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How Overlapping Authority Creates Fragmented Outcomes: An Assessment of Flood Management Architecture in Bayelsa, Nigeria

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ABSTRACT
The dynamism of floods and flooding, preparedness and response, usually require multi-stakeholder/multi-level cooperation. However, persistent role fragmentation and inter-agency competition can undermine collective action. This paper examines multi-stakeholder relations around environmental governance frames and flood response in Bayelsa State, one of the most flood-vulnerable states in West Africa. The paper proceeds by assessing how formal legal mandates translate, or fail to translate into operational flood preparedness and management. Drawing on qualitative document and policy analysis, official disaster assessments, fiscal data, and peer-reviewed scholarship, and interpreted through Wright's overlapping-authority model of intergovernmental relations, the paper argues that Bayelsa's principal governance challenge is an implementation deficit rooted in weak coordination, inadequate prevention finance, and insufficient community-level action thresholds, despite a comparatively well-developed statutory foundation. The 2022 floods, which affected 99.3 per cent of surveyed households and displaced 67.8 per cent, illustrate the consequences of this deficit. The findings of paper are organised around three themes that show i. formal legal clarity at state level coexists with substantial gaps in fiscal predictability, ii. Dynamics of operational coordination, and iii. The nature and impact of locally tailored early warning. The paper concludes that state's flood governance architecture requires a prevention-oriented reorientation of existing institutions rather than the creation of additional statutory bodies.

Keywords: Flood response, Vulnerability, Cooperation, disaster risk reduction, environmental governance, Niger Delta

INTRODUCTION

Nigeria's experience with flood governance fragmentation is not unique among federal developing states exposed to hydrological risk. Federal systems that assign environmental and disaster functions across multiple governmental tiers face a recurring design problem, namely that the technical scale of hazard monitoring often sits most efficiently at the national level while the practical burden of prevention and response falls on local administration. What distinguishes Bayelsa, and what makes it a particularly instructive case for testing Wright's overlapping-authority model, is the combination of severe and worsening physical exposure with a comparatively well-developed statutory foundation, a pairing that isolates implementation, rather than legal design, as the central governance variable requiring explanation. Flooding is the most damaging and recurrent natural disaster in Nigeria, affecting communities across 34 states in 2022 alone, claiming more than 600 lives, displacing approximately 1.4 million people, and generating estimated economic losses of approximately ₦4.2 trillion (Pelumi and Ogunwumi, 2026). No state illustrates the governance dimensions of this crisis more sharply than Bayelsa. Created on 1 October 1996 and occupying a heavily riverine and estuarine portion of the Niger Delta, Bayelsa confronts a combination of high seasonal rainfall, low elevation, saturated soils, river overflow, and tidal influence that makes flooding structurally recurrent rather than episodically exceptional (Bayelsa State Government, n.d.). Two thirds of the state are inundated for at least a quarter of every year (Idibhar and Ziprebor, 2024).

Managing that reality demands coordinated action across federal, state, and local governmental levels. At present, the coordination falls persistently short.

The central problem in Bayelsa's flood governance is not an absence of legal mandates. The Bayelsa State Emergency Management Agency Law of 2012 establishes a multi-sectoral state coordination body and provides for a local government emergency committee in each of the eight local government areas. The National Emergency Management Agency Act, the National Disaster Management Framework, and the Sendai Framework for Disaster Risk Reduction 2015 to 2030, to which Nigeria has committed, create a further layered policy architecture (National Emergency Management Agency [NEMA], 2010, 2013; NEMA, 2024). What the system lacks is operational coherence. Danhassan et al. (2023) find that Nigeria has no single flood policy and that flood-relevant institutions exhibit insufficient coordination. Ogunkan (2022) similarly concludes that Nigerian environmental governance is weakened by ineffective implementation, poor participation, and fragmented institutional arrangements. These diagnoses fit Bayelsa precisely.

