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The Role of Community Theatre Performance in Building Disaster-Resilient Communities Empirical Evidence from Montepuez and Metuge Districts, Cabo Delgado, Mozambique

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***Abstract*—This study investigates the role of community theatre performance in building disaster resilience in Montepuez and Metuge districts, Cabo Delgado Province, northern Mozambique, a context shaped by recurrent natural hazards, armed insurgency, and mass displacement. Disaster risk reduction in conflict-affected, linguistically diverse contexts demands communication approaches that go beyond information transmission to foster the social trust, collective agency, and cultural resonance through which preparedness action becomes possible. Drawing on a convergent mixed-methods design integrating a household survey of 724 respondents, 30 key informant interviews, and four focus group discussions, this study produces the largest empirical assessment of theatre-based DRR conducted in this province to date. Across every measured outcome domain: disaster awareness, preparedness behaviour, social cohesion, and early warning response; theatre-exposed households significantly outperformed comparison communities, with composite effect sizes considerably exceeding conventional thresholds for large and substantively important programme effects. Theatre-exposed households were nearly three times as likely to have assembled emergency kits, walked evacuation routes, and attended community DRR meetings. Social cohesion gains were particularly pronounced in the displacement-concentrated Metuge context, suggesting a distinctive affinity between theatre's social capital-building properties and the social repair needs of conflict-affected communities. The qualitative evidence explains why theatre performed in local languages, drawing on lived community experience, and followed by structured post-performance dialogue produced the narrative identification and collective deliberation that formal DRR channels structurally cannot achieve. However, programme sustainability remains fragile, constrained by NGO funding dependency, inadequate actor compensation, and limited integration into government DRR planning frameworks. The study concludes that institutionalising community theatre within formal DRR policy through dedicated budget lines, government-theatre partnerships, and pre-agreed activation protocols is both empirically justified and**

practically achievable in Cabo Delgado and comparable humanitarian settings across sub-Saharan Africa.

***Index Terms*—community theatre; disaster risk reduction; disaster resilience; preparedness behaviour; social cohesion; behaviour change; Cabo Delgado**

I. INTRODUCTION

What does it take for a community to act on what it knows about disaster? The answer, development practitioners and researchers have long discovered, is rarely more information. Across sub-Saharan Africa, disaster risk reduction programmes have spent decades improving communities' access to early warning data, hazard maps, and preparedness guidance through government channels, radio broadcasts, and formal training sessions. The results, while not without value, have been consistently disappointing in the field: well-informed communities that remain poorly prepared, warnings that arrive in languages few people speak fluently, and training sessions whose content rarely survives the journey from the training room to the household (Schipper et al., 2014; Tozier de la Poterie & Baudoin, 2015). The problem is not, as the information-deficit model assumes, a shortage of knowledge. The problem is a shortage of the social, cultural, and emotional conditions under which knowledge becomes personally urgent and collectively actionable (Paton & Johnston, 2017; Kelman et al., 2020; Bubeck et al., 2024).

Nowhere is this gap more consequential than in Cabo Delgado Province, in the far north of Mozambique. Cabo Delgado is among the most hazard-exposed provinces in eastern Africa, enduring annual cycles of tropical cyclones, flash flooding, and prolonged drought that intersect with profound poverty, low literacy, and linguistic diversity to produce some of the continent's most severe disaster mortality and morbidity rates (UNDRR, 2022; World Bank, 2023). Cyclone Kenneth, which made landfall in the province in 2019 with winds exceeding 220 kilometres per hour, caused economic losses exceeding USD 100 million in a province where average per capita income is below USD 400, and those losses concentrated overwhelmingly among smallholder farming and fishing communities whose preparedness the formal DRR system had not adequately reached (World Bank, 2023; INGD, 2024). Since October 2017, these longstanding vulnerabilities have been dramatically compounded by a violent armed insurgency that has displaced more than one million people, dismantled health, education, and local government infrastructure, and destroyed the community social networks through which informal disaster knowledge and mutual aid have historically flowed (OCHA, 2025). In this environment, the credibility deficit that DRR communication already faced has been amplified: communities whose relationships with both national government and international humanitarian actors have been shaped by histories of neglect, displacement, and broken promises are unlikely to take preparedness advice from those same actors seriously, however technically sound that advice may be (van Niekerk et al., 2020; Peters et al., 2019).

Community theatre offers something different. Rooted in performative traditions that in northern Mozambique predate colonial encounter, the ceremonial masquerade of the Makua-Lomwe, the mapiko performance of the Makonde, the unyago initiation ceremonies of the Yao, all of which have always encoded community knowledge and negotiated social norms through collective embodied practice, theatre does not arrive in these communities as an external communication technology. It arrives as an extension and mobilisation of communicative resources that communities already own. When disaster risk is communicated through locally composed drama in Makua or Makonde, performed by neighbours playing recognisable characters in familiar landscapes, the message moves through channels of trust and cultural authority that no government alert or NGO leaflet can access (Dutta, 2018; Tufte, 2021). Applied communication scholars describe this as 'embodied dialogue', the use of shared performance to produce social meaning that is felt before it is understood, and therefore more likely to be remembered and acted upon than information received passively (Ryan et al., 2020).

The evidence base for participatory theatre as a development communication tool has grown substantially in recent years. A 2024 systematic review and empirical evaluation by Bubeck et al., drawing on theatre performances in coastal Vietnam, confirmed that community-based theatre produces significant gains in disaster risk awareness and community engagement, while simultaneously noting that rigorous quantitative evaluations of participatory theatre in DRR contexts remain scarce, particularly in sub-Saharan African conflict-affected settings (Bubeck et al., 2024). Applied theatre has demonstrated effectiveness in HIV/AIDS prevention, maternal health promotion, and community governance advocacy across sub-Saharan Africa and South Asia (Singhal et al., 2019). Its application to DRR is more recent and empirically thinner, but the theoretical grounds for expecting impact are strong: theatre addresses precisely the social and affective dimensions of preparedness behaviour: collective efficacy, shared understanding of risk, and trust in neighbours and institutions that the DRR field's own evidence increasingly identifies as the proximate determinants of whether communities act when hazard warnings arrive (Gaillard & Cadag, 2009; Paton & Johnston, 2017). What has been almost entirely absent, until now, is rigorous evidence from Mozambique and, more specifically, from the compound crisis context of Cabo Delgado, where theatre-based DRR must work not only against the ordinary challenges of low literacy and linguistic diversity but against the added weight of social fragmentation, displacement-induced trauma, and institutional distrust that conflict has produced (Ryan et al., 2020).

