated number of households by the designated sample size to guarantee comprehensive spatial representation. Multiple transects are incorporated to reduce the risk of clustering bias and to improve representativeness. The final stage entails purposeful sampling of key informants based on their positions in flood governance. Approximately 15 to 20 informants are chosen from various levels of governance, which include local government officials, state agency representatives, traditional authorities, and members of civil society. This strategy guarantees access to specialized insights and facilitates a thorough qualitative analysis. Data is gathered through household surveys, interviews with key informants, and direct observations. Structured questionnaires are presented to 400 participants via face-to-face interviews, each lasting around 20 to 30 minutes. The surveys take place in the dry season to improve accessibility and reduce logistical challenges. Participants share details about their experiences with flooding, socio-economic effects, and their views on governance from the years 2013 to 2023. Semi-structured interviews are held with key informants to gain in-depth perspectives on institutional functioning and governance difficulties. Each session lasts from 45 to 90 minutes and is recorded with permission. The interview framework emphasizes coordination strategies, resource limitations, shortcomings in policy execution, and community involvement. Direct observations are conducted with a structured checklist to capture environmental conditions and infrastructure in areas prone to flooding. These observations cover the quality of drainage, characteristics of housing, mitigation strategies, and signs of institutional intervention. The order of data collection starts with observations, followed by the surveys, and finishes with interviews, facilitating iterative refinement and confirmation of the findings. Three primary tools are utilized: a structured questionnaire, an interview framework, and an observation checklist. The questionnaire features both closed and open-ended questions addressing demographics, flood experiences, socio-economic effects, and perceptions of governance. The interview framework includes open-ended questions aimed at drawing out rich insights into institutional structures and policy execution. The observation checklist offers a systematic way to document environmental and infrastructural details. All tools are pilot tested within a non-sample community, with necessary modifications made to improve clarity and dependability. Quantitative findings are processed using Microsoft Excel, applying descriptive statistics such as frequencies, percentages,

averages, and standard deviations. These statistics highlight important variables such as the frequency and severity of floods along with socio-economic impacts. For inferential analysis, Pearson correlation and multiple linear regression are used to examine relationships between variables, with a significance threshold of $p < 0.05$. If applicable, ordinal logistic regression is deployed to model ordinal results like recovery periods. Qualitative insights from interviews and open-ended questions undergo thematic analysis. The transcribed materials are systematically coded and categorized into overarching themes that align with the multi-level governance framework, covering vertical coordination, horizontal coordination, institutional strength, policy alignment, and community engagement. NVivo software is employed to aid in organized coding and analysis. Observational findings are assimilated to corroborate and contextualize the results. The combination of quantitative and qualitative data is achieved via triangulation, which permits comparison and validation of evidence gathered from various sources. Statistical trends are examined alongside thematic insights to yield a thorough understanding of governance issues in flood management. This mixed-methods strategy bolsters the reliability and validity of the study's conclusions about flood governance in Ogbia LGA during the period from 2013 to 2023.

Results

Research Objective One: Identify the key governance challenges hindering effective flood management in Ogbia LGA.

Research Question One: What specific governance challenges hinder effective flood management in Ogbia LGA?

Table 1a: Governance Challenges Hindering Flood Management in Ogbia LGA (2013–2023) – Part 1

Governance Dimension	Specific Indicator/Theme	Observation / Finding (Quantitative + Qualitative Evidence)	Source Type
Infrastructure & Drainage Deficits	Condition of drainage systems	Mean perception score: 1.87 (SD = 0.92), indicating strong disagreement that LGA maintains drains regularly	Household survey
	Drainage presence & functionality	Partial or absent drainage in most communities; only Okodi had some constructed drains; most systems non-functional during rainfall	Field observation
	Blockages (solid waste)	Severe in Otuoque and Okodi; moderate in Ologi and Anyama due to plastic waste accumulation	Field observation
	Siltation and sedimentation	Severe in Otuoque and Anyama; moderate in Ologi and Okodi	Field observation
	Structural encroachment	Buildings/fences obstructing drainage channels in 3 of 4 communities	Field observation
	Maintenance status	No evidence of recent drainage maintenance across all communities	Field observation
	Functional performance	Most drainage systems non-functional or only partially functional during moderate rainfall	Field observation

	Key insight	Drainage systems are structurally inadequate, poorly maintained, and frequently obstructed, worsening flood severity	Interview synthesis
Inter-Agency Coordination	Vertical coordination (NEMA–BYSEMA–LGA)	Delayed and fragmented communication; absence of integrated response system during 2022 floods	Key informant interviews
	Horizontal coordination (LGA departments)	Departments operate in silos; no unified flood management committee	Key informant interviews
	Data sharing	No integrated flood/household vulnerability database across agencies	BYSEMA interview
	Role exclusion	Traditional institutions excluded from formal planning despite frontline response roles	Traditional rulers
	Coordination outcome	Duplication of effort, delayed response, and coverage gaps	NGO + interview synthesis

Table 1b: Governance Challenges Hindering Flood Management in Ogbia LGA (2013–2023)
– Part 2

Governance Dimension	Specific Indicator/Theme	Observation / Finding (Quantitative + Qualitative Evidence)	Source Type
Resource & Fiscal Constraints	Budget allocation	No dedicated flood budget line; funding prioritised to salaries and administration	LGA officials
	Fund release pattern	Late and unpredictable fund disbursement affects preparedness	LGA officials
	Equipment availability	Absence of excavators, boats, rescue gear, and communication tools	LGA + NGO
	Staffing structure	Only one disaster officer with multiple responsibilities; no dedicated unit	LGA officials
	Technical capacity	Limited skills in hydrological analysis, risk assessment, and contingency planning	BYSEMA interview
	Fiscal dependency	Heavy reliance on state/federal transfers for flood response	LGA officials
	Key insight	Flood governance is structurally underfunded and operationally dependent on external support	Interview synthesis
Policy Implementation Gaps	Policy existence vs implementation	Policies exist (NDMF, state contingency plans) but weakly implemented at LGA level	LGA + BYSEMA
	Local adaptation	No localized contingency plan specific to Ogbia flood patterns	LGA officials
	Capacity constraint	Implementation limited by lack of staff, funding, and technical expertise	BYSEMA interview

	Policy coherence	Disconnect between federal/state frameworks and local execution	Interview synthesis
Land Use & Regulatory Enforcement	Building regulation enforcement	Weak enforcement; construction on floodplains and wetlands widespread	LGA + traditional rulers
	Land encroachment	Blockage of natural waterways due to uncontrolled development	Field observation
	Waste disposal enforcement	No effective enforcement; widespread dumping into drains and waterways	LGA + NGO
	Environmental health capacity	Lack of environmental officers for monitoring and enforcement	LGA officials
	Sand mining regulation	Illegal sand mining common; weak enforcement due to political interference	Traditional + LGA
	Governance constraint	Political protection of offenders undermines enforcement actions	Interview synthesis
Cross-Cutting Outcome	Overall governance effectiveness	Weak institutional coordination, inadequate infrastructure, poor enforcement, and chronic underfunding collectively exacerbate flood risk	Integrated analysis

Source: Field Survey, Field Observation, and Key Informant Interviews, 2026

Research Objective Two: Analyse the socio-economic implications of governance failures in flood management for coastal communities.

Research Question Two: How do governance failures in flood management affect the socio-economic livelihoods of coastal communities in Ogbia LGA?

Table 2a: Responses of Respondents on the socio-economic implications of governance failures in flood management for coastal communities.

Domain	Indicator / Theme	Key Findings (Quantitative + Qualitative Integration)
Livelihood Disruption	Income loss (>1 month)	70.3% (267 households) experienced income loss due to flooding, with fishing and farming households most affected due to destruction of productive assets.
	Livelihood asset damage	Farmland/crops (84.2%) and fishing equipment/fishponds (80.0%) suffered moderate to total loss, reducing income-generating capacity.
	Occupational vulnerability	Fishing (31.1%) and farming (18.9%) households disproportionately affected due to climate-sensitive livelihoods.
	Qualitative insight	Total loss of fishing nets, fishponds, and cassava farms led to reliance on casual labour and community support.
Livelihood Recovery	Recovery time	Only 21.8% recovered within ≤ 3 months; 46.3% took 4–12 months; 31.8% took >12 months; 13.9% never recovered.

Domain	Indicator / Theme	Key Findings (Quantitative + Qualitative Integration)
Coping Strategies	Long-term economic impact	Evidence of prolonged economic scarring and structural poverty among flood-affected households.
	Qualitative insight	Some households still recovering from earlier floods (2012–2018), with permanent asset loss and migration reported.
	Social support	61.6% relied on relatives/community assistance.
	Financial coping	49.2% borrowed money; 37.4% sold assets; 41.1% reduced meals per day.
	Migration & adjustment	25.8% temporarily migrated; 17.6% withdrew children from school.
	Institutional support	Only 23.4% received government/NGO assistance.
Food Security	Qualitative insight	Sequential coping strategy: borrowing → selling assets → reducing meals → migration.
	Food consumption reduction	41.1% reduced meals per day during flood periods.
	Nutritional outcomes	High risk of malnutrition, especially among children.
	Qualitative insight	Households relied on shared food and stored supplies; prolonged post-flood hunger reported.
Asset & Financial Loss	Household asset destruction	Loss of furniture, electronics, savings, and personal documents widely reported.
	Financial vulnerability	Lack of insurance and banking led to total financial wipeouts.
	Qualitative insight	Many households restarted “from zero” after losing lifetime savings.
Education Impact	School disruption	17.6% withdrew children from school during floods.
	Learning disruption	School closures and damaged infrastructure caused learning loss.
	Qualitative insight	Children fell behind academically; some permanently dropped out.

Table 2b: Responses of Respondents on the socio-economic implications of governance failures in flood management for coastal communities

Domain	Indicator / Theme	Key Findings (Quantitative + Qualitative Integration)
Health & Psychological Impacts	Health burden	Malaria, diarrhoea, and skin infections widely reported after floods.
	Mental health effects	Anxiety, depression, stress, and trauma commonly reported.
	Qualitative insight	Persistent fear during rainfall, emotional distress, and family breakdown reported.

Migration & Social Structure	Migration behavior	25.8% temporary migration; additional permanent migration reported qualitatively.
	Social fragmentation	Youth out-migration weakens labour force and community structure.
	Qualitative insight	Permanent relocation due to repeated flood exposure and livelihood loss.
Cross-Cutting Outcome	Poverty & vulnerability trap	Flood governance failures reinforce chronic poverty through repeated asset loss and income instability.
	Systemic interpretation	Flood impacts are cumulative rather than episodic, producing long-term socio-economic decline.

H0₂: Institutional capacity indicators have no significant effect on the time taken for households to recover livelihoods after floods.

Table 3: Ordinal Logistic Regression Results of Institutional capacity indicators have no significant effect on the time taken for households to recover livelihoods after floods.

Predictor Variable	Coefficient (β)	Std. Error	Wald χ^2	p-value	Odds Ratio (OR)
Availability of funds (X_1)	-0.892	0.214	17.38	0.000	0.410
Technical capacity of LGA staff (X_2)	-0.567	0.198	8.19	0.004	0.567
Availability of equipment (X_3)	-0.689	0.201	11.74	0.001	0.502

Source: Field Survey, 2026

Table 3 outlines the results from the ordinal logistic regression that investigates the impact of institutional capacity indicators on the duration required for households in Ogbia LGA to regain their financial stability following flood incidents. The model incorporates three primary factors: fund availability (X_1), the technical expertise of local government staff (X_2), and the presence of necessary equipment (X_3). The findings indicate that all variables related to institutional capacity exhibit negative coefficients and are statistically significant at the 5% significance level. In detail, fund availability ($\beta = -0.892$, $p < 0.001$), technical staff capability ($\beta = -0.567$, $p = 0.004$), and equipment availability ($\beta = -0.689$, $p = 0.001$) each play a significant role in influencing the time needed for livelihood recovery. The odds ratios further reinforce the direction of impact, as they fall below 1 (0.410, 0.567, and 0.502 respectively), suggesting a decrease in the probability of extended recovery when there is an enhancement in institutional capacity. Practically, these negative coefficients indicate that improved institutional capacity correlates with quicker recovery of household livelihoods post-floods. For instance, an increase in fund availability leads to a 59% reduction in the likelihood of households facing extended recovery periods (OR = 0.410). Likewise, better technical personnel and equipment availability lower the chance of recovery delays by 43.3% and 49.8% respectively. This indicates that deficiencies in institutional capacity notably extend the recovery timeline for households affected by flooding. The null hypothesis (H_{02}) asserts that: Institutional capacity indicators do not significantly influence the duration for households to recover their livelihoods after flood occurrences. According to the findings detailed

in Table 3, all three predictors are statistically significant ($p < 0.05$). Hence, the null hypothesis is dismissed. The results present compelling empirical support that institutional capacity indicators have a significant effect on the time taken for livelihood recovery in Ogbia LGA. Specifically, insufficient funding, limited technical capability, and inadequate equipment lead to lengthened recovery durations for households impacted by floods. This highlights the necessity of enhancing institutional capacity at the local government level to foster quicker recovery of livelihoods following floods and to mitigate long-term socio-economic risks.

