



# Governance and society-driven challenges to community-based disaster management: A case study from Chandpur, Bangladesh

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## Abstract

In Bangladesh, the Chandpur Sadar Upazila is recurrently exposed to floods, riverbank erosion, cyclones and other riverine hazards. Given this vulnerability, there is a global and national trend towards community-based disaster management (CBDM). Although capacity-building measures may help address challenges, there is very little research on which measures are actually underway at the upazila level or on the obstacles administrators and residents face in their implementation. This CBDM capacity-building research looks back at the initiatives undertaken in Chandpur Sadar Upazila over the preceding five years (i.e., approximately 2018–2023) and identifies the governance- and society-driven constraints associated with them. The study used a mixed-methods stakeholder-informed design, having a secondary review (of policy documents and literature) and primary data (gathered through two semi-structured interview instruments). Due to accessibility constraints, the researcher approached government officials, elected community leaders, and representatives of NGOs using convenience sampling, while for the youth volunteers, snowball sampling was used, as there was no registry of trainees. Data were collected through interviews with 62 respondents, and analysis was conducted using descriptive statistics and thematic coding. The analysis identified six types of community-based initiatives in the study area: social safety net assistance, volunteer team formation, disaster drills, awareness campaigns, training programmes, and NGO participation incentives. *These challenges have been grouped into two major sources, yielding thirteen distinct challenges in total.* The challenges of governance and policy deal with an intermittent rather than sustained focus on CBDM, inappropriate decentralization without capacity, spatial concentration of initiatives away from the most exposed char areas, goal displacement from CBDM toward poverty reduction, absence of training to elected and administrative officials, missing records of trainees, low budget allocation, absence of safety equipment, absence of localised disaster-management plans at Union level, and formalised stakeholder communication with limited trust and continuity. Socially, the community prefers established relief over training; social stereotypes prevent women's contributions, and there is limited socialisation of CBDM within the wider community. The results indicate that the simultaneous improvement of institutional capacity, the budget, and social change at the community level is essential for developing sustainable community resilience in a disaster-prone deltaic area such as Chandpur.

**Keywords:** community-based disaster management; disaster governance; capacity-building; Chandpur; Bangladesh; community resilience

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## 1 Introduction

In South Asia, Bangladesh is the most disaster-prone country. Cyclones, floods, riverbank erosion, earthquakes,

fire and building collapses in the country disrupt human lives, infrastructure and the national economy. Chandpur Sadar Upazila is located where the Padma, Meghna

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and Dakatia rivers meet. Intense river erosion displaces settlements as annual monsoon-season flooding (June–September) accelerates. [The Daily Dhaka Times \(2020\)](#) reported that large portions of Hanarchar, Ibrahimpur, and Alubazar were washed away, while the river took Rajarajeshwar, Lakshmirchar, and Jahazmara's high school and cyclone shelter. Cyclones pose a perennial threat: Eight people died in the district in 2019 due to Cyclone Bulbul ([The Daily Prothom Alo, 2019](#)). The upazila is alarmingly classified as earthquake-prone, with experts warning that the entire upazila may get inundated due to climate change within 50 years ([The Daily Manab Zamin, 2023](#)). Bangladesh's disaster risk management was traditionally top-down, but is now community-based disaster management (CBDM), involving at-risk communities. It is established that local people know their own hazards, resources, and constraints better than anybody else. If these people participate in planning, preparedness, response, and recovery, this will lead to more resilient outcomes that are more effective and useful than centrally managed relief alone ([Meissen et al., 2014](#); [Victoria, 2003](#); [Ali et al., 2019](#)). According to [Van Niekerk et al. \(2017\)](#) and [Zhang et al. \(2012\)](#), CBDM is considered the best option for improving disaster preparedness by governments. A community-based orientation has been gradually internalized in Bangladesh's policy framework. The legal framework for risk reduction, preparedness, and response was established by the Disaster Management Act 2012; the roles and coordination mechanisms of the ministry and the committee were defined by the Standing Orders on Disaster 2019 ([GoB, 2019](#)). The National Disaster Management Policy 2015 specifically envisions the creation of community-based volunteer organisations and identifies community-participation-based risk management as a guiding principle. According to the National Plan for Disaster Management 2021–2025, community volunteers are being further recognized as a proven success. As these instruments indicate, community engagement is at the heart of disaster governance in Bangladesh ([UNDRR, 2023](#)). Although there is agreement on this policy, little evidence has been published documenting which capacity-building efforts actually reach the field and what barriers administrators and communities face during implementation. Existing Bangladeshi scholarship has mostly focused on either the structural constraints of top-down disaster management ([Shoji and Murata, 2018](#)) or the generic characteristics of community-based approaches at the policy level ([Azad et al., 2019](#)), with operational impediments in highly vulnerable locales being underexplored. International implementation challenges have been observed in places such as Portsmouth, Virginia ([Chacko et al., 2018](#)) and the Philippine purok system ([Matthies, 2017](#)), but not yet in Chandpur's char areas or riverine communities. The Department of Disaster Management and Upazila-level administrations design CBDM capacity-building. Still, there are geographical and practical gaps: the implementation challenges practitioners face regarding venues, which are often highly exposed, remain undocumented. This research fills that gap by examining CBDM practice on the ground in Chandpur Sadar Upazila. More specifically, it asks: (1) What community-based disaster management ini-