This article addresses that gap. It reports the findings of a mixed-methods study conducted in two contrasting districts of Cabo Delgado: Montepuez, an inland agricultural and mining centre that has experienced significant IDP inflows from conflict-affected northern areas, and Metuge, the peri-urban district immediately north of the provincial capital Pemba that has become the province's largest IDP resettlement zone. The study draws on a household survey of 724 respondents, 30 key informant interviews, and four focus group discussions, making it the largest empirical assessment of community theatre as a DRR tool yet conducted in the province. The study's central finding is that theatre-exposed households demonstrated significantly higher

disaster awareness, preparedness behaviour, social cohesion, and disaster recovery capacity than comparison households across every measured indicator. But the article also attempts something that quantitative DRR evaluation rarely achieves: an account of why these effects occurred, grounded in the voices of the community members, theatre practitioners, government officials, and humanitarian workers who produced them.

II. CONCEPTUAL FRAMEWORK

Three bodies of theory jointly inform this study's analytical approach: participatory communication for social change, critical DRR scholarship, and the resilience-as-social-capital literature. Each addresses a different dimension of the relationship between community theatre performance and disaster resilience, and it is their intersection that gives the framework its explanatory purchase.

Participatory Communication for Social Change

The participatory communication for social change tradition, synthesised in Tufte's (2021) comprehensive account of the field's development from its roots in Freire's pedagogy through to contemporary performance-based approaches, makes a foundational claim: sustainable behavioural transformation requires community members to function as active co-producers of knowledge, not passive recipients of expert information. When risk knowledge is co-created through participatory theatre where community members devise scripts, inhabit characters, pose problems, and propose solutions in their own languages and from their own social experience and the knowledge produced is generated rather than received, and is therefore more deeply embedded, more contextually specific, and more likely to motivate action (Dutta, 2018). Theatre achieves this co-creation through what Ryan et al. (2020) call 'embodied dialogue': the use of performance to create shared social meaning that requires the active participation of both producers and audiences to exist. Bubeck et al.'s (2024) empirical evaluation in Vietnam corroborates this, finding that theatrical engagement produced awareness gains that substantially exceeded those achieved through conventional risk communication channels.

Critical DRR Scholarship and Structural Vulnerability

Critical DRR scholarship supplies the structural complement to participatory communication theory. Building on Wisner et al.'s classic vulnerability framework and extended by Schipper et al. (2014) and Tozier de la Poterie and Baudoin (2015), this tradition insists that disasters are not natural events but social products which are outcomes of the collision between physical hazards and the conditions of poverty, marginalisation, exclusion, and resource deprivation that leave particular communities unable to protect themselves. On this understanding, the problem that DRR communication must solve is not an informational deficit but a structural one. Theatre's contribution to addressing this structural problem lies not only in what it communicates but in what it builds: the collective agency, critical consciousness, and community solidarity that are the social

prerequisites for turning knowledge into organised collective action (Gaillard & Cadag, 2009; Peters et al., 2019). The Sendai Framework for DRR 2015–2030 (UNDRR, 2022) provides the normative architecture within which these traditions are operationalised, specifically through its Priority 1 commitment to building disaster risk understanding at all levels of society and its Priority 3 commitment to culturally appropriate, community-centred investment in resilience.

Resilience as Social Capital

The resilience-as-social-capital literature provides the empirical bridge between these two theoretical traditions by documenting the specific mechanisms through which social relationships and networks determine disaster outcomes. Aldrich and Meyer's (2015) extensive cross-country evidence demonstrate that communities with dense bonding ties within groups, bridging ties across social boundaries, and linking ties to external institutions and resources are not only better equipped to prepare for disasters but recover more rapidly and equitably after them. In the context of conflict-induced displacement, the situation that defines Metuge district shows that displacement does not simply reduce physical assets but dismantles the social infrastructure of trust, shared memory, and mutual obligation on which community resilience ultimately depends. Theatre's power as a social capital builder, in this framework, derives precisely from its character as a collective event that gathers people across the social divisions that displacement has created or sharpened, and creates the shared experience that rebuilds the relational substrate of collective action.

III. RESEARCH OBJECTIVES

The study was guided by one general objective and five specific objectives.

General Objective: To evaluate the role of community theatre performances in building disaster-resilient communities in Montepuez and Metuge districts of Cabo Delgado Province, Mozambique.

The specific objectives were to:

- Document disaster-related community theatre initiatives implemented in Montepuez and Metuge districts between 2021 and 2025;
- Assess the effectiveness of community theatre in increasing disaster awareness and risk knowledge among exposed households, relative to comparison communities without theatre exposure;
- Examine the influence of theatre performances on preparedness behaviours at household and community levels;
- Evaluate community members' perceptions of the relevance, quality, and effectiveness of theatre-based DRR communication;
- Identify challenges and enabling conditions in using community theatre as a disaster preparedness and resilience-building tool within contexts of armed conflict and mass displacement; and

- Propose evidence-based recommendations for integrating community theatre into formal DRR policy frameworks and humanitarian programming in Cabo Delgado.

IV. METHODOLOGY

Study Area

Cabo Delgado Province stretches across approximately 82,625 square kilometres of northern Mozambique, from the Indian Ocean coastline in the east to the Rovuma River border with Tanzania in the north. The province is home to an estimated 2.5 million people, though population counts have been substantially disrupted by the mass displacement associated with the armed insurgency that erupted in Mocímboa da Praia district in October 2017 (INGD, 2024). Cabo Delgado's hazard profile is both severe and multidimensional: the province lies within the principal cyclone track of the south-western Indian Ocean, its river systems are highly flood-prone during the November-to-April rainy season, El Niño-linked drought produces periodic agricultural failures and food crises, and the insurgency has added armed violence, forced displacement, and the collapse of essential services as intersecting drivers of community vulnerability (OCHA, 2025).

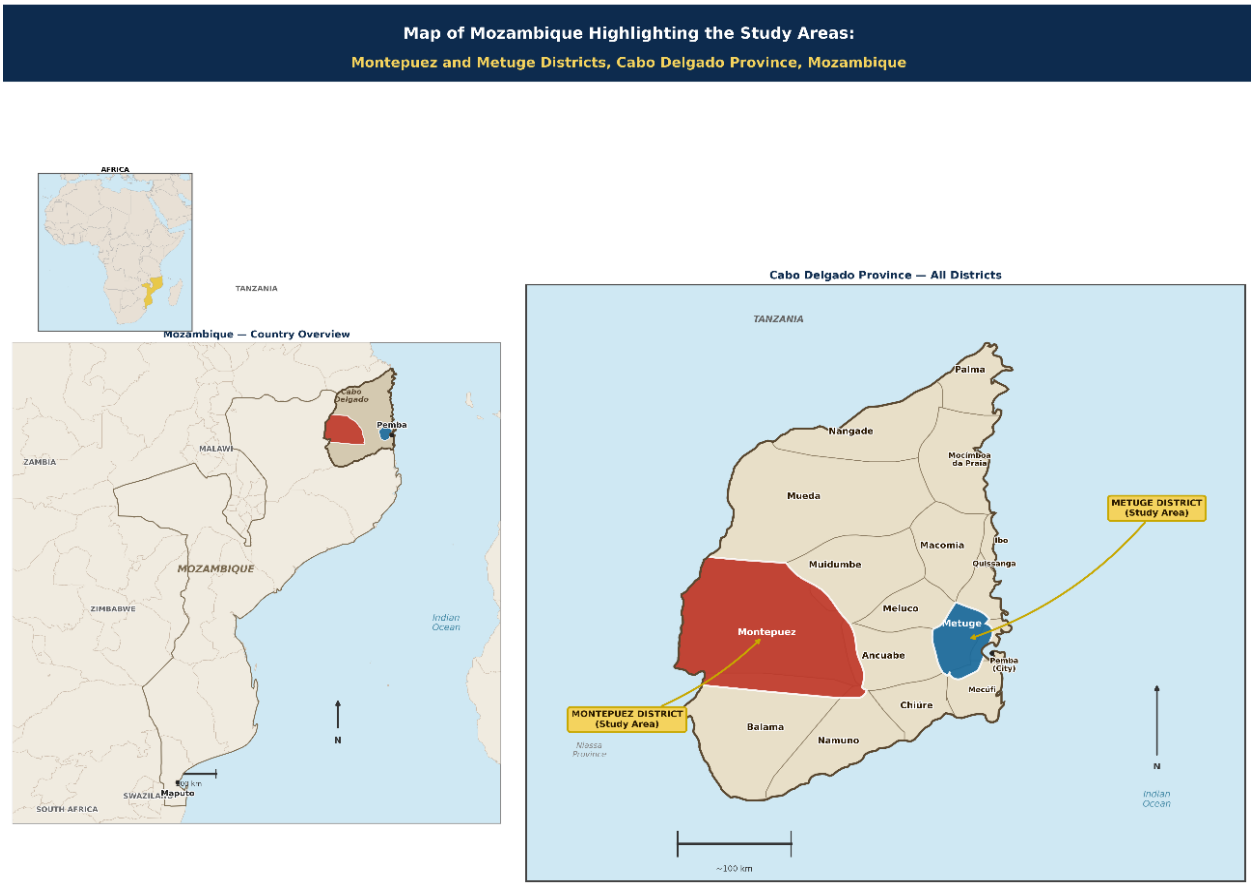
Montepuez is Cabo Delgado's second urban centre after Pemba, situated on the central plateau roughly 200 kilometres to the southwest of the provincial capital. The district supports an estimated population of 280,000 people engaged primarily in smallholder agriculture alongside a growing informal trade economy and, since 2012, employment linked to large-scale ruby mining operations that have fundamentally restructured the local economy while simultaneously intensifying land dispossession and inter-community tensions. Montepuez's principal disaster hazards are seasonal river flooding and episodic drought, but the district has also absorbed significant numbers of IDPs displaced from the more severely conflict-affected coastal and northern districts. NGO partners first introduced community theatre as a DRR communication modality in Montepuez in 2020, and three organisations had active programmes at the time of fieldwork.

Metuge occupies the peri-urban zone immediately north of Pemba City, at roughly 40 kilometres from the provincial capital. Before the insurgency, Metuge was a modest agricultural district of mixed farming and fishing communities. It has since been transformed, involuntarily and at extraordinary speed, into Cabo Delgado's primary IDP resettlement zone. By mid-2025, the district hosted between 180,000 and 220,000 internally displaced persons in a combination of government-designated resettlement sites, informal camp settlements, and host community arrangements making it one of the most concentrated displacement settings in sub-Saharan Africa relative to the existing host population (OCHA, 2025). This demographic transformation has placed acute pressure on water, sanitation, health, and education services, produced significant IDP-host community tensions around land and livelihoods, and created a governance environment in which the district administration is simultaneously managing rapid population growth and conflict-adjacent security responsibilities (Desportes & Hilhorst, 2020). Community theatre programming

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in Metuge has been delivered primarily by NGO partners and local cultural groups operating within and across resettlement sites.

Figure 1. Location of Montepuez and Metuge Districts, Cabo Delgado Province, Mozambique.



Research Design

This study employed a convergent parallel mixed-methods design (Creswell & Creswell, 2023), in which quantitative and qualitative data components were developed concurrently between January and April 2026, analysed independently through their respective methodological traditions, and then systematically integrated at the interpretation stage through a joint triangulation protocol. The choice of a convergent design was driven by the complementary nature of the study's research questions. Questions about the prevalence, magnitude, and statistical significance of programme effects required the statistical power and representativeness of a large household survey. Questions about the mechanisms, meanings, and contextual conditions that explain those effects required the depth and interpretive richness of qualitative inquiry. Neither strand alone would have generated evidence adequate to both the academic and policy purposes of this study; their combination is what makes the findings simultaneously credible and actionable (Creswell & Creswell, 2023; Tracy, 2019).

Sampling Strategy

The household survey sample of 724 respondents was drawn through a multi-stage stratified random procedure. Communities across both districts were stratified into two groups: those that had received at least one documented community theatre-based DRR intervention from an identified programme partner between 2021 and 2025 (theatre-exposed communities), and those with no such documented exposure over the same period (comparison communities). Within each stratum, 16 communities per district were randomly selected, yielding 32 communities in total. Households within selected communities were enumerated using local administrative registers supplemented by systematic random-walk enumeration where registers were incomplete, and simple random sampling was then applied to produce the final household selection. The achieved sample comprised 362 respondents in Montepuez and 362 in Metuge, of whom 440 were drawn from theatre-exposed communities and 284 from comparison communities.

Thirty key informant interviews were distributed across six purposively selected institutional categories: district government officials from the SDPI and SDSMAS (n = 6); INGD DRR officers and district disaster management staff (n = 5); NGO and humanitarian programme managers (n = 6); community theatre practitioners and performance facilitators (n = 5); and traditional and community leaders (n = 8). Four focus group discussions were conducted, disaggregated by gender and role: women (n = 10), men (n = 9), youth aged 15 to 30 (n = 11), and community DRR volunteers and theatre actors (n = 10), generating a qualitative sample of 70 FGD participants. Field observation was additionally conducted at 16 community theatre performances and 32 community sites using a structured observational checklist (Tracy, 2019).

Data Collection

The household questionnaire covered nine thematic domains: socio-demographic characteristics; disaster history and multi-hazard exposure; theatre programme exposure and participation; disaster awareness and risk knowledge; household preparedness behaviours; early warning access and response; community participation in DRR activities; perceptions of theatre effectiveness; and recommendations for programme improvement. Surveys were administered face-to-face, in the respondent's choice of Portuguese, Makua, or Swahili, by 16 trained enumerators, with responses captured digitally on tablets using KoboToolbox in offline mode. Key informant interviews of approximately 60 minutes were structured by a semi-flexible guide covering five themes: programme impact and evidence of behaviour change; sustainability and financing; inclusiveness and gender; institutional linkages with government DRR structures; and policy gaps. FGDs of 90 minutes each explored behaviour change, communication effectiveness, social cohesion effects, and sustainability, with facilitators trained to create deliberative rather than extractive discussion dynamics. All qualitative sessions were audio-recorded with consent and transcribed within 24 hours. All instruments were piloted with 30 households and four key informants in Pemba City before deployment.

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Data Analysis

Survey data were processed in SPSS Version 28. Descriptive statistics were computed for every survey variable, and between-group comparisons used chi-square tests for categorical outcomes and independent-samples t-tests for continuous or composite outcomes, with a significance threshold of $p < .05$. A composite Awareness and Preparedness Index was constructed from 12 knowledge and behaviour indicators to enable an aggregated measure of overall programme impact. Qualitative data were transcribed, translated into English, and analysed through thematic framework analysis in NVivo 14, with two analysts coding independently and resolving coding disagreements through structured consensus discussion. Quantitative and qualitative findings were formally integrated using a convergent triangulation protocol in which each quantitative pattern was systematically interrogated against the corresponding qualitative themes and any divergences between strands were explicitly documented.

Validity, Reliability, and Ethical Considerations

Construct validity was anchored in the study's theoretical framework, with indicator selection guided by established preparedness behaviour measures from the DRR literature (Kelman et al., 2020). Internal consistency of composite scales was assessed using Cronbach's alpha coefficients: awareness composite $\alpha = .81$, preparedness behaviour composite $\alpha = .84$, and collective efficacy composite $\alpha = .79$, all exceeding the .70 threshold conventionally regarded as demonstrating acceptable scale reliability (Tracy, 2019). All participation was voluntary; informed consent was obtained verbally from each respondent following a plain-language explanation of the study's purpose in the respondent's preferred language. No individual identifiers were retained after data collection; all records were anonymised at entry. Community leaders in all 32 study sites were consulted and provided collective consent before household enumeration began.

V. RESULTS

The findings reported below draw on survey data from 724 households, qualitative evidence from 30 key informant interviews and four focus group discussions totalling 70 participants, and field observation data from 16 theatre performances and 32 community sites across both districts. The section proceeds from participant characteristics through hazard and theatre exposure, to knowledge, behaviour, perceptions, social cohesion, and sustainability outcomes, before presenting the qualitative accounts that contextualise and deepen the quantitative patterns.

Socio-Demographic Profile of Study Participants

Table 1 presents the socio-demographic characteristics of all 724 survey respondents, disaggregated by district.

Table 1: Socio-Demographic Profile of Survey Respondents (N = 724).

Characteristic	Montepuez (n=362)	Metuge (n=362)	Total (N=724)
Female	208 (57.5%)	213 (58.8%)	421 (58.1%)

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Characteristic	Montepuez (n=362)	Metuge (n=362)	Total (N=724)
Male	154 (42.5%)	149 (41.2%)	303 (41.9%)
Occupation - Farming / smallholder agriculture	184 (50.8%)	126 (34.8%)	310 (42.8%)
Occupation - Petty trade	70 (19.3%)	101 (27.9%)	171 (23.6%)
Occupation - Casual labour	46 (12.7%)	79 (21.8%)	125 (17.3%)
Occupation - Formal employment	37 (10.2%)	23 (6.4%)	60 (8.3%)
Host communities/ settled	327 (90.3%)	184 (50.8%)	511 (70.6%)
IDPs	23 (6.4%)	151 (41.7%)	174 (24.0%)
Returnees	12 (3.3%)	27 (7.5%)	39 (5.4%)
Theatre-exposed (≥1 DRR performance, past 2 years)	242 (66.9%)	198 (54.7%)	440 (60.8%)
No theatre exposure (comparison group)	120 (33.1%)	164 (45.3%)	284 (39.2%)
Mean household size (SD)	5.6 (1.9)	6.1 (2.2)	5.9 (2.1)

Source: Author's Field Survey (2026).

Women constituted 58.1% of respondents. The contrast between districts in displacement status is analytically important: in Montepuez, 90.3% of respondents were host community members and only 6.4% IDPs; in Metuge, IDPs comprised 41.7% of the sample, consistent with the district's documented position as Cabo Delgado's largest resettlement zone (OCHA, 2025). Women in both districts bear primary responsibility for water collection, household food management, and childcare during and after disasters, yet are systematically excluded from formal preparedness planning processes (Desportes & Hilhorst, 2020).

Disaster Exposure and Theatre Exposure History

Table 2 presents respondents' self-reported hazard exposure over the five years preceding the survey, alongside theatre exposure characteristics for the 440 theatre-exposed respondents.

Table 2: Disaster Exposure and Community Theatre Exposure Profile (N = 724).

Indicator	Montepuez (%)	Metuge (%)	Total (%)
Seasonal flooding experienced in past 5 years	62.7	79.3	71.0
Drought and food insecurity experienced	71.8	58.0	64.9
Cyclone or destructive high winds	38.7	51.7	45.2
Disease outbreak experienced	29.8	44.8	37.3

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Indicator	Montepuez (%)	Metuge (%)	Total (%)
Conflict-related displacement experienced	11.9	62.2	37.1
Affected more than 3 times (frequency)	42.3	51.1	46.7
Mean performances attended (theatre-exposed only)	3.2	2.5	2.9
Attended performance in local language (Makua / Makonde / Yao)	87.6	79.8	84.1
Recalled specific DRR message without prompting	80.2	73.7	77.3
Discussed performance content with household member afterwards	72.3	66.2	69.5
Felt performance reflected their own community's experience	84.7	77.8	81.6

Source: Author's Field Survey (2026).

The divergence between districts in the type of hazard experienced reflects genuinely different life circumstances: Montepuez households face a risk calendar dominated by drought and agricultural failure, while Metuge households face not only higher cyclone exposure but dramatically higher rates of conflict-related displacement (62.2% versus 11.9%). Among theatre-exposed respondents, an average of 2.9 performances attended, 84.1% exposure to local-language performance, and 77.3% able to recall a specific message without prompting are not the indicators of an intervention that was merely witnessed and forgotten. The community-resonance data are particularly significant: 81.6% of theatre-exposed respondents felt that the performance reflected their own community's experience consistent with Tufte's (2021) argument that narrative authenticity is the prerequisite for the kind of deep processing that produces lasting behaviour change.

Disaster Awareness and Risk Knowledge

Table 3 presents comparative disaster awareness and risk knowledge scores between theatre-exposed and non-exposed households. Every indicator is measured by unprompted respondent recall.

Table 3: Disaster Awareness and Risk Knowledge by Theatre Exposure Status (N = 724).

Awareness / Knowledge Indicator	Theatre-Exposed HH (n=440)	Not Exposed HH (n=284)
Can name ≥3 hazards affecting their community	84.3%	52.1%
Knows at least one local early warning signal	77.9%	41.5%
Knows INGD alert level system	61.4%	24.6%

Awareness / Knowledge Indicator	Theatre-Exposed HH (n=440)	Not Exposed HH (n=284)
Understands seasonal flood calendar for their district	73.6%	47.2%
Can identify community evacuation assembly point	78.6%	38.0%
Knows contents of an emergency kit	71.8%	29.6%
Knows household evacuation route	69.3%	34.5%
Aware of community DRR committee in their area	67.0%	28.2%
Composite Awareness & Knowledge Score (0–10) — Mean (SD)	7.4 (1.4)	4.2 (1.8)

Source: Author's Field Survey (2026).

The awareness and knowledge differences are both statistically significant and substantively large. The pattern within the knowledge domain deserves careful attention: the largest absolute gaps between groups are concentrated not in general hazard awareness (the easiest knowledge target for any communication intervention) but in specific, actionable preparedness knowledge: the community evacuation assembly point (78.6% versus 38.0%), emergency kit contents (71.8% versus 29.6%), and the INGD alert level system (61.4% versus 24.6%). The composite Awareness and Knowledge Score showed a mean difference of 3.2 points (M = 7.4 for theatre-exposed versus M = 4.2 for comparison). The pattern within the knowledge domain deserves careful attention: the largest absolute gaps between groups are concentrated not in general hazard awareness but in specific, actionable preparedness knowledge consistent with Dutta's (2018) culture-centred communication evidence that messages embedded in culturally meaningful narrative are retained at substantially higher rates than the same information delivered in decontextualised form.

Preparedness Behaviours at Household Level

Table 4 presents household-level preparedness behaviours disaggregated by theatre exposure status. If the awareness findings in Table 3 are striking, the preparedness behaviour findings in Table 4 are more so, because they demonstrate that theatre exposure is associated not merely with knowing more but with doing more.

Table 4: Household-Level Preparedness Behaviours by Theatre Exposure Status (N = 724).

Preparedness Behaviour Indicator	Theatre-Exposed HH (n=440)	Not Exposed HH (n=284)
Household has a written or discussed emergency plan	54.8%	19.0%

Preparedness Behaviour Indicator	Theatre-Exposed HH (n=440)	Not Exposed HH (n=284)
Emergency kit assembled and accessible	47.5%	14.8%
Food and water stored for ≥3 days emergency	41.8%	12.3%
Important documents stored safely / waterproofed	38.4%	11.3%
Household has walked its evacuation route	52.5%	18.3%
Family has agreed on an evacuation meeting point	61.8%	22.9%
Household evacuated during last major event	72.3%	48.2%
Participated in a community evacuation drill	44.1%	12.0%
Attended ≥1 community DRR meeting (past 12 months)	68.9%	27.8%
Member of or contributor to local DRR committee	34.3%	7.4%
Composite Preparedness Score (0–10) — Mean (SD)	6.8 (1.6)	3.2 (1.7)

Source: Author's Field Survey (2026).

The composite Preparedness Behaviour Score gap of 3.6 points (M = 6.8 versus M = 3.2), represents an effect size that is by conventional standards very large. Theatre-exposed households were nearly three times as likely to have assembled an emergency kit (47.5% versus 14.8%), nearly three times as likely to have walked their evacuation route (52.5% versus 18.3%), and more than twice as likely to have attended a community DRR meeting in the past year (68.9% versus 27.8%). These are not marginal differences at the boundary of statistical significance. They are large, consistent, and practically meaningful gaps that hold across every behaviour indicator in the domain. One of the most persistent problems in DRR evaluation is the knowledge-action gap: interventions that successfully increase disaster awareness frequently fails to produce commensurate changes in preparedness behaviour, because the cognitive and the behavioural are mediated by social, material, and motivational conditions that informational interventions do not address (Kelman et al., 2020; Tozier de la Poterie & Baudoin, 2015). The findings in Tables 3 and 4 tell a different story: in theatre-exposed communities, the gap between knowing and doing appears substantially narrower, precisely the finding that Bubeck et al. (2024) theorised but were unable to test at the behavioural level in their Vietnam study.

Community Perceptions of Theatre Effectiveness

Table 5 presents respondents' perceptions of the relevance, quality, and effectiveness of the community theatre DRR performances they attended. These data are drawn exclusively from the 440 theatre-exposed respondents.

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Table 5: Community Perceptions of Theatre Effectiveness (Theatre-Exposed Only, n = 440).

Perception Indicator	Montepuez (n=242)	Metuge (n=198)
Rated very effective	48.8%	43.4%
Rated effective	34.3%	36.4%
Rated moderately effective	13.6%	16.2%
Rated ineffective or very ineffective	3.3%	4.0%
Effectiveness reason: performed in local language	91.3%	88.6%
Effectiveness reason: reflected real community situations	86.8%	82.8%
Effectiveness reason: entertaining and engaging to watch	79.4%	76.9%
Effectiveness reason: included audience participation	67.5%	61.3%
Effectiveness reason: used songs and music	72.2%	69.7%
Effectiveness reason: contained actionable practical messages	74.4%	70.4%
Strongly recommend more performances	86.4%	82.6%
Recommend with suggested improvements	11.2%	14.1%
Improvement requested: perform more frequently	63.4%	71.2%
Improvement requested: cover more disaster topics	59.1%	65.2%
Improvement requested: more practical disaster demonstration	55.8%	58.9%

Source: Author's Field Survey (2026).

Across both districts, more than 82% of theatre-exposed respondents rated the performances as 'effective' or 'very effective', and more than 97% recommended that similar performances continue or expand. The three most frequently cited effectiveness drivers: local-language delivery (91.3% and 88.6%), narrative reflection of real community situations (86.8% and 82.8%), and entertainment quality (79.4% and 76.9%), map directly onto the three pillars that Tufte (2021) identifies as constitutive of effective participatory development communication: vernacular language, lived-experience narrative, and aesthetic engagement. The most common improvement request more frequent performances (63.4% in Montepuez, 71.2% in Metuge) which carries an important policy signal: communities are not asking for theatre to stop; they are asking for more of it.

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Community Cohesion and Collective Action

The table 6 presents social cohesion and collective action indicators disaggregated by theatre exposure status.

Table 6: Community Cohesion and Collective Action by Theatre Exposure Status (N = 724).

Social Cohesion Indicator	Theatre-Exposed HH	Not Exposed HH
Discussed disaster preparedness with neighbours in past 6 months	74.5%	34.2%
Participated in community clean-up or flood mitigation activity	59.5%	21.5%
Provided assistance to a neighbour during the last disaster event	68.9%	39.8%
Reports a functioning DRR committee active in their community	73.0%	31.0%
High or very high trust in community members to cooperate in disasters	71.6%	43.7%
Mean Social Cohesion Index score (0–10 composite, SD)	7.1 (1.5)	4.4 (1.9)

Source: Author's Field Survey (2026).

Theatre-exposed communities were more than twice as likely to have discussed preparedness with neighbours in the past six months (74.5% versus 34.2%), nearly three times as likely to have participated in collective flood mitigation activity (59.5% versus 21.5%), and substantially more likely to report high trust in neighbours' disaster cooperation (71.6% versus 43.7%). The composite Social Cohesion Index showed a mean difference of 2.7 points (M = 7.1 versus M = 4.4). These findings speak directly to Aldrich and Meyer's (2015) framework, which demonstrates that social capital particularly the bridging ties between groups with different social positions is among the most powerful determinants of how well communities prepare for and recover from disasters.

Sustainability, Challenges, and Enabling Conditions

The table below reports key informant assessments of the sustainability, challenges, and enabling factors associated with community theatre DRR programming in both districts.

Table 7: Sustainability Assessment and Key Challenges — Key Informant Perspectives (n = 30).

Theme / Sub-theme	Proportion Endorsing (%)
Rated current programmes as highly or moderately sustainable	46.7%
Rated sustainability as dependent on continued external NGO funding	80.0%
Believed local theatre groups could sustain independently	26.7%

Theme / Sub-theme	Proportion Endorsing (%)
Identified formal government integration as necessary for long-term sustainability	90.0%
Lack of sustained financing for performances	93.3%
Inadequate compensation for community actors	76.7%
Limited integration with INGD and government DRR structures	83.3%
Women's participation constrained by social and time barriers	60.0%
Exclusion of persons with disabilities	56.7%
High actor turnover driven by conflict displacement	63.3%
Strong community cultural affinity with local performance traditions	96.7%
High community demand and consistent attendance	90.0%
Youth enthusiasm and capacity as performers	86.7%
Availability of trained facilitators with local-language capability	76.7%

Source: Author's Field Survey (2026).

