

Role of Civil Society in Enhancing Disaster Management and Resilience in Odisha

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Abstract:

Odisha, a state on India's eastern coast, is one of the most disaster-prone states in the country. It is affected by cyclones, floods, and droughts. Following the Super Cyclone of 1999, the approach to disaster preparedness has slowly changed from relief to disaster management. In this altered context, civil society organizations – non-governmental organizations, community-based organizations, self-help groups, volunteers and community radio stations – have become essential partners. This paper examines the changing role of civil society in disaster management and resilience across Odisha, drawing on 107 peer-reviewed publications from 2001 to 2025. It highlights that civil society organisations play a robust role in all the phases of disaster, that is, during preparedness through training, spreading early warning signals, and preparing local contingency plans, during response through last mile distribution of relief materials, support evacuation and two-way communication, during recovery through restoration of means livelihood, psychosocial support, resilient building back and during mitigation through advocacy for risk-informed development and ecosystem-based adaptation. Civil society involvement has gradually taken on a formal character through institutional mechanisms such as the Odisha State Disaster Management Authority (OSDMA), the District Disaster Management Authorities (DDMAs), and the Village Disaster Management Committees (VDMCs). While CSOs and NGOs have made significant contributions, there are still many issues they face, such as resource constraints, coordination gaps, capacity limitations, and the sustainability of engagement between disasters. The paper concluded that institutionalizing community-based approaches, expanding participatory communication platforms, establishing sustainable funding mechanisms, and deepening policy engagement are essential for strengthening civil society. The experiences of Odisha can provide salient lessons for the world's disaster-prone regions. These experiences demonstrate that successful disaster governance requires a true partnership among the government, civil society, and the people.

Keywords: Civil Society, Disaster Management, Odisha, Adaptive Governance, Community Resilience.

Introduction

Odisha is one of the most disaster-prone states in India, located on the eastern coast of the country along the shores of the Bay of Bengal. Due to its location, India is hit by a number of natural calamities, such as tropical cyclones, storm surges, floods, droughts, and coastal and inland hazards. The situation is further aggravated by high population density in vulnerable coastal areas and significant socio-economic vulnerabilities (Meher, 2024; B. Pradhan & Nayak, 2025; Tomar et al., 2024). The devastating Super Cyclone in 1999, which killed around 10,000 people, marked a turning point in Odisha's disaster management (Rout & Mishra, 2024; Srinivasan & Nagaraj, 2006). Disaster management is a systematic

approach to addressing natural and human-made disasters, such as fires, floods, earthquakes, droughts, and more. In other words, disaster management involves an efficient preparation, mitigation, response, and recovery system aimed at dealing with disasters. Above all, the aim of disaster management is to organize these activities to ensure safety and security. The coordinated efforts of governments, NGOs, communities, and other stakeholders shall be involved in the formulation and implementation of strategies to enhance resilience and reduce vulnerability (Ediga, 2015; NDMA, 2016; Panneer et al., 2021). Important components are risk assessment, early warning, capacity building, preparedness response, and rehabilitation activities. The management of disasters is a process with which to develop structures that will resist hazards. Further, through the aid of non-structural processes like awareness-raising, education, and making policies participatory, the disaster process no longer just benefits disaster management but also sustainable development. This is because disaster risk reduction (DRR) is now being mainstreamed into policy and will be planned on a larger scale (Das et al., 2022; Ediga, 2015; Foundation, 2022; Ogra et al., 2021).

Odisha has created a robust disaster management system in accordance with the Disaster Management Act, 2005, which is institutionally anchored with the Odisha State Disaster Management Authority (OSDMA), State Disaster Management Authority (SDMA), and District Disaster Management Authorities (DDMAs). The Chief Minister chairs the OSDMA, which is involved in policy formulation and planning, capacity building, and the facilitation of multistakeholder cooperation among government and civil society actors (Government of Odisha, 2019; OSDMA, 2008). By focusing on preparedness, prevention, response, and recovery (which includes community-based disaster preparedness), the agenda seeks to integrate disaster risk reduction into development (Gottardo & Rego, 2021; Rout & Mishra, 2024; Syal et al., 2021). Civil society organizations (CSOs), which range from NGOs and women's self-help groups to community-based organizations, volunteers and more, have emerged as vital partners in this process in Odisha in the last few years. Through their grassroots organizations, they enhance risk awareness, provide alerts, support evacuation, and deliver relief and rehabilitation, bringing locally and culturally relevant interventions. The convergence of civil society and government agencies has improved disaster outcomes. For example, during Cyclone Phailin in 2013 and Cyclone Fani in 2019, the government's evacuation took place in a coordinated manner. This signifies a shift from an earlier Odisha model of relief-centric provision towards active governance and disaster governance in civil society (Rout & Mishra, 2024; Syal et al., 2021; TISS, 2005).

