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Inequitable Disaster Support for Socially Vulnerable Communities an Integrated Public Policy Framework for Equity Across the Disaster Management Cycle

SK Monirul Islam Mahadi

Department of Emergency and Threat Response Management, Rowan University, Glassboro, New Jersey, USA

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ABSTRACT: Disasters do not affect all communities equally. Socially vulnerable communities often face greater exposure, weaker preparedness support, delayed response assistance, reduced access to emergency information, and slower recovery after disasters. These inequities are not caused only by hazard severity or individual vulnerability; they are also shaped by public policy gaps, fragmented needs assessment, inaccessible communication, resource allocation barriers, administrative burdens, weak recovery tracking, and limited accountability. This article uses a qualitative document based conceptual analysis to examine inequitable disaster support and develop an Integrated Public Policy Framework for Equitable Disaster Support across the disaster management cycle. The analysis synthesizes social vulnerability theory, emergency management doctrine, official government oversight reports, disaster review evidence from the United States, Australia, and New Zealand, and qualitative document analysis literature. The findings show that disaster equity gaps are cycle-wide, that equal availability of assistance does not create practical accessibility, that recovery inequity is reinforced by administrative and documentation barriers, and that equity-oriented data governance is necessary to prevent invisible recovery disparities. The article develops a ten-component framework that integrates social vulnerability and needs assessment, inclusive preparedness and mitigation investment, accessible warning and risk communication, equitable evacuation and sheltering, priority resource allocation, culturally competent and community led response, recovery assistance access, equity focused recovery tracking, equity centered data governance, and policy accountability. The article contributes to disaster management and public policy scholarship by positioning equitable disaster support as a measurable governance responsibility rather than a narrow recovery issue.

KEYWORDS: disaster equity, social vulnerability, public policy, emergency management, qualitative document analysis, resource allocation, disaster recovery, vulnerable communities, community resilience

INTRODUCTION

Disasters reveal and often intensify existing social, economic, health, housing, language, disability, transportation, and infrastructure inequalities. A flood, wildfire, cyclone, pandemic, or severe storm may begin as a natural or technological hazard, but the resulting human impact is shaped by social conditions and public policy decisions. Socially vulnerable communities may have fewer resources for preparedness, fewer evacuation options, greater exposure to unsafe housing, limited access to insurance, greater dependence on public services, weaker access to digital systems, and more difficulty navigating disaster assistance programs. For this reason, inequitable disaster support should be examined not only as a humanitarian concern, but also as a public policy and governance problem across the full disaster management cycle.

Social vulnerability theory provides the foundation for this article.(Arabadjis, Sophia D., et al.,2026) define social vulnerability as the social conditions that influence a community's ability to anticipate, cope with, resist, and recover from hazards. The CDC/ATSDR Social Vulnerability Index (SVI) also shows how socioeconomic status, household characteristics, racial and ethnic minority status, housing type, and transportation access can indicate communities that may need additional support before, during, and after emergencies (Agency for Toxic Substances and Disease Registry). These sources show that disaster risk is not only about hazard exposure. It is also about whether people can receive warnings, evacuate safely, access shelter and healthcare, obtain assistance, and recover after impact(Vojtek, Matej, et al.,2026).

Emergency management doctrine recognizes that disaster support requires coordinated action across the whole community. FEMA's National Incident Management System emphasizes coordination among government, nongovernmental organizations, and private sector partners, supported by communications and information management (Federal Emergency Management Agency). FEMA's Community Lifelines approach focuses on essential services such as safety and security, food, hydration, shelter, health and medical services, energy, communications, transportation, hazardous materials, and water systems .These lifelines are especially important for socially vulnerable communities because unequal access to transportation, healthcare, shelter, communication, food, water, and housing can turn a hazard event into prolonged social disruption(Amankwaa, Ebenezer F., et al.,2026).

Official oversight and disaster reviews show that inequitable disaster support remains a practical problem in advanced emergency management systems(Moise, Imelda K., et al.,2026). In the United States, GAO's review of barriers to federal disaster recovery assistance reported, drawing on

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its flood mapping work, that FEMA flood mapping investments from fiscal years 2012 through 2020 were lower for communities with higher social vulnerability and underserved populations, other factors being equal (U.S. Government Accountability Office . GAO has also examined FEMA Individual Assistance declaration guidance and recommended updated guidance to better help communities apply for Individual Assistance . These findings show that inequity can emerge before and during disaster assistance delivery because risk information, declaration guidance, and program design shape who receives attention and support(Murdhani, 2026).