tiatives has the Upazila undertaken? (2) What problems does the Upazila face in implementing them? The study will contribute to a site-specific inventory of CBDM initiatives and a two-source (governance/policy versus society) classification of implementation challenges in the char-affected deltaic upazila, which may offer a transferable diagnostic for other hazard-prone upazilas. The findings are intended to support evidence-based decision-making, policy development, and the design of programmes for community-based disaster management in Chandpur and other disaster-vulnerable areas of Bangladesh.

## 1.1 Conceptual Framework

For this study, a disaster is understood as a sudden damaging event, caused by natural or human-induced processes, that exceeds the coping capacity of the affected community ([Oliver-Smith, 1999](#); [Etkin, 2016](#)). The study focuses on floods, cyclones, riverbank erosion, earthquakes, fires and building collapses reported in Chandpur Sadar Upazila; the present study has been restricted to the actual flood, cyclone, river erosion, earthquake, fire and building collapse that occurred in Chandpur Sadar Upazila. Community-based disaster management operates on a 'bottom-up' approach, unlike traditional top-down disaster management systems. The communities are empowered to identify, assess and act on their own disaster risks rather than passively receiving centre-based disaster management solutions. The capacity for compliance and institutions refers to the willingness and readiness of mandated government agencies to implement CBDM as prescribed by policy. Financial capacity means a sufficient budget allocation to meet demand. The capacity-building mechanism ensures training and the availability of relevant programmes. Coordination capacity refers to the ease of cooperation between the many institutions and non-institutions involved in disaster management. The extent to which local needs feed into planning is referred to as stakeholder engagement. The extent of economic and gender inclusion is known as the inclusivity level. The purpose of the six constructs is only to provide thematic organising lenses. They are not operationalised as measurable variables and lack statistical tests for the challenges outlined in subsection 3.2. [Table 1](#) should be read as a conceptual map, not an empirical model. [Table 1](#) summarises this thematic framework, and [Section 4](#) revisits each of the six lenses in relation to the identified challenges.

## 2 Methods

### 2.1 Study Design and Approach

The investigation employed a concurrent mixed-methods strategy. The researchers employed both closed- and open-ended questions in a single semi-structured interview with each participant at a single time point. After being entered into appropriate databases, the qualitative and quantitative data were analysed concurrently and then successively merged during the interpreting phase of the research, rather than one strand of the case sequentially informing the design of the other. This option was chosen as the study population was small and access-constrained, and

**Table 1.** Conceptual framework: thematic lenses used to organise the challenges of CBDM implementation.

| Thematic Lens                                               | Challenges Organised Under This Lens (Section 3.2)            |
|-------------------------------------------------------------|---------------------------------------------------------------|
| Institutional and compliance capacity                       | Challenges to Community-Based Disaster Management Initiatives |
| Financial capacity                                          |                                                               |
| Capacity-building and follow-up training mechanism          |                                                               |
| Coordination capacity (government–NGO and inter-government) |                                                               |
| Stakeholders' engagement                                    |                                                               |
| Inclusivity                                                 |                                                               |

