



“Evaluation Of Community-Based Disaster Preparedness For Flood And Drought In Mysore Taluk”

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ABSTRACT: This study examines community awareness, preparedness, and risk perception regarding floods and droughts in Mysore, Karnataka. Despite being educated and employed, most respondents lacked disaster plans or training. Reliance on government warnings was high, but community alerts and institutional engagement were limited. The findings highlight the need for improved infrastructure, widespread training, and stronger community-institution collaboration to boost resilience.

Keywords: Disaster Preparedness, Floods, Droughts, Risk Perception

Introduction: Floods and droughts are among the most destructive and frequent natural disasters globally. In India, their impacts are amplified by climate change, dense populations, and rapid urbanization. Mysore, Karnataka, faces increasing environmental stress due to expanding urban areas and erratic weather patterns. As extreme events intensify, proactive mitigation and adaptation strategies are critical. Floods lead to displacement, disease outbreaks, and infrastructure damage, while droughts cause water scarcity, crop failures, and ecological decline. Vulnerable groups in poorly planned or low-resource areas suffer the most. Conventional top-down disaster management often overlooks local needs and community knowledge. Extreme weather events—including droughts, floods, and heatwaves—are becoming more intense due to climate change and environmental degradation [1–5].

Mysore’s rapid growth and climate shifts have increased flood risks in urban zones like Vontikoppal and Jayanagar, and droughts in rural areas like Periyapatna. Poor drainage, seasonal monsoons, and weak infrastructure worsen these impacts. Slum and rural populations remain especially vulnerable due to limited resources and awareness, highlighting the urgent need for inclusive disaster management and community-focused resilience strategies.

The main objectives of the study are to assess public awareness and perceptions regarding flood and drought risks in Mysore Taluk. To evaluate residents' knowledge of disaster preparedness measures. To examine community participation in disaster risk reduction training, campaigns, and activities. To assess the disaster preparedness of local authorities, community organisations and NGOs involved in CBDP

Review of literature: The ILATGANA PHN model in Indonesia improved disaster-prone communities' awareness and response through training, participatory learning, and local engagement, enhancing resilience and preparedness (Sofyana et al., 2024). A study in Chitwan, Nepal, found local disaster committees lacked training, planning, and policy support, stressing the need to empower grassroots institutions for effective, localized disaster risk reduction (Shrestha, 2023) Zhao et al. (2025) propose generative AI chatbots to enhance culturally adaptive, trusted disaster communication in multiethnic communities. Neerunjun shows that community-led drills, early warnings, and training boost resilience, highlighting bottom-up planning and collaboration in Mauritius, a climate-vulnerable island state (Neerunjun, 2024). In Indonesian communities, localized and trusted communication—particularly through community leaders—significantly improves disaster preparedness, emphasizing the need to integrate grassroots strategies into national frameworks (Prasetyo et al., 2024). After the 2023 Türkiye earthquake, psychological preparedness among responders was linked to emotional resilience, stress training, and past experience, highlighting the importance of mental health in disaster volunteer training (Marčeta & Jurisic, 2024). A Japan-based study on earthquake preparedness reveals that residents prefer inclusive planning, local drills, and transparency from institutions, highlighting the need for personalized engagement and responsive governance in urban disaster management (Lin & Lee, 2025). In Mamuju, Indonesia, a qualitative study identifies gaps in leadership, early warning systems, and emergency response. It stresses culturally relevant training, community drills, and inclusive strategies to strengthen local disaster resilience (Purnomo et al., 2025). Research on post-2008 Kosi River flood recovery in Bihar shows that in the absence of institutional aid, communities relied on traditional coping mechanisms. Rural populations demonstrated flexibility and self-reliance in disaster recovery (Acharya, Parida, & Singh, 2023). A resilience assessment in Surat reveals that informal settlements face significantly lower disaster preparedness. The study emphasizes youth-centered reforms in education, women's inclusion, and mobile-based solutions for sustainable urban resilience (Jamshed et al., 2024). In developed countries like the Netherlands, Australia, the U.S., and Spain, disaster management is fragmented, with landowners bearing key responsibilities (Raikes et al., 2019). Trust in city authorities and media improves disaster response in Mumbai slums, while local leaders lack influence due to low credibility (Samaddar et al., 2012).

MATERIALS AND METHODOLOGY: This study seeks to evaluate how the community in Mysore taluk feels about and copes with drought and flood hazards. Community members' knowledge, experiences from disasters, how people prepare, and ways they cope are all studied in this research. The chapter explains the way data was collected and analysed from a structured survey of 26 questions. The method uses both numbers and stories to give a clear picture of how communities handle these repeated hazards.

Description of the study Area: Mysore Taluk which lies in southern Karnataka, is known for its different terrains, changing weather and farming communities. Droughts often happen in the district when the monsoon is not strong enough and floods occur when there is heavy rain.

MAP OF STUDY AREA

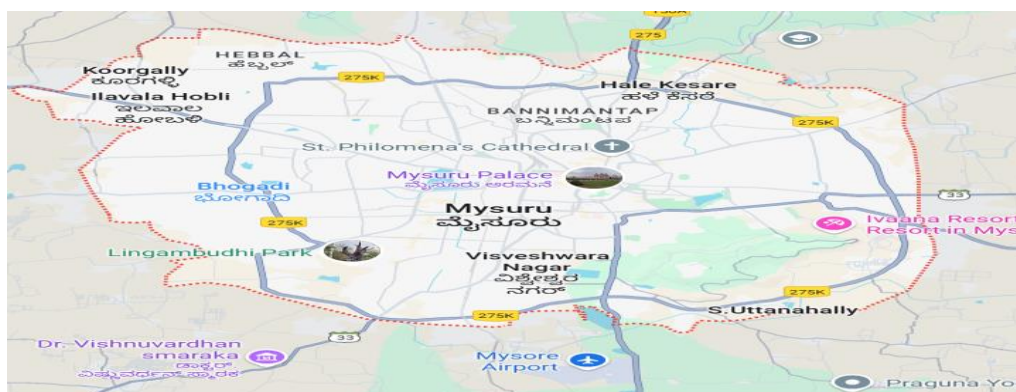


Fig 3.2.2 Map of Mysore taluk (Courtesy: Google Maps)

Result and Discussion:

The majority of respondents (118) were aged 31–45, followed by 68 aged 18–30. Middle-aged individuals (46–60) were less represented (18), with only one person above 60. Gender distribution was nearly balanced, with 110 men and 95 women. Most participants were well-educated: 137 had undergraduate degrees, 44 postgraduates, and 15 completed high school, while few had only primary (5) or no education (4). Regarding residency, 115 had lived in the area for 5–10 years, 53 for over 15 years, 35 for less than 5 years, and 2 between 10–15 years.

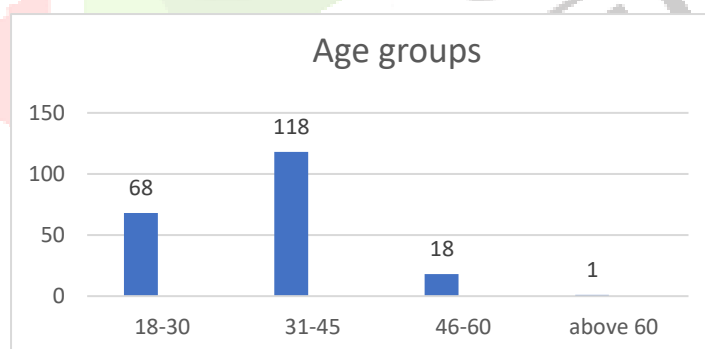


Fig 4.1: Graphical representation of the age groups

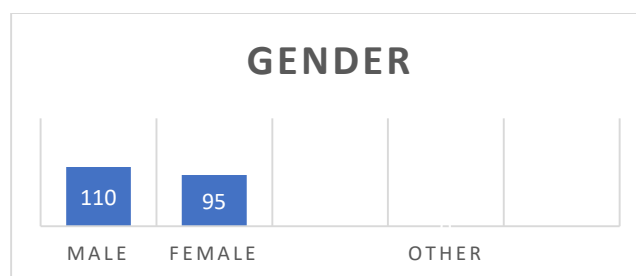


Fig. 4.2 Graphical representation of the Gender

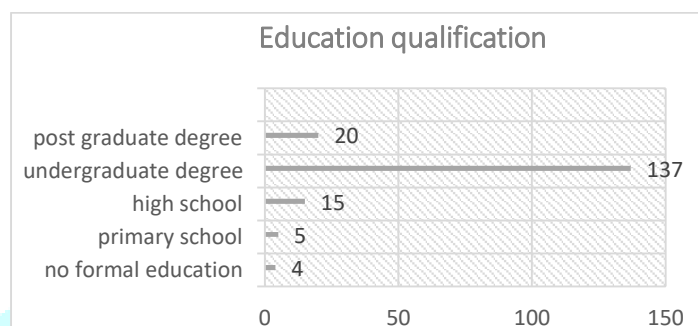


Fig.4.3: Graphical representation of education qualification

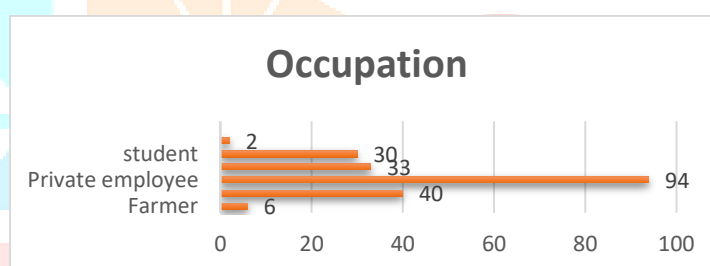


Fig 4.4: Graphical representation of occupation

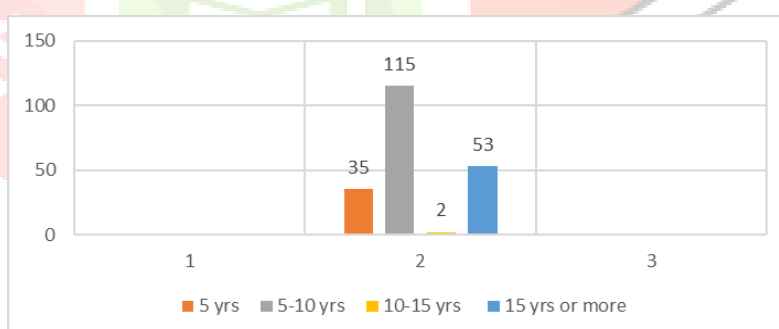


Fig.4.5: Graphical representation of residence

4.2 Section B: Disaster awareness and risk perception

The majority of respondents (128) reported moderate awareness, while 71 had low to very low awareness and only 6 were highly aware, indicating a widespread lack of knowledge and the need for stronger risk communication. 71 cited climate change as the main cause, followed by urban planning (44), drainage (43), deforestation (42), and other minor factors. Sixty-nine respondents experienced floods or droughts, while 136 had not—suggesting limited firsthand experience, potentially affecting overall disaster preparedness. 90 respondents faced floods/droughts every 2–5 years, 78 rarely, 33 yearly, and 31 every 5–10 years with rising severity.

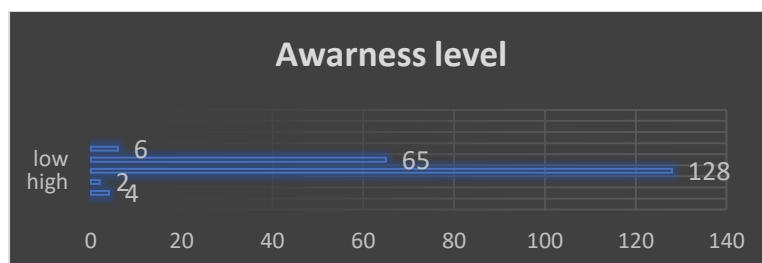


Fig 4.6: Graphical representation of awareness level in Mysore

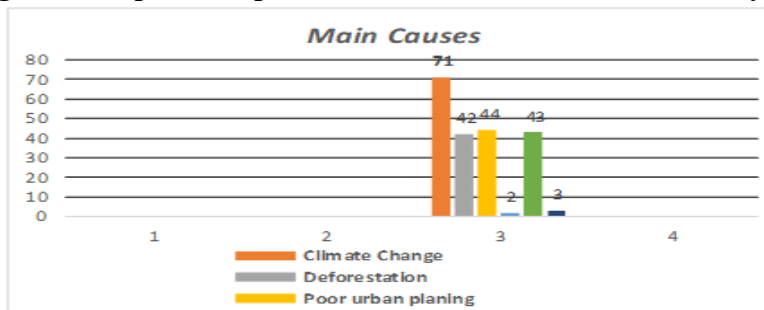


Fig 4.7 Graphical representation of the main causes of floods and droughts in Mysore

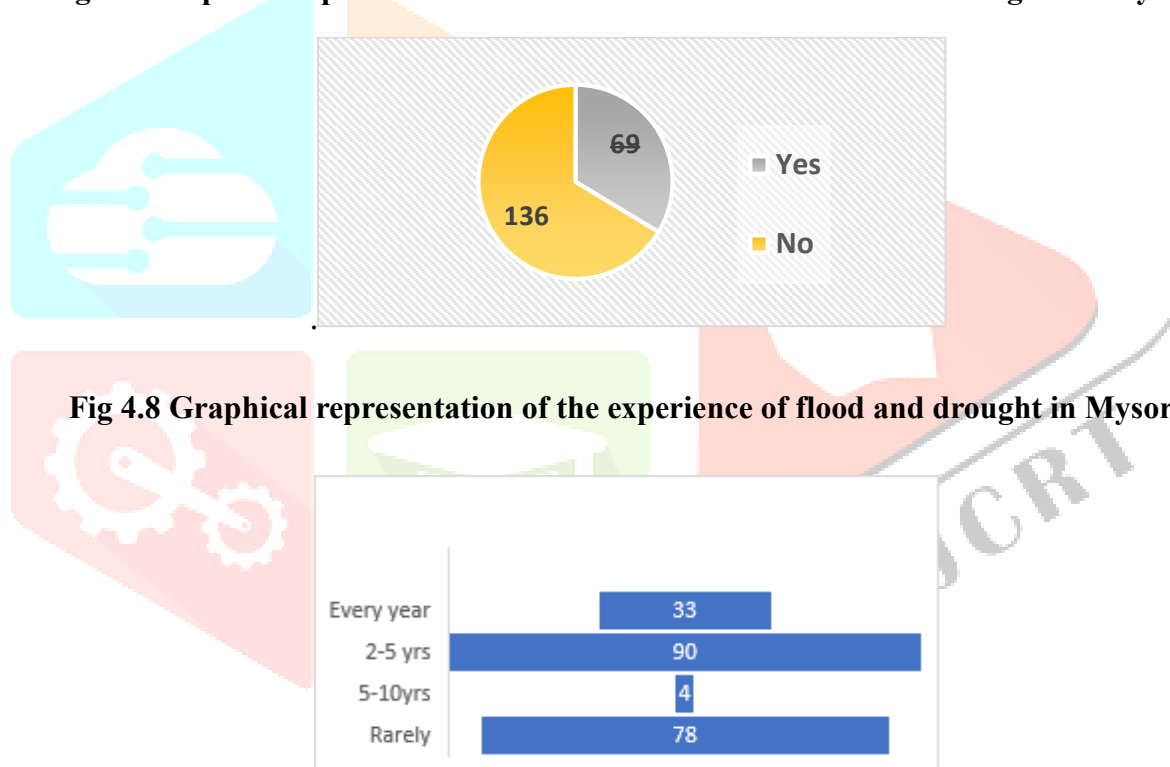


Fig 4.8 Graphical representation of the experience of flood and drought in Mysore

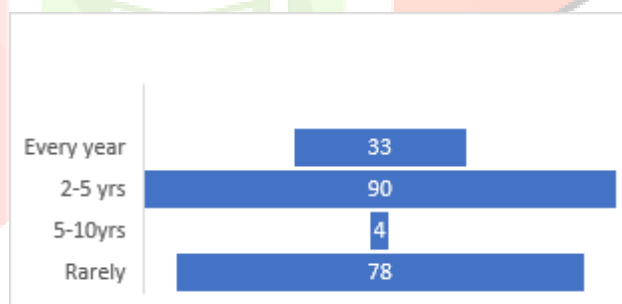


Fig 4.9 Graphical representation of flood and drought occurrence in Mysore

4.3 Section: C Preparedness Measures at the Household and Community Level

7 households had a disaster plan, 120 did not have one and 78 did not know, which is a poor preparedness and a clear indication that local awareness programs are needed. Out of all respondents, 103 lacked preparedness, 65 had supplies, 15 had plans, few had training—indicating urgent awareness needs. 172 used government warnings, 15 relied on community alerts, and 18 used personal judgment—highlighting gaps in local communication systems. 173 would go to government shelters, 22 to friends, 3 to NGOs, 7 had no plan—showing reliance on government support.

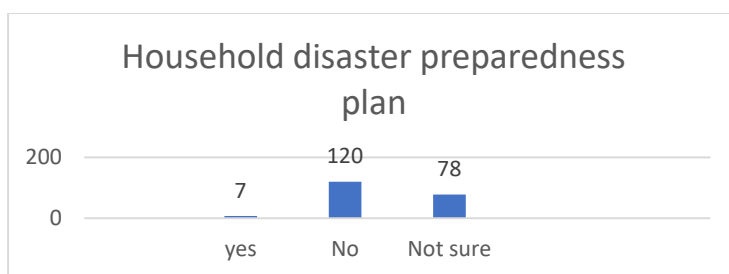


Fig 4.10 Graphical representation of preparedness

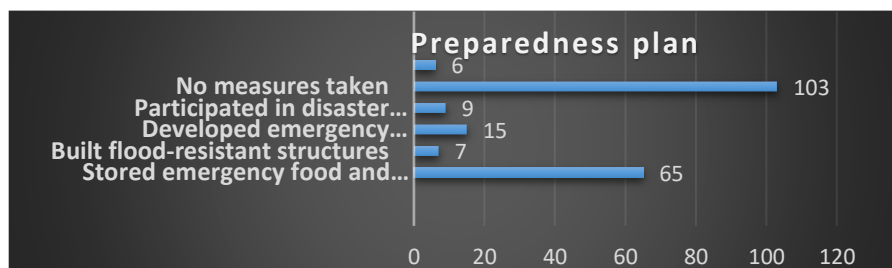


Fig 4.11 Graphical representation of preparedness measure

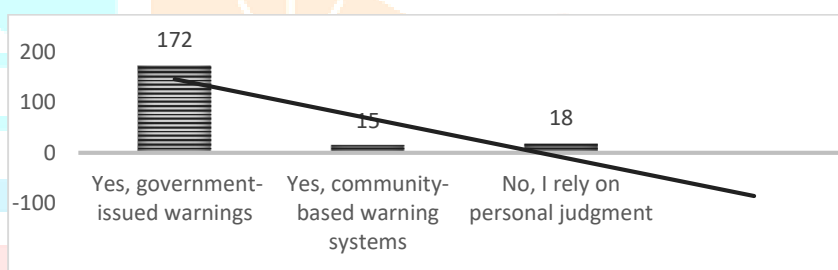


Fig 4.12 Graphical representation of warning systems

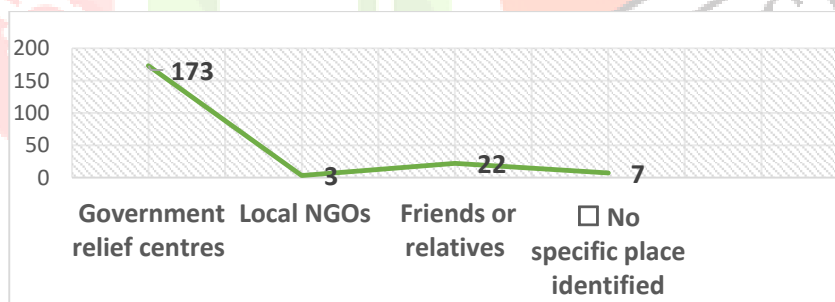


Fig 4.13 Graphical representation indicating the respondents seeking shelter during the disaster

4.3 Section D: Government and Institutional Support

123 were indifferent to government efforts, 47 saw them as partly good, only 8 found them effective—showing weak public confidence. 99 prioritized awareness programs, 42 supported infrastructure upgrades, while fewer focused on agriculture, emergency planning, and water conservation initiatives. 121 were unsure about local training, 22 confirmed it, 63 denied—indicating poor visibility and need for stronger community outreach.

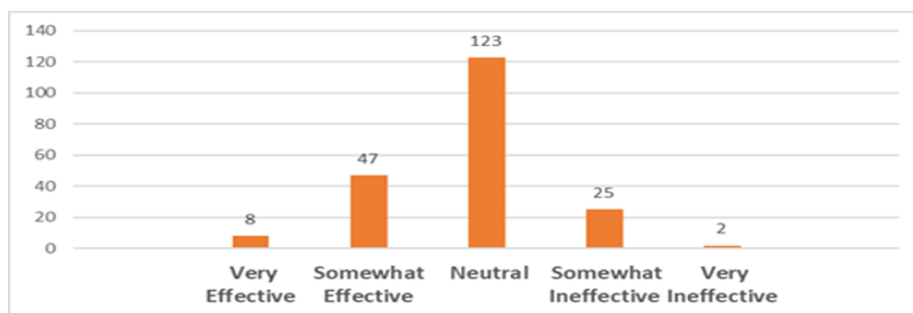


Fig 4.14 Graphical representation of government support

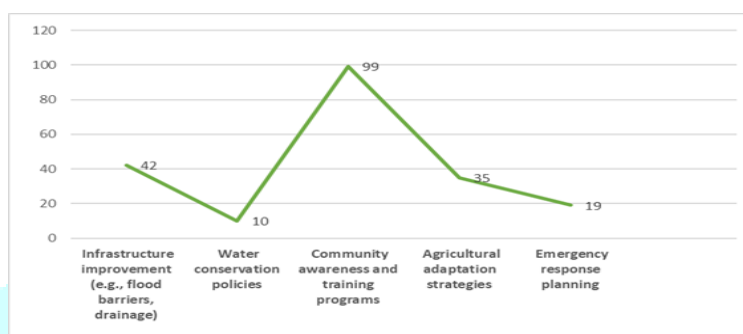


Fig 4.15 Graphical representation of disaster management strategies

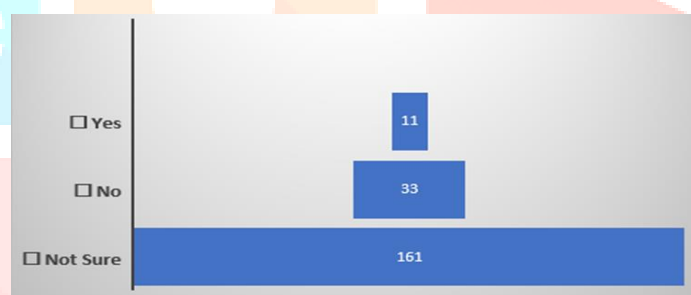


Fig 4.16 Graphical representation of training activity conducted

Section D: Social and Economic Impact of Disasters

Floods and droughts caused property damage (72), health issues (61), water shortages (32), crop loss (25), displacement (15)—highlighting urgent risk reduction needs. Most households scored 0–1 in financial preparedness, few were fully ready—revealing urgent need for financial planning and disaster resilience support. 69 prioritized free food and water, 48 preferred farm insurance, 36 emergency loans, 28 cash transfers, 24 other aid—showing diverse needs.

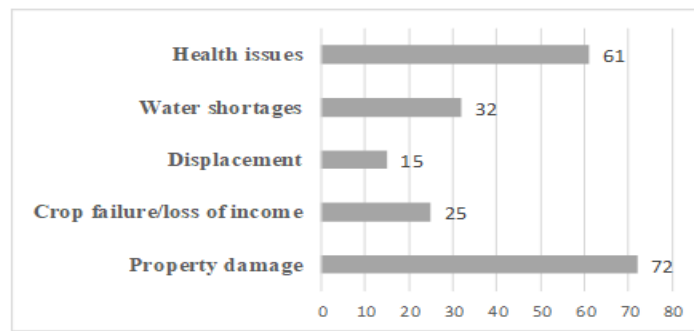


Fig 4.17 Graphical representation of house hold effected by past flood and drought

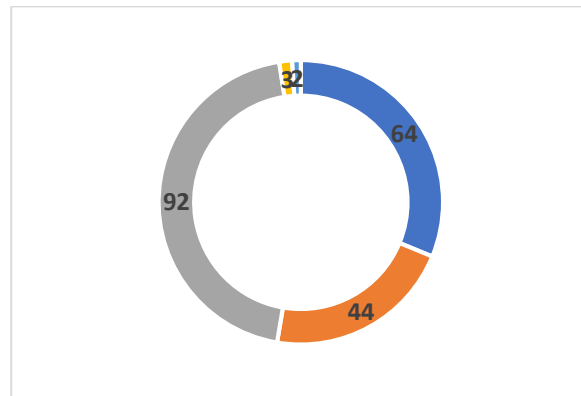


Fig 4.18 Graphical representation of financial preparedness'

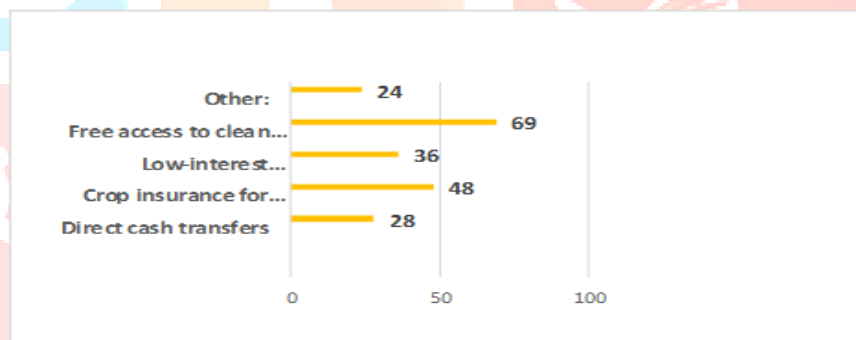


Fig 4.19 Graphical representation showing financial assistance for disaster-affected communities

4.6 Section E: Community Engagement and Recommendations

Community participation is low—102 were neutral, 50 reported low involvement, 22 no participation, only 6 highly active—showing need for engagement. Community support for CBOs is strong—awareness (185), relief (180), rescue (178), training (174), coordination (173), recovery (171)—showing vital preparedness roles. Key barriers include lack of awareness (143), poor policies (126), bad infrastructure (124), climate change (81), limited resources (51), weak communication (38). Public interest in preparedness is high—awareness programs (90), early warnings (69), more funding (50), volunteer training (19), ward teams (27).

Strong public interest in preparedness—awareness programs (90), early warning systems (69), increased funding (50), volunteer training (19), ward-level teams (27).

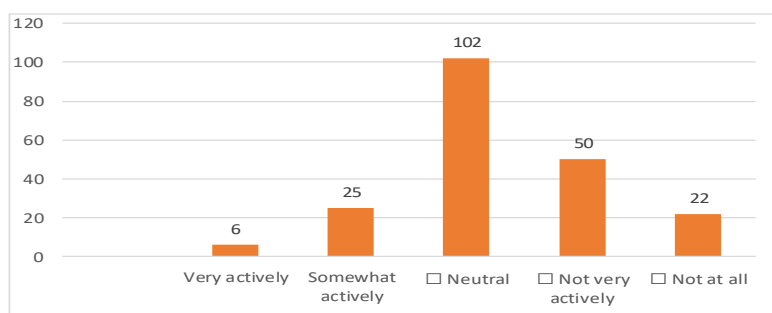


Fig 4.20 Graphical representation of community participation in disaster risk reduction initiatives

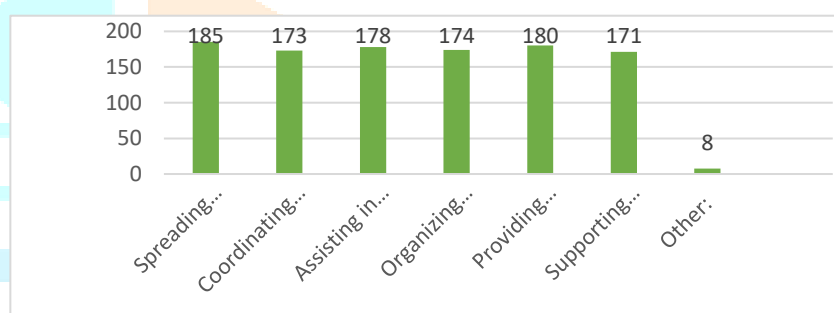


Fig 4.21 Graphical representation of people's perception of the role of community-based organisations during disaster management

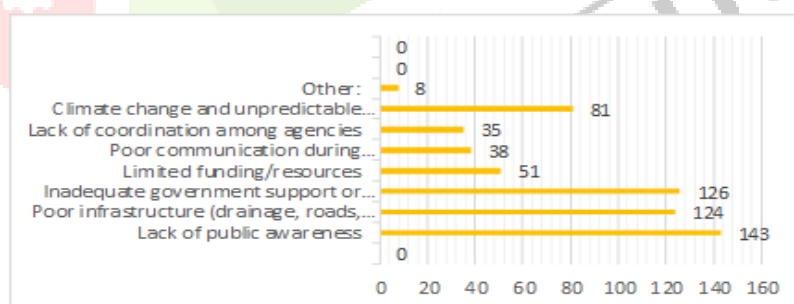


Fig 4.22 Graphical representation of the biggest challenges to improving disaster preparedness in Mysore

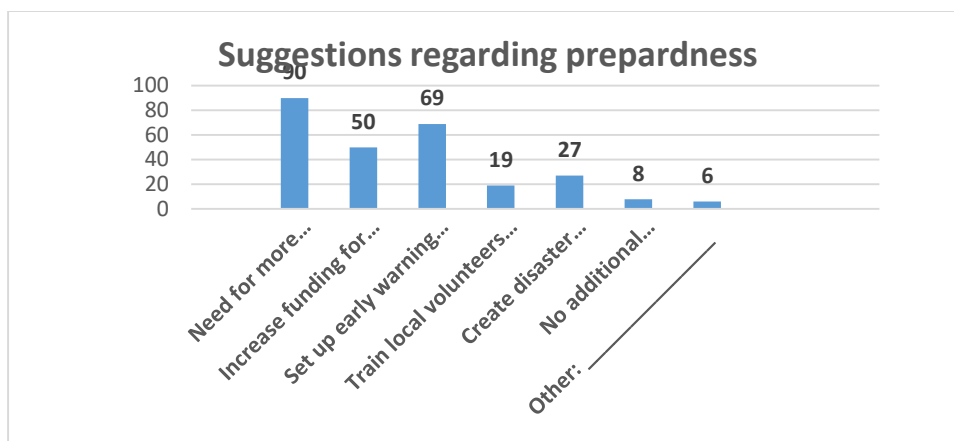


Fig 4.23 Graphical representation of additional comments or suggestions regarding flood and drought preparedness.

Role of Government initiative, community-based organisation & NDMA in disaster management

4.7.1 Mysuru's District Disaster Management Authority

The key responsibilities include planning, coordinating, and implementing disaster policies. He is tasked with preparing and updating the District Disaster Management Plan (DDMP), organizing disaster risk reduction and emergency response activities, ensuring the District Emergency Operations Centre (DEOC) functions effectively, and arranging training, awareness programs, and mock drills in coordination with the Administrative Training Institute (ATI) and Karnataka State Disaster Management Authority (KSDMA).

District Emergency Operation Centre (DEOC) is located in Mysuru.

The District Emergency Operations Centre (DEOC) serves as the central hub for coordinating disaster response efforts. It operates continuously, especially during emergencies, to ensure timely and effective action. Its primary roles include disseminating early warnings for floods, droughts, or pandemics; coordinating efforts among the police, fire services, NDRF, health departments, and local bodies; supporting the Deputy Commissioner (DC) and District Disaster Management Authority (DDMA) by managing logistics and real-time communication; and maintaining updated contact lists, resources, and communication tools for efficient disaster management.

ATI Mysuru (Administrative Training Institute)

The Centre for Disaster Management (CDM) at ATI Mysuru is Karnataka's main disaster training institute, aiding DDMA and DEOC in planning, mock drills, and capacity building. ATI trains officials, first responders, and NGOs, supports DDMP preparation, and shares global best practices. KSDMA, chaired by the Chief Minister, provides funding, oversight, and ensures Mysuru aligns with the State Disaster Management Plan. While DDMA manages decisions, DEOC handles real-time coordination, with ATI offering continuous training and technical guidance for effective flood response in Mysuru.

Summary and Conclusion

The survey conducted in Mysore reveals critical insights into the community's disaster preparedness for floods and droughts. Most respondents were middle-aged (31–45 years), well-educated—mainly with undergraduate degrees—and employed in professional or private sector jobs. Despite long-term residency in the area, awareness about disaster risks was generally moderate to low, reflecting inadequate outreach and education. Very few households had structured disaster preparedness plans, and participation in training or drills was minimal. People relied heavily on government-issued alerts, while community-based warning systems were rarely used or known.

Trust during emergencies leaned heavily toward government relief centres, with little engagement from NGOs or local initiatives. Major challenges identified include poor infrastructure, low financial preparedness, weak community participation, and limited communication among agencies. Institutions such as the District Disaster Management Authority (DDMA), District Emergency Operations Centre (DEOC), and Administrative Training Institute (ATI) play vital roles in disaster response and planning, yet community engagement with these bodies remains low, indicating a communication gap.

The following are the recommendations: To strengthen disaster preparedness, Mysore should enhance awareness campaigns, install local early warning systems, and introduce school disaster education. Promoting water conservation, improving relief access, mapping risk zones, supporting livelihoods, using technology for communication, and establishing feedback mechanisms will empower communities and ensure timely, inclusive, and effective disaster response.

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