This paper examines how civil society's role in disaster management in Odisha has transformed in the 21st. The research examines peer-reviewed literature, together with citation and authorship data, to support the emergence of thematic clusters surrounding local knowledge, community-based disaster risk reduction (CBDRR) in recent years. The emphasis on CSO engagement across all disaster phases preparedness, response, rehabilitation, and resilience strengthens the adaptive and inclusive disaster management framework of the state (Sharma, 2023; van Wessel et al., 2020).

Much progress has been made so far, but still, there are gaps regarding the role of CBOs in Odisha. Limited coordination among the various CSOs is evident, often due to a lack of resources and capacity, as well as political situations that hinder the collaboration between the government and CSOs. The lack of systematic recording and assessment of the contributions of civil society actors across disaster phases limits evidence-based policy development. The incorporation of climate adaptation into disaster risk management systems and the establishment of sustainable funding mechanisms to support ongoing community participation are two areas that remain to be explored.

Statement of the Problem

Though Odisha has institutionalized disaster management, the participation of civil society organizations that support disaster resilience in all phases requires investigation. This addresses spatial and temporal coordination, capacity, and sustainability challenges. In light of increasing climate risks, there is a need for a systematic analysis of the contributions of civil society organizations to preparedness, response, recovery, and mitigation, and of how they can be engaged in an adaptive governance system for long-term disaster resilience.

Research Questions

This study aims to systematically explore the evolving role of civil society organizations in Odisha's disaster management, focusing on their contributions, challenges, and partnership dynamics with government agencies. The key research questions are:

RQ1: How do civil society organizations contribute to building community resilience across different phases of disaster management in Odisha?

RQ2: What challenges and opportunities shape their collaboration with government agencies in disaster governance?

Methodology

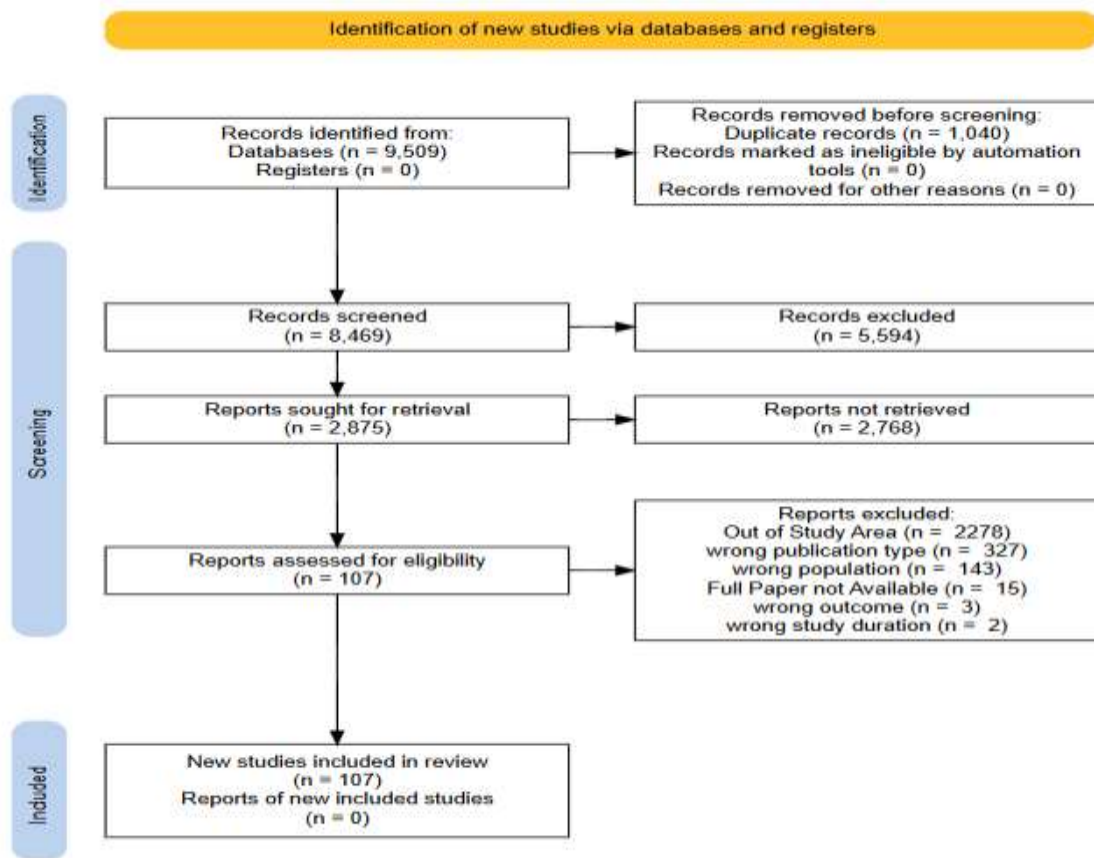
The study examines civil society's efforts in disaster management, with special reference to Odisha. The researcher obtained three major literature databases from OpenAlex, LENS, and Dimensions. These databases were selected for their broad coverage of peer-reviewed literature across various subject areas, including social science, environmental studies, and disaster research (Singh et al., 2021; Garg et al., 2021). Using multiple databases reduces bias that would arise from relying on a single source for all data. Moreover, it leads to greater coverage of relevant publications (Mongeon & Paul-Hus, 2016). In Odisha, the selected publications on civil society and disaster management were identified through data collection based on the criteria outlined below.

Search Terms: The search string combined three thematic categories:

- **Civil Society Actors:** "civil society," "non-governmental organization," "NGO," "community-based organization," "CBO," "self-help group," "SHG," "volunteer," "community participation," "social capital"
- **Disaster Management Context:** "disaster management," "disaster risk reduction," "disaster resilience," "emergency management," "cyclone," "flood," "natural hazard," "natural disaster"
- **Geographic Focus:** "Odisha," "Orissa," "India," "eastern India"

The search was applied to the title, abstract, and keywords (TITLE-ABS-KEY) fields using Boolean operators (AND, OR).

1. **Language:** English language publications only
2. **Document Type:** Peer-reviewed journal articles, conference proceedings, and book chapters
3. **Subject Areas:** Social sciences, environmental science, disaster management, public administration, and related interdisciplinary fields
4. **Time Frame:** Publications from 2001 to 2025, capturing the period following the catastrophic 1999 Super Cyclone that transformed Odisha's disaster management approach.



The selected search strategy aimed to minimize researchers' biases by ensuring that publications encompassed all relevant iterations of the subject, including studies incorporating terms such as "community resilience," "adaptive governance," and "participatory disaster management." The search initially yielded a combined total of publications across the three databases. After merging and deduplication, **8469 documents** were screened; of these, 5594 were excluded, and 2875 were selected for retrieval. Among them, 2768 were not retrieved for various reasons; 107 documents were included in this review. The database included articles spanning from 2001 to 2025.

Inclusion and Exclusion Criteria

To ensure the relevance and quality of the retrieved documents, the following inclusion and exclusion criteria were applied:

Inclusion Criteria:

- Peer-reviewed journal articles, conference proceedings, and book chapters
- Publications from 2001 to 2025
- Documents with complete bibliographic information (authors, title, abstract, keywords, references)
- Publications in English language
- Studies focusing on civil society, disaster management, and/or Odisha/India

Exclusion Criteria:

- Editorials, letters, news items, and book reviews
- Duplicate records across databases
- Publications without abstract or author information
- Studies not focused on disaster management or civil society

- Non-English publications

Results & Discussions

Major Non-governmental Components of Disaster Management in Odisha.

Community-Based Organizations (CBOs): CBOs act at the grassroots level for engaging civil society in disaster management. The local organisations, such as self-help groups, youth clubs and village committees, have knowledge of the vulnerabilities, social networks and local culture to mobilise communities (Kilby, 2007; Mohapatra et al., 2019; Sinha & Chattopadhyay, 2024). On the impact of cyclone Fani, the CBOs displayed commendable capacity for rapid response through door-to-door awareness campaigns, evacuating victims and providing first-response relief at the village level (Banerjee & Mohapatra, 2023; Chatterjee, 2020; Reshmi Mohan et al., 2022).

NGOs at state level and national level have played an instrumental role in linking the need of the community with the institutional resource. Among the various initiatives, the foremost is the Aparajita programme of the Voluntary Health Association of India (VHAI). Following the Super Cyclone of 1999, VHAI undertook a comprehensive reconstruction and preparedness programme in Jagatsinghpur, Kendrapara and Puri districts (Mandal & Dey, 2022; Puri et al., 2024). integrated approach livelihood support, health services, infrastructure development and capacity building became a model for long-term disaster recovery that empowers communities rather than creating dependency.

Collaborative networks of civil society organizations may boost better coordination, sharing of resources and collective advocacy. Through these networks, smaller organizations can gain technical expertise, funding opportunities and a platform to engage with policymakers while remaining focused on local operations (Mukhopadhyay, 2007).

The Community Radio stations run by civil society groups have emerged as a veritable communication channel for disaster preparedness and response. Research demonstrates how community radio stations in Odisha enabled communities to access early warning messages in vernacular languages about the cyclones and share local information, as well as local participation in preparedness. Kanjilal et al., 2025. The two-way communication model which involved people improved warning uptake and evacuation compliance, compared to one-way official broadcasts (Kanjilal & Bhandari, 2025)

Civil Society Contributions Across Disaster Management Phases

Civil society organizations help communities prepare through training, drills, early warning systems, local planning, and more. There are constant NGO and CBO trainings on cyclone safety, first aid, evacuation, and disaster preparedness planning. Attention is mainly on vulnerable groups including women, children, the elderly, and the disabled (Kumar & Pradhan, 2022; Rajakumari et al., 2022). Organising mock exercises and simulations that makes the population familiar with the cyclone shelters, evacuation routes, and emergency protocols (Pradhan et al., 2023). Apart from this, local organizations act as vital last-mile communicators for the dissemination of early warnings. They transform technical weather alerts into localized actionable information so marginalized communities, who may not have access to mainstream messaging, get timely messages (Dash, 2024; M. K. Kanjilal et al., 2025). Community-based organizations develop village-level disaster management plans collaboratively with residents, helping them identify local vulnerabilities and resources, as well as work out response strategies that are tailored to the context of the community (De Sisto et al., 2024; Sethi et al., 2025).

During disaster situations, civil society organizations (CSOs) effectuate a rapid, localized response that significantly augments the government's own relief doings through several ways. According to Panigrahi, CBOs and NGOs mobilize fast to provide necessities such as food, water, medicines and tarpaulins, often in remote and inaccessible areas, and often do so before government agencies arrive. They offer assistance to the official teams for the purpose of search and rescue and also for evacuation. Given their familiarity with the geography of the community, they are able to identify the vulnerable households that require special assistance and help work with the public to implement evacuation plans. Alongside this, civil society undertakes rapid needs assessments to identify what communities need, which groups are most at risk and to detect gaps in official response so as to provide important information for targeting (Panigrahi, 2003). Ultimately, these organizations control essential two-way communication and information flows during disasters. They communicate official messages to communities, and simultaneously send back field-level realities and community requirements (Kanjilal et al., 2025).

In recovery, civil society organisations show opportunities for sustained engagement and empowerment of communities through a comprehensive range of interventions. Programs such as Aparajita have included holistic livelihood restoration measures like agriculture, livestock, skill training and formation of saving and credit groups (Mukhopadhyay, 2007). Civil society also participates in rebuilding through the rehabilitation of schools, health centres, water systems and the like. Such efforts often incorporate disaster resilient designs so as to reduce vulnerability in the future (Mukhopadhyay, 2007). Non-governmental organizations (NGOs) offer psychosocial support as official responses often ignore psychological impacts. This includes counseling and mental support aimed at individuals with trauma (Pradhan et al., 2025). Ultimately, recovery programs incorporate capacity-building actions, that include trainings and organizational developments, in turn reinforcing the capacity of the community for future disaster preparedness and response and sustaining resilience beyond the immediate post-disaster period (Mukhopadhyay, 2007).

Minimizing and Lowering Risk.

Civil Society also makes important contributions to long-term disaster risk reduction through a range of proactive and forward-looking measures. NGOs are also working towards advocating for risk-informed development. They engage in demanding the integration of disaster risk into development planning, land-use policies and infrastructure projects so that development does not compromise safety (B. Pradhan & Nayak, 2025). Nature-based solutions, including mangrove restoration and coastal vegetation and land management are also advocated to reduce vulnerability to disasters while improving the environmental sustainability (Pradhan et al., 2025). In localities, civil society organizations engage communities in assessing risks as perceived by them. The critical understanding of the hazards, vulnerabilities, and capacities ensures that the risk reduction measures are aligned with the realities (Pradhan et al., 2025). In the end, they document and share. In particular, they document and share local knowledge, traditional practices and lessons learned from past events. All of these contribute evidence to more effective disaster management policies and practices. (Pradhan & Nayak, 2025).

One of the most important contributions of civil society may be the strengthening of community participation and local governance of disaster management. Continuous studies indicate that social capital, such as trust, networks, reciprocity, etc., influences disaster preparedness and response efficiency. Civil society organizations can develop and mobilize social capital efficiently. Researchers in Odisha's coastal villages found that the presence of strong civil society and active local networks significantly influenced

the uptake of early warnings and collective action in cyclones. Community members would rely on trusted local leaders and CBO representatives as credible sources of information and mobilisers within the community. As a result, they overcame barriers of literacy, language and institutional distance.

The civil society not only builds trust but also contributes to participatory governance mechanism; post the 1999 Super Cyclone, Odisha experimented with nodal NGO arrangements at the block level, where specific organizations were given the task of coordinating preparedness and response at the sub-district level. While implementation was uneven, this was a key development in the formalising of civil society role in disaster governance. Recent efforts have focused on participatory planning processes where communities, with facilitation from civil society organisations, are involved in the making of district and state disaster management plans, ensuring that local vulnerabilities, priorities, and capacities feed into official planning (Pradhan & Nayak, 2025). The integration of livelihoods into disaster risk reduction planning is crucial for sustained community engagement. Whenever preparedness programs tackle everyday livelihood issues (for example, agricultural productivity, income diversification and market access), communities feel the direct benefits and continue to engage (Nayak, 2020). Civil society organizations are adept at planning such integrated programs that connect immediate livelihood needs with long-term resilience building (Mukhopadhyay, 2007) which embeds disaster preparedness into people's communities as part of the daily work and promotes ownership and accountability that lasts beyond a single hazard event.

Government-Civil Society Collaboration

The relationship between government agencies and civil society in Odisha's disaster management has evolved from parallel, sometimes competitive operations toward increasingly coordinated partnerships, though challenges persist.

Evolution of Collaboration

Early disaster responses, including the 1999 Super Cyclone, were characterized by fragmented efforts with limited coordination between government and civil society actors (Panigrahi, 2003). Over time, several factors have fostered improved collaboration:

- **Institutional Reforms:** Establishment of the Odisha State Disaster Management Authority (OSDMA) and district-level disaster management authorities created formal structures for multi-stakeholder engagement (Pradhan & Nayak, 2025).
- **Recognition of Civil Society Capacity:** Successive disasters demonstrated civil society's unique strengths—community trust, local knowledge, flexibility, and sustained engagement—leading to greater government appreciation of CSO contributions (Nayak, 2020).
- **National Policy Framework:** India's Disaster Management Act (2005) and National Disaster Management Policy emphasize multi-stakeholder participation, providing policy legitimacy for government-civil society partnerships (Pradhan & Nayak, 2025).

Mechanisms of Collaboration

Collaboration occurs through various mechanisms:

- **Coordination Meetings:** Regular coordination meetings at state and district levels bring together government officials and civil society representatives to share information, plan joint activities, and address operational challenges (Pradhan & Nayak, 2025).

- **Joint Training Programs:** Government agencies and NGOs collaborate in conducting training for communities, volunteers, and government functionaries (Pradhan et al., 2025).
- **Resource Sharing:** Government provides civil society organizations with access to early warning information, technical expertise, and sometimes financial resources, while civil society contributes community mobilization capacity and local implementation (Kanjilal et al., 2025).
- **Policy Consultation:** Civil society organizations are increasingly consulted in disaster management policy formulation and planning processes, though the depth and impact of such consultation varies (Pradhan & Nayak, 2025).

Best Practices and Success Stories

The Aparajita projects show how systematic, community-centred interventions can revive a disaster-affected community and hence become an integrated model on disaster recovery. After the Super Cyclone that struck in 1999, Aparajita worked in three severely affected districts. They took a multi-pronged developmental approach. It included a revival of livelihood through support in agriculture, provision of livestock, and income-generating activities. It also included health and nutrition services to address the immediate and long-term health impacts. It further focused on developing infrastructure to repair housing, water systems, and community structures and facilities. Other areas were capacity building and institutional strengthening of local organizations. There was also training on disaster preparedness along with community contingency planning (Mukhopadhyay, 2007). According to Mukhopadhyay (2007), the success of the program is not due to a single intervention, but rather to the long-term commitment maintained over the years, coupled with the focus on empowering the community. Furthermore, this program also integrated recovery and preparedness by building community capacity, local leadership, and organizational networks to handle future disasters independently. Aparajita proved that responding to disasters is not isolated, it is also development and investment in people and institutions is equally or more important than restoring the material. By treating recovery as a chance for transformation and not mere restoration.

Community Organizations During Cyclone Faniya

The community-based organizations' pre-existence and their ability to deliver a quick response based on local conditions was evidenced by Cyclone Fani in 2019. In the affected areas, CBOs initiated door-to-door campaigns to ensure that every household received and fully understood evacuation warnings, and assisted vulnerable individuals which included the elderly, persons with disabilities and pregnant women in safely reaching cyclone shelters. The relief supplies from the pre-positioned community stocks were provided immediately. They conducted rapid needs assessments and damage documentation to guide targeted interventions and maintain community cohesion (Banerjee & Mohapatra, 2023). The interventions led by community-based organizations (CBOs) were speedy, contextually relevant, and had strong community ownership. It suggests an important lesson that investing in local organizational capacity is not just an add-on to disaster preparedness. On the contrary, it must be viewed as a core strategy for disaster management. This helps communities to act when the situation demands and with speed (Banerjee & Mohapatra, 2023).

Community Radio: Disaster Communication.

The community radio stations in Odisha have adopted participatory disaster communication strategies that

radically reshape the way communities receive, know and act upon information during cyclones. During cyclon Yass and other recent instances, these stations sent early warnings in local languages and dialects so that all sections of the community could understand them, literate or otherwise. Critically, they ensured two-way communication. Community members were able to transmit not only information received but also report on local conditions, emerging needs and ground realities. The practical and actionable wisdom on evacuation, shelter and safety measures was given. Continuous broadcasting when the cyclone hit and right after when nothing else worked was another way of communicating that, yes, it will pass! Moreover, with broadcasting, they ensured an uninterrupted relay of information, advising people on what actions to take immediately. In the post-disaster phase, they aided recovery by announcing relief distribution, government services and livelihood support (Kanjilal et al., 2025). Studies have shown that people living in communities served by community radio are more aware of warnings, have a better understanding of the right protective actions, and are more confident about their disaster preparedness than people living in communities who only have access to mainstream media (Kanjilal et al, 2025). Thus, locally grounded, participatory communication saves lives and builds resilience.

Challenges Faced by Civil Society Organizations

Civil society Odisha's disaster management context is not a bed of roses despite their contribution.

Limitations of Resources.

Local civil society organizations in many places lack financial resources for full-time staff equipment, infrastructure, or programs between disasters (Panigrahi, 2003). Funding mechanisms tend to favour well-established and big NGOs, leading to under-resourced grassroots CBOs, who play vital roles at the community level (Banerjee & Mohapatra 2023).

Issues Related to Verifiability.

In disasters' immediate aftermath civil society is not able to reach the affected communities and provide needed support because of destruction of roads, communication break-down, flooding etc (Panigrahi, 2003). Limited access to vehicles, boats and communications equipment restricts operational capacity, especially for smaller organizations. (Panigrahi, 2003)

Difficulties in Coordination.

The range of civil society actors from village level groups to large national NGOs makes coordination difficult. The overall effectiveness can be reduced by the lack of sharing of information, duplication of work and competition in funds and recognition (Panigrahi, 2003). It is difficult to create coordination mechanisms that allow organizations to act collectively while respecting their autonomy (Pradhan & Nayak, 2025).

Lack of Capacity.

Many civil society organizations lack technical expertise such as disaster risk assessment, project management, monitoring and evaluation and financial management (Pradhan et al., 2025). Although the knowledge and commitment of the community are invaluable, a training strategy that builds technical capacities is important to improve effectiveness and access formal disaster management systems (Pradhan et al., 2025).

Dealing with Institutions and Politicians.

The political and institutional environment poses challenges for civil society organizations. Finding the right equilibrium between operational partnerships with government entities and remaining independent for advocacy can be challenging (Freeman & Kunreuther, 2002). Political pressures or restrictions deter some organizations from their activities, particularly when they raise critical issues concerning disaster vulnerability, development policies, or government response (Freeman & Kunreuther, 2002).

Sustainability of Engagement

Maintaining civil society engagement between disasters is challenging. Funding typically flows during and immediately after disasters but diminishes during inter-disaster periods when preparedness and mitigation work is crucial (Banerjee & Mohapatra, 2023). Building sustainable organizational models and ensuring continued community participation require long-term commitment and resources often unavailable to civil society actors (Banerjee & Mohapatra, 2023).

Policy Frameworks and Institutional Mechanisms

India's Disaster Management Act (2005) provides the national legal and institutional framework for India's disaster management policy. There has been a perceived need to shift from a traditional relief-oriented focus to one that offers priority to prevention, mitigation and preparedness. The policies emphasize multi-stakeholder participation, which explicitly includes civil society; community-based disaster management, which privileges local communities; and capacity building at all levels of government and society. Pradhan & Nayak's (2025) issue paper has provided relevant recommendations. When nations develop their disaster response policies, they create formal space for civil society engagement and legitimise government-CSOs partnerships. It recognises that the scale and complexity of disasters require collaborative responses that mobilise the various strengths from state and non-state actors. Even though there is enabling national policy environment, and its implementation at state and local levels has until now remained uneven due to variations in political will, institutional capacity, resource allocation, and the depth of actual civil society involvement, meaning that the policy itself may be progressive but its transformative potential will depend largely on the actual translation of this policy into practice at ground level (Pradhan and Nayak, 2025).

Odisha has put in place a strong set of institutional mechanisms that formally structure and facilitate civil society engagement across all tiers of disaster governance. In the context of disaster management activities, OSDMA at the top increasingly involved civil society in planning and implementation as the community-based organizations have local knowledge, reach and trust which complement state capacities (Pradhan & Nayak, 2025). District Disaster Management Authorities serve as vital platforms through which civil society can engage in disaster planning and response at the district level. This ensures that disaster management strategies at the district level are informed by local experience and that civil society actors are included in official coordination structures during disasters (Pradhan & Nayak, 2025). Most significant perhaps, at the grassroots level, the Village Disaster Management Committees include civil society representatives and formalize community participation, providing an area through which local voices, vulnerabilities, and capacities feed into the disaster preparedness and response activities of the government agencies customized to village contexts (Pradhan et al., 2025). The arrangements at the state, district and village levels create the necessary structured ecosystem for civil society

engagement/participation. Without these nested institutional arrangements, non-state actors would probably collaborate in an ad hoc manner rather than as a more systematic engagement.

Various analyses now view the evolving disaster risk management system of Odisha as a case of “adaptive governance”, which is a flexible arrangement that learns and works with many stakeholders, incorporating a wide range of actors and knowledge systems to manage complexity (Pradhan & Nayak, 2025). This approach essentially recognizes that effective disaster management cannot solely depend upon formal institutional capacity but must build on the state structure, knowledge of the community, flexibility of civil society organizations, and decision-making process that is truly participatory and empowering the people (Pradhan & Nayak, 2025). Some of the key components of adaptive governance in Odisha are decentralized preparedness and response to enable timely and context-sensitive action, and the deliberate combination of scientific and traditional knowledge that facilitates user-friendly and culturally appropriate early warnings and risk assessments, respectively. There is also an emphasis on learning from past experiences, especially through experimentation in identifying which strategies work under different circumstances. Formal and informal partnerships among the government, civil society and communities are also fostered (Pradhan & Nayak, 2025). Odisha is shifting away from rigid top-down approaches in coastal management towards an adaptive governance paradigm. This paradigm can better take into consideration the uncertainties of climate change as well as the complex social realities of life in the coast.

Lessons Learned and Future Directions

1. **Community Capacity is Critical Infrastructure:** Pre-existing community organizations and social networks are as important as physical infrastructure for effective disaster management. Investing in community capacity building and organizational development yields significant returns in disaster resilience (Banerjee & Mohapatra, 2023).
2. **Long-Term Engagement Matters:** One-off relief interventions have limited impact compared to sustained engagement that integrates preparedness, response, recovery, and development. Programs like Aparajita demonstrate the value of long-term commitment to community empowerment (Mukhopadhyay, 2007).
3. **Local Knowledge and Participation Are Essential:** Top-down approaches that ignore local knowledge, priorities, and participation are less effective than participatory approaches that engage communities as active agents rather than passive beneficiaries.
4. **Communication Must Be Two-Way:** Effective disaster communication requires two-way flows—not just disseminating warnings but also listening to community concerns, incorporating local knowledge, and enabling community feedback. Community radio and participatory media exemplify this principle (Kanjilal et al., 2025).
5. **Collaboration Requires Institutional Support:** While informal partnerships can be effective, sustained government-civil society collaboration requires formal mechanisms, clear roles, resource commitments, and mutual respect (Pradhan & Nayak, 2025).
6. **Integration with Livelihoods Sustains Engagement:** Disaster risk reduction programs that address everyday livelihood concerns maintain community participation and build resilience that extends beyond disaster events (Nayak, 2020).

Future Directions

Drawing on lessons from decades of experience, from the 1999 Super Cyclone to Cyclone Fani and Yaas,

the priorities for strengthening the role of civil society in Odisha's disaster management landscape are listed below. They either address continuing gaps or build on existing strengths. Approaches based on communities and community-based disaster management structures must be institutionalized, taking cognizance of their presence and adequately resourced. They must be recognized by resourcing communities and not merely engaged with at the time of disasters (Banerjee & Mohapatra, 2023). The expansion of participatory communication platforms must be done, primarily community radio and the like, along with their systematic inclusion in official early warning systems, so that the two-way communication which proved to be so useful in the recent cyclones becomes part of the early warning architecture rather than an addition (Kanjilal et al., 2025). Coordination mechanisms need to be greatly strengthened at the level of the state, district, block and village (Pradhan & Nayak, 2025). There are numerous actors involved in disaster management. Consequently, many plans and actions are undertaken at different levels. Lack of coordination leads to duplication of effort. Equally relevant, scarce resources are deployed inappropriately. Hence, better coordination amongst various stakeholders will enable smooth information sharing, joint planning and compatible action. Finally, sustained effort is required to secure safety and livelihoods of civil society organisations (CSOs), particularly local CSOs or community-based organisations (CBOs), in critical technical areas such as disaster risk assessment, project management, monitoring and evaluation, and advocacy—enabling them to not just respond but also intervene in policy and planning (Pradhan et al., 2025). Another important area which needs to be addressed is the issue of resource constraints. Sustainable funding mechanisms need to be created for civil society work in disaster management so that there is dedicated funding for these inter-disaster preparedness and mitigation activities specific support to civil society almost universally lacking. Currently, there are no dedicated resources. These do not get the same donor attention as high publicity emergency response to disasters. (Banerjee & Mohapatra, 2023) Another essential step in the overall strategy for enabling more effective disaster management efforts by civil society will be improved tracking and documentation. This involves systematically monitoring and documenting the contribution of civil society to disaster management which will establish a robust evidence base of their impact while also allowing for the identification of effective practices at the local level which can then be scaled and replicated across districts (Pradhan & Nayak, 2025). As we can see that climate change is increasing disaster risks, disaster management is shifting towards integrating climate adaptation. The strengths of civil society in community-based adaptation can be best harnessed to tackle slow onset changes- sudden onset hazard overlaps (Pradhan et al., 2025). Strengthening policy engagement is, therefore, crucial creating opportunities for civil society participation in disaster policy formulation and policy planning at all levels – local, state and national – which are meaningful and sustained. The community is to be consulted before formulation and planning so that local knowledge and ground realities inform state and national strategies. It is essential that the consultation is not tokenistic after a decision has been made (Pradhan & Nayak, 2025). Collectively, these priorities embody a comprehensive agenda to enhance and systematise the civil society-government partnership that characterises Odisha's disaster management approach, converting the often-reaction collaborative effort into a proactive, resilient, and truly participatory governance system.

Conclusion.

Civil society organisations have been transformative actors in Odisha's evolution from a disaster-vulnerable to disaster-resilient state. Civil society has contributed to all phases of disaster management starting from the 1999 Super Cyclone and to Phailin, Fani and thereafter. These engagements covered

building community preparedness, providing rapid response, facilitating long-term recovery and risk reduction advocacy. Civil society is strong due to its engagement, knowledge of the local context, flexibility, and a long-term approach. Community-based organizations, NGOs, networks, and community media initiatives have mobilized our communities, filled institutional gaps, and empowered the most vulnerable groups to protect themselves within their communities.

The experience of Odisha shows that disaster management needs synergetic initiatives of government institutions, civil society organizations and communities. Even if there are challenges like limited resources, lack of coordination and limited capacity, it will lead to positive development of collaborative, adaptive governance arrangements. As climate change escalates disaster risks, the participation of civil society shall become increasingly important. Using lessons learned, Odisha must increasingly invest in community capacity and civil society partnerships and create institutional mechanisms for participatory, community-centered disaster resilience. The state performance with regards to disaster was excellent. Showing when government, civil society and communities work together we can avoid a major disaster.

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