This paper contributes to the literature on intergovernmental environmental governance in federal developing states in two ways. First, it synthesises legal, fiscal, and operational evidence on Bayelsa flood governance, much of which has previously been assessed sector by sector, into a single analytical account organised around a formal theory of intergovernmental relations. Second, it evaluates that evidence against a specific and recent flood record, drawing particular weight from the joint National Bureau of Statistics, NEMA, and United Nations Development Programme household survey of the 2022 floods, the International Organization for Migration's post-flood report for 2024, and Bayelsa's 2026 approved budget, none of which had been jointly assessed in a single peer-reviewed account before this study. The paper proceeds in five further sections. Section 2 reviews the relevant literature and identifies the gap that justifies this investigation. Section 3 sets out Wright's overlapping-authority model as the paper's theoretical framework. Section 4 describes the method. Section 5 presents findings organised around four themes, drawing on comparative lessons from Lagos State, the Netherlands, and Bangladesh. Section 6 concludes.

Literature Review

Scholarship around flood governance in Nigeria can be thematized into four strands, addressing respectively the physical scale of flood risk, the legal and fiscal architecture of intergovernmental responsibility, the operational record of coordination and early warning, and comparative lessons from other flood-exposed jurisdictions. This section synthesises each strand before identifying the gap this paper addresses.

The first strand documents the scale and trajectory of flood risk in the Niger Delta. Watson et al. (2022, as cited in Idibhar and Ziprebor, 2024) observe that climate change heightens the variability of rainfall, creating greater flood risk in low-lying regions such as the Niger Delta, and Tosin-Orimolade et al. (2026) reports that rainfall intensity in the downstream Niger Delta rose by an estimated 15 to 20 per cent between 2018 and 2024, with inundated areas increasing from approximately 20 to 35 per cent of downstream zones over the same period. Idibhar and Ziprebor. (2024) link this trajectory directly to underdevelopment outcomes in Bayelsa State, while Echendu (2020) situates recurrent Nigerian flooding within the country's broader difficulty in meeting its Sustainable Development Goal commitments. This strand establishes that Bayelsa's exposure is severe and worsening, but it says comparatively little about why governance responses have not kept pace.

A second strand addresses the legal and fiscal architecture assigning flood-related responsibility across governmental levels. The Fourth Schedule of the 1999 Constitution assigns local councils' responsibility for roads, drains, and sanitation, while the Bayelsa State Emergency Management Agency Law of 2012 creates a state coordinating body and mandates a local emergency committee in each local government area (Bayelsa State Government, 2012; Federal Republic of Nigeria, 1999). Yusuf and Monday (2025) observe that the tendency of Nigerian state governments to control the State Joint Local Government Account has historically undermined the ability of local councils to plan and execute service delivery functions independently, a constraint directly relevant to flood prevention spending. Danhassan et al. (2023) extend this diagnosis nationally, finding that Nigeria's disaster governance suffers from institutional fragmentation despite an increasingly dense policy architecture.

A third strand examines the operational record of coordination, early warning, and community-level preparedness. The joint NBS, NEMA, and UNDP household survey of the 2022 floods found that only 19.7 per cent of respondents across six surveyed states reported awareness of government alerts and only 8.3 per cent had evacuated before flooding occurred (NBS, NEMA, & UNDP, 2023). Fanama and Bang (2026), in a mixed-method study focused on Yenagoa, identify significant deficiencies in flood-risk communication

while demonstrating that communities possess their own knowledge and informal coping practices that formal systems rarely incorporate. Olawuyi (2025) argues, based on a national assessment of anticipatory action, that effective early warning must be tailored to the socio-economic and environmental context of specific communities rather than applied uniformly, a finding with direct implications for a state as geographically diverse as Bayelsa. Odubo (2023) adds a distributional dimension, finding that flooding in Southern Ijaw Local Government Area imposes disproportionate livelihood costs on women and fishing-dependent households.

A fourth strand draws comparative lessons from other flood-exposed jurisdictions. Nkwunonwo et al. (2016) documented long-standing weaknesses in flood data, public awareness, and mitigation knowledge in Lagos State, while noting that Lagos has nonetheless developed a visible emergency-response infrastructure that smaller states have not matched. Internationally, the Netherlands Delta Programme demonstrates the value of an annually renewed, multi-level planning cycle (Government of the Netherlands, n.d.), while Bangladesh's Delta Plan 2100 illustrates how a lower-middle-income delta state can integrate flood management into long-horizon development planning backed by a prioritised investment pipeline (World Bank, 2021). Okunola (2025), in a comparative study spanning five African countries including Nigeria, find that formal alignment with the Sendai Framework for Disaster Risk Reduction coexists with major implementation gaps at the community level across the continent, suggesting that Bayelsa's experience is representative of a wider regional pattern rather than an isolated failure. The Sendai Framework itself, to which Nigeria formally committed through the National Disaster Risk Management Policy of 2018, provides an additional evaluative reference for this strand of the literature, since its Priority 2 explicitly calls for disaster risk governance to be strengthened through clear institutional arrangements, legal frameworks, coordination mechanisms, and public accountability, criteria against which Bayelsa's operational record can be directly assessed (NEMA, 2024; Pelumi and Ogunwumi, 2026).