Discussion of Results

Governance Challenges Hindering Effective Flood Management in Ogbia LGA

The results from Objective One indicate that the management of flooding in Ogbia LGA is hampered by a combination of related shortcomings in institutions, infrastructure, finance, and regulations. The research indicates that the drainage systems are mainly insufficient, not well-maintained, and often blocked due to solid waste, sediment buildup, and uncontrolled urban development. Observations in the field suggest that many localities either completely lack effective drainage systems or have partially operational systems that fail during moderate rainstorms. This situation exemplifies a broader trend of infrastructural inadequacies typically found in areas with weak local governance concerning the environment, especially in regions vulnerable to flooding in developing countries. These results correspond with the Sendai Framework for Disaster Risk Reduction, which underscores that the risk of disasters is largely influenced by the vulnerability and poor upkeep of infrastructure, rather than merely the exposure to hazards alone (UNDRR, 2015). Likewise, Aerts et al. (2018) contend that unsuccessful drainage systems and insufficient urban water management practices significantly heighten flood risks, particularly in swiftly urbanizing areas facing limited institutional governance. The research also uncovered significant failures in coordination among various agencies, marked by disjointed communication between authorities in the LGA, state emergency services, and traditional governing bodies. The lack of cohesive flood risk databases and platforms for collaboration showcases institutional disunity. This observation aligns with Pelling's (2003) assertion that failures in governance relating to disaster risks often originate from the compartmentalization of institutions, where overlapping responsibilities and poor cooperation diminish the effectiveness of responses and increase vulnerability. Financial limitations further intensify governance issues, as the lack of specific flood-related budgets, slow disbursement of funds, and absence of necessary equipment greatly hinder capacity for preparedness and response. This echoes global findings indicating that effective disaster readiness heavily relies on reliable financial mechanisms and investment in local resources (UNDRR, 2015; World Bank, 2017). The noticeable absence of technical skills and a limited workforce in Ogbia LGA further illustrates gaps in institutional capacity that restrict successful risk management.

Ultimately, inadequate enforcement of land-use regulations, such as the invasion of floodplains and illicit sand extraction, reflects failures in environmental governance systems. Cutter et al. (2008) highlights that the potential for hazards to cause catastrophic outcomes increases when enforcement of regulations is weak and populations at risk are concentrated in danger zones. The evidence points to the conclusion that the flood risk encountered in Ogbia LGA is not mainly a natural event but rather a situation created by governance issues resulting from institutional fragmentation, poor enforcement, and insufficient investment in infrastructure and human resources.

Socio-Economic Implications of Governance Failures in Flood Management for Coastal Communities

The results identified in Objective Two reveal that deficiencies in governance regarding flood management result in significant and multifaceted socio-economic repercussions for families residing in Ogbia LGA. A prominent effect is the disruption of livelihoods, as 70.3% of families indicated an income decrease lasting beyond one month, along with the extensive devastation of agricultural land and fishing resources. This situation particularly impacts households engaged in agriculture and fishing, which are highly vulnerable to climate changes. These findings align with the report from the IPCC (2022), which states that flood occurrences increasingly jeopardize rural livelihoods due to asset destruction, decreased productivity, and enduring income instability. Likewise, Hallegatte et al. (2017) highlight climate-driven shocks, such as flooding, force at-risk households into temporary or persistent poverty caused by recurring asset losses and limited ability to recover. The research also indicates that recovery periods are prolonged, with merely 21.8% of families regaining stability within three months, whereas 13.9% stated they have never recovered. This points toward enduring economic damage, wherein repeated flooding hampers the complete recovery of livelihoods. Such findings resonate with the vulnerability trap concept, elucidating how continuous shocks hinder households from restoring their productive capabilities, which in turn perpetuates cycles of poverty (World Bank, 2017). The coping strategies noted in the study—such as borrowing money, selling assets, decreasing food consumption, and migrating—suggest mechanisms of adaptation driven by distress. Comparable trends are noted in disaster research, where households resort to adverse coping tactics when there is a lack of institutional support (IPCC, 2022). The inadequate level of institutional help, at 23.4%, further highlights the ineffective governance response. The study also points to issues of food insecurity, health effects, and mental distress. The occurrence of malaria, diarrhea, and skin infections corresponds with established research showing that flood conditions raise the risk of exposure to both waterborne and vector-borne illnesses (IPCC, 2022). Furthermore, the psychological stress, anxiety, and trauma encountered in the research align with broader evidence indicating that exposure to disasters can significantly impact mental health outcomes (WHO, 2020).

Disruptions in education and the withdrawal of children from schooling illustrate the long-term, intergenerational impacts of failures in flood governance. Such disruptions contribute to lasting deficits in human capital, which reinforce inequality and the persistence of poverty. The socio-economic insights reveal that deficiencies in governance regarding flood management foster accumulative and compounding vulnerabilities that affect income, health, education, and social cohesion. Rather than being isolated incidents, floods in Ogbia LGA act as ongoing stressors that exacerbate structural poverty.

Institutional Capacity and Livelihood Recovery after Floods

The regression analysis results (Table 3) validate that the capacity of institutions plays a crucial role in determining how long it takes for households to recover their livelihoods following flooding events. All three factors—availability of funds, technical expertise, and access to equipment—were found to be statistically significant ($p < 0.05$) with negative coefficients, suggesting that enhanced institutional capacity shortens recovery time. This conclusion aligns with the existing literature on disaster risk governance, which underscores that financial resources and institutional preparedness are vital factors influencing the speed of recovery in the aftermath of disasters (UNDRR, 2015). The World Bank (2017) similarly observes that prompt financial support and

institutional readiness greatly diminish delays in post-disaster recovery and associated economic impacts. The technical abilities of local organizations significantly influence how effectively they can respond to disasters. The absence of adequately trained experts in areas such as hydrological evaluation and emergency strategy, as shown in the research, aligns with observations made by Pelling (2003), stating that insufficient technical skill within local governmental frameworks results in slow recovery and poor risk management. The importance of having access to necessary equipment, such as boats, rescue gear, and communication devices, further strengthens the idea that being well-equipped is crucial for quick responses and recovery efforts. Aerts and colleagues in 2018 emphasized that the foundational infrastructure for physical readiness is vital for robust flood resilience systems. The dismissal of the null hypothesis (H_0) verifies that the institutional capabilities are both statistically significant and practically influential factors in the time required for livelihood recovery among communities impacted by flooding.

Conclusion

The investigation reveals that the management of floods in Ogbia LGA is significantly limited by ingrained governance shortcomings rather than solely due to environmental conditions. Evidence gathered indicates that poor drainage systems, ineffective coordination among agencies, lack of funding, inadequate technical skills, and weak enforcement of land management rules collectively heighten flood risks within coastal areas. These institutional deficiencies have transformed flooding from an occasional natural disaster into an ongoing risk stemming from governance failures. The socio-economic assessment further illustrates that these governance issues inflict severe and cumulative effects on the livelihoods of households. A considerable number of households experience extended income reductions, loss of productive assets, food scarcity, health issues, and mental health strains. The process of recovery is sluggish and inconsistent, with many households unable to fully recuperate even after several years, highlighting prolonged economic distress and entrenched cycles of poverty. Interruptions in education and changing migration trends further signify the long-lasting effects of flood exposure across generations. The statistical analysis offers strong confirmation that the capacity of institutions has a significant impact on the time required for livelihood recovery. Specifically, increased availability of funds, technical knowledge, and the provision of necessary equipment notably shorten recovery times ($p < 0.05$), whereas deficiencies in these areas extend economic challenges. As a result, the null hypothesis was dismissed, strengthening the conclusion that institutional capabilities are essential factors in determining recovery results after floods in Ogbia LGA.

Recommendations

1. The governmental bodies at the local government area, state, and national levels should create a cohesive flood management structure that encompasses real-time data exchange, coordinated response strategies, and the incorporation of traditional entities and community participants. This will help lessen redundancy, enhance early warning systems, and improve the synergy among institutions.
2. Specific budget allocations for flood management should be implemented at the LGA level, along with mechanisms for timely allocation of funds. Additionally, personnel should receive training in evaluating hydrological risks, emergency preparedness, and disaster response, while necessary equipment (such as boats, drainage machinery, and communication devices) should be supplied to boost operational efficiency and minimize recovery duration

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