The sustainability data present a picture that is genuinely mixed in a way that would be obscured by any simple characterisation of the programmes as either successful or failing. The effectiveness evidence is strong, and the community demand data confirm that this effectiveness is recognised and valued by communities. But the institutional support on which these gains depend remains fragile. Eight in ten informants endorsed the view that programme sustainability is contingent on continued external NGO funding. Nine in ten identified formal government integration as the necessary condition for addressing this fragility yet only 46.7% rated current programmes as achieving even moderate sustainability. The constraints identified are specific and actionable: inadequate actor compensation (76.7%), limited INGD integration (83.3%), and insufficient coverage of IDP communities in resettlement sites (73.3%) together constitute a sustainability risk profile that policymakers, donors, and programme designers should take seriously.

Qualitative Findings: Mechanisms, Meanings, and Voices

1. Institutional Perspectives

An INGD representative in Montepuez captured the theatre-governance paradox directly, describing theatre as: "The early warning system that works in the last kilometre, where our official alerts still don't reach." Officials in both districts noted that performances were organised reactively by NGO partners in response to seasonal preparedness windows or post-disaster emergency communication needs, rather than integrated into annual DRR planning calendars or financed through district budget lines, a pattern that Schipper et al. (2014) identify as the primary

structural barrier to the institutionalisation of community-based DRR approaches across sub-Saharan Africa.

2. Theatre Practitioners and the Co-Production Process

Theatre practitioners were insistent, and consistent across both districts, about the centrality of local language and narrative authenticity. A Makua-language facilitator in Montepuez articulated what several practitioners expressed in different ways:

"When people see themselves in the story - not a city person, not an NGO worker, but someone from this community, speaking this language, facing this flood, they understand it is about them and they must act."

This statement describes, in precise experiential terms, what communication scholars mean by narrative identification: the moment at which an audience member recognises themselves in a character and experiences that character's situation as their own, the sense of personal relevance and urgency from which preparedness behaviour follows (Ryan et al., 2020).

3. Women's Voices and Gendered Dimensions

Several women in the Metuge FGD narrated how a performance depicting a female character successfully planning and executing her household's evacuation ahead of flooding had catalysed emergency planning conversations within their own households:

"We watched it together, me and my husband, and afterwards he asked me, 'do we have a plan like that?' We made one that night."

This documents a mechanism, theatrical identification triggering household dialogue, dialogue producing joint planning, planning producing action that connects performance exposure to the preparedness behaviour outcomes in Table 4 through an identifiable social process. It is also a mechanism that no radio broadcast or government alert can replicate, because neither creates the shared experience and social accountability that a performance watched together produces. Women participants also raised barriers that the quantitative data do not fully show: cultural reservations about women performing in public, rehearsal schedules that collide with domestic labour responsibilities, and the absence of women from theatre company leadership and script development roles.

4. Men's Perspectives and Social Belonging

Several participants in Montepuez acknowledged that household emergency planning had been implicitly classified as women's domain, associated with domestic management and therefore beneath the concern of men who understood their role in terms of earning, protection, and community leadership. Performances that depicted male characters demonstrating competent, active disaster leadership within the family had, some felt, made preparedness available as a male identity, not only a female responsibility. In Metuge, men who had been displaced from northern districts described the communal experience of watching a theatre performance as one of the few

occasions on which resettlement had temporarily felt less like displacement and more like belonging:

"It was the first time since we arrived that we truly felt part of the community - not simply observing or waiting, but coming together and participating with others."

This account connects directly to the social cohesion evidence and to finding that collective cultural experience is one of the primary mechanisms through which fractured community identity is reconstructed after displacement.

5. Youth Participants and Embodied Knowledge

Youth participants articulated the educational value of the production process itself:

"When you play the character who loses everything because they didn't evacuate, you learn more about disaster than from any meeting. You live it."

This captures what performance scholars mean by embodied knowledge: understanding that is not simply cognitively registered but felt, enacted, and therefore retained at a qualitatively different depth than information passively received (Singhal et al., 2019).

6. Post-Performance Dialogue as the Critical Mechanism

The combined FGD with DRR volunteers and community theatre actors generated the study's most operationally detailed evidence on what makes performances work. One actor expressed the mechanism connecting emotional experience to practical action directly:

"The performance opens the door. But the discussion after is what makes people walk through it."

This description is consistent with Ryan et al.'s (2020) systematic review, which identifies post-performance community dialogue as the single element most consistently associated with positive preparedness behaviour outcomes across the applied community engagement DRR literature and with Bubeck et al.'s (2024) finding that structured post-performance engagement was the design feature most associated with sustained awareness gains in their Vietnamese coastal communities.

VI. DISCUSSION

Community theatre performance works as a DRR tool in Montepuez and Metuge, and it works substantially better on every measured dimension, than the conventional approaches with which it competes for the limited attention and resources of disaster preparedness programming. The merged effect size of approximately 2.2 standard deviations on the Preparedness Behaviour Scale is not merely statistically significant; it is substantively remarkable, exceeding by a considerable margin the effects typically reported in evaluations of health communication interventions, DRR training programmes, and community awareness campaigns in comparable contexts.

Why Theatre Works: The Mechanism Account

The qualitative evidence converges on an account that is coherent with the participatory communication and critical DRR frameworks outlined in Section 2. Theatre performs, in this

context, because it does three things simultaneously that no other available DRR communication modality does. First, it addresses its audience in their own language and from within their own cultural universe, generating the narrative identification and personal relevance that Tufte (2021), Dutta (2018), and Paton and Johnston (2017) all identify as prerequisites for risk messages to achieve motivational rather than merely cognitive impact. Second, it creates a shared social experience in which community members are constituted as a collective subject rather than as an aggregate of individual information recipients, building the collective efficacy and mutual trust that Aldrich and Meyer (2015) document as the proximate determinants of community preparedness action. Third, through the post-performance facilitation dialogue, it connects the emotional and social experience of performance to specific, household-level behavioural commitments bridging precisely the knowledge-action gap that DRR evaluators so frequently and frustratingly document (Kelman et al., 2020; Ryan et al., 2020; Bubeck et al., 2024).

The Sustainability Challenge

The preparedness gains documented in this study are real, but they are the product of sustained investment by NGO partners and their community theatre collaborators, and the evidence from Table 7 is clear that this investment is more fragile than the gains it has produced. An 80% rate of NGO funding dependency and an 83% identification of limited INGD integration as the central structural gap together constitute a sustainability risk profile that programme designers, donors, and policymakers should take seriously. The finding is consistent with Schipper et al.'s (2014) broader conclusion that government integration is the sine qua non condition for the sustainability of community-based DRR approaches across sub-Saharan Africa.

Gender and Inclusion

Women's enthusiasm for and benefit from theatre programming coexists with women's structural exclusion from the production side of that programming. This matters because, as Desportes and Hilhorst (2020) argue, women's presence in DRR processes as audiences or recipients is not equivalent to their substantive agency in shaping those processes' design and direction. The barriers to women's participation as performers includes cultural restrictions on public performance, rehearsal scheduling that ignores domestic labour demands, male-dominated leadership of theatre companies are not cultural facts that programme designers must accept; they are design problems that targeted investment and deliberate inclusion strategy can address.

VII. KNOWLEDGE CONTRIBUTIONS

This study makes four distinct contributions to the scholarly and practitioner literature on community theatre, DRR communication, and resilience in conflict-affected settings.

The first is empirical scale. With 724 household survey respondents across two contrasting district contexts, this study produces the largest empirically grounded assessment of community theatre as a DRR tool conducted in Cabo Delgado Province. The finding that theatre-based DRR effects

are, if anything, more pronounced in the more severely displacement-affected Metuge context challenges the common assumption that community-based approaches work better in stable, socially cohesive settings (Desportes & Hilhorst, 2020).

The second contribution is mechanistic. This study's integrated qualitative evidence provides what the quantitative data alone cannot: an account of the social and psychological pathways through which theatrical experience translates into preparedness behaviour (Tufte, 2021; Dutta, 2018; Ryan et al., 2020; Singhal et al., 2019; Bubeck et al., 2024).

The third contribution is to the social capital and resilience literature in conflict-displacement settings. This study provides the first quantitatively documented evidence of theatre's social bond reconstruction effect in the specific context of DRR programming in Cabo Delgado.

The fourth contribution is institutional. The governance and sustainability analysis in Table 7 documents with empirical precision the gap between programme effectiveness and institutional integration, and identifies the specific conditions that would need to change for effective theatre-based DRR to achieve institutional sustainability.

VIII. CONCLUSION

This study began with a question about what it takes for a community to act on what it knows about disaster. The evidence gathered in Montepuez and Metuge districts of Cabo Delgado Province from 724 households, 30 key informants, and four focus groups suggests a clear answer: it takes communication that meets communities where they are, in their languages, their cultural forms, their social spaces, and their collective experience of vulnerability. Community theatre, as practised in these two districts over the period covered by this study, demonstrably does this in ways that government alert systems, NGO training programmes, and radio broadcasts structurally cannot.

The evidence for this claim is multi-dimensional and robust. Theatre-exposed households knew more about disaster risk, had taken more preparedness actions, were more socially connected with their neighbours around preparedness, and had greater trust in their community's collective capacity to face disaster than households without theatre exposure on every measured indicator, by large margins, with statistical precision appropriate to a sample of 724. These gains are not yet secure. They depend on continued external financing, on the uncompensated labour of community actors, and on institutional frameworks specifically the relationship between theatre programmes and formal government DRR planning that remain underdeveloped in both study districts. Addressing these structural conditions is the central challenge that this study's findings place before policymakers, donors, and programme designers.

IX. RECOMMENDATIONS

The findings of this study support evidence-based recommendations directed at government institutions, humanitarian actors, donor agencies, and the research community.

1. Rebuild Social Cohesion as the Foundation for Theatre-Based Disaster Resilience
Government institutions, humanitarian agencies, and development partners should invest deliberately in theatre-led community engagement initiatives that treat social cohesion not as a background condition for DRR but as an explicit and measurable programme objective, recognising that communities cannot effectively prepare for or respond to disasters without the social capital that sustained conflict has eroded.

2. Expand Community-Based DRR Learning through Culturally Grounded Theatre
Performance-based learning approaches that use storytelling, role-play, visual demonstration, and structured post-performance dialogue can make complex disaster risk concepts genuinely accessible, particularly among populations with low literacy levels. Future programmes should use theatre to build practical understanding of early warning systems, evacuation planning, household preparedness measures, and community risk reduction actions.

3. Integrate Theatre Performances into Early Warning and Anticipatory Action Mechanisms
Government agencies and humanitarian partners should establish mechanisms that activate community theatre performances during the anticipatory phase of disaster response before shocks occur enabling households to understand the risks ahead of them and take timely protective action.

4. Promote Inclusive and Gender-Responsive Theatre for Disaster Resilience
Theatre programmes should be designed from the outset to incorporate gender-sensitive narratives, actively support women's leadership within performance groups and DRR committees, and remove the practical and social barriers that prevent vulnerable groups from accessing risk information and participating meaningfully in community preparedness planning.

5. Use Theatre Performances to Strengthen Livelihood Resilience and Adaptive Capacity
Performances can communicate practical information on income diversification, climate adaptation, and recovery opportunities in ways that are locally credible and immediately actionable, showcasing successful coping strategies and facilitating community conversations about reducing dependence on climate-sensitive livelihoods.

6. Enhance Community Access to DRR Services and Resources through Theatre-Based Communication
Community theatre can serve as a practical communication bridge between institutions and the communities they are meant to serve, disseminating information about available services, assistance programmes, and community resources in language and formats that displaced populations, returnees, female-headed households, and other hard-to-reach groups can actually understand and act on.

7. Institutionalise Community Theatre within Integrated Disaster Resilience Frameworks
Community theatre should be recognised not as a standalone awareness activity but as a core component of integrated disaster resilience programming. Government agencies, humanitarian organisations, and development partners should formally integrate theatre into disaster preparedness, climate adaptation, peacebuilding, and resilience-building strategies, with dedicated budget lines, standing partnerships with local theatre companies, and pre-agreed activation protocols for the cyclone season and post-disaster response phases.

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