All four strands of the literature combine to establish that Bayelsa possesses a comparatively well-developed statutory foundation for flood governance, that its exposure is high and worsening, that its operational coordination and early warning performance fall well short of that statutory design, and that comparable jurisdictions offer transferable lessons at the level of institutional discipline rather than financial scale. What remains absent from the literature is a single account that evaluates these dimensions together, using a formal theory of intergovernmental relations to explain why legal clarity at one level of government does not automatically produce coordinated outcomes across all three. This is the gap the present paper addresses, using Wright's overlapping-authority model to organise the analysis of Bayelsa's flood governance record from 2012 to 2026.

Grounding Overlapping Authority and Intergovernmental Relations around Flood Management

This paper adopts Wright's overlapping-authority model of intergovernmental relations as its guiding theoretical framework. The model was developed by Deil S. Wright and set out across successive editions of Understanding Intergovernmental Relations, most fully in the third edition (Wright, 1988). Wright proposed three competing models of how governmental levels relate to one another. The coordinate-authority model depicts federal, state, and local governments as occupying separate and largely independent spheres of jurisdiction. The inclusive-authority model depicts local and state governments as hierarchically subordinate components nested entirely within federal authority. Wright's own contribution, the overlapping-authority model, rejected both alternatives in favour of a depiction in which federal, state, and local spheres share substantial areas of jurisdiction, exercise limited but real autonomy within that shared space, and depend on bargaining, negotiation, and resource exchange rather than strict hierarchy to coordinate action. Agranoff and Radin (2015), reviewing the model's continued influence three decades after its introduction, note that its central contribution was to move the field beyond static, formally defined descriptions of federalism towards a dynamic account of how actors across levels actually interact in practice.

Flood management is a paradigm case of overlapping authority. Hydrological monitoring and seasonal forecasting operate most efficiently at national scale, since river systems cross state boundaries and the technical infrastructure required exceeds what any single state can sustain independently. Yet the functions that determine everyday vulnerability, including drains, local roads, refuse removal, market sanitation, and evacuation, require local knowledge that national bodies cannot efficiently supply. Wright's model predicts that effective governance in such a domain depends less on which level formally holds legal authority, since Bayelsa's statutory architecture already assigns authority reasonably clearly, and more on whether the bargaining and resource-exchange relationships connecting those levels function well. Yusuf and Monday

(2025) reinforce this reading, identifying a tendency in Nigerian federalism for constitutional ambiguity to produce intergovernmental conflict precisely in areas of shared functional responsibility, the condition Wright's model treats as normal rather than exceptional.

The model has attracted an important critique concerning its scope. Agranoff and Radin (2015) observe that Wright's original three-level formulation was developed for an intergovernmental system with a comparatively small number of institutional actors, and that contemporary governance increasingly involves networks of public agencies, private contractors, and civil society organisations that the model's original vocabulary does not fully capture. This limitation is relevant to Bayelsa, where effective flood governance depends on the interaction of federal, state, and local government, and increasingly also on community-based organisations, traditional leadership structures, and, increasingly, international humanitarian agencies such as the International Organization for Migration. A second limitation concerns the model's relatively limited treatment of fiscal power as a distinct coordinating mechanism. Wright's framework describes overlapping jurisdiction well but says comparatively little about how one government's control over another's money, as occurs through Nigeria's State Joint Local Government Account, can convert formally shared authority into practical subordination.

Despite these limitations, the overlapping-authority model retains strong relevance for this study because it directs analytical attention to precisely the dimension where Bayelsa's flood governance most visibly falls short, namely the quality of bargaining, resource exchange, and coordinated action across governmental levels that share formal responsibility. Building on this framework and on Ogunkan's (2022) related diagnosis of Nigerian environmental governance, the paper evaluates Bayelsa's flood governance across five practical dimensions that operationalise Wright's model for the purposes of this study, namely legal clarity, administrative capacity, fiscal capacity, operational coordination, and accountability. Legal clarity identifies who should perform a function. Administrative capacity supplies the personnel, equipment, data, and routines required to discharge it. Fiscal capacity provides predictable and traceable money before and after floods. Operational coordination makes warning, evacuation, response, and recovery compatible across institutions sharing overlapping authority. Accountability permits legislatures, auditors, communities, and other governmental levels to determine whether shared authority produced measurable risk reduction. Each dimension is assessed independently in the findings that follow, since strength on one, as Bayelsa's legal architecture demonstrates, does not imply strength on the others, and the overlapping-authority model's central insight is precisely that formal jurisdictional clarity and effective coordinated governance are analytically distinct achievements that a single statute cannot guarantee together.

METHOD

This paper adopts a qualitative document and policy analysis design combined with descriptive statistical evidence, an approach suited to a research question concerned with institutional structure, fiscal architecture, and disaster response performance rather than individual behaviour or attitudes. The evidence base includes constitutional and statutory materials, principally the 1999 Constitution as amended and the Bayelsa State Emergency Management Agency Law of 2012, official disaster assessments from BYSEMA, NEMA, the National Bureau of Statistics, the United Nations Development Programme, and the International Organization for Migration, state and federal budget documents, hydrological publications from the Nigeria Hydrological Services Agency, and peer-reviewed studies published predominantly from 2012 onward. Particular analytical weight is given to the joint NBS, NEMA, and UNDP household survey of the 2022 floods, since it is the most methodologically rigorous and geographically comprehensive dataset available for the study period, to the IOM's Joint Post-Flood Situation Report for 2024, and to Bayelsa's 2026 approved budget.

Documentary evidence was analysed thematically against the five dimensions derived from Wright's overlapping-authority model, namely legal clarity, administrative capacity, fiscal capacity, operational coordination, and accountability. For each dimension, the analysis first establishes the formal position, then assesses the documented operational record against that position, and finally traces the consequence for flood outcomes reported in the available evidence. This sequencing mirrors the logic of the overlapping-authority model itself, since Wright's framework treats formal legal assignment as only the starting point for understanding intergovernmental performance, with the substantive question being whether bargaining and resource exchange across levels convert that formal assignment into coordinated action. Administrative and household survey figures are reported separately rather than combined, since they employ different units, reference periods, and measurement procedures, and mechanically summing them would produce a

misleading composite. Where independent sources report similar findings using different methods, this is treated as triangulation strengthening confidence in the finding; where sources diverge, the divergence itself is reported as evidence of the data fragmentation problem. The principal limitation of this method is that it relies on secondary and administrative sources rather than primary household-level data collection, which means the paper cannot independently verify agency-reported figures, a constraint that is itself analytically informative given the paper's finding that data fragmentation is a governance weakness in its own right.

FINDINGS

This section presents findings organised around four themes derived from the dimensions set out earlier. Each theme first establishes the formal position, then the operational record, and finally the consequence for flood governance outcomes.

Flood Risk, Exposure, and the Record of Disaster

Bayelsa occupies approximately 10,773 square kilometres of riverine and estuarine terrain in the central Niger Delta. Its eight local government areas range from the expanding urban centre of Yenagoa to deeply rural, river-dependent communities in Southern Ijaw, Sagbama, and Ekeremor, where waterways remain the principal means of transport. National Bureau of Statistics projections placed the state's population at 2,394,725 in 2019, and a continuation of the implied annual growth rate of approximately 2.3 per cent yields an indicative 2026 population of roughly 2.81 million (National Bureau of Statistics [NBS], 2021). This extrapolation is analytical rather than an official estimate, but it signals that flood planning must now account for a substantially larger population than official projections reflect.

The flood record since 2012 provides the principal empirical basis for evaluating governance performance. The 2012 national flood affected approximately seven million people, displaced 2.1 million, and caused 363 deaths across Nigeria, with Bayelsa among the most severely affected southern states (United Nations Office for the Coordination of Humanitarian Affairs, 2012). Flooding in 2014, 2018, and 2020 confirmed recurrence, with large farm losses among fishers and farming cooperatives in 2018 particularly notable. The 2022 flood season produced the strongest evidentiary record currently available. The joint NBS, NEMA, and UNDP assessment surveyed households across six states and found that 99.3 per cent of surveyed Bayelsa households experienced an impact under its broad overall-impact measure, the highest share among all six states, and that 67.8 per cent of surveyed households reported displacement, again the highest among the states surveyed (NBS, NEMA, & UNDP, 2023). BYSEMA's administrative count placed the total number of people affected at approximately 1.5 million across all eight local government areas, with roughly 1.2 million displaced, 96 deaths confirmed, and some 300 communities affected (The Guardian, 2023). The discrepancy between BYSEMA's administrative count and the household survey reflects differences in unit, date, and measurement procedure rather than error by either source, underlining the need for a permanent, definition-consistent event database in the state.

Housing and livelihood losses added further depth to the 2022 disaster. Some 36.2 per cent of surveyed Bayelsa households reported complete housing impact and 43.1 per cent reported partial impact, leaving only 20.7 per cent in an unaffected category, with average reported house damage of approximately ₦444,836. Only 30.2 per cent of respondents whose employment or business had been disrupted reported recovery by the survey period (NBS, NEMA, & UNDP, 2023). Studies of yield losses in Niger Delta staple crops, including rice and cassava, estimate damage as high as 70 per cent in severely affected growing seasons (Sani and Wibowo, 2026). The 2024 flood season demonstrated continued large-scale displacement, with the IOM's Joint Post-Flood Situation Report recording 35,587 displaced people and 703 returnees as of 10 December 2024 (International Organization for Migration [IOM], 2024). This figure confirms that recurrent displacement is a structural feature of Bayelsa governance, rather than a residual consequence of one exceptional event.

Table 1: *2022 Flood Impact on Surveyed Bayelsa Households, Compared with the Six-State Survey Average*

Measure	Bayelsa	Six-state average
Households reporting overall impact	99.3%	—
Households displaced	67.8%	—
Households reporting complete housing impact	36.2%	—
Households reporting partial housing impact	43.1%	—
Average reported house damage	₦444,836	—
Respondents reporting livelihood/business recovery by survey period	30.2%	—

Households aware of government flood alerts	—	19.7%
Households that evacuated before flooding occurred	—	8.3%
Households reporting no support received during the floods	—	89.6%

*NB: Bayelsa-specific figures and the six-state averages are reported as published; the survey did not release Bayelsa-only figures for the alert-awareness, evacuation, and support items, hence the dashes.
Source: NBS, NEMA, & UNDP (2023).

Legal, Institutional, and Fiscal Responsibilities

Nigeria operates a federal system comprising the Federal Government, 36 states, and 774 local government areas, with the 1999 Constitution distributing legislative competence across an exclusive federal list and a concurrent list on which both federal and state legislatures may act, while the Fourth Schedule assigns local councils specific functions including the construction and maintenance of roads, streets, and drains, refuse disposal, and public conveniences (Federal Republic of Nigeria, 1999). At state level, the Bayelsa State Emergency Management Agency Law of 2012 provides the most detailed statutory foundation for flood management, establishing BYSEMA as a corporate body with a governing council chaired by the Deputy Governor and drawing membership from commissioners responsible for environment, health, social development, transport, water resources, works and infrastructure, agriculture, and housing (Bayelsa State Government, 2012). Critically for intergovernmental relations, the Law also requires a Local Government Emergency Management Committee in each of the eight local government areas, chaired by the local vice-chairman and tasked with notifying BYSEMA of disasters, implementing recommended measures, and accounting to BYSEMA for funds received.

This statutory design anticipates a coordination model in which emergency management connects to the sectors that create or reduce flood exposure throughout the year, not only during a crisis, precisely the overlapping-authority pattern that Wright's model predicts for a shared functional domain. The administrative weakness lies in converting nominal council membership into shared work programmes, jointly financed projects, and common performance metrics. Public documentation of standing work across all eight local emergency committees remains sparse, meaning the formal design is considerably more developed than the observable operating system. Federal responsibilities reinforce the state framework without replacing it. NEMA coordinates disaster preparedness and response at national level, the Nigeria Hydrological Services Agency produces annual flood outlooks from more than 250 monitoring stations nationally (Nigeria Hydrological Services Agency [NIHSA], 2026), and ecologically funded disaster finance flows through a constitutional arrangement allocating 2.32 per cent of federation revenues to ecological and disaster purposes (NEMA, 2022a).

Table 2: *Bayelsa Flood Governance: Fiscal and Displacement Indicators, 2023–2026*

Indicator	Figure	Source
Bayelsa State approved budget, 2026	₦1.02 trillion	Bayelsa State Government (2025); Open Nigeria States (2026)
Works and Infrastructure allocation, 2026	₦298.6 billion	Bayelsa State Government (2025); Open Nigeria States (2026)
BYSEMA appropriation, 2023 (most recent confirmed)	₦1 billion	Bayelsa State Ministry of Finance (2023)
People displaced, 2024 flood season (as of 10 December 2024)	35,587 displaced; 703 returnees	IOM (2024)
Ecological/disaster fund share of federation revenues	2.32%	NEMA (2022a)

Note. ₦ = Nigerian naira.

Fiscal transparency presents a further constraint. Bayelsa's approved 2026 budget reached approximately ₦1.02 trillion, of which federation-linked sources constituted roughly 82.8 per cent, and Works and Infrastructure received ₦298.6 billion, vastly exceeding any discrete emergency management allocation recoverable from public sources (Bayelsa State Government, 2025; Open Nigeria States, 2026). The most recent year from which a specific BYSEMA allocation could be independently confirmed was 2023, when ₦1 billion was appropriated (Bayelsa State Ministry of Finance, 2023), and a current discrete BYSEMA line for 2026 could not be reliably extracted from the accessible public interface. This transparency gap makes it

impossible to distinguish money devoted to prevention and preparedness from money spent on post-disaster response and reconstruction. This fiscal opacity has been identified in this paper as an important extension of Wright's model, since one government's control over shared resources can convert formally overlapping authority into practical subordination, a dynamic the original framework does not directly predict.

Coordination Performance and Early Warning Failures

Bayelsa demonstrates a persistent gap between formal coordination and operational coordination. Formal coordination is clearly present, since BYSEMA's enabling law connects state sectors, local committees, and NEMA through a statutory architecture, and NEMA and BYSEMA conducted joint community assessments during the 2022 floods and further preparedness discussions in 2025 (NEMA, 2022b). These activities demonstrate institutional contact. Operational coordination requires substantially more, including common warning thresholds, pre-agreed evacuation authority, transport contracts, shelter managers, compatible damage-assessment forms, communications that function during power outages, and finance accessible before losses become catastrophic, all components of the bargaining and resource-exchange relationships that Wright's model identifies as the true test of overlapping authority.

The early warning chain is the most consequential gap. Across the six states surveyed in the 2022 to 2023 NBS, NEMA, and UNDP assessment, only 19.7 per cent of respondents reported awareness of government alerts and only 8.3 per cent had evacuated before flooding occurred, while approximately 89.6 per cent reported receiving no support during the floods (NBS, NEMA, & UNDP, 2023). Fanama and Bang (2026), in a mixed-method study focused on Yenagoa, similarly identify significant deficiencies in flood-risk communication and preparedness while demonstrating that communities possess their own knowledge and informal coping practices that formal systems could draw upon more effectively. These findings establish that forecast production cannot serve as the principal measure of a functioning early warning system, since a forecast that does not reach an exposed person in time, in a form they can interpret, paired with a feasible protective action, provides no protection.

The logistical diversity of Bayelsa's eight local government areas compounds this challenge. Yenagoa requires strong drainage inventories, urban waste control, and neighbourhood-scale flood communication, while more riverine local governments, including Southern Ijaw and Ekeremor, require boats, fuel, distributed shelters, water-safe communications, and the capacity to transport medicines and relief without assuming road access. Olawuyi (2025) argues that effective early warning must be tailored to the socio-economic and environmental contexts of specific communities rather than applied uniformly, an insight that applies directly to Bayelsa, where a single equipment package would fail communities whose flooding dynamics, infrastructure, and transport options differ substantially from one another. Data fragmentation compounds these coordination gaps, since even severe events such as the 2018 floods lack a readily accessible Bayelsa-wide ledger containing verified deaths, displacement, housing damage, infrastructure loss, agricultural losses, and public expenditure. The Sendai Framework's Priority 1 requires governments to understand disaster risk as a precondition for governing it, and systematic loss accounting is the mechanism through which that understanding is built and maintained (United Nations Office for Disaster Risk Reduction, 2015).

Social Vulnerability and Local Operational Capacity

Social vulnerability receives insufficient attention in the current governance design. Flood-affected households seek to protect livelihoods as much as lives, and in Bayelsa these include fish ponds, fishing equipment, boats, crops, stored food, small trading stock, and identity documents. Odubo (2023) reports severe impacts on farming and fishing among residents of Southern Ijaw and identifies women as among those experiencing particularly difficult flood conditions. An evacuation plan that counts available shelter floor area but overlooks safe water, sanitation, maternal health, and child protection will fail the most vulnerable residents while formally complying with preparedness requirements. Local emergency committees hold a considerable organisational advantage here, since they can map vulnerable residents, understand community social organisation, and identify individuals who cannot self-evacuate before the emergency period begins. That advantage remains unrealised where committees lack trained personnel and operating budgets.

Comparative Lessons from Lagos, the Netherlands, and Bangladesh

Three comparative cases illuminate the institutional directions that Bayelsa's reform could take, each testing a different dimension of the overlapping-authority framework. Lagos State offers the most applicable domestic comparison. Nkwunonwo et al. (2016) found long-standing weaknesses in flood data, public awareness, and mitigation knowledge in Lagos, so the state offers a partial rather than a complete model of success. Lagos has nonetheless developed a highly visible emergency-response infrastructure, including long-established public emergency numbers and recurring state-level drainage and sanitation programmes. The transferable lesson concerns institutional visibility and scheduling. Residents should know one permanent mechanism for reporting emergencies, and drainage should be treated as a scheduled public service with a published maintenance timetable rather than an activity triggered only by disaster proximity, though Bayelsa would need to adapt this model to account for greater reliance on water transport and more dispersed settlement patterns.

The Netherlands Delta Programme provides an international reference point at the scale of institutional design, though not at the scale of engineering or fiscal capacity. The Programme is updated annually and brings together central government, provincial and municipal authorities, water boards, civil society, and specialist organisations around three interconnected fields of flood protection, freshwater supply, and spatial adaptation (Government of the Netherlands, n.d.). The transferable lesson is the statutory, recurring nature of the planning cycle, since a programme updated every year, connected to a long-term investment pipeline and spanning multiple governmental levels, prevents the contraction of institutional knowledge and political attention that typically follows a major flood, the exact bargaining discipline that Wright's model identifies as necessary for overlapping authority to function well over time.

Bangladesh's Delta Plan 2100 provides the most relevant developmental comparison because Bangladesh is a lower-middle-income delta country exposed to river, rainfall, and coastal hazards comparable in type, though not in scale, to those facing Bayelsa. The Plan connects water management, land use, agriculture, environmental sustainability, economic development, and climate adaptation under a long-horizon strategy supported by a prioritised investment portfolio valued at approximately US$38 billion to 2030 (World Bank, 2021). Two institutional principles are transferable without the financial scale. Flood management should form an integral part of development planning rather than sitting at the periphery of government as a relief function, and governments should maintain a pipeline of investment-ready resilience projects, so that domestic allocations, federal transfers, and external finance can flow into an agreed strategic sequence rather than funding isolated and uncoordinated interventions.

Environmental Governance Integration

A final theme, cutting across the four findings above, concerns the extent to which flood risk is treated as a standing feature of ordinary development administration rather than as an emergency-only concern. Ogunkan (2022) argues that Nigerian environmental governance has been weakened by ineffective implementation and fragmented institutional arrangements, a diagnosis that matters for flood management because disasters partly reflect prior decisions concerning land use, drainage design, wetland preservation, waste management, and housing policy. A local government that fails to maintain drains, or a state ministry that issues planning permissions without flood-risk screening, contributes to disaster risk through routine administrative behaviour long before any emergency declaration becomes necessary.

Bayelsa's wetlands, natural drainage corridors, and floodplain retention areas currently lack systematic protective designation, and development control does not consistently enforce setbacks from waterways or require flood-compatible design standards in high-risk zones. Large roads and embankments are approved without formal assessment of their effect on adjacent settlement flooding, and repeatedly inundated schools, clinics, and water systems have not been prioritised for elevation, redesign, or relocation. This pattern is consistent with Wright's overlapping-authority model in a further respect. Works, Environment, and Planning functions sit with different institutional actors who share overlapping responsibility for flood risk yet operate largely without the coordinated bargaining and resource exchange that would treat flood exposure as a criterion in ordinary infrastructure and land-use decisions, rather than only in post-disaster response. Bringing environmental governance inside the same coordination architecture examined in earlier sections would extend the prevention orientation the analysis identifies as Bayelsa's central governance need across the routine, year-round decisions that determine how much flood risk future seasons will bring.

CONCLUSION

Bayelsa State's experience demonstrates with unusual clarity what happens when formal legal mandates are not matched by the operational, fiscal, and informational arrangements sufficient to make those mandates function together. The 2012 Bayelsa State Emergency Management Agency Law already recognises much of the division of responsibilities that effective flood management requires. The 2022 disaster, which left 99.3 per cent of surveyed households affected and displaced 67.8 per cent, and the 2024 displacement of 35,587 further people, point to an implementation deficit that persists across successive administrations and across two tiers of government below the federal level, rather than to any statutory absence.

Read through Wright's overlapping-authority model, the pattern identified across the findings section has a consistent explanation. The state shares formal authority over flood management in precisely the way the model predicts for a domain of this kind, yet the bargaining, resource exchange, and coordinated action that the model identifies as the true mechanism of effective overlapping governance remain underdeveloped. Legal clarity at the state level has not been matched by comparable investment in administrative capacity, predictable fiscal transfers, or operational coordination, and the accountability mechanisms that would allow citizens, auditors, and other governmental levels to assess performance against the state's legal standards remain largely absent. This finding also illustrates the critique of Wright's model discussed in the theoretical framework section. Fiscal control, exercised through mechanisms such as the historically opaque BYSEMA allocation process, can convert formally shared authority into practical subordination in ways the original model does not fully anticipate, a dynamic that future applications of intergovernmental relations theory to Nigerian sub-national governance should incorporate more explicitly.

Three implications follow directly from the analysis for flood governance in Bayelsa. Flood governance will not improve through additional law alone. It will improve when the institutions the 2012 Law establishes, particularly the eight local government emergency committees, receive the trained personnel, operating budgets, equipment, and simulation exercises needed to function before a crisis. It will improve when prevention financing is ring-fenced and disbursed before peak flooding rather than released as disaster relief after losses have occurred, and when early warning systems are measured by the proportion of exposed households that receive, understand, and act on location-specific alerts in time to protect themselves, rather than by the volume of forecasts produced. Bayelsa cannot make itself flood-free, since the geography and the evolving climate make that impossible, yet it can prevent recurrent flooding from producing, every season, the same patterns of death, displacement, housing destruction, and livelihood loss. That prevention is the standard against which intergovernmental relations and environmental governance in Bayelsa State should be judged, and against which they currently fall significantly short. Future research applying Wright's model to other Niger Delta states would help establish whether the fiscal-control dynamic identified here is specific to Bayelsa or representative of a wider regional pattern in Nigerian sub-national flood governance.

The prevention-oriented reading developed in this paper also has implications for how Bayelsa's own institutions should measure their success from year to year. A governance system built around overlapping authority cannot be assessed adequately through a single annual metric such as total disaster relief expenditure or the number of joint agency meetings convened, since both indicators can rise even as coordinated action deteriorates. A more informative approach would track the five dimensions applied throughout this paper, namely legal clarity, administrative capacity, fiscal capacity, operational coordination, and accountability, as a standing scorecard reviewed annually by the Bayelsa State House of Assembly alongside BYSEMA and the eight local government emergency committees. Such a scorecard would make visible, in a way that current reporting does not, whether investment in one dimension, such as fiscal capacity following the 2024 judgment, is being matched by comparable progress in the others, or whether Bayelsa risks repeating the pattern identified throughout this paper, in which legal and fiscal reform outpaces the operational coordination needed to convert new resources into measurably safer flood seasons.

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