a single combined interview instrument was more feasible than separate sequential phases of data collection. Fieldwork was conducted from July to September 2023 as part of an undergraduate research monograph in the Department of Public Administration at the University of Dhaka, which was submitted in October 2023; this article draws on that fieldwork and thesis. The term “past five years” in the research objectives refers to FY 2018–19 through FY 2022–23, while activities for FY 2021–22 and FY 2022–23 are reported in Table 3, as these two recent fiscal years had the most reliable administrative records and respondent recall at fieldwork. Interviews were conducted in the respondents' native language, Bengali. The research used both quantitative and qualitative techniques to develop a more complete and more realistic account of the challenges of implementing community-based disaster management in Chandpur Sadar Upazila. The research used quantifiable data collected from structured items incorporated into the interview schedules, as well as secondary document analysis of existing literature and relevant government, legal, and institutional frameworks. Community members and government-NGO stakeholders were interviewed using a semi-structured approach to collect qualitative data and learn about the challenges they face. This study does not claim CBPR status; it is a stakeholder-informed mixed-methods design in which a preliminary literature review identified relevant institutional actors and the policy context, which informed the design of the interview instruments, the follow-on data collection, and the interpretation of findings. The respondents did not participate in the design of the interview questions, the interpretation of the coded data, or the validation of the final findings. Thus, the study should be understood as a stakeholder-informed mixed-methods case study, designed to generate policy-relevant insights while acknowledging that community members were respondents rather than co-researchers.

## 2.2 Research Field

The study was carried out by the researcher in Chandpur Sadar Upazila, Chandpur District, Bangladesh, which is highly vulnerable to floods, cyclones, river erosion and earthquakes. The reason for this vulnerability is that the area is located at the confluence of the Padma, Meghna, and Dakatia rivers. In 2023, GoB reports that the upazila is home to over 450,000 people. Some marginalized groups are affected by disasters. The assessed areas were the worst-disaster-affected localities of the upazila: Puran Bazar, Boro Station, Rajarajeshwar, Lakshmirchar, Jahazmara, Hanarchar, Ibrahimpur, and Alubazar. The study aims to understand the community, administrative body

and NGOs of the area for the implementation of CBDM. The reason for selecting this study area was that it had been exposed to many disasters and was an active CBDM. Consequently, this region is likely to yield findings that will be transferable learning for similar disaster-prone communities in Bangladesh.

## 2.3 Study Population

The study population consisted of three groups relevant to CBDM in the study area. The community leaders who were community organization members like the Union Parishad, Ward Committees and Disaster Management Committees included women elected from reserve seats. Youth volunteers were included because they are the primary community resource for disaster response and are usually more amenable to capacity-building training. Youth beneficiaries and youth contributors were the only ones included in the disaster response. According to the study area, the Upazila Nirbahi Officer (UNO), UNO's Confidential Assistant, Upazila Project Implementing Officer, Officer of Bangladesh Water Development Board, Deputy Assistant Director of Fire Service and Civil Defence, Union Parishad Secretary, NGO personnel, and other CBDM actors are the officials who implement the Programme.

## 2.4 Sources of Data

The study's information was gathered using primary and secondary data collection methods. The techniques discussed in subsection 2.5 were used to collect primary data from the study population discussed above. The secondary data for the study came from the existing research literature on community-based disaster management and the legal and policy framework of the Government of Bangladesh on disaster management.

## 2.5 Sampling Techniques and Data Collection Instruments

We used two sampling methods. Using purposive-convenient sampling, we gathered data from elected community leaders, government officials, and NGO officials. This refers to selecting respondents who are readily available and have a specific, verifiable role in community-based disaster management. In this situation, random sampling was not appropriate. Random sampling would mean the selection of individuals from the community leaders, NGO officials, and government officials whose roles are of substance in CBDM, and many do not, therefore, have any substantive role in CBDM. The researcher gathered information from young volunteers through snowball sampling,

**Table 2.** Sampling details by respondent category.

| Respondent Type           | Respondent                                        | n         | Justification                                                                                                        |
|---------------------------|---------------------------------------------------|-----------|----------------------------------------------------------------------------------------------------------------------|
| Elected Community Leaders | Upazila Chairman                                  | 1         | Chair of the Upazila Disaster Management Committee.                                                                  |
|                           | Upazila Vice-Chairman                             | 1         | Member of the Upazila Disaster Management Committee.                                                                 |
|                           | Upazila Vice-Chair (Female)                       | 1         | Participant of the Upazila Disaster Management Committee.                                                            |
|                           | UP Chair                                          | 7         | Chair of the Disaster Management Committee of the Union.                                                             |
|                           | UP Member (reserved seat)                         | 7         | To mirror women's perspective.                                                                                       |
| Government Officials      | Upazila Nirbahi Officer                           | 1         | Upazila Disaster Management Committee Vice-Chairperson                                                               |
|                           | Upazila Project Implementing Officer              | 1         | The Upazila Level of the Government of Bangladesh (GoB, 2016)                                                        |
|                           | District Relief and Rehabilitation Officer        | 1         | Local representative from the Ministry of Disaster Management and Relief.                                            |
|                           | Deputy Assistant Director, FSCD, Chandpur Sadar   | 1         | The authority responsible for the response in an emergency.                                                          |
|                           | Station Officer, Chandpur Sadar Fire Stations     | 3         | The authority responsible for emergency response.                                                                    |
|                           | Executive Engineer, Water Development Board       | 1         | In charge of addressing river erosion.                                                                               |
|                           | Confidential Assistant to UNO / UP Secretary      | 3         | Continuity of institutional knowledge (with continuing UNO turnover; MES of the Union Disaster Management Committee) |
| NGO Officials             | Secretary, District Rover                         | 1         | Head Of an NGO                                                                                                       |
|                           | Secretary, Upazila/District Red Crescent          | 1         | Head of a community volunteer NGO group.                                                                             |
|                           | Assistant Director, Bangladesh Scouts             | 1         | Leader of a community volunteer NGO group.                                                                           |
|                           | Responsible Person, Tarunner Agroodut (local NGO) | 1         | Leader of a non-governmental organization volunteer group.                                                           |
| Local People              | Youth who participated in a CBDM programme        | 30        | Discover what challenges the community is facing.                                                                    |
| <b>Total</b>              |                                                   | <b>62</b> |                                                                                                                      |

in which existing participants refer the researcher to additional participants. Due to the lack of an inventory of training or informal contributing volunteers, the technique was required. Two types of semi-structured questionnaires were used as the main data collection tool. Community leaders and government/NGO officials were sampled for one. The other was for youth volunteers and community members. The final sample consisted of 62 respondents, distributed by respondent category as shown in Table 2.

## 2.6 Data Analysis Techniques

The numerical data obtained from the interviews were processed and visualized in Excel. With consent, interviews were recorded in Bengali. Where no consent was given, the interview was documented through contemporaneous notes. The recordings and notes were translated and summarised in English using the researcher's English. Using the standard small-sample approach, thematic analysis began with open coding, grouped those codes into candidate themes, and then reviewed them iteratively against the full set of interviews. Coding for this undergraduate monograph was a solo effort by the researcher, the sole investigator. The coding scheme and emerging themes were reviewed by the academic supervisor before finalisation; no independent double-coding took place, which represents a limitation (see subsection 4.4). The researcher believes that thematic saturation was reached in the community-respondent group as the later interviews reiterated the previously identified challenges rather than introducing new ones. The exploratory purpose and small, non-probability sample justify the use of descriptive statistics. No claim of statistical generalisability is made.

## 2.7 Ethical Considerations

The researcher followed ethical guidelines by Miles and Huberman (1994) in conducting the research. The research which is an undergraduate research monograph was conducted under the direct supervision of a faculty supervisor in the Department of Public Administration, University of Dhaka who reviewed the research tools and fieldwork process; however, this departmental supervisory oversight was not equivalent to formal institutional ethical review and no separate institutional ethics committee approval/exemption certificate could be obtained. This is so as the department did not operate a dedicated research ethics review board at the time of this research and as a consequence of the author's limited access to apply to a university level board during the time available for an undergraduate monograph. This is disclosed here and noted as a limitation (see subsection 4.5). The respondents' privacy was maintained. The government and NGO respondents agreed under the condition that their individualized, disaggregated responses will

**Table 3.** Community-based disaster management capacity-building initiatives identified in Chandpur Sadar Upazila.

| Initiative                   | Description / Scale Reported                                                                                                                                                                                                                                                                                                                                                                             | Lead Actor(s)                                                                    |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Social safety net assistance | In 14 Union Parishads, 928 women benefited from the Vulnerable Group Development (VGD) Programme in the last fiscal year. Women used to receive food rations monthly. Also training and savings. Not independently verified against a published administrative document; as reported to the researcher during 2023 fieldwork.                                                                            | MoDMR / World Food Programme / Samahar (implementing consultancy; Samahar, 2018) |
| Volunteer team formation     | Volunteer teams were established, involving members of the Red Crescent, Bangladesh Scouts, Bangladesh National Cadet Corps, and local NGOs, as well as interested residents. Thanks to these teams, people were able to evacuate to safe shelters without delay and discipline was maintained in the shelters. Later, these teams helped in rescue operations.                                          | Upazila administration (supervision); Upazila information office (logistics)     |
| Disaster drills              | During the fiscal year 2022–23, the Fire Service and Civil Defence conducted two self-initiated drills and seven drills on request of local institutions.                                                                                                                                                                                                                                                | Fire Service and Civil Defence (FSCD)                                            |
| Awareness campaigns          | During the financial year 2022–23, the District Red Crescent and District Scouts held two rallies and two seminars separately. In addition, drawing and speech competitions, four seminars, and two rallies were held on the occasion of National Disaster Preparedness Day and Fire Service and Civil Defence Week.                                                                                     | Upazila administration; Red Crescent; Bangladesh Scouts                          |
| Training programmes          | For four days (the last of which was in the previous fiscal year), the FSCD ran a training program for community volunteers. The Bangladesh Scouts delivered training on first-aid and fire-extinguishing. The Red Crescent delivered a single open training. At the National Disaster Management Institute, 20 beneficiaries from BNCC, Scouts and Red Crescent received training on relief-management. | FSCD; Bangladesh Scouts; Red Crescent; Department of Disaster Management (DDM)   |
| NGO participation incentives | For the FY 2022–23, the upazila administration provided a subsidy of BDT 50,000 to the Bangladesh Scouts (Chandpur) to attend the second national disaster response camp in Mithamoin, Kishoreganj.                                                                                                                                                                                                      | Upazila administration                                                           |

not be published or made known outside of this study; only the anonymized, aggregated findings are reported here, in accordance with that condition (see, Data Availability). Before data collection, the respondents were briefed on the study and subsequently provided written consent. The respondents were told that there was no payment for participating in the interview and could withdraw whenever they wanted to. Further agreement was obtained for the use of a recording device wherever applicable.

### 3 Results

The results of the study are presented according to the two objectives. Subsection 3.1 presents the identification of community-based disaster management capacity-building initiatives in Chandpur Sadar Upazila. Subsection 3.2 describes the barriers identified during their implementation. These obstacles can be grouped into two categories: those arising from governance and policy, and those arising from society.

#### 3.1 Nature of the CBDM Capacity-Building Initiatives

The various community-based capacity-building initiatives that took place in the study area have been categorised into six distinct types, which are summarised in Table 3 and subsequently described.

The evidence in Table 3 suggests that CBDM capacity-building exists in Chandpur Sadar, but it remains fragmented, event-driven, and dependent on a limited set of administrative and NGO actors. The upazila administration appears to function mainly as a convenor and coordinator, while much of the training and mobilisation work is carried out by organisations such as the Fire Service and Civil Defence, Red Crescent, Bangladesh Scouts, BNCC and local NGOs. This stakeholder-led arrangement has practical value, but its sustainability remains uncertain because it is not yet supported by regular trainee records, dedicated budgets, safety equipment, or localised Union-level disaster-management plans.

**Table 4.** Challenges to community-based disaster management identified in Chandpur Sadar Upazila, by source.

| No. | Challenge                                                                    | Source              |
|-----|------------------------------------------------------------------------------|---------------------|
| 1   | Infrequent Stress on CBDM                                                    | Governance & Policy |
| 2   | Disaster management decentralization is premature                            | Governance & Policy |
| 3   | Restrictions on the location of the initiatives.                             | Governance & Policy |
| 4   | Combining the CBDM initiative goal with poverty reduction.                   | Governance & Policy |
| 5   | Elected and administrative officials do not have a training programme.       | Governance & Policy |
| 6   | The lack of records of trainees and a communication system.                  | Governance & Policy |
| 7   | Lack of Funding.                                                             | Governance & Policy |
| 8   | Insufficient safety gear.                                                    | Governance & Policy |
| 9   | Localized CBDM planning is absent at the union level.                        | Governance & Policy |
| 10  | Communication with stakeholders is formal and motivating factors are absent. | Governance & Policy |
| 11  | Individuals prefer traditional relief instead of training.                   | Society             |
| 12  | Stereotypes against women's participation.                                   | Society             |
| 13  | Lack of socialization of the CBDM concept.                                   | Society             |

### 3.2 Challenges of CBDM in Chandpur Sadar Upazila

The interviews yielded 13 unique challenges, which can be categorized as originating from governance and policy (10 challenges), and originating from society (3 challenges). They are summarised in Table 4 and supported with additional statistics.

#### 3.2.1 Governance-, Policy-, and Society-Produced Challenges

A further governance-related challenge was goal displacement. The Vulnerable Group Development and Vulnerable Group Feeding programmes are important social safety-net initiatives in Bangladesh, and they may contribute indirectly to household coping capacity and post-disaster recovery (Khuda, 2011). However, respondents generally described these programmes primarily as poverty-reduction and welfare-support mechanisms rather than as explicit community-based disaster management tools. This suggests that, although social safety nets can support disaster resilience, their CBDM function is not clearly understood, communicated, or operationalised at the local level.

The study also found that several elected community leaders and local administrative actors had only a limited understanding of CBDM as a participatory approach. This is important because Bangladesh's Disaster Management Act 2012 and Standing Orders on Disaster 2019 formally decentralise disaster-management responsibilities to Upazila and Union-level disaster management committees, while the National Disaster Management Policy 2015 and the National Plan for Disaster Management 2021–2025 emphasise community participation, volunteerism, and local preparedness. In practice, however, decentralisation appears to have moved faster than local capacity-building. Union Parishad officials, elected representatives, and other local actors are expected to perform disaster-management roles, but many have not received systematic training for those responsibilities.

Elected community leaders and administrative officials are crucial local-level drivers of CBDM, but the study found no prescribed training framework for them. In addition, no organisation appeared to maintain regular trainee records,

limiting the ability to re-contact trained volunteers during emergencies or for refresher training. Budget allocation for CBDM was also inadequate. Only two of the fourteen Union Parishads in the upazila were reported to maintain their own localised disaster management plans, despite the Standing Orders on Disaster requiring disaster-management planning at every administrative level, including the Union level. The budget gap was also reflected in the limited availability of personal safety equipment among community respondents. Although several respondents had participated in some form of training, drill, or disaster-management activity, only a very small number reported having access to personal safety gear.

Social dynamics within the community generated three further challenges. First, respondents reported that many community members preferred relief-based support over training-based capacity-building. Second, women's participation in CBDM activities remained limited. Among the thirty community respondents, only five were women. Although training programmes formally included gender quotas, respondents reported continuing difficulty in ensuring women's participation, suggesting that formal inclusion provisions have not yet overcome local social barriers. Third, CBDM itself was not widely socialised within the broader community, leaving many residents and even some formal actors unclear about the expected role of communities in preparedness, response, and resilience-building.

## 4 Discussion

This discussion sets out the study's two objectives before moving on to sustainability, resource feasibility, compatibility with the governance framework, limitations, and wider applicability. For objective 1, a phase-based reading of disaster management activity, drawing on the Freeman and Kunreuther (2002) division of pre-disaster, during disaster and post-disaster intervention and its more granular four and five-phase variants (Biji and Swapnesh, 2022; Mahdian and Fazel, 2019; Tierney, 1993; Coetzee and Van Niekerk, 2012), helps explain why the six initiatives noted in subsection 3.1 cluster unevenly, rather than spanning the disaster management cycle evenly. Disaster exercises and awareness campaigns most closely map onto risk mitigation and

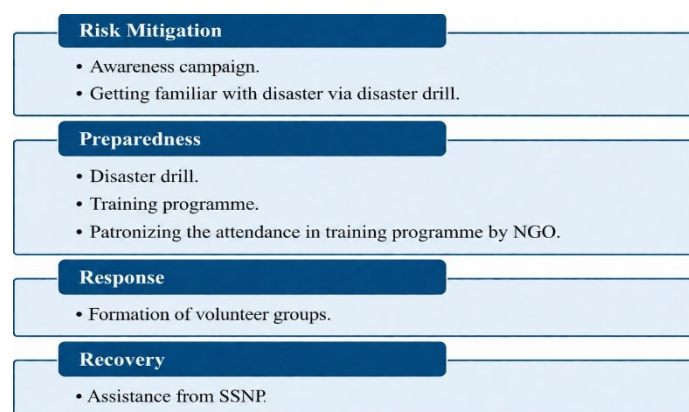


**Fig. 1.** Classification of Chandpur Sadar's CBDM initiatives by disaster-management phase.



**Fig. 2.** Source-based classification of challenges to CBDM initiatives in Chandpur Sadar Upazila.

preparedness, in that becoming familiar with a hazard and rehearsing a response reduces risk before a disaster occurs (Alexander, 2015). Likewise, training programs and incentives for NGO participation increase preparedness and, to a lesser extent, response capacity. The setup of volunteer teams primarily contributes to the response phase itself and represents the logistical aspect of emergency-response resourcing (Pesik and Keim, 2002). Ultimately, social safety net support through the VGD and VGF helps with post-disaster recovery. The study's initiatives are relatively focused on the preparedness segment of the cycle, but recovery support appears limited to some food safety net measures. This resonates with international evidence that disaster management often shows uneven development across the mitigation–recovery continuum unless it is done deliberately. Fig. 1 classifies the six identified initiatives according to the disaster-management cycle.

Regarding Goal 2, when arranged by source (Fig. 2), the thirteen challenges form a pattern. The governance factors that offer intermittent emphasis, premature decentralisation, spatial concentration in readily accessible ar-

reas, and the displacement of goals towards poverty reduction suggest that the legal obligation of Bangladesh (GoB, 2012, 2019; National Disaster Management Policy, 2015) to decentralised, community-based disaster management is ahead of the administrative capacity to implement it at the union level. Such a mismatch is in line with a more general observation that disaster outcomes are often explained more by unmanaged risk than by the event hazard itself (Choudhary and Sharma, 2017; Choe et al., 2023). Community acceptance of the CBDM concept is as important as administrative capacity. Even when administration is strong, it will fail if the community does not accept the approach. The collective pressure from society, namely, a stated preference for traditional relief, the presence of gendered participation barriers, and weak socialisation of the CBDM concept, shows that the administrative apparatus will face a second independent constraint. These findings indicate that community attitudes and social norms constitute a second major constraint on CBDM implementation. Ultimately, disaster impacts are shaped not only by hazard exposure but also by the coping capacity, institutional

support and resilience of affected communities (Vasilescu et al., 2008; Torrens Resilience Institute, 2015; Rajeev, 2014).

#### 4.1 Sustainability and Institutionalisation

The findings suggest that Chandpur will have a way forward to build capacity to sustain the gains of CBDM as part of the Union Parishad and Upazila governance routines, rather than as an ad hoc, linked activity. To address the governance issues mentioned above, it is necessary to formalize trainee records and implement localized disaster management plans at the union level (in practice, not just in policy). There must also be a mandatory disaster management orientation during the induction of elected officials. Using existing Gram or Union-level meetings for planning/implementation, rather than designing a new institution, may be more sustainable given the resource constraints already noted in this study. This also fits within the broader principle from cross-national reviews of disaster-related social recovery programming, which is that such recovery/preparedness activities embed more durably when nested within local institutions rather than running in parallel with and dependent on donor funding (Tan, 2013). The Chandpur phenomenon also has similarities with other community-led instances globally. Matthies (2017), who examined the Philippine purok system, found that a respected community-based mechanism with international recognition was subject to internal maintenance difficulties and the conceptual ambiguity of voluntarism. This reflects the “occasional emphasis” and volunteer-sustainability challenges noted here. However, Chandpur’s CBDM, unlike the purok system, is further constrained by formal decentralisation that has devolved responsibility to Union Parishads without a correlating devolution of training or budget. This suggests that the former also reflects a mismatch between governance capacity and need as much as the latter.

#### 4.2 Budgetary and Resource Feasibility

In all probability, a full cost-effectiveness analysis is outside the scope of this study. However, one observation was that the CBDM received only around 2 per cent of the Upazila budget for FY 2021–22, and Union-level or CSR funding was almost absent for training and equipment. This suggests that budgetary reform is a precondition for most of the other recommendations made here. The provision of safety equipment and the establishment of Trainee Record Systems could be more easily expanded in the short term with existing NGO networks (Red Crescent, Bangladesh Scouts, BNCC), which already provide low-budget, volunteer-based training, than creating new government expenditure lines.

#### 4.3 Alignment with National and Global Disaster Governance Frameworks

There is a discomfiting relationship between the problems identified in Chandpur Sadar and Bangladesh’s stated policy direction. The 2015 National Disaster Management Policy, along with the 2021–2025 National Plan for Disaster Management, makes community volun-

teers and community-based organizations central to national resilience (National Disaster Management Policy, 2015; National Plan for Disaster Management, 2021–2025, 2020/2021). This directive aligns with Bangladesh’s international commitments, such as the UNDRR (2023). The gaps between administrative practice and social experience we have observed in Chandpur Sadar suggest that the practical implementation bottleneck is less a matter of national policy design (which is already well aligned with international commitments) than of the administrative capacity and community engagement mechanisms available at the upazila and union levels. Government reform efforts, therefore, suggest targeting this ‘sub-national implementation gap’ directly rather than further elaborating national-level policy.

#### 4.4 Study Limitations and Recommendations for Future Research

This study has several limitations. First, it was exploratory and was conducted within the time and resource constraints of an undergraduate research monograph. Second, the use of purposive-convenience and snowball sampling limits statistical generalisability. Third, because some original field materials could not be retained, the analysis relies on retained thesis summaries, aggregate results and reconstructed thematic findings rather than full verbatim interview transcripts. The manuscript does not include any direct quotations from participants. It is important to note that the results reported here refer only to this (small, non-probability, purposive-convenient, and snowball) sample of respondents and cannot be statistically generalised to population estimates. Subsequent studies could bolster reliance if there were a larger probability sample mobilized, comparative data gleaned from a matched control upazila to bolster causal interpretation, and perspectives of donor organizations engaged directly; replication across other char and coastal upazilas will help identify which of the challenges uncovered here are unique to Chandpur and which recur more broadly.

#### 4.5 Broader Applicability

Though limited, the six-initiative typology and thirteen-challenge classification we have developed here may serve as a transferable diagnostic framework for other disaster-prone Upazilas in Bangladesh, notably with social and physical contexts similar to Chandpur’s riverine and char geography. Because the governance system and society create challenges that are conceptually different and likely to require different remedies, the two-category classification itself (rather than just the specific findings) could be useful for administrators and researchers who might be looking at CBDM implementation elsewhere in the country and in comparable South Asian deltaic contexts.

#### 4.6 Policy Recommendations

Based on the challenges in subsection 3.2, four recommendations follow. First, the findings suggest the need for a mandatory disaster-management orientation for newly

elected Union Parishad officials. The Department of Disaster Management can create a simple registry system at the Upazila level. It will help re-contact trained volunteers for re-skilling or mobilisation. Upazila and Union Parishads could allocate a minimum share of their budgets to CBDM capacity-building rather than relief alone; the near-absence of any dedicated allocation is itself the more pressing finding, whatever share is ultimately deemed appropriate. The planning for the fourth challenge could prioritize char and remote unions based on an explicit vulnerability criterion rather than formal convenience. As illustrated in subsection 4.1, costs can be reduced by embedding CBDM activities within existing Union Parishad meetings and local governance routines.

## 5 Conclusion

In deltaic Bangladesh, disasters are common. Although a wide range of hazards can be avoided, the combination of flood, cyclone and river erosion in a district at the confluence of three major rivers cannot be. With government capacity alone becoming increasingly unrealistic in the face of this unending exposure, disaster governance in Bangladesh has seen a progressive shift towards engaging the wider community rather than opting for a ‘living free from disaster’ (Ali et al., 2019). The purpose of the work was an investigation into community-based disaster management capacity-building initiatives in Chandpur Sadar Upazila and the challenges of their implementation. There were already six types of interventions. These measures include training workshops, assistance in disaster drills, creating volunteer teams, social assistance through safety nets, and NGOs organising external training. This research has identified a total of thirteen implementation barriers, of which ten are caused by governance and policy. There is occasional emphasis on CBDM, premature decentralization, spatial concentration of initiatives in less-exposed areas, displacement of the initiative’s goal towards poverty reduction, absence of training for elected representatives, missing trainee records, inappropriate budget allocation, missing safety equipment, absence of localized union-level planning, and weak stakeholder communication. The remaining three are generated by society: a persistent community preference for relief rather than training; social barriers to women’s participation; and general unfamiliarity with the CBDM concept itself. The findings suggest that enhancing community-based disaster management in Chandpur and similar disaster-prone localities elsewhere in Bangladesh will require coordinated attention to both institutional capacity and community-level social change, rather than to either one alone.

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## Conflict of Interest

The author has no financial and non-financial competing interests related to the research, authorship, and/or publication of this article.

## Data Availability

Access to the disaggregated interview data used in this study is not public due to the confidentiality conditions presented in subsection 2.7. Only anonymised aggregate summaries retained from the 2023 fieldwork are available on reasonable request. Original audio files and some detailed field notes are no longer available, as noted in subsection 4.4.

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## Ethical Consideration

The study was conducted in accordance with Miles and Huberman’s (1994) predetermined ethical principles for data collection and coding. Due to accessibility constraints, a complete institutional ethical review procedure is not available (see subsection 2.7 for elaboration and disclosure of this limitation). All participants provided informed consent, participated on a voluntary and unpaid basis, and all data is reported in aggregate or anonymised forms to protect confidentiality.

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