Australia and New Zealand provide additional official evidence that equity is a disaster governance issue. Australia's Royal Commission into National Natural Disaster Arrangements was established after the 2019-2020 bushfires and emphasized stronger coordination, improved disaster risk information, and better arrangements across governments, sectors, and communities (Royal Commission into National Natural Disaster Arrangements). In New Zealand, the Government Inquiry into the Response to the North Island Severe Weather Events reviewed Cyclone Hale, Auckland Anniversary heavy rainfall, and Cyclone Gabrielle, while the government response sought to strengthen disaster resilience and emergency management after those events (Department of the Prime Minister and Cabinet ; Government Inquiry into the Response to the North Island Severe Weather Events). The Chief Ombudsman's report on the 2023 extreme weather events also recorded difficulties experienced by affected people and communities, including challenges involving isolation, access, communication, and support networks

This article develops an Integrated Public Policy Framework for Equitable Disaster Support. It does not claim to be a systematic literature review, statistical study, field based empirical study, program evaluation, or formal comparative case study. Instead, it uses a qualitative document based conceptual analysis to synthesize selected theory, doctrine, official oversight reports, disaster review evidence, and qualitative methodology literature(Zaychik, Danielle, et al.,2026). The article makes three contributions. First, it reframes inequitable disaster support as a cycle-wide public policy problem rather than an issue limited to emergency response or recovery. Second, it clarifies that the United States, Australia, and New Zealand materials are selected official document evidence rather than bounded comparative case studies. Third, it proposes a practical framework for improving equitable resource allocation, accessible response, recovery support, data governance, and policy accountability for socially vulnerable communities.

Research Questions

RQ1: How do socially vulnerable communities experience inequitable disaster support across preparedness, response, and recovery?

RQ2: What public policy, data, communication, resource allocation, and administrative barriers contribute to inequitable disaster support?

RQ3: How can an Integrated Public Policy Framework strengthen equitable resource allocation, accessible response, and recovery support for socially vulnerable communities across the disaster management cycle?

LITERATURE REVIEW

Social Vulnerability and Unequal Disaster Impacts

Social vulnerability is central to understanding why disaster impacts are uneven. Hazards may be physical events, but disaster outcomes are shaped by income, age, disability, language access, housing quality, transportation access, health status, social isolation, digital access, and institutional support. (Solekhah, Nuzul, et al.,2025)argue that vulnerability reflects social characteristics that influence the ability of communities to anticipate, cope with, resist, and recover from hazards(Udo, Fidelis, et al.,2025). This shifts analysis away from hazards alone and toward the relationship between exposure, social capacity, and governance.

The CDC/ATSDR SVI provides a policy relevant tool for identifying communities that may need additional support in emergencies. (Ramgopal, Sriram, et al.,2025)describes SVI as a way to identify communities that may need support before, during, and after emergencies. Such tools are valuable because emergency managers cannot allocate support equitably if they do not know which communities face the greatest barriers to preparedness, evacuation, emergency assistance, and recovery.

Social vulnerability also shapes recovery. Households with limited savings, low insurance coverage, precarious housing, disability related needs, limited English proficiency, weak transportation access, or lower administrative capacity may struggle to access assistance and rebuild. Inequitable support can therefore appear before disasters through unequal mitigation and preparedness outreach, during disasters through warning and evacuation barriers, and after disasters through complex aid applications, documentation requirements, digital access problems, and uneven restoration of lifeline services(Onyejesi, Chibuike Daniel, et al.,2025).

Public Policy, Emergency Management, and Equity

Emergency management policy provides the formal structure through which governments prepare for, respond to, and recover from disasters. FEMA's NIMS emphasizes coordinated action, resource management, and communications and information management. FEMA's Community Lifelines approach identifies essential services that support community survival and stabilization. However, these systems do not automatically produce equitable outcomes unless they are applied with explicit attention to social vulnerability and access barriers.bA public policy approach to disaster equity must distinguish between equal availability and practical accessibility. A warning message, shelter, grant program, or recovery application may be formally available to everyone but practically inaccessible to people who lack transportation, internet access, English proficiency, documentation, stable housing, disability accommodations, or trust in government systems. Equity based support recognizes that some communities require additional or different pathways to achieve comparable safety and recovery outcomes(Shemshad, Masoomeh, et al.,2025).

Equitable disaster policy should therefore focus on barriers, not only benefits. It should ask whether warnings are accessible, whether evacuation transportation exists, whether shelters meet disability and cultural needs, whether recovery applications are understandable, whether renters and informal workers can access support, whether rural and remote communities receive timely assistance, and whether recovery progress is monitored across different population groups.

Official Disaster Equity Evidence from Selected Documents

The United States provides official evidence that inequity can occur in preparedness, mitigation, and assistance systems. GAO's 2021 review of barriers to federal disaster recovery assistance reported that FEMA flood mapping investments from fiscal years 2012 through 2020 were lower for communities with higher social vulnerability and underserved populations than for communities with lower vulnerability, other factors being

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equal . This matters because flood maps influence risk awareness, insurance decisions, mitigation planning, local preparedness, and community advocacy for risk reduction resources.

Inequity also appears in disaster assistance access. GAO's 2025 report on FEMA Individual Assistance examined declaration trends, resources to help states understand the declaration process, and the need for updated guidance to better help communities apply for Individual Assistance. Individual Assistance is critical because survivors may depend on it for temporary housing, home repair, and serious disaster related needs. Communities with limited administrative capacity may be disadvantaged if guidance, documentation, or application procedures are unclear.

Australia's 2019-2020 bushfires provide another example of equity relevant disaster governance. The Royal Commission into National Natural Disaster Arrangements identified the need for stronger national coordination, disaster risk information, decision support, and arrangements across governments, sectors, and communities (Royal Commission into National Natural Disaster Arrangements, 2020). The Australian evidence is important because rural, remote, older, disabled, First Nations, and culturally and linguistically diverse communities may face different barriers in warning, evacuation, sheltering, health support, and recovery.

New Zealand's 2023 North Island severe weather events, including Cyclone Gabrielle, provide a third source of official disaster review evidence. The Government Inquiry reviewed emergency management performance after Cyclone Hale, Auckland Anniversary heavy rainfall, and Cyclone Gabrielle. The government response set a direction for strengthening disaster resilience and emergency management after those events. The Chief Ombudsman's report also recorded insights and observations from affected people and communities after the extreme weather events. These sources show that disaster support gaps can involve communication, evacuation, isolation, community access, service continuity, and recovery support.

Research Gap

The literature and official disaster documents show that inequitable disaster support is a cycle-wide public policy problem. Social vulnerability theory explains why some communities face greater barriers to preparedness, response, and recovery. Emergency management doctrine explains coordination, resource management, and lifeline stabilization. Government oversight and disaster reviews identify specific problems in mapping investment, assistance access, national coordination, risk information, communication, and recovery systems.

However, these areas are often discussed separately. Social vulnerability literature explains unequal risk, emergency management doctrine explains operational coordination, and official reports identify program or event-specific gaps after major disasters. What remains underdeveloped is an integrated public policy framework that connects vulnerability assessment, inclusive preparedness, accessible warnings, evacuation support, priority resource allocation, culturally competent response, recovery assistance access, equity-focused tracking, data governance, and public accountability across the full disaster management cycle(Gökkaya, Emrah, et al..2026).

A second gap concerns the use of official evidence. The United States, Australia, and New Zealand documents show that disaster equity problems appear across different governance settings. However, if these materials are presented without a declared method, the article can appear to be a comparative case discussion. This study therefore treats those materials as selected official document evidence within a qualitative document based conceptual analysis, not as bounded comparative case studies. The purpose is to identify recurring policy and access barrier themes, not to produce country level causal comparison.

This article addresses the gap by linking social vulnerability theory, emergency management doctrine, Community Lifelines, government oversight reports, disaster review evidence, and qualitative document analysis methods into one public policy framework. The specific contribution is to show how document-based evidence can be analyzed into equity findings, framework components, and decision support functions for preparedness, response, recovery, and accountability.

METHODOLOGY

This study uses a qualitative document based conceptual analysis. It does not claim to be a systematic literature review, statistical study, interview-based study, survey, field evaluation, or formal comparative case study. Document analysis is appropriate when publicly available documents are examined to identify meaning, context, and patterns relevant to a research problem (Dang, Belle, et al.,2025). The purpose of this study is to synthesize selected social vulnerability literature, emergency management doctrine, official oversight reports, disaster review documents, and qualitative methodology sources in order to develop a defensible public policy framework for equitable disaster support.

The source base was selected through purposive relevance sampling. The selection was not intended to be exhaustive; rather, it was designed to include high relevance sources that directly informed the conceptual development of the framework. Sources were included when they addressed one or more of the article's core concepts: social vulnerability, disaster equity, emergency management doctrine, Community Lifelines, public policy barriers, disaster assistance access, official disaster review evidence, data governance, or qualitative document analysis.

The United States, Australia, and New Zealand materials were not treated as bounded case studies. They were used as illustrative official document evidence because they provide documented examples of inequity, access barriers, disaster governance challenges, and recovery support problems in advanced emergency management systems. Their role was to support theme identification and framework development, not to compare the countries or establish causal claims about national systems.

The analytical procedure followed four steps. First, the selected sources were reviewed to identify recurring references to vulnerability, access barriers, communication gaps, evacuation and sheltering barriers, resource allocation problems, recovery assistance obstacles, data governance concerns, and accountability gaps. Second, these recurring issues were grouped into thematic categories aligned with the research questions. Third, the themes were compared across source types to identify cross-cutting patterns, following the logic of thematic analysis as a flexible method for identifying patterns in qualitative material (Braun & Clarke, 2006). Fourth, the themes were translated into framework components designed to support practical policy design, equity-oriented emergency management, recovery monitoring, and future empirical testing.

Trustworthiness was supported through triangulation across different source types: peer reviewed social vulnerability literature, emergency management doctrine, official government oversight reports, disaster review documents, and qualitative methodology literature. The framework

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was not developed from a single country, disaster, report, or institutional source. Ethical concerns were limited because the study used publicly available documents and published literature and did not involve human subjects, private records, field interviews, or personally identifiable data.

Table 1. Source Categories and Analytical Roles

Source category	Examples used	Analytical role
Social vulnerability and equity literature	Cutter et al.; CDC/ATSDR SVI	Defined social vulnerability, access barriers, and the need for equity-oriented disaster support.
Emergency management doctrine	FEMA NIMS; FEMA Community Lifelines	Supported the whole community, coordination, resource management, and lifeline stabilization logic.
Official government oversight and disaster review documents	GAO reports; Australian Royal Commission; New Zealand severe weather inquiry, government response, and Chief Ombudsman report	Provided illustrative official evidence of risk mapping, assistance access, coordination, communication, community access, and recovery support gaps.
Qualitative methodology literature	Bowen; Braun and Clarke	Supported document analysis, thematic pattern identification, and transparent framework development.

RESULTS / ANALYTICAL FINDINGS

Finding 1: Disaster equity gaps are cycle-wide, not recovery only.

The document analysis shows that inequitable disaster support appears before, during, and after disasters. Before disasters, inequity may emerge through uneven risk mapping, mitigation investment, preparedness outreach, transportation planning, shelter readiness, and community capacity building. During disasters, it may appear through inaccessible warnings, evacuation constraints, shelter barriers, and uneven emergency supply distribution. After disasters, it may appear through complex assistance applications, housing barriers, documentation requirements, service restoration gaps, and weak distributional tracking.

Finding 2: Social vulnerability becomes operationally harmful when policy systems fail to remove access barriers.

Social vulnerability does not automatically produce disaster harm by itself. It becomes more damaging when warning systems, evacuation plans, shelters, aid programs, public information channels, and recovery processes assume that all communities have similar resources, mobility, language access, digital access, documentation, trust, and administrative capacity.

Finding 3: Equal availability of assistance does not create practical accessibility.

A recurring pattern across the source base is the difference between formal availability and practical access. A warning, shelter, grant, hotline, or recovery application may be open to everyone but still inaccessible to people without transportation, internet access, disability accommodation, stable housing, English proficiency, documents, or trusted support. This finding supports the need for policy design that measures whether assistance can actually be reached and used by communities facing barriers.

Finding 4: Recovery inequity is reinforced by administrative burden and weak distributional tracking.

Official oversight and disaster review evidence show that recovery support can become inequitable when assistance programs are difficult to understand, documentation is hard to produce, case management is limited, housing support is delayed, or aid delivery is reported only in aggregate. Without distributional tracking, agencies may know how much aid was delivered but not whether the most affected or most marginalized communities received timely support.

Finding 5: Equity oriented data governance is necessary to prevent invisible disparities and protect communities.

Vulnerability and needs data can improve prioritization, outreach, and resource allocation, but sensitive data can also create privacy, stigma, misuse, or distrust risks. Equitable disaster support therefore requires privacy safeguards, role-based access, data minimization, community oversight where appropriate, and transparent rules for how vulnerability information informs decisions.

Analysis and Framework Development

The findings indicate that inequitable disaster support can be analyzed as a chain of connected public policy problems: vulnerability is not identified early, access barriers remain hidden, assistance is designed as formally equal rather than practically accessible, resource allocation does not always reflect differential need, recovery systems impose administrative burdens, and weak tracking allows disparities to remain invisible. This chain explains why an equity framework must cover the full disaster management cycle rather than only the recovery phase.

The first analytical step was to translate the identified barriers into policy functions. Hidden vulnerability and unmet needs require social vulnerability and needs assessment. Unequal preparedness and mitigation require inclusive preparedness and mitigation investment. Warning and communication barriers require accessible warning and risk communication. Transportation, disability, health, cultural, and family barriers require equitable evacuation and sheltering. Uneven distribution of supplies and services requires priority resource allocation based on hazard impact, lifeline disruption, vulnerability, and access barriers.

The second analytical step was to connect response equity with community trust and local knowledge. Top-down response systems may miss local realities, especially in rural, Indigenous, migrant, disabled, older, linguistically isolated, or socially isolated communities. This finding led to the component on culturally competent and community-led response, which emphasizes trusted local partners, community organizations, disability advocates, faith groups, Indigenous organizations, and rural networks as part of operational disaster support.

The third analytical step was to connect recovery access, data governance, and accountability. Administrative burden and documentation barriers led to the recovery assistance access component. Invisible recovery disparities led to equity-focused recovery tracking. Sensitive vulnerability data

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led to equity-centered data governance. Weak conversion of lessons into reform led to policy accountability and continuous improvement. The resulting framework is therefore both operational and institutional: it identifies immediate equity actions and the governance mechanisms needed to sustain them.

The Integrated Public Policy Framework for Equitable Disaster Support is based on the argument that inequitable outcomes are not caused only by individual vulnerability, hazard severity, or lack of community preparedness. They are also produced by public policy gaps, weak vulnerability assessment, unequal risk reduction investment, inaccessible communication systems, transportation and shelter barriers, fragmented resource allocation, administrative burdens, limited recovery tracking, and inadequate accountability mechanisms.

The framework contains ten connected components. These components operate before, during, and after disasters. Before disasters, the framework supports vulnerability identification, inclusive preparedness, accessible risk communication, mitigation investment, evacuation planning, shelter readiness, and responsible data governance. During disasters, it supports accessible warnings, transportation assistance, equitable sheltering, emergency supplies, medical support, community led response, and priority resource allocation. After disasters, it supports recovery assistance access, housing support, document replacement, legal aid, case management, community led outreach, equity focused recovery tracking, privacy-protected data use, and policy accountability.

Table 2. Integrated Public Policy Framework for Equitable Disaster Support

Framework component	Policy problem addressed	Equity action	Expected contribution
Social vulnerability and needs assessment	Hidden or underestimated needs	Combine SVI data with local, real time, and community reports	Earlier identification of priority needs
Inclusive preparedness and mitigation investment	Unequal pre-disaster protection	Target outreach, risk mapping, technical assistance, and mitigation support	Reduced unequal exposure and readiness gaps
Accessible warning and risk communication	Messages not received, understood, or trusted	Use plain language, multilingual formats, disability access, and trusted messengers	Better warning reach and action
Equitable evacuation and sheltering	Transportation, disability, medical, cultural, and family barriers	Plan accessible transport, shelters, care continuity, and pet and family support	Safer evacuation and shelter access
Priority resource allocation	First come or damage only allocation	Use hazard impact, lifeline disruption, vulnerability, and access barriers	Needs based resource prioritization
Culturally competent and community-led response	Top-down response missing local realities	Fund and integrate trusted local, disability, Indigenous, migrant, faith, and rural partners	Higher trust and better outreach
Recovery assistance access	Complex applications and documentation barriers	Provide case management, mobile intake, legal aid, translations, and document support	Improved access to recovery programs
Equity focused recovery tracking	Total aid reported without distributional insight	Track who receives aid, who is denied, who remains displaced, and service restoration	Visible recovery disparities
Equity centered data governance	Sensitive data may be misused	Apply role based access, privacy safeguards, data minimization, and community oversight	Safer and more trusted data use
Policy accountability and continuous improvement	Lessons not converted into reform	Use equity audits, public reporting, after-action review, and corrective plans	Institutional learning and policy change

Table 2 identifies the framework components, while Figure 1 integrates them into a cycle-wide public policy model showing how equity actions should operate before, during, and after disasters.

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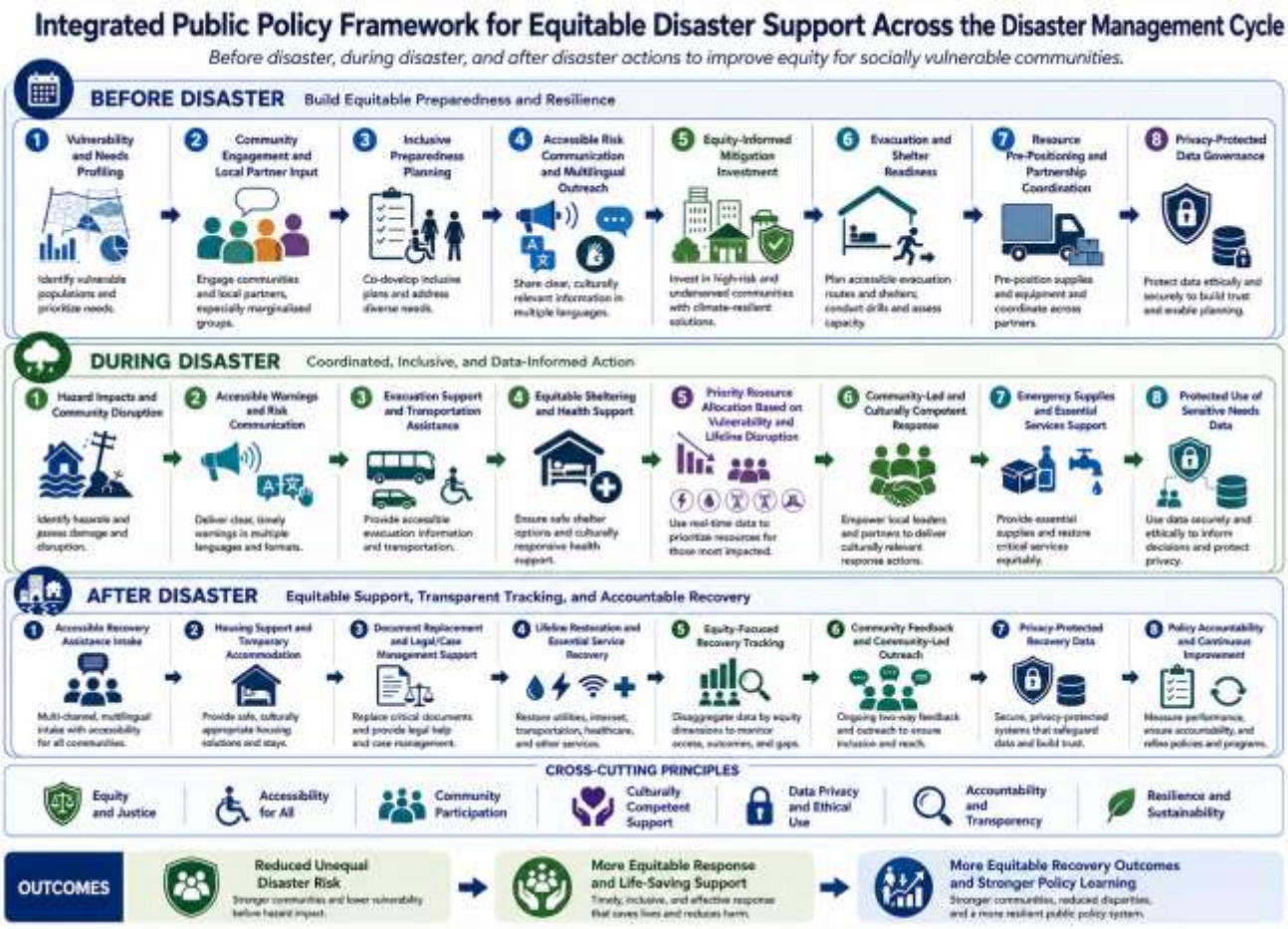


Figure 1. Integrated Public Policy Framework for Equitable Disaster Support Across the Disaster Management Cycle

Note. The figure integrates the framework across three operational periods: before disaster, during disaster, and after disaster. It shows how equity actions move from vulnerability identification and preparedness, to accessible response and priority allocation, and then to recovery assistance, equity tracking, data governance, and policy accountability. Cross cutting principles include equity and justice, accessibility, community participation, culturally competent support, data privacy, accountability, and resilience.

DISCUSSION

The findings and analysis show that inequitable disaster support is not only the result of social vulnerability itself. It is also produced when public systems fail to identify priority needs, remove access barriers, communicate accessibly, allocate resources according to differential need, simplify assistance access, protect sensitive data, and monitor whether support reaches communities most at risk.

The first research question asked how socially vulnerable communities experience inequitable disaster support across preparedness, response, and recovery. The findings show that inequity can appear before disasters through unequal investment in risk information, mitigation, preparedness outreach, evacuation planning, and community capacity building. GAO's flood mapping finding illustrates that inequity may begin before a hazard occurs because risk information affects preparedness, insurance decisions, land-use awareness, and the ability to advocate for protective investment.

During disasters, inequitable support may appear through inaccessible warnings, limited transportation, shelter barriers, language gaps, disability-related barriers, limited healthcare access, and uneven emergency supply distribution. FEMA's Community Lifelines approach identifies essential services needed for community survival and stabilization, but socially vulnerable communities may experience lifeline disruption more severely when they have fewer alternatives or fewer private resources . A general warning, centralized shelter, or online information portal may be available in theory while remaining inaccessible in practice.

After disasters, inequitable support can appear through complex assistance applications, documentation requirements, housing barriers, insurance gaps, internet access limitations, long travel distances to service centers, and weak case management. GAO's 2025 work on FEMA Individual Assistance highlights the importance of updated guidance to help communities apply for assistance. This supports the argument that recovery inequity is not only about the amount of aid available. It is also about whether vulnerable communities can access assistance systems, understand eligibility rules, meet documentation requirements, and receive timely support.

The second research question asked what policy, data, communication, resource allocation, and administrative barriers contribute to inequitable disaster support. The analysis shows that these barriers are connected. Data gaps make vulnerable needs less visible. Communication barriers reduce warning and assistance access. Transportation and shelter barriers reduce safety. Administrative burden slows recovery. Weak distributional tracking makes disparities difficult to see. The United States, Australia, and New Zealand documents are useful because they show that these problems can appear across different governance contexts, even though this article does not treat the countries as formal comparative cases.

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The third research question asked how an Integrated Public Policy Framework can strengthen equitable resource allocation, accessible response, and recovery support. The framework responds by translating the document-based findings into ten policy functions. Before disasters, agencies should identify vulnerability, invest in inclusive preparedness, target mitigation support, and plan accessible communication, evacuation, and sheltering. During disasters, agencies should use needs-based resource allocation, trusted community partners, culturally competent communication, and lifeline disruption data to prioritize assistance. After disasters, agencies should simplify recovery access, provide case management, monitor who receives support, track who remains underserved, and convert lessons into policy reform.

A key contribution of the framework is that it distinguishes equal support from equitable support. Equal support gives every community the same message, application process, shelter model, or recovery deadline. Equitable support asks whether different communities need different pathways to achieve comparable safety and recovery outcomes. A rural community may need local distribution because routes are damaged. A disabled resident may need accessible transport and continuity of care. A linguistically isolated community may need translated warnings and trusted messengers. A low-income renter may need legal aid and case management to access housing support.

The framework also emphasizes responsible data governance. Social vulnerability data can help agencies identify priority needs, but sensitive data can also create privacy risks, stigma, distrust, discrimination, or operational misuse. Equity-centered data governance requires data minimization, role-based access, cybersecurity, transparency, community oversight where appropriate, and clear rules for how vulnerability data inform resource allocation. Equitable disaster support should use data to reduce harm, not expose vulnerable communities to additional risk.

POLICY AND PRACTICE IMPLICATIONS

First, social vulnerability and needs assessment should be integrated into preparedness, response, and recovery planning. Agencies should not wait until after a disaster to identify who may need additional support. Vulnerability indicators, disability related needs, transportation limitations, language access needs, rural isolation, housing insecurity, medical dependency, and digital access barriers should be identified before disaster impact and updated during response and recovery.

Second, disaster policy should move from equal availability to practical accessibility. Warnings, shelters, grants, and recovery applications may be officially available but still inaccessible to people without transportation, internet access, English proficiency, documents, stable housing, disability accommodations, or trust in government systems. Policy design should include multilingual communication, disability accessible services, mobile assistance centers, simplified applications, transportation support, legal aid, document replacement, and community navigators.

Third, mitigation and preparedness funding should prioritize communities where social vulnerability and hazard exposure overlap. Public agencies should use vulnerability data to guide flood mapping, mitigation grants, evacuation planning, preparedness outreach, and technical assistance, especially for communities with limited administrative capacity, high renter populations, low insurance coverage, repeated hazard exposure, or aging infrastructure.

Fourth, response operations should use trusted community partners. Disability advocates, local leaders, Maori and First Nations organizations, Pacific and ethnic community groups, immigrant organizations, rural networks, faith groups, and community-based organizations can help design and deliver warnings, welfare checks, supply distribution, translation, shelter support, and recovery navigation. Community partnership should be funded and built into emergency plans before disasters occur.

Finally, recovery performance should include equity indicators. Agencies should track not only total aid delivered but also who received assistance, who was denied, who did not apply, which communities remain displaced, and which groups experience slower restoration of housing, transportation, healthcare, utilities, food access, and public services. Without this distributional view, recovery inequity may remain hidden until it becomes permanent.

LIMITATIONS AND FUTURE RESEARCH

This article is conceptual and document based. It does not test the proposed framework through field data, interviews, surveys, statistical analysis, pilot implementation, or formal comparative case study. The framework is developed from selected social vulnerability literature, emergency management doctrine, official oversight reports, disaster review evidence, and qualitative methodology literature. It should therefore be understood as a structured model for future research and practice rather than an empirically validated system.

The source selection was purposive rather than exhaustive. The study was designed to include high relevance sources that directly informed the conceptual framework, not to catalogue every disaster equity document or compare all national emergency management systems. The framework is also shaped by selected U.S., Australian, and New Zealand documents. Although these sources provide useful official evidence of disaster equity and governance challenges, the framework may require adaptation before being applied in other legal, cultural, administrative, or resource settings.

Future research should test the framework through comparative case studies, practitioner interviews, community-based research, emergency management exercises, and pilot applications. Studies could examine how agencies use vulnerability data, how community organizations participate in resource allocation, how recovery assistance barriers affect different groups, and whether equity focused tracking improves recovery outcomes. Future work should also examine privacy, trust, and ethical data governance when sensitive vulnerability information is used for disaster planning and assistance.

CONCLUSION

This article examined inequitable disaster support as a cycle-wide public policy problem and proposed an Integrated Public Policy Framework for Equitable Disaster Support. By reframing the article as a qualitative document based conceptual analysis, it clarifies that the United States, Australia, and New Zealand materials are selected official document evidence rather than formal comparative case studies.

The analysis found that socially vulnerable communities are not disadvantaged only because hazards are severe or because individuals lack resources. They are also disadvantaged when public systems fail to identify need early, communicate accessibly, allocate resources based on barriers and risk, simplify assistance access, protect sensitive data, and monitor whether support reaches the communities most affected. Inequity

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can emerge before disasters through uneven risk information, mitigation investment, preparedness outreach, and evacuation planning; during disasters through warning, transportation, sheltering, healthcare, communication, and emergency supply barriers; and after disasters through complex assistance systems, housing challenges, documentation requirements, and uneven recovery tracking.

The proposed framework contributes to disaster management and public policy scholarship by positioning equitable disaster support as a measurable governance responsibility. It connects social vulnerability assessment, inclusive preparedness, accessible response, priority resource allocation, community-led support, recovery assistance access, equity focused tracking, data governance, and policy accountability. If tested and implemented responsibly, the framework can help public agencies and emergency management partners move from equal treatment in theory to equitable support in practice.

REFERENCES

1) Arabadjis, Sophia D., et al. "Social Vulnerability, Locational Vulnerability, and Uncertainty in Wildfire Risk Index Construction." *Annals of the American Association of Geographers* (2026): 1-24.doi: https://doi.org/10.1080/24694452.2025.2604851
2) Vojtek, Matej, et al. "Spatial and temporal changes of social flood vulnerability in municipalities of Slovakia." *Geomatics, Natural Hazards and Risk* 17.1 (2026): 2616992.doi: https://doi.org/10.1080/19475705.2026.2616992
3) Amankwaa, Ebenezer F., et al. "'Don't call us vulnerable!': Rethinking flood vulnerability and community-led governance." *Journal of Urban Affairs* 48.2 (2026): 535-550.doi: https://doi.org/10.1080/07352166.2024.2401885
4) Moise, Imelda K., et al. "A mixed-methods national study assessing municipal rodent control infrastructure, surveillance capacity and disaster readiness in the United States." *Scientific Reports* (2026).doi: https://doi.org/10.1038/s41598-026-41987-1
5) Murdhani, L. A. (2026). Big Data And Artificial Intelligence In Local Government Disaster Risk Management: Toward Responsive And Adaptive Governance. *Jurnal Kecerdasan Buatan Dan Teknologi Informasi*, *5*(1), 101-107.doi: https://doi.org/10.69916/jkbti.v5i1.466
6) Zaychik, Danielle, et al. "A Disaster-Recovery Typology Framework: Conceptual Development and Application to Sustainable Recovery Planning." *Sustainability* 18.11 (2026): 5769.doi: https://doi.org/10.3390/su18115769
7) Udo, Fidelis, et al. "Evaluating the sustainability of local women's climate change adaptation strategies in Durban, South Africa: A feminist political ecology and intersectionality perspective." *Sustainable Development* 33.3 (2025): 3212-3227.doi: https://doi.org/10.1002/sd.3284
8) Solekhah, Nuzul, et al. "Learning from volcanic eruptions: Co-production of knowledge at Merapi and Kelud, Indonesia." *Jàmbá-Journal of Disaster Risk Studies* 17.1 (2025): 1881.doi: https://hdl.handle.net/10520/ejc-jemba_v17_n1_a1881
9) Ramgopal, Sriram, et al. "Comparison of the Social Vulnerability Index, Area Disadvantage Index, and Social Deprivation Index for Adults With Out-of-Hospital Emergencies." *Public Health Reports*® 140.5-6 (2025): 522-530.doi: https://doi.org/10.1177/00333549251357818
10) Onyejesi, Chibuike Daniel, et al. "Pediatric emergency disaster preparedness: a narrative review of global disparities, challenges, and policy solutions." *International Journal of Emergency Medicine* 18.1 (2025): 91.doi: https://doi.org/10.1186/s12245-025-00856-w
11) Shemshad, Masoomeh, et al. "The community-driven ecosystem resilience and equity framework: A novel approach for social resilience in ecosystem services." *Sustainability* 17.8 (2025): 3452.doi: https://doi.org/10.3390/su17083452
12) Gökkaya, Emrah, et al. "Emotional disturbances and psychological resilience among earthquake survivors in temporary shelters: assessing the role of life satisfaction." *BMC psychology* 14.1 (2026): 507.doi: https://doi.org/10.1186/s40359-026-04297-9
13) Dang, Belle, et al. "Human–AI collaborative learning in mixed reality: Examining the cognitive and socio-emotional interactions." *British Journal of Educational Technology* 56.5 (2025): 2078-2101.doi: https://doi.org/10.1111/bjet.13607

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