



Governance constraints in building climate resilience: Evidence from coastal Bangladesh

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Abstract Bangladesh is extensively cited as one of the countries most at risk of the adverse effects of climate change. The coastal zone of this country is extremely vulnerable as people of these areas live in a highly dynamic estuarine setting and often face various climatic hazards. Against this backdrop, effective ‘governance’ is often cited as the key to properly implementing climate actions to build resilience. This study attempts to identify the governance dimensions of coastal community resilience and analyze the deficiencies that hamper their capacity to enhance resilience in the face of climate change. The findings of the study revealed some governance constraints in building community resilience to climate change. The study specifically identified that the resilience dimension is absent in the existing climate policy. In addition, the impact of weak institutions, corruption, accountability, and transparency challenges create obstacles to enhancing community resilience. Most importantly, coastal people still tend to lack a voice and representation in decision-making. As a result, it is recommended to improve the current climate governance mechanism, including increasing the participation of the community people.

Keywords Governance · Adaptation · Climate resilience · Participation

Introduction

The people living in coastal Bangladesh are most vulnerable to climate-induced natural catastrophes and continuously adopt survival strategies to cope with changing climatic conditions. Therefore, coastal communities have less resilience to tackle uncertainty during and after a crisis (Hasan et al., 2018). Although adaptation measures from the different state and non-state actors help to reduce climate vulnerability, governance constraints hamper resilience-building among the most vulnerable people (Hossain & Rabby, 2019). However, it is well noted that while considering adaptation to climate change and resilience building, it is necessary to rethink the governance agenda. Adaptation is regarded as a vital response option in the context of climate vulnerability, which is the core of climate governance (Dzebo, 2019).

On the other hand, resilience is the outcome of successful adaptation (Hossain et al., 2022a), which implies the capacity of the individual, households, and communities in the complex socio-ecological setting (Baxter, 2019). Moreover, the core of resilience is to learn, cope, and transform in the face of shocks due to climate change. Thus, a governance mechanism is a significant part of resilience (Bedi et al.,

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2014). In other words, governance is essential to resilience building against climate effects, which refers to the processes and structures that determine how power is exercised, decisions are made, and actions are taken. It includes actors, institutions, policies, and practices that shape the development and implementation of climate resilience policies and programmes (Brown, 2022).

Although Bangladesh is not responsible for global warming, this country is considered one of the most vulnerable countries at risk of the adverse effects of climate change (Hossain et al., 2022b). The coastal zone of this country is tremendously vulnerable (Tashmin et al., 2018). Climate change stresses coastal areas and their inhabitants in various ways (Hossain et al., 2022a, 2022b). The coastal areas of Bangladesh have been experiencing frequent climate-induced disasters. Bangladesh's government has already developed several action plans, policies, and strategies for tackling the adverse impacts of climate change to build people's resilience capacities (Ahmed et al., 2015).

Similarly, Non-Governmental Organizations (NGOs) are also active in all nineteen coastal districts in Bangladesh (Hossain et al., 2021). Several NGOs promote the resilience of local communities and are dealing with typical coastal concerns, e.g., environment and forestry, fisheries, and providing micro-credit assistance in solving daily difficulties of coastal people and implementing various adaptation interventions in coastal areas (Hasan et al., 2018). However, people living in the coastal area are still not resilient to climate risks (Mahmud et al., 2021). Bhuiyan (2015) argues that the climate vulnerability of Bangladesh is due to its weak governance rather than the hazards it faces. Similarly, weak governance leads to a lack of access to resources, limited capacity to respond to climate change, and an inability to build resilience to climate-related risks, making coastal people more vulnerable to the effects of climate change (Hossen et al., 2019).

The most cited governance approach in academia, e.g., decentralized governance (Miller & Douglas, 2016), multi-stakeholder governance (Djalante et al., 2011), polycentric governance (Biggs et al., 2015), participatory governance (Collins, 2009), and community-based governance (Berkes, 2009) are directly related to policy, institutions, and community participation (Fraser & Kirbyshire, 2017). In this

context, Garmestani and Benson (2013) argued that these approaches are interrelated and help to develop community resilience to climate change. The question now arises: how does one evaluate the utility and effectiveness of governance dimensions in attaining resilience? Against this backdrop, this empirical study aims to identify the dimensions of existing climate governance mechanisms and analyze their deficiencies, which hinder the development of community resilience to climate change. Most precisely, this article aims to point out the governance dimensions of coastal community resilience and analyze the deficiencies that hamper their capacity to enhance resilience in the face of climate change.

Theoretical framework

The insertion of the governance perspective in the climate change literature is the recent fashion. For example, considering the most general principles of governance, e.g., accountability, transparency, fairness, and responsibility, the 'Action on Climate Today' (ACT), an initiative funded by UKAid from the UK government and managed by Oxford Policy Management (OPM), has established a framework for assessing climate governance (Gogoi & Harshita, 2018). The framework covers seven dimensions that provide a comprehensive picture of the overall environment of climate governance. However, these are organised within three broad themes: *Foundations* for action on climate change (adequacy of evidence, effectiveness of policy framework), *Stakeholders* for action on climate change (awareness and understanding, political commitment, participation, and influence), and *Mainstreaming* of climate change (institutional capacity, finance, and investment) (Price, 2021).

The Climate Action Tracker (CAT), an independent scientific research group, developed a climate governance assessment framework that includes political commitment, institutional framework, policy processes, and stakeholder engagement (CAT, 2021). The World Economic Forum (WEF) has set up eight principles for addressing changing regulations and increasing expectations of boards in the climate arena: Principle 1-Climate accountability on boards, Principle 2- Command of the subject, Principle 3-Board structure, Principle 4- Material risk and opportunity assessment, Principle

5-Strategic integration, Principle 6- Incentivization, Principle 7- Reporting and disclosure, Principle 8-Exchange (WEF, 2019).

Ostrom et al. (1994), on the other hand, in the Institutional Analysis and Development (IAD) framework, identify three groups of variables for evaluating institutions and governance structures. These are- the rules for the field of action (institutions), the collective unit of interest (community), and the attributes of the physical environment in which the community acts (Oñate-Valdivieso et al., 2021). However, the initial goal of the IAD framework is to evaluate the effectiveness of policies instituted to regulate significant institutional aspects (Ostrom, 2009). For example, policy activity is initiated to make climate governance work, and core governance institutions translate climate policy into climate action. As a result, countries like Bangladesh have formulated policies, strategies, and initiatives to tackle the challenges posed by climate change (Chowdhury et al., 2022). Still, a majority of the population in Bangladesh does not see the results of government initiatives, mainly due to institutional inefficiency at both local and national levels (Khan, 2019); consequently, they are highly vulnerable to the adverse effects of climate change. It is assumed that the core institutions can neither discharge their duties effectively nor manage emerging issues and challenges.

Interestingly, authors, e.g., Kalogiannidis et al. (2023), Nachbaur et al. (2017), and Twigger-Ross et al. (2015), argue that effective governance is essential for boosting community resilience to climate change. More precisely, it ensures well-planned, inclusive, and sustainable adaptation measures, reducing vulnerabilities and improving the ability to withstand environmental challenges. Transparent and responsive governance structures help communities adapt more efficiently, safeguarding their well-being and long-term sustainability.

This study amalgams multiple established frameworks, including the ACT framework for evaluating climate governance, the CAT climate governance assessment framework, the WEF principles for effective climate governance, and the IAD framework. Through this amalgamation, the study identifies a set of four interconnected governance dimensions: policy initiatives, effective institutions, accountability and transparency, and citizen participation and voice.

Policy initiatives are instrumental in achieving climate resilience as they provide the necessary framework, coordination, financial support, and legal frameworks to promote adaptive actions at different levels (Chowdhury et al., 2021). They help integrate climate resilience into various sectors, foster long-term planning, and encourage collaboration, ultimately reducing vulnerability to climate change impacts. Effective institutions are essential for developing and implementing climate policies and regulations (Chowdhury et al., 2021). When institutions are weak, there is a lack of effective oversight and inadequate enforcement of laws and regulations. This creates an environment where people abuse power and act without repercussions (Rojas & Rojas, 2020). As a result, corruption particularly enormously affects marginalized and vulnerable populations. Similarly, corruption severely impacts climate change adaptation activities and enhances community resilience (Fach & Timilsina, 2011). Rahman (2018) also mentioned that corruption reduces people's capability to respond to the stressors associated with climate change. Accountability and transparency are significant indicators of good governance concerning policy-making and policy implementation. Both terms have been emphasized in several guiding frameworks for climate-induced disaster resilience as a component of good governance (Tanner et al., 2009; Twigg, 2009). The hierarchy-based and rule-driven accountability mechanisms make people's representatives and public officials accountable for their activities (Chaudhary, 2020). Accountability has two dimensions- answerability and enforceability, and both dimensions of accountability require that there is transparency (Goetz & Jenkins, 2005). Transparency in decision-making fosters accountability in partnership-based projects and programmes. Citizen participation and voice are vital preconditions for enabling a community to be more resilient to climate change (Chitsa et al., 2022). Similarly, community members' active and meaningful participation in governance affairs helps them build resilience in climate-induced disasters. It is already proven that by raising their voice, citizens can express their opinions and expectations, mainly involving complaints and organized protests against irregularities, pursuing improved service delivery after a disaster, and involvement in the decision-making and execution (Goetz & Gaventa, 2001).

The dimensions mentioned above are consistent across all four frameworks, demonstrate strong correlations within the context of Bangladesh, and serve as valuable means to evaluate the governance challenges associated with enhancing climate resilience in coastal areas. Thus, this study has employed a framework encompassing four fundamental governance dimensions crucial for strengthening community resilience. These dimensions include initiating impactful policies, establishing effective institutions, nurturing accountability and transparency, and fostering citizen participation and voice. This framework offers a broad perspective on the multifaceted aspects of governance that play a pivotal role in enhancing community resilience.

Literature review

In the climate governance discourse, resilience is now a vital aspect. To make people prepare for and to recover from climate shocks quickly, various stakeholders, e.g., governments, the private sector, bilateral and multilateral development partners, NGOs, and civil society, work collectively to achieve resilience against the destructive effects of a changing climate (Garmestani & Benson, 2013). This concern has made academicians and researchers enthusiastic about exploring climate resilience from the governance angle (Wakeman et al., 2017). Thus, effective governance mechanisms are vital for resilience to climate change (e.g., Boucher, 2018; Boyd & Juhola, 2015; Chanza & De Wit, 2016; Garmestani & Benson, 2013; Nachbaur et al., 2017; Wakeman et al., 2017). These studies emphasize participation and deliberation, accountability, and effective institutions. For example, Munene et al. (2018) argued that the attributes of different governance approaches enable a more transparent and participatory decision-making process, whereby the interests of the people affected by climate change are appropriately addressed and ensure their capacities in the face of climate change. The international development partners also recognize and advocate good governance principles for community resilience, including transparency, legitimacy, inclusion, and equity, as many developing countries suffer from administrative corruption, lack of government credibility, and inequitable access to rights and services (Chaudhary, 2020). Similarly,

Bahauddin (2014) opined that the key variables of a broad-based governance framework include accountability, transparency and information sharing, corruption prevention, participation and voice, legal and policy frameworks, effective and efficient public sector management, and active civil society involvement.

However, community resilience heavily depends on all the national policy initiatives and relevant activities, which should be covered within the climate governance framework. The initiatives and activities include coordination and execution of policy strategies, stakeholder involvement both in policy formulation implementation phases, independent monitoring, and evaluation (Baxter, 2019). Moreover, community resilience cannot be achieved without higher accountability, transparency, and stakeholder involvement (Adekola et al., 2020). Thus, there should be a “balance of power” between state and non-state institutions to ensure accountability and transparency (Rahman & Huang, 2019). Furthermore, these institutions should have clear mandates within the governance framework and ensure that they can influence the policy formation and execution process, which fosters community resilience in the face of climate change (Fraser & Kirbyshire, 2017). It is also urgent to note that institutions should have both human and financial resources to achieve their goals (Yu et al., 2017).

Therefore, an effective governance process enables the government to make sound policies and provides a wide range of understanding to the institutions operating across the state and civil society. It also encourages citizens to participate in all government and NGO activities (Chaudhary, 2020). In contrast, it has already been proven that weak national and sub-national-level governance is a crucial challenge to ensuring sufficient resilience across the community (Hossen et al., 2019).

Although there is no precise indication of what kind of governance structure enhances or hampers community resilience, a simple approach that links with local realities is connected to more wide-ranging approaches to climate change that improve community cohesion (Twigger-Ross et al., 2015). However, the essential aspects of building resilience capacities are institutional measures, groups, and actions set up to make citizen involvement more accessible both in working with and challenging prevailing structures to respond to the adverse impacts of climate change (Cutter et al., 2010). In

the same way, Bahadur et al. (2010) suggest a high level of diversity of participating stakeholders: central government, local government, government agencies, NGOs, and, of course, the citizens are fundamental in building resilience as each of them perform a diversified function from their context. NGOs and civil society organizations are vital in disaster risk reduction and resilience building. The flexibility in NGO activities, mainly regarding the capacity to accelerate the arrangement of resources without typical bureaucratic hassle, allows them to help communities at every phase of the disaster management cycle and climate adaptation approaches (Telford & Cosgrave, 2007).

Published and unpublished scholarly works on climate change issues in Bangladesh are increasing. Several studies related to climate change-related shocks (Sammonds et al., 2021), adaptation strategies (Chowdhury et al., 2022), and resilience-building (Hoque et al., 2019) have attempted to assess the negative impacts of climate change from the perspective of the occurrence and outcomes of natural hazards. Another school also took into cognizance social, economic, and political issues (Zamudio & Parry, 2016). Some studies were also undertaken on urban climate resilience in Bangladesh. However, these studies have mainly emphasized the capital city, Dhaka, or other large coastal cities like Khulna (Islam et al., 2014). The studies above have addressed climate change-related vulnerability, effects, and response. Still, only a few studies have been directed at governance concerns at the local level, especially in the most affected coastal zone of Bangladesh. For example, Ishtiaque et al. (2021) analyzed the structure, processes, and power dynamics in the multilevel adaptation governance in coastal Bangladesh, focusing only on floods. Although Hossen et al. (2019) studied governance challenges in addressing climatic concerns in the coastal areas of Bangladesh, Ghana, and India, this paper only evaluated the effectiveness of existing policy documents. Rahman (2018) explores only the impacts of corruption on livelihoods and adaptive capacity to climate change. Therefore, Haque et al. (2017) and Kivimaa et al. (2017) have already expressed concern about the need for governance-focused research to reveal the governance constraints that hinder the development and implementation of effective climate resilience strategies in coastal Bangladesh.

Materials and methods

Research approach and study area

This study adopted a qualitative research approach. However, data and information were collected from both primary and secondary sources. Primary research consisted of Focus Group Discussions (FGDs) and Key Informants Interviews (KIIs). FGDs and KIIs were conducted from September to November 2022. Separate checklists were developed for FGDs and KIIs.

In contrast, secondary research included a review of recent literature on policy and programming, published and unpublished project strategy papers, books, journal articles, annual and quarterly NGO reports, and so on. The study was conducted in four villages under two coastal districts, Satkhira and Patuakhali, in Bangladesh. It is well noted that the entire coastal area of Bangladesh is highly prone to disasters, especially cyclones. Satkhira, a district in southwestern Bangladesh, was one of the most affected areas due to Cyclone *Aila* in 2009. The cyclone destroyed homes, crops, and other infrastructure, leaving thousands of people homeless and without food or water. People in this area still struggle to rebuild and recover from the disaster (Yeasmin et al., 2022). Therefore, two villages of Burigoaliny Union and Atulia Union under Shyamnagar Upazila of Satkhira district were selected for data collection.

Similarly, Patuakhali, a southcentral district in Bangladesh, was particularly hard hit, with most villages and towns damaged due to cyclone *Sidr* of 2007, one of the most devastating cyclones to hit the country in recent history. Communities affected by Cyclone *Sidr* still carry the physical and psychological scars left by the storm (Uddin et al., 2021). Thus, two villages from Lalaria Union and Dhulasar Union, under Kalapara Upazila of Patuakhali district, were selected for data collection.

Study design and participants

The study has used a qualitative multi-method tool, *i.e.*, FGDs and KIIs. Two research assistants having masters in public administration from a reputed public university in Bangladesh conducted four FGDs in the selected four villages. Two local NGOs played a vital role in helping to identify potential participants

and facilitating the FGDs. Each FGD consisted of 8–10 participants representing different backgrounds within the community, e.g., disaster-affected males and females, community leaders, religious leaders, school teachers, young adults, and older people. Participants of the FGDs were selected based on their level of community involvement, knowledge of local issues, and willingness to participate in the discussion sessions.

The conversation incorporated the use of the local Bengali language, considering it is the native tongue of Bangladesh. Each FGD took almost one hour. The research assistants requested consent from the participants before starting the session. The FGDs addressed eight semi-structured questions concerning governance constraints in building climate resilience. The four stages of each FGD are applied to the issues addressed in this. *First*, participants were asked to discuss major governance constraints hindering climate resilience in coastal Bangladesh. Accordingly, participants talked about policy initiatives and institutional factors that influence climate resilience efforts in coastal Bangladesh. *Second*, participants were requested to elicit their views on how governance structures and decision-making processes affect the allocation of resources for climate resilience projects in coastal Bangladesh. *Third*, participants were asked how the engagement of local communities in decision-making processes influences the success of adaptation projects in coastal areas. *Finally*, participants were requested to recommend strategies that should be implemented to overcome these constraints and enhance climate resilience in coastal areas.

In addition, 15 key informants (e.g., policy-making bureaucrats, elected representatives of the local government, field-level government officials, NGO officials, academics, experts, and researchers) were interviewed regarding the governance dimensions relevant to coastal community resilience. The author interviewed the key informants (Table 1). The interviews included topics relating to existing policies in Bangladesh that promote climate resilience, institutional arrangements, and power dynamics within the government and local authorities that influence the effectiveness of climate resilience, political factors, e.g., corruption or political instability, play in hindering climate resilience efforts and potential strategies or approaches that could help overcome the governance constraints and enhance climate resilience.

Table 1 Number of KIIs

Respondents type	Number
Policy-making bureaucrats	2
Field-level government officials	2
Elected representatives of the local government	4
NGO officials	4
Academics, experts, and researchers	3
Total	15

Thematic analysis

As the study sought to determine how governance arrangements and challenges supported or hindered climate resilience, information obtained from the literature was structured within Microsoft Excel, sorted based on thematic categories, and examined using a framework designed for conducting literature reviews. This framework served the purpose of identifying critical and pertinent details, subsequently allowing for their synthesis. FGDs and KIIs responses were analyzed using thematic analysis introduced by Braun and Clarke (2014). The analysis proceeded in five distinct phases. Initially, all the transcripts were thoroughly reviewed to establish a deep understanding of the data. During this stage, brief notes were taken directly on the transcripts, and different highlighter colors were employed to mark keywords or noteworthy statements in the text. In the second phase, the researcher systematically extracted codes from the text, going through it line by line to create an initial set of codes. The initial searches created primary codes by abstracting meaning units. All codes and data identified similarities and differences. This process formed ten meaningful categories and sub-categories, for example, climate adaptation, climate policy, policy gap, governance practices, institutional challenges, stakeholder engagement, community awareness, community participation, community resilience, and barriers to resilience, which were created in this context. These categories were established based on prior research and aligned with the issues acknowledged or presumed during FGDs and KIIs in line with the aim of the study. In the third phase, these categories were organized and grouped into sub-themes, *i.e.*, lack of inclusive policy formulation, policy implementation gap, institutional capacity, corruption and mismanagement, accountability

mechanisms and transparency, community engagement strategies, and NGO initiatives based on commonalities. The fourth phase consisted of generating overarching themes by combining and consolidating these sub-themes. The researcher went back and forth between the data and the emerging themes, refining and redefining them as they gained a deeper understanding of the content. Finally, in the last stage, some analytical themes were revealed through reviews and re-reviews of the sub-themes through which the key themes emerged; thus, the analysis led to four major themes, as discussed below.

Findings

Upon analyzing the FGDs, interviews, and existing secondary data, this study has identified four governance constraints in building peoples' resilience in the face of climate change. These are- (a). absence of community resilience dimension in climate policy; (b). weak institutions and corruption undermine community resilience; (c). accountability and transparency challenges in enhancing community resilience; and (d). lack of participation and voice in building a resilient community.

Absence of community resilience dimension in climate policy

Bangladesh Climate Change Strategy and Action Plan (BCCSAP), the core strategy document of climate change adaptation in Bangladesh, lacks a substantial understanding of socio-economic and cultural dimensions. For example, the people living in the coastal area practiced cultivating and owning resources through co-operation among households and social networks for generations (Hossen et al., 2019). Still, the national policy document does not sufficiently include these considerations in climate change adaptation. According to the interviews with climate change academics, experts, and researchers, it is revealed that socio-cultural viewpoints are not appropriately acknowledged in the present climate change and disaster response policies. Similarly, it also revealed from the FGDs that women's requirements were not considered when setting up cyclone shelters to offer them washrooms separate from the men. One female FGD participant mentioned: "Women have

unique hygiene needs, especially during menstruation, and not having separate washrooms is incredibly inconvenient and uncomfortable. These considerations must be taken into account when setting up shelters."

Additionally, one academician's observations revealed- "The BCCSAP policy document fails to make available locality-specific information connected to catastrophic events due to a lack of proper community engagement along with a lack of appropriate operating mechanisms." On the contrary, the resilience capacity of individuals, households, or communities to respond to climate hazards depends on the amount of information available (Kelman et al., 2018). On top of that, a substantial portion of the adaptation measures are physical, immediate effect-centered, short to medium-term, and accomplished through external involvement as opposed to community-based participation.

Although the BCCSAP was formulated through a fully consultative process involving government, civil society, and development partners and emphasized mainstreaming vulnerable people into climate adaptation interventions as a general strategy, this action plan did not prioritize the participatory planning process (Lopa & Ahmad, 2016). As a result, adaptation experts and academicians claimed that the views and opinions of climate-vulnerable people were largely overlooked. Consequently, communities affected by climate change are unaware of this action plan (Karim & Thiel, 2017). One of the FGD respondents stated: "We come from a coastal area that has been grappling with the effects of climate change for years. Still, we can confidently say that most people here have no idea about any policies, action plans, or initiatives specifically aimed at helping us. It's disheartening because we could benefit from that support." The absence of the participatory process made the real significance of the BCCSAP less important. In addition, it has also been proven that community people do not actively participate in adaptation interventions under the BCCSAP (Rahman, 2020). Moreover, the private sector, major political parties, and some of Bangladesh's renowned climate experts were not also consulted during the formulation process of BCCSAP (Hossain, 2009).

The NGO activists claimed that the BCCSAP had not considered NGOs enough as one of the key actors in enhancing community resilience to climate change.

NGOs do not play a significant role in accomplishing this action plan. Even there have not been any expectations from NGOs to perform any vital tasks in lessening climate vulnerabilities. In this action plan, NGOs were not treated as copartners and mentioned that the government would involve NGOs when needed. As a result, the BCCSAP turns out to be just a ‘government action plan’ rather than a ‘community resilience enhancement plan’.

Weak institutions and corruption undermine community resilience

Despite the efforts of the government, climate change remains a major challenge to Bangladesh due to its weak institutional capacities at the national and local levels to implement the necessary climate change adaptation measures (Khan, 2019). There are significant impacts of weak institutional capacities and corruption on livelihoods and resilience capacity in the face of climate change. Rahman (2018) claimed that the Forest Department under the Ministry of Environment Forest and Climate Change (MoE-FCC) sells permits for a specific period to extract a certain amount of resources from the *Sundarbans* mangrove. However, those who pay bribes stay more extended periods inside the forest. Thus, they obtain more resources than they are supposed to harvest. For instance, the ‘official forest permit’ allows someone to collect for a week but pays bribes for their harvest for more than one week.

Besides the BCCSAP projects, the government has undertaken projects to rehabilitate climate change-affected people. These projects include *Ashrayan* and ‘One House One Farm’ (Khan & Hasan, 2016). The *Ashrayan* project, launched in 1997, is a development project of the government of Bangladesh under the Prime Minister’s Office. The project was tasked with building homes for the families who lost their homes because of climate-induced natural disasters like cyclones, river erosion, and landslides. The government also launched the ‘One House One Farm’ project in 2010 to alleviate poverty through agro-livelihood and family farming.

However, the government’s praiseworthy efforts have often been tainted by allegations of corruption by a few dishonest persons. One of the climate experts mentioned: “*The local public representatives or people affiliated with the ruling party had taken a*

bribe from the beneficiaries to enlist their names in the Ashrayan project.” Ahmed (2019) found that for enrolling in the *Ashrayan* project, each household had to pay BDT 20,000–25,000 bribe to either Union Parishad members or local politicians. In FGDs, similar findings have been revealed. One FGD participant stated: “*Many eligible villagers who could not fulfill illegal demands of the Union Parishad members and local politicians were excluded from the project list. But the names of solvent persons were included in return for a bribe in the beneficiary list. Unfortunately, the eligible beneficiaries who paid the bribe had to sell their household assets or borrow money from the NGOs to arrange the bribe money.*”

‘One House One Farm’ project also faces several challenges in its progress. The actual poor are ignored in many areas. Moreover, many wealthy people have been included in the project, the structures of membership, and the operation of 11 village-level cooperative associations (Ahmed, 2019). Due to the favoritism shown by the politically influential people, the objectives of the project sometimes had been hampered. One of the NGO officials working in the coastal area mentioned: “*In all social assistance programmes, specific criteria are outlined in the guidelines for selecting the beneficiaries. The people’s representatives and implementing officials are supposed to follow the guidelines. But, in most cases, these are not appropriately followed.*”

It is revealed from KIIs that local influentials and elites use the process of climate change, and they often seek information about where adaptation projects will be executed. For example, one of the elected representatives of the local government claimed: “*Well-connected local influential and elites use the “Khas” (public) land lease system for climate change adaptation projects as an instrument to gain dominance over the property as well as custodial rights. Once local influentials and elites illegally grab the land, they hold on to it with a tight fist, supported with forcefulness and even financial brokers and court personnel.*”

It is further revealed that illegal land-grabbers employ musclemen or law enforcers to secure their claims on the unlawfully acquired land. Over time, the courts legitimized their ownership, rendering physical force unnecessary. Once guaranteed, these landholders often lease the land to impoverished farmers who rely on it for their livelihoods. Surprisingly, even the

villagers initially displaced accepted the land grab as legitimate. This process involves influential individuals or civil servants seizing the land and utilizing formal power or coercion until it eventually becomes ‘theirs’ in a normalized fashion (Sovacool, 2018).

The interviews and informal discussions with academicians and experts revealed that the existing unequal social power structures imposed by the local elites reduce peoples’ adaptive capacities and are therefore regarded as an obstacle to community resilience. One expert opined that “*people are more scared of the power of the elites than the climate-induced disasters*”.

Corruption exists in different forms of social protection programmes. During the field investigation, it was found that in some cases, the Union Parishad chairmen and members are often compelled to ‘pacify’ and ‘satisfy’ Upazila officials who are tagged with these programs through some form of benefit to them. One FGD participant noted: “*In most cases, we assume that the guidelines are deviated for selecting beneficiaries. The reasons behind this are the political considerations of the local leaders, nepotism, satisfying existing vote banks, creating new vote banks, and corrupt practices by the local leaders.*”

Accountability and transparency challenges in enhancing community resilience

As climate-induced natural disasters drive people into vulnerability, exposure to different hazards, and, more importantly, chronic poverty, accountability, and transparency are considered vital weapons to fight against the adverse effects of climate change (De Swardt, 2011). Community people believe there is a lack of accountability and transparency in selecting the beneficiaries for social protection programmes. Major causes, in their opinions, include politicization, both at the Union Parishad (UP), the smallest rural administrative and local government unit in Bangladesh, and Upazila Parishad (UzP), the middle tier of local government for Bangladesh in the rural setting; personal greed of the elected representatives; nepotism; and bribery. It was also reported in FGD sessions that most of the UPs still do not hang the social protection beneficiary list on their notice boards. Almost all of the FGD participants claimed they did not have concrete information about the disbursement schedule of goods.

It is revealed from the FGDs that the politicians mismanaged the relief goods, and the distribution was uneven. One of the FGD participants mentioned: “*The UP chairman and members purposely neglected the ‘real’ disaster-affected people and gave away the relief materials to their relatives and supporters.*” It was also found that the emergency reliefs and other government handouts were distributed by prioritizing religious, social, and political considerations among the communities. On top of that, comparatively better-off households got an advantage in getting relief and other government handouts. Consequently, disaster victims don’t receive adequate relief support immediately after a disaster.

One FGD participant noted: “*Sometimes we protested against the unequal distribution of relief and rehabilitation services, corruption, and pilferage of relief goods by government officials and local politicians. But the local politicians and the bureaucrats involved in corrupt practices threatened us with consequences if we protested against corruption in distributing relief materials.*” This finding indicates that the local politicians and the bureaucrats use disaster events as opportunities to strengthen clientelism in the affected areas.

Literature suggests that funds are available to protect people from natural disasters that climate change brings. However, these funds have not been correctly spent. Moreover, accountability mechanisms often do not work appropriately (De Swardt, 2011). One of the climate change adaptation experts opined: “*If funds for flood defenses in the coastal area are misused, dams are constructed too low and too weak, the community people definitely will live knee-deep in stagnant water. This also damages their crop yields. If the community people knew well what was going on, how much funding was allotted, and for what, they would unlikely have permitted unsatisfactory activities. Nevertheless, it is interesting to note that thousands of people living in coastal areas in Bangladesh have limited or no idea how climate change would affect their lives and livelihoods.*”

Interviews with NGO officials working in coastal areas revealed no indication of any role being played by the Union Disaster Management Committee (UDMC) at the union level in a pre-disaster period. Likewise, it has been reported from the consultation with key stakeholders that disaster management is a secondary concern for some local-level actors. For

example, the disaster management issue is still poorly integrated into different programs by the Union Parishad. This finding is similar to the FGD findings conducted with community people.

The experts were concerned about the efficiency and effectiveness of the Disaster Management Committees at the local levels. However, as one experienced expert has observed: *“The persons who deal with and lead Disaster Management Committees at the local level do have little expertise in disaster management in most cases. However, they were provided authority to coordinate and manage disaster management initiatives and efforts according to the Standing Orders on Disaster (SOD), a detailed guideline of the institutional framework for disaster risk reduction and emergency management.”*

One elected local government representative added a different dimension: *“Local political leaders are not interested in joining and leading disaster management activities. They are instead interested in selecting their ‘own man’ as relief beneficiary. Consequently, the people’s interest and the spirit of accountability are not reflected in the affairs of the disaster management committees.”*

Under the BCCSAP, the government established the Bangladesh Climate Change Trust Fund (BCCTF) and the Bangladesh Climate Change Resilience Fund (BCCRF). The BCCTF has been funded domestically since 2009, with nearly \$500 million allocated so far (Parvin & Johnson, 2015). The BCCRF, supported by developed countries and donors, had a transparent project selection and approval process. However, after a few years of operation, the BCCRF will likely close with approximately \$200 million in unimplemented projects. Around \$50 million of the unspent funds may be returned to donors (Khan, 2017). This situation sets a negative example.

The key informant interviews revealed that though the BCCTF and BCCRF implement several adaptation projects, accountability challenges exist in the climate change adaptation arena, especially at the local project implementation stage. Experts mentioned that under both BCCTF and BCCRF, there is limited access to the information in contracts, project selection criteria, and disbursement. As a result, the project applicants cannot know the selection procedure, precisely why or why not their projects were picked. Though some documents were open, they were partial and not precise. One of the academicians

mentioned: *“The MoEFCC, the Chair of both BCCTF and BCCRF, could not confirm the expected disclosures on the decision. Besides, this nodal climate change agency failed to disseminate the assimilated knowledge and information and successfully coordinate with concerned stakeholders.”*

It has also been observed that the MoEFCC could not make accountable the fund recipient agencies, particularly those who belong to the government. However, an effective accountability mechanism guarantees the quality of work by effectively utilizing resources. Furthermore, the MoEFCC has no legal mandate to rule over other ministries, whereas many projects are being implemented by different ministries and departments funded either by BCCTF or BCCRF. Moreover, Khan et al. (2013) identified that no effective mechanism was ensured to engage the oversight and enforcement actors for the effective monitoring of the implementation of the project. These enforcement actors include the Implementation, Monitoring, and Evaluation Division (IMED) under the Ministry of Planning, the Comptroller and Auditor General (C&AG) office, and Civil society organizations (CSOs). It is also evident from the interview with key informants that there are no proper procedures to receive and resolve complaints against corrupt practices in climate finance.

Lack of participation and voice in building a resilient community

In Bangladesh, citizens do not have enough space to participate in formal institutions (Karim & Thiel, 2017). Likewise, the provision of community participation or engagement was negligible in government-initiated adaptation projects. Whereas ‘community participation’ is considered a vital instrument to ensure the sustainability of any development programs or projects. It is revealed from the discussions with policy-making bureaucrats and field-level government officials that they are usually concerned about community engagement during the programmes or project implementation phase. However, they are not much concerned about involving the community before starting or after the completion of programmes or project activities. Community people identified this process as a kind of exclusion. This exclusion in determining adaptation interventions ultimately results in deprivation. In other words, the

affected community people do not receive the actual benefit from the interventions initiated and implemented by formal institutions.

It is revealed from the FGDs that community people lack the adequate skills and knowledge to access institutions. Union Parishad (UP), the lowest tier of the local government institution in Bangladesh, is supposed to provide services to citizens at their doorstep (Hussain et al., 2015). The UP is the only institution where the inhabitants can express their demands in rural areas. However, it is revealed in the FGD sessions that community people have negligible participation in UP activities to assert their demands and rights to well-being, livelihoods, and development.

On the contrary, the Union Parishad Act 2009 has allowed citizens to ensure greater participation in development planning and implementation. Moreover, The Act made provision for 13 Standing Committees in the UP on issues such as education, agriculture, health, family planning, and disaster management to ensure transparency, accountability, and people's participation in ensuring sound governance (Islam et al., 2017). The standing committees consist of elected representatives of the UP, socially respected persons (e.g., teachers, religious leaders), and representatives from women of that locality. However, the participation of poor people and women in different affairs of UP is minimal.

The UP also has the provision to engage the people in various committees and affairs like social safety net programmes, relief distribution, climate-resilient infrastructure development, disaster risk reduction, and so on (Masud-All-Kamal, 2013). One of the experts, in this context, stated: *“People’s active involvement and direct engagement are usually limited during decision-making. In most cases, poor people are excluded from the project implementation phases. Project Implementation Committees (PICs) are formed as an official formality. However, the committee members are neither adequately consulted nor appropriately informed of the implementation status of the projects. Consequently, people’s participation in PICs is minimal and often considered artificial.”*

In a disaster management context, the most marginalized and disadvantaged sections of the rural localities have minimal access to the meetings and other activities of the UDMC at the union level, which is the lowest tier of local government and the Upazila Disaster Management Committee (UzDMC)

at the Upazila level. Consequently, these people also have a limited role in the process of decision-making (Haque et al., 2019). This lack of inclusiveness indicates that marginalized community group members have minimal information about the roles, directives, and relevant functions of the disaster management committees at the local level.

The key informants generally agreed that the people exposed to climate-induced disasters lack access to knowledge about disaster management efforts initiated and implemented by the Upazila and District administration. At the same time, the UDMC is headed by the UP Chairman, who has been in the paper as chairman. The other members are not well-trained in the roles, functions, and procedures of the committee. Moreover, the Upazila Nirbahi Officer (UNO), the Project Implementation Officer (PIO), and other Upazila Administration officials do not support making the UDMC effective for disaster management.

Community-Based Organizations (CBOs) created under NGO projects, once activated, provided catalyst support. They became linking pins between different stakeholders of adaptation projects, including the local bodies, the government agencies, and the local communities. These CBOs became a force with the facilitation of the local NGOs in demanding services from government agencies as well as local government institutions. On the other hand, they also helped them when they needed support from the local communities (Hussain et al., 2015).

For example, one of the NGO officials informed that, in 2017, a local NGO named *Nabolok* implemented a project titled ‘Strengthen Civil Society and Public Institutions to Build Community Resilience to Adopt Climate Change project’ (ACC Project) in Satkhira District during 2017–2021. *Nabolok* initiated the ACC project aimed to build the capacity of vulnerable communities, especially women, to deal with socio-economic vulnerability to climate change impacts. The project sought to make local government bodies more accountable to the vulnerable sections of society. Furthermore, through the ‘participatory community risk & vulnerability assessment and action plan (CRA)’, community people communicate with UP regarding their problems. The concerned NGO official further informed that the project’s significant innovations and activities are- the creation of the village group, farmers’ group, community

volunteer, and a regular follow-up meeting with UDMC and UzDMC.

However, no long-term strategies or organized measures are known to be employed by NGOs and community-based groups. They mostly focused on short-term measures to promote early recovery. Most NGO project interventions related to adaptation are perceived and initiated as per the development support policy of the donors or development partners, and they provide the necessary funds to implement those projects (Hasan et al., 2018). Therefore, these adaptation projects are entirely dependent on the funding of the donors or development partners. However the project activities and project-created CBOs generally wither away with the completion of the project. Besides, a recent study focused on the coastal area found some weaknesses and constraints in prevailing NGO coordination mechanisms at the local level, which ultimately create obstacles to achieving aid effectiveness in recovery (Sadik et al., 2017).

Women are the most vulnerable to the adverse effects of climate change in Bangladesh. In a patriarchal society like Bangladesh, women are unaware of their rights, and their involvement in local affairs is relatively low. This situation leaves them even more exposed to the impacts of climate change (Ahmed & Sen, 2018). On the contrary, one of the NGO officials stated: *“Under the project initiatives, groups of women are supposed to lead to assess their vulnerability to climate risks and identify action plans. If this guideline is followed properly, this community-based approach empowers women to express their needs and increase their resilience to climate change.”*

However, some government and NGO projects empower women at the community level to adapt to climate change. For example, the Ministry of Women and Children Affairs recently started a six-year-long (2018–2024) project in Southwestern coastal districts benefitting women and adolescent girls to build resilience to climate change.

Discussion

Bangladesh has been making significant efforts to fight climate change and build resilience against the impacts of climate change. BCCSAP identifies six pillars for action: (a). Food security, social protection, and health; (b). Comprehensive disaster management;

(c). Infrastructure; (d). Research and knowledge management; (e). Mitigation and low carbon development; and (f). Capacity building and institutional strengthening (Irfanullah, 2016), but it lacks community resilience dimensions, particularly it is revealed that it undermines peoples’ agenda. Moreover, although the document recognizes the need to connect to sustainable development and poverty alleviation approaches, it considers vulnerability a central assessment priority. However, academics, experts, and researchers opined that all the components of BCCSAP except the first and the sixth ones reveal top-down techniques.

On the other hand, they claimed that this policy document hardly outlines any bottom-up approaches. This top-down approach indicates more government and other formal stakeholders’ involvement and less grassroots community participation. The BCCSAP also undermines the importance of indigenous ecological knowledge and effective coping strategies for remote communities. Furthermore, the BCCSAP treated the community as a passive actor. In contrast, government agencies and other formal stakeholders are considered active players in preparing, executing, and monitoring the action plan.

The BCCSAP is being implemented under the guidance of the National Environment Committee, headed by the prime minister and coordinated by the concerned minister of the Ministry of Environment Forest and Climate Change (MoEFCC) (Rahman & Shams, 2016; Rai et al., 2014). However, climate policy analysts claimed that this institutional arrangement represents a centralized governance mechanism and bureaucratic dominance of government officials. Moreover, climate policy analysts also argued that the BCCSAP has no separate coordination mechanisms as policy coordination is one of the foremost and age-old challenges for any government. Furthermore, the action plan does not describe how the national committees, specifically the ‘climate change unit’ under the MoEFCC and ‘climate change the focal point in different ministries, will designate administrative power and coordinate with the local government.

Interviews with key informants such as adaptation experts and academicians further revealed that the BCCSAP does not suggest any effective institutional mechanisms regarding the local level of governance. For example, though an environmental committee at the divisional level is headed by the divisional

commissioner with representation from different government agencies, the committees are nonfunctional. However, there is no such committee at the district and Upazila levels.

NGOs are implementing various projects and conducting empirical research on climate adaptation issues. Though a provision is made during the creation of two funds, Bangladesh Climate Change Trust Fund (BCCTF) and Bangladesh Climate Change Resilience Fund (BCCRF), under the BCCSAP to allocate ten percent of funds would be used for NGO project implementation (Lopa & Ahmad, 2016). Still, NGO activists questioned the procedure of selecting those NGOs. In the context of selecting the partner NGOs for implementing BCCSAP projects, irregularities, political considerations, and influence in fund approval prevailed. However, policy-making bureaucrats claimed that the government focused on the participation of NGOs. In this regard, a senior official of MoEFCC denied the allegation of irregularities and stated: *“After the finalization of the BCCSAP, the MoEFCC put out a call for projects for the strategic partnership to execute the tasks mutually with NGOs”*.

The interviews and informal discussions with the officials of the MoEFCC further revealed that out of the six themes of BCCSAP, most of the NGOs wanted to work on either research or capacity-building activities in the area of climate change. At the same time, the ministerial bodies wanted to get projects concerning disaster management services and infrastructure development. This situation created confusion about what type of adaptation projects should be initiated at the initial stage.

On the other hand, the interviews with the NGO officials revealed that some of the leading and experienced NGOs submitted project proposals during the call for projects of BCCSAP. However, the ministry selected only a few of them. The NGO officials claimed that the NGOs with good relations with the ministry were selected as partners and received funds to implement projects. One of the NGO officials stated: *“The government officials asked for bribes to approve the project. As a result, most of the leading NGOs denied and withdrew their project proposals. However, the government selected NGOs with no experience in the relevant area except microcredit. These NGOs, which have a good connection with bureaucrats, got projects in return for money. They*

gave a specific percentage to the government officials as bribes of the total project fund.”

This process encourages a bribe culture as inexperienced NGOs provide bribes for getting projects. On the other hand, the large and experienced NGOs did not offer bribes to get government climate change projects. Consequently, the inexperienced NGOs selected for implementing the BCCSAP adaptation projects failed to reach project objectives and goals, eventually creating difficulties and hindrances in enhancing community resilience to climate change.

This action plan has no provision for reform agenda of the existing institutional structure. Similarly, climate change adaptation experts opined that the current institutional structure is not much efficient in dealing with adaptation activities. In the same vein, O’Donnell et al. (2013) claimed that local bodies still do not have sufficient capacity to manage adaptation projects, which has hindered progress in reducing climate hazards. Besides, the limited coordination between central and local governments threatens to undermine the success of the outcomes of adaptation activities. Adaptation experts further criticized the BCCSAP for its lack of accountability and transparency.

It is revealed that adaptation projects, especially adaptive social protection programmes encounter irregularities at the local level. FGD respondents opined that the reasons behind this are nepotism, political considerations, satisfying prevailing vote banks and making new vote banks, and corruption of the local level officials and leaders. Key informants like academicians identified not following the guidelines leads to a faulty selection of beneficiaries. One of the academicians categorically mentioned: *“Due to the ‘tremendous power’ exercised by the rural elites, pervasive corruption prevails at every level, which is considered the main hindrance to achieving community resilience. Rural elites, e.g., local government representatives and wealthy landowners, have well connections. They usually deal with policy-making, street-level bureaucrats, and powerful politicians and often provide bribes and gifts. This practice enables them to commit corruption and easily escape from allegations.”*

Adaptation through innovative coastal land use has significant roles, and these interventions are intended to support mainly poor coastal inhabitants to enhance their resilience (Shaw et al., 2013). However, often

coastal lands have been plagued by grabbing (Sovacool, 2018). It is revealed that both *Khas* (public) and *Char* (coastal island) lands are at risk in the coastal area. In fact, several rural riverine and coastal zones consistently move islands called *char* lands. These lands are contested spots for power games that evict small-scale farmers or producers from their fertile alluvial soils (Feldman & Geisler, 2012). Similarly, many urban lands are grabbed by elites who use immoral civil servants, law enforcers, and even influential criminals (Sovacool, 2018). Although the existence of land reform legislation and the abolition of intermediary landlords, many people still suffer landlessness, and land distribution has become unequal in recent years due to corruption and poor governance in public land administration (Quan and Dyer, 2008).

Corruption at the policy level ultimately affects local-level community resilience to climate change at every step (Lewis, 2017). For example, Transparency International Bangladesh (TIB) (2017) found that irregularities in selecting project sites, contractors, project monitoring, peoples' participation in the process implementation of the six climate change adaptation projects were initiated and implemented by the Bangladesh Water Development Board (BWDB). The study further revealed that no monitoring was done by the inspection teams from the Ministry of Water Resources or the Implementation Monitoring and Evaluation Division (IMED) under the Ministry of Planning. In context with the above, ensuring external accountability through using relevant parliamentary committees can be one of the ways to make concerned civil servants accountable. Transparency can only be ensured if citizens know about decision-making (Hossen et al., 2019). Therefore, public decision-making secrecy should be replaced by openness and information sharing. Last but not least civil servants have the will to change their mindset to serve the citizen truly.

There is no common framework for involving community people in monitoring and evaluating adaptation activities in climate change policies. In fact, the other national strategic documents, e.g., Perspective Plan, Five Year Plan, and Annual Development Plan, also don't have specific provisions for involving community people in monitoring and evaluating development projects (Pervin, 2013). As a result, the BCCSAP lacks community

involvement in monitoring and evaluation, which makes it challenging to assess the implementation of climate-responsive activities. On the other hand, citizen participation and voice are vital preconditions for enabling a community to be more resilient to climate change (Bedi et al., 2014). By raising their voice, citizens can express their opinions and expectations, mainly involving complaints and organized protests against irregularities, improving service delivery after a disaster, and involvement in the decision-making and execution (Goetz & Gaventa, 2001). In addition, MacRae and Hodgkin (2011) emphasize the significance of citizen participation and collaboration by various stakeholders at various phases of disaster management.

Participation is commonly incorporated in policