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Research Article

Understanding the Role of Volunteerism in Flood Disaster Management in Assam: An Analysis from Dhemaji District

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Abstract: The study investigates the role of volunteerism in flood disaster management in Dhemaji District. Dhemaji is one of the most flood-affected districts in the state. Despite floods being a repetitive phenomenon that causes large-scale loss of lives, livelihoods, and infrastructure. The contribution of volunteers remains underutilized within conventional disaster response mechanisms. The study relies on both primary and secondary data: field observation, survey responses, and government reports are also included. The findings reveal that the current level of volunteer participation is limited. There is a strong willingness among citizens to contribute during future flood events. The paper suggested (a) the need for capacity building, awareness programs (b) training at the local, district, and state levels to integrate volunteerism into the formal disaster management system. The improvement in grassroots participation can remarkably reduce vulnerabilities and improve flood response.

Keywords: Volunteerism; Disaster Management; Assam; Flood Volunteerism, Dhemaji District

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Introduction

Disasters are one of the biggest challenges facing humanity today (Kateule et al., 2024). Floods are the most common type of natural disaster in India. Approximately 40 million ha out of India's 329 million ha of land are classified as flood-prone. As a result, India continues to remain vulnerable to floods (National Disaster Management Authority, 2025). Among the flood-affected states in India, Assam is one of the worst hit (Dekaraja & Mahanta, 2021). Major floods occurred in Assam in 1954, 1962, 1972, 1977, 1984, 1998, 2002, 2004, and 2012 (Debbarma & Deen, 2020). Due to the impact of floods on human life, livelihoods, property, infrastructure, and public utility services in earlier years, floods have been a recurrent feature of the state. The 2020 floods started in May and continued until July after intense rainfall. Over 2 – 3 million people across 27 districts were affected by the disaster (Assam State Disaster Management Authority, 2024). More than 3,000 villages were affected, and more than 44,000 people took refuge in relief camps. Agricultural land was severely damaged (Debbarma & Deen, 2020). On average, 42.96 lakh people and 156 revenue circles were affected due to floods in the state. Dhemaji is one of the most flood-prone districts in Assam. Four revenue circles (Dhemaji, Sissiborgaon, Jonai, and Gogamukh) were affected in the year 2024, with 120391 people, 343 villages, and 9 people died in the flood between 01st May 2024 to 31st Oct 2024. The flood occurs each year in the district.

There are varied forms of disaster management in Dhemaji and the role of voluntarism has often been overlooked in the institutional response mechanism (Armah, 2020; Kamanyi, 2024). Voluntarism can be defined as voluntary action taken by individuals to assist others who are perceived to be suffering. Voluntarism also creates sustainable communities that may require individuals to make sacrifices. Individuals intend to engage in helping activities, and unlike obligatory support, it typically involves assisting people with whom they have no prior relationship or responsibility (Ali Chisty et al., 2023). Researchers have identified a variety of personal and interpersonal reasons why individuals engage in voluntarism. They have also developed tools to measure them and determine their effects on how individuals begin and sustain their engagement in voluntarism. Authorities and the general public share responsibility for emergency management in case of a disaster (Whittaker et al., 2015; Scanlon et al., 2014). Stukas et al. (2016) provided a theoretical overview of the factors affecting attempts to increase voluntarism and community involvement. They focused on how these attempts create patterns of sustained voluntarism. Andrea and Kangalawe (2021) investigated community vulnerability to floods in the Lower Rufiji floodplain. Their investigation concerned geographical, social, economic, political, and environmental

characteristics of the region, but their work appears to ignore the contributions of voluntarism. Additionally, they did not provide much insight into how voluntarism networks might contribute to mitigating such vulnerabilities. Previous research indicated that voluntarism can play an essential role in emergencies and in times of disaster.

Gunessee et al. (2017b) explained the motivation for voluntarism and defined motivators as factors that motivate pro-social spontaneous volunteer behavior in post-disaster relief operations. Motivators are based primarily on two dimensions: internal and external. Internal motivation is characterized by personal values or interests of the volunteer. External motivation is characterized by rewards, pressures, or obligations of the volunteer. A key motivator is empathy. People are motivated to volunteer because they are concerned for people affected by a disaster. Empathy is described as the ability to understand another person's thoughts and feelings by putting oneself in his/her position. Empathy is central to the empathy-altruism hypothesis. Empathetic concern can lead to altruistic volunteering. Another internal motivator is moral principles. For example, a sense of duty or a belief that one should do what is right can motivate volunteering. Finally, the last motivator for pro-social disaster relief volunteering is learned helpfulness. Learned helpfulness suggests that a person can learn to be positively reinforced for helping in the past. This reinforcement can occur through either direct experience or observing others assisting. Citizens' participation in emergencies and disaster management is a fundamental tenet of disaster risk reduction and resilience building (Nahkur et al., 2022). Many studies have documented the roles of citizens in disaster management.

Traditionally, disaster management systems have been top-down, but many are now developing approaches to formalize informal volunteers. When there are policies or plans in place that recognize and facilitate spontaneous volunteer engagement, informal volunteers will likely be engaged in the greatest capacity (Hafizah Md Akhir, 2024). The main motivators for people to become involved in flood mitigation voluntarism were identified by Hafizah Md Akhir (2024). These include self-interest, family and friends, the environment and religion. This suggests the need for broadly based volunteer programs by policymakers that include training, development and incentives for volunteers. Understanding such motivators enables the preparation of volunteers for operations and maintains their participation over the long term. Ali Chisty et al. (2023) emphasized the role of voluntarism in highlighting the importance of the communities at the center of flood risk management. Communities with a high level of knowledge, positive attitude and active practice regarding flood risks can be valuable assets. Their research indicates the existence of practical, policy-level interventions that can aid in achieving the goal of creating a more resilient society.

This study is to explore the theme of voluntarism in flood management in Dhemaji District. The study examines current levels of participation, community willingness and the motivations behind the voluntary engagement. While previous research has addressed vulnerabilities and institutional responses, as well as the overall importance of voluntarism, very little consideration has been given to how volunteer networks operate in flood-prone regions similar to Assam. This study attempts to fill this knowledge gap by combining insights from the literature with primary data to investigate the potential of voluntarism to improve disaster preparedness, response and resilience.

Aims and Objectives

The study is to analyse the role of voluntarism in flood disaster management in Assam.

Objective of the Study:

- To understand the role of voluntarism in Assam during floods.
- To suggest and discuss the ways of strengthening volunteerism in Assam for flood.

Research Methodology

Both primary and secondary data were used for the study. The secondary data were reviewed to address the research question from the existing literature. An overall research plan was formulated that contained the study objectives, criteria for selection of papers and inclusion/exclusion criteria. The research aims to identify the inherent attributes of voluntarism in the context of floods. The keywords are "voluntarism", "flood" and "Assam". Only English language peer-reviewed research articles and books are considered in this study. This study does not consider conference proceedings, editorials, non-academic works and works published in other languages. Academic databases, namely, Scopus, Web of Science, Wiley Online Library, and the Directory of Open Access Journals, were searched online. Only full-text, peer-reviewed journal articles and other materials available online are considered. Reports from the Government of India, academic research studies, and official documents are included as secondary data to complement the findings obtained from the primary data.

In addition to the secondary data, a questionnaire was designed to gather primary data to carry out a quantitative analysis of voluntarism and floods. The consent of the participants was requested to participate in the study. Only those who gave their consent and participated in the study were included in the study. Data collection was carried out based on this. The questionnaire was piloted with 20 flood-affected people before being administered to 50 people to test its validity and reliability. Two additional indicators were included in the questionnaire.

Study Area

This Study focuses on the Dhemaji district because this area has been one of the top flood-affected areas of Assam. Dhemaji district, located on the north bank of the Brahmaputra River, is surrounded by the Brahmaputra River to the south and the SubansiriRiver to the West. Many rivers from the Northern part flow into the Brahmaputra River in this region. Because of this reason, the district receives the maximum amount of rain in comparison to other regions of Assam. Therefore, the district experiences floods almost every year. After the major earthquake occurred in 1950, the earthquake changed the course of the river system in the region. The onset of the southwest monsoon from May to September creates a huge volume of water overflowing along the 720km long stretches of embankments created along the Brahmaputra River in Assam. Amongst which 132 km falls under the Dhemaji E & D Division. When the water of the Brahmaputra River rises to its peak and meets with the water from its tributary rivers, the flood intensity increases.

Results and Discussions

Data collected from secondary sources were analyzed. Based on recurring themes and theoretical aspects of volunteerism in flood management, the selected literatures were categorized. Emphasis was placed on those studies that focused on community participation in disaster response, volunteer initiatives in Assam. Findings were compiled to provide information on the patterns, gaps, and significant characteristics relative to the research objective:

Four themes emerge from the literature:

- Understanding Volunteerism
- Volunteering in Times of Disaster
- Flood in Assam
- Floods in Dhemaji District

Understand Volunteerism

Millions of people worldwide contribute hours and resources each year to organizations that assist individuals and groups in need, improving the quality of life of millions (Stukas et al., 2016). Generally, volunteerism is defined as an altruistic contribution of services to others without expecting material reward (Ellis & Campbell, 1990). It represents an individual acting voluntarily as per his/her free will. Thus, the term comes from "voluntates," a Latin word for "to choose" (Ali Chisty et al., 2023). Ellis and Campbell (1990) define this concept as emphasizing the assistance action driven by the values of the individual performing it. Although it is recognized that volunteering provides psychological advantages and an award

system unrelated to monetary compensation (Smith, 1981), studies show that volunteerism increases community resilience and reduces community vulnerability (Andrea &Kangalawe, 2021; Msemo et al., 2021). Volunteering is a vital component of disaster and development management. Community volunteers develop flexible and locally based responses to complement formal systems. They fill gaps in assistance and promote resilience at the grassroots level. Involving volunteers in planning for disaster and development results in more effective and inclusive approaches that combine institutional capabilities and community action (Kamanyi, 2024). There are many studies indicating the necessity of investigating cooperation between different types of volunteers to better explore their ability to reinforce development results (Kamanyi, 2024).

From this literature, we see that volunteerism is defined as a voluntary act driven by the personal values of an individual, and therefore it is a voluntary act without any expectation of financial rewards although it does produce psychological rewards. Studies indicate that volunteerism decreases community vulnerabilities, promotes resilience, and supplements formal disaster management systems. Including volunteers in the disaster and development planning process produces more beneficial results by connecting institutional and community activities. Prior studies also stress the value of studying the collaborations between different types of volunteers to improve the development results.

Volunteering in Times of Disaster

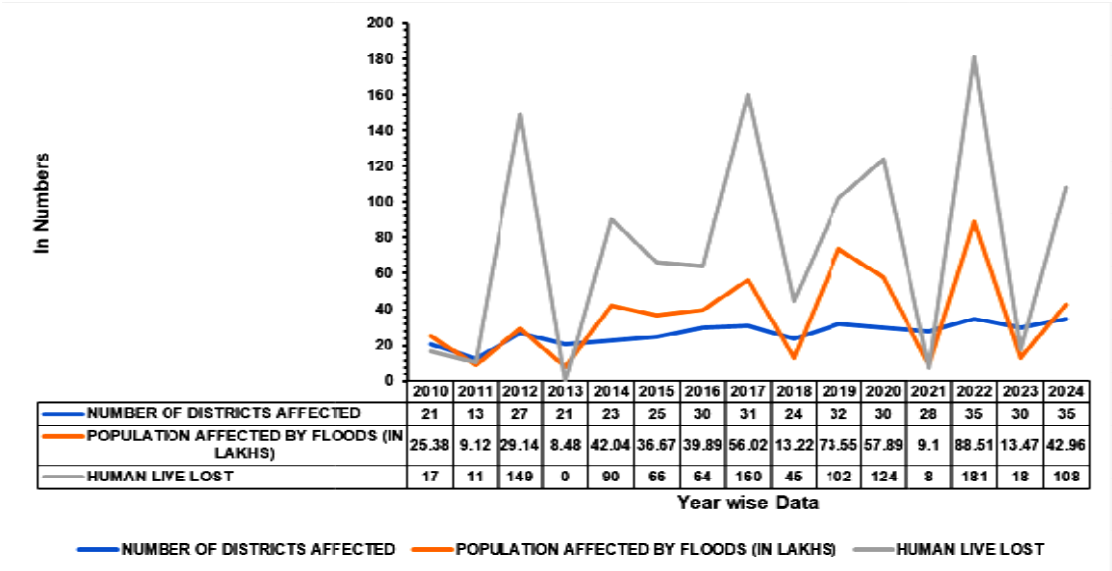
When viewed as an expression of agency, volunteering needs to be critically evaluated for the intentions and motivations of its agents (Hustinx & Lammertyn, 2003). An approach of reflecting on the changing nature of human activity and interaction should be used to evaluate volunteering in times of disaster as an example of agency. In terms of disaster management, volunteering can be thought of as a socially constructed reality that is created by the collective understanding, interactions, and meanings of the community (Hustinx & Lammertyn, 2003). By taking an interpretative position on this type of approach to volunteering in disaster, it shows agency and illustrates how the volunteers' actions create and sustain social realities during the crisis period. Volunteers freely give their desire to help in all forms of volunteerism (rescue, first aid, and emotional support) during disasters. While these actions may be motivated by individual choice, they are also influenced by the pre-existing cultural and social context of the community. The pre-existing social norms, values and expectations of community support and solidarity heavily motivate volunteer behavior and motivations. Volunteering is a primary form of self-help in response to natural disasters (Kamanyi, 2024). In general, volunteers fill the service gaps that formally established disaster response systems leave empty. These include providing both practical support and psychological/emotional

support to the survivors of disasters (Shagembe et al., 2022; Hustinx &Lammertyn, 2003). In addition to providing support, volunteers also play a very important role in helping raise awareness and educate communities on disaster preparedness (Kamanyi, 2024).

These studies found that volunteering during disasters is not simply an individual's choice, but rather a socially constructed practice that is influenced by the values and norms of the community. Volunteers play a critical role in filling the gaps that formal disaster management systems typically leave behind, in areas such as rescue, first aid, emotional support, and education. Volunteering plays a key role in enhancing the resilience of the community, serving as both a self-help mechanism and a complementary measure to formal responses.

Floods in Assam

Previous surveys were carried out for many years in the flood zones of Northeast India, including in Assam. These annual floods create a difficult environment to live in because of the large amount of destruction caused by them. Due to the fact that it contains 21 major rivers and their tributaries, Sarma et al. (2023) described Assam as being very susceptible to flooding. Sarma et al. (2023) stated that the flood-prone region of Assam is approximately four times larger than the national average for flood-prone areas in India.



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
NUMBER OF DISTRICTS AFFECTED	21	13	27	21	23	25	30	31	24	32	30	28	35	30	35
POPULATION AFFECTED BY FLOODS (IN LAKHS)	25.38	9.12	29.14	8.48	42.04	36.67	39.89	56.02	13.22	71.55	57.89	9.1	88.51	13.47	42.96
HUMAN LIVE LOST	17	11	149	0	90	66	64	160	45	102	124	8	181	18	108

Figure 1 Flood situation in Assam from 2010-2024 (Government of Assam, 2024)

According to the ASDMA report, on average, the floods affect 9.31 lakh hectares of land per year. The data shown in Figure 1 is secondary data based on the Assam Flood Memorandum, published by the Government of Assam, which depicts the flood situation in Assam from 2010 to 2024. The data presented in Figure 1 indicates that the number of districts affected by the floods has generally stayed the same, between 20 and 35. This suggests that floods consistently impact nearly the same areas across all of the districts in Assam each year. In

contrast, the number of people affected by floods has fluctuated greatly, with major spikes occurring in 2012 (29.14 lakh), 2016 (39.89 lakh), 2017 (56.02 lakh), 2019 (73.55 lakh), 2020 (57.89 lakh), and 2022 (the largest spike in the dataset was in 88.51 lakh). Also, the number of human lives lost to the floods has fluctuated significantly, with major spikes in mortality occurring in 2012 (149 deaths), 2017 (160 deaths), 2020 (124 deaths), and 2022 (181 deaths).

Floods in Dhemaji District

As indicated in figure 2, Dhemaji is among the worst districts in Assam in terms of flooding. As indicated in figure 2, all four revenue circles, namely, Dhemaji, Sissiborgaon, Jonai, and Gogamukh are affected by the floods each year. Flooding leads to the erosion of land, and many hundreds of hectares of land have eroded recently. Monsoon flooding also causes severe damage to the forest biodiversity through long-term inundation of the forests. Long-term inundation of the forest results in the habitat loss of small plants and animals. The construction of the Lower Subansiri Hydroelectric Project at Gerukamukh has led to the submergence of approximately 842.76 hectares of forestland.

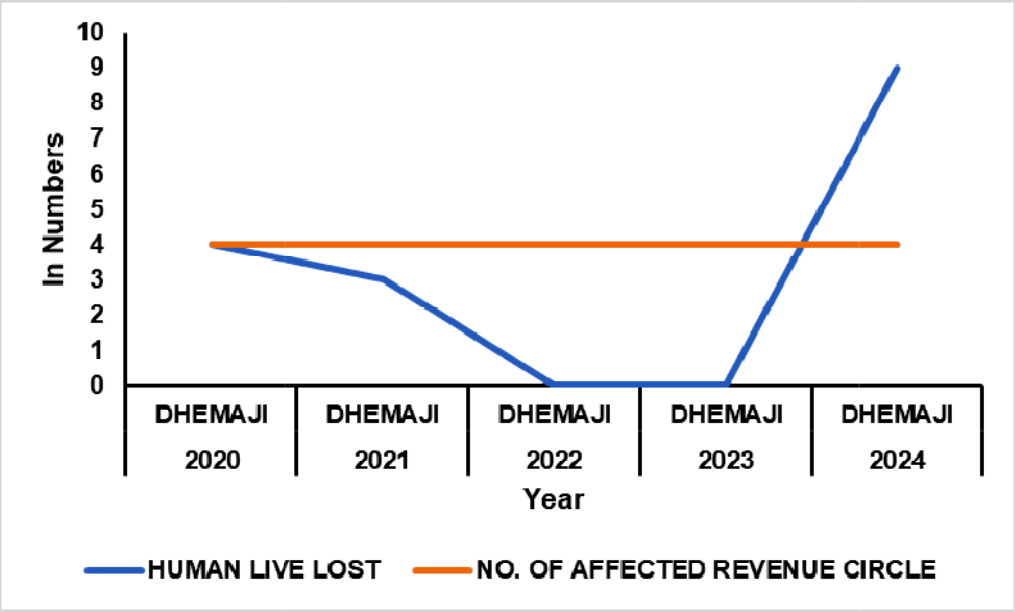


Figure 2 Year-Wise Human Lives Lost and No. of Affected Revenue Circle Due to Floods in Dhemaji District (2020–2024)

The graph (Fig. 3) shows a rising trend in the number of individuals affected by flooding each year. While the number of individuals affected by floodwaters varies from one year to another, it is clear that this trend can be utilized to create greater preparedness and awareness within communities regarding their response to flooding. Therefore, informational leaflets with key "dos and don'ts" for residents to follow before and after flood events are being distributed among residents; however, as per departmental reports, there has been no training provided to local village dwellers on how to perform small-scale repairs to local water

supplies which they could implement themselves. Furthermore, the current employees have not organized any capacity-building programs for their current employees (District Disaster Management Plan, Dhemaji District, 2024).

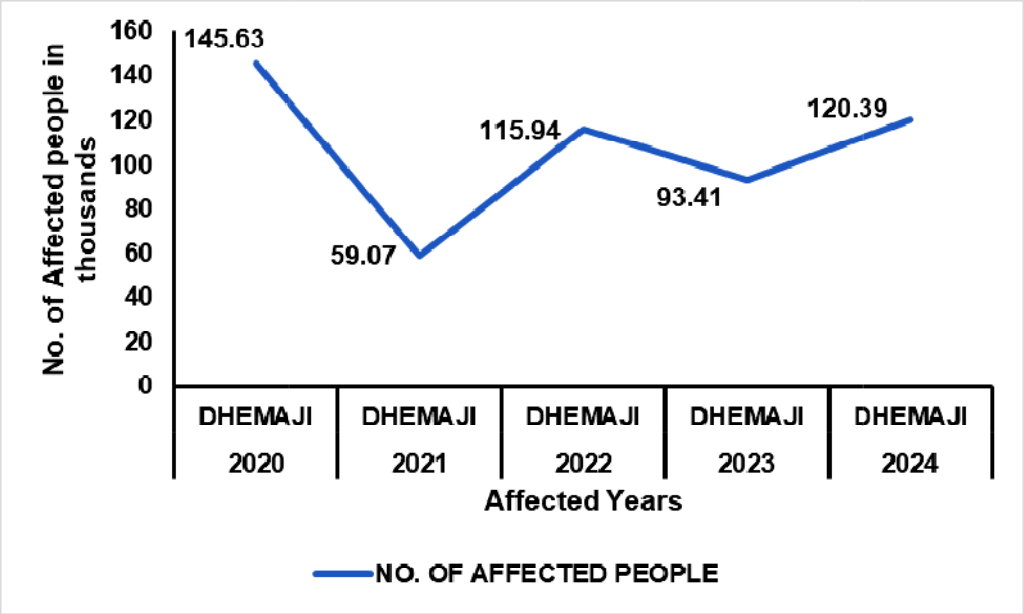


Figure 3 Year-Wise Number of Affected People (2020-2024)

Data Analysis

In our study, the data is analysed with the help of cross-tabulation

- Age groups and willingness to volunteer during floods

Table 1 Cross-tabulation between age group and Willingness to volunteer during floods

Age group	Willing to volunteer(Yes)	Not willing to volunteer(No)	Total
18-25	13	0	13
25-35	18	0	18
35-45	9	3	12
46 years and above	3	4	7
Total	43	7	50

In the chi-square test, the p-value is 0.000682, which is less than 0.05. The result is statistically significant. The younger volunteers are more likely to volunteer.

Primary data were collected using a structured questionnaire survey from residents who had been impacted by floods in Dhemaji District, Assam. In addition to demographic information the questionnaire contained seven key indicators that measure how volunteers contribute to managing flood disasters: (1) participation in volunteer activities while there is a flood; (2) rescue work; (3) distributing relief supplies; (4) providing shelter or supporting those that have been impacted; (5) working together with other volunteer groups or organizations; (6)

willingness to help as a volunteer in the next flood event; and (7) encouraging other volunteers to help as well. Each of the seven indicators is composed of closed-ended questions with Yes/No responses so that all respondents can answer clearly and comparably.

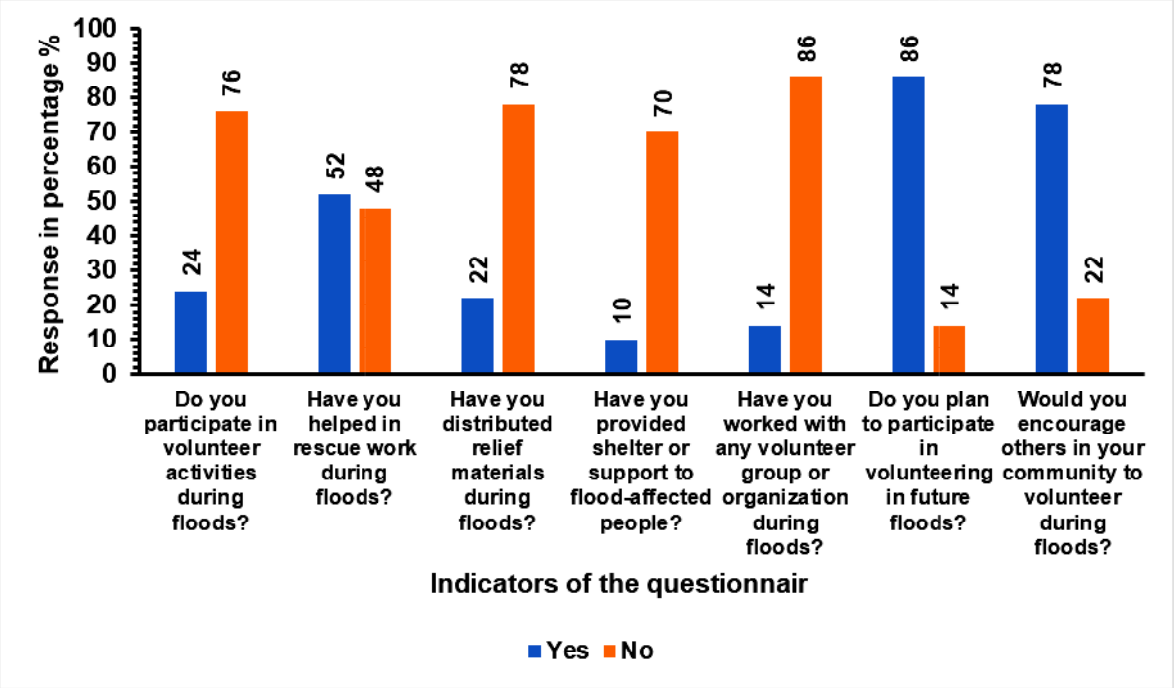


Figure 4: Respondents' responses in percentage based on the seven indicators

Figure 2 displays the percentage distribution of the answers of fifty individuals as to their ideas of volunteerism. Of the number, 76% of them had recorded no participation in volunteer activities, while eleven (24%) had. The tendency to prefer rescue work showed greater directness, since there were twenty-four (52%) who reported having participated in the rescue work, while 48% had not. The distribution of remedial supplies was reported by 22%, and there were 78% had not participated in this work. The supply of food or support to flood sufferers was the least participated in, since only 10% reported any participation in the work of supplying food to flood sufferers, and 70% had not. Working with volunteer groups or organizations was low in this list also, with only 14% reporting any proclivity in that direction, while 86% denied participation. The report on future inclinations, however, showed a large variation in the opposite direction, since there were 86% who reported their willingness to participate in volunteerism for the future flooding periods, while seven (14%) were not. In the same line, 78% reported in favor of having others in their communities engage in volunteer activities, while 22% border on the statement that they would not.

These data show a very great willingness in favor of future participation in volunteer efforts during flood tides in Dhemaji, Assam. They would mean much in the way of betterment of floods and also in the way of community organization for community disaster work, provided there were proper systems of training and help. The accompanying data from

the literature review and collections of the first-hand data, and with descriptive statistics as derived from these first-hand data, would show that both problems and opportunities were returned, as appertaining to the greater facility of emphasizing volunteering in its relation to government in the management of flooding in Assam. From the literature review it was found that the activity of volunteering is affixed generally to those voluntary kinds of acts of the common man who without any compulsion participate in the activity of working voluntarily for a common good.

Volunteering is by definition an impulse or act of personal motivation growing out of personal sense of goodness, rather than from any material incrustation, but through the act in general itself is extended also other benefits of social moment than economic. In any opportunity afforded for volunteering, it is a factor of great importance to lessen the urban vulnerability of a community, to increase its resistivity to hostility and to supplement more or less the regular administrative conduct of disaster activities. The discrepancy between actual level of participation and future willingness is one of the major findings. Approximately one-fourth of the respondents indicated having participated in volunteer work in the past, while the actual participation in some of the projects which were included in this survey such as distribution of relief and shelter support was found to be low.

On the other hand, an overwhelming number of respondents indicated they had intentions to assist others in the future and volunteered to encourage others to assist in this manner. This discrepancy indicates that the actual present low rate of participation is not a lack of effort or willingness to work but can be related to impediments such as lack of training, absence of organized structures, or lack of knowledge or availability of situations in which the person can be involved. If this question is given proper attention, such situations could provide a very large community potential for disaster assistance. The results also indicate that volunteer activities are not uniform in the various categories. The work in rescue activities would indicate comparatively greater rates of participation as compared with distribution of relief and the supplying of shelter supports. This finding may be a result of the visible and urgent nature of the rescue activity during floods, and the fact that the need for immediate assistance can be more readily mobilized at the community level.

On the other hand, the distribution of relief, long term assistance and activities necessitating some organized coordination, also consideration of more material support needed and the necessity for continuous effort, may explain some of the lower rate of participation rated. This is an additional point which points to the necessity for the strengthening of institutionalized machinery for the placing of volunteers in the post-disaster phase, beyond the of the immediate rescue operations. From the perspective of policy

formulation, this analysis highlights a continuing gap between levels of community willingness and formal disaster management mechanisms. Flooding in Assam is expected to continue to affect millions of people annually though varying degrees of exposure and death tolls. For example, almost the same districts continue to suffer flooding each successive year, illustrating systemic weaknesses and showing that disaster management mechanisms should increasingly be couched in terms of community-led rather than infrastructure-based approaches. It is possible that if the volunteers were trained and incorporated into state and district disaster management plans, they could provide flexible, localized services. Another important insight is in regard to the social and cultural aspects of volunteering. The literature suggests that the incentives for volunteering come about not just by virtue of individual inclination but by social norms and expectations of communities as a collective. This suggests greater emphasis on the narratives of communities which focus on solidarity and collective responsibility, particularly in Assam where the floods are recurrent and have a calamitous impact on collective memory. This might form the matrix for volunteer retention. It is clear that by tapping into localised traditions of cooperation, ably complemented by structured training protocols, it is indeed possible to enable civil society to be much more effective in disaster management.

Results suggest that volunteering in Dhemaji, Assam, retains considerable potential yet to be exploited. Current participation remains at a low level, but the considerable willingness to assist in disasters in the future represents a big opportunity for both policy makers as well as those institutions engaged in disaster management. Strategic investment in awareness programs, human resource development as well as giving institutional legitimacy to volunteers is likely to improve disaster preparedness and response in Assam to a considerable degree. Such is the view taken in the world at large, emphasising the need to connect formally institutionalised systems for disaster management with indigenous grassroots systems. More effective coordination may rally community engagement and solidarity at local level and in sustainable ways.

In training activities of volunteers as noted therein these began up to 31 December 2020, by the National Disaster Management Authority, 2025, but what is required is a more extensive training program which can be run yearly in Assam as it is one of the flood affecting areas of the Indian subcontinent. While larger factors influence disaster risk, such as governance and climate change, it is also one which produces local effects. Communities and local actors produce patterns of risk, exposure, vulnerability and resilience which can be summed up as the human geography of risk Maskrey 2011. Disaster management risk is produced from local sources and the particular strengths of the communities concerned,

however the outcomes shown here suggest that actual characteristics of individuals within those communities has importance. The chi-square test yields result ($p = 0.000682$), indicating a highly significant correlation between age and volunteering – the young are much more likely to volunteer.

Thus, the result suggests that local disaster risk management can be improved significantly with engagement of such demographic groups within communities who have greater propensity for volunteering, namely younger volunteers. The further need for greater training activities among volunteers is also clearly evidenced, in order to enable them to assist communities in flood risk mitigation at the grassroots level.

Conclusion

Volunteer activity was studied in relation to disaster planning and response during flooding in the Dhemaji district of Assam. An assessment of existing literature on volunteer activity and responses in the region was combined with the results of an original survey conducted within affected communities in the area. Results of this research indicate that while there appears to be a significant interest in engaging in disaster-related volunteer work (i.e., "willingness") among surveyed communities, the actual number of individuals participating in volunteer efforts remains low. Volunteer involvement in rescue-related activities tended to be somewhat higher than in other types of disaster-related activities (e.g., relief food distribution, provision of temporary housing and organizational support). As such, it may be reasonable to assume that a lack of institutional support and/or inadequate training may have contributed to lower rates of volunteer involvement in certain areas of disaster response.

Results also illustrate how volunteer activity can be considered a form of social practice. A social practice is defined as a set of actions or behaviors that are collectively practiced by members of a particular community (or group), often guided by shared cultural or normative values or expectations. Thus, when viewed through the lens of social practice theory, volunteerism can be seen as an action that is both individually motivated (as an expression of altruistic or charitable intent) and socially constructed (influenced by collective community values or expectations). This dual nature of volunteerism suggests that volunteers can help fill important gaps in formal emergency management systems, including those related to rescue, relief and public awareness/education. Considering the recurring and extensive nature of annual flooding in Assam (affecting millions of people), incorporating volunteerism into formal emergency management practices represents an important step toward enhancing overall disaster preparedness and resilience in the region. To achieve these goals, there is a need to develop capacity-building and awareness programs that will enable a greater number of individuals to participate in volunteer activities; as many districts in Assam

experience flooding each year, training initiatives would be beneficial at the local, district and state levels to enhance the capacity of selected volunteers in responding to disasters. Increasing the availability of volunteer programs in additional flood-affected districts, and increasing the frequency and quality of training and awareness-raising programs could further increase disaster preparedness and resilience at the community-level.

Consequently, the research suggests that tapping into community willingness, institutionalizing volunteer engagement, and fostering strong connections between grassroots community-based participation and formal emergency management systems are all crucial steps in enhancing disaster preparedness and resilience in Assam. Building on community willingness, institutionalizing volunteerism, and establishing relationships between community-based participation and formal emergency management systems will not only enhance disaster response capacity but also contribute to the development of long-term disaster resilience at the community level.

Limitations of the study

This study is based on a small sample of 50 respondents from Dhemaji District, which may limit the generalizability of the findings to other flood-affected areas in Assam.

References

Ali Chisty, M., Khan, N. A., Syeda, Sumaya, I. A., & Rahman, M. M. (2023). Knowledge, Attitude, and Practice Toward Flood Volunteerism in Bangladesh: A Gender-Based Analysis with Policy Implications. *Global Social Welfare*, *10*(3), 225–233. https://doi.org/10.1007/s40609-023-00276-9

Andrea, J., & Kangalawe, R. (2021). Analysing Vulnerabilities of local communities to flood disasters in the Lower Rufiji Floodplain, Tanzania. *JOURNAL of the GEOGRAPHICAL ASSOCIATION of TANZANIA*, *39*(1), 256–274. https://doi.org/10.56279/jgat.v39i1.43

Armah, F. (2020). *Communicating Disaster Risk in the Context of Climate Change in Tanzania: Are the Most Vulnerable Onboard?* . https://doi.org/10.20944/preprints202012.0339.v1

ASDMA. (2024). *Assam State Disaster Management Authority, Government of Assam*. https://asdma.assam.gov.in/

Batson, C. D. (1992). The altruism question: toward a social-psychological answer. *Choice Reviews Online*, *29*(08), 29–479729–4797. https://doi.org/10.5860/choice.29-4797

Batson, C. D., Ahmad, N., & Tsang, J.-A. (2002). Four Motives for Community Involvement. *Journal of Social Issues*, *58*(3), 429–445. https://doi.org/10.1111/1540-4560.00269

Bierhoff, H.-W. (2005). *Prosocial Behaviour*. Psychology Press. https://doi.org/10.4324/9780203989425

Debbarma, A., & Deen, S. (2020). Flood Disaster Management in Assam. *Zenodo (CERN European Organization for Nuclear Research)*, *10*(40), 105–109. https://doi.org/10.5281/zenodo.8200122

Dekaraja, D., & Mahanta, R. (2021). Riverbank erosion and migration inter-linkage: with special focus on Assam, India. *Environmental Systems Research*, *10*(1). https://doi.org/10.1186/s40068-020-00214-0

District Disaster Management Plan Dhemaji District. (2024). *District Disaster Management Plan Dhemaji District (2024-25), Government of Assam*. Government of Assam, India. https://dhemaji.assam.gov.in/

Dovidio, J. F., Piliavin, J. A., Schroeder, D. A., & Penner, L. A. (2017). *The Social Psychology of Prosocial Behavior*. Psychology Press. https://doi.org/10.4324/9781315085241

Ellis, J. S., & Campbell, K. N. (1990). *By the people: A history of Americans as volunteers* . WorldCat.org. In Jossey-Bass. Jossey-Bass Publishers.

Gunessee, S., Subramanian, N., Roscoe, S., & Ramanathan, J. (2017a). The social preferences of local citizens and spontaneous volunteerism during disaster relief operations. *International Journal of Production Research*, *56*(21), 6793–6808. https://doi.org/10.1080/00207543.2017.1414330

Gunessee, S., Subramanian, N., Roscoe, S., & Ramanathan, J. (2017b). The social preferences of local citizens and spontaneous volunteerism during disaster relief operations. *International Journal of Production Research*, *56*(21), 6793–6808. https://doi.org/10.1080/00207543.2017.1414330

Hafizah, Md Akhir, N. (2024). Motivation Toward Volunteerism in Flood Disaster Relief. *Salud Ciencia Y Tecnología - Serie de Conferencias*, *3*. https://doi.org/10.56294/sctconf2024.1040

Hustinx, L., & Lammertyn, F. (2003). Collective and Reflexive Styles of Volunteering: A Sociological Modernization Perspective. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, *14*(2), 167–187. https://doi.org/10.1023/a:1023948027200

Kamanyi, E. (2024). Volunteering in Disaster Management for Development in Africa: Reflections from Bukoba District, Tanzania. *Tanzania Journal for Population Studies and Development*, *31*(2), 55–71. https://doi.org/10.56279/tjpsd.v31i2.275

Kateule, R., Kamanyi, E., & Tunga, M. (2024). Crisis management: Unveiling information and communication technologies' revamped role through the lens of Sub-Saharan African countries during COVID-19. *The African Journal of Information Systems*, *16*(2).

https://digitalcommons.kennesaw.edu/cgi/viewcontent.cgi?article=2374&context=ajis. ISSN 1936-0282.

Maskrey, A. (2011). Revisiting community-based disaster risk management. *Environmental Hazards*, *10*(1), 42–52. https://doi.org/10.3763/ehaz.2011.0005

Msemo, H. E., Taylor, A. L., Birch, C. E., Dougill, A. J., Hartley, A., & Woodhams, B. J. (2021). What Do Weather Disasters Cost? An Analysis of Weather Impacts in Tanzania. *Frontiers in Climate*, *3*. https://doi.org/10.3389/fclim.2021.567162

Nahkur, O., Orru, K., Hansson, S., Jukarainen, P., Myllylä, M., Krüger, M., Max, M., Savadori, L., Nævestad, T.-O., Frislid Meyer, S., Schieffelers, A., Olson, A., Lovasz, G., &Rhinard, M. (2022). The engagement of informal volunteers in disaster management in Europe. *International Journal of Disaster Risk Reduction*, *83*, 103413. https://doi.org/10.1016/j.ijdrr.2022.103413

National Disaster Management Authority, GOI. (2025). *Floods, NDMA, GoI*. Ndma.gov.in. https://ndma.gov.in/Natural-Hazards/Floods

Sarma, D., Das, A., Castillo, O., & Kumar Bera, U. (2023). Rough interval approach to predict uncertain demand in a large scale disaster scenario: an analytical study on Assam flood. *Sādhanā (Bangalore)*, *48*(2). https://doi.org/10.1007/s12046-023-02103-5

Scanlon, J., Helsloot, I., & Groenendaal, J. (2014). Putting it All Together: Integrating Ordinary People into Emergency Response. *International Journal of Mass Emergencies & Disasters*, *32*(1), 43–63. https://doi.org/10.1177/028072701403200103

Shagembe, M., Kinanda, J., Senga, M., & Ndaluka, T. (2022). The Impact of COVID-19 Pandemic on Mental Health among Individuals in Dar es Salaam, Tanzania. *Tanzania Journal of Sociology*, *8*(1), 132–153. https://doi.org/10.56279/tajoso.v8i1.80

Smith, D. H. (1981). Altruism, Volunteers, and Volunteerism. *Journal of Voluntary Action Research*, *10*(1), 21–36. https://doi.org/10.1177/089976408101000105

Snyder, M., & Maki, A. (2015). Volunteerism, Psychology of. *Elsevier EBooks*, 268–272. https://doi.org/10.1016/b978-0-08-097086-8.22021-7

Stukas, A. A., Snyder, M., & Clary, E. G. (2016). Understanding and encouraging volunteerism and community involvement. *The Journal of Social Psychology*, *156*(3), 243–255. https://doi.org/10.1080/00224545.2016.1153328

Whittaker, J., McLennan, B., & Handmer, J. (2015). A review of informal volunteerism in emergencies and disasters: Definition, opportunities and challenges. *International Journal of Disaster Risk Reduction*, *13*, 358–368. https://doi.org/10.1016/j.ijdrr.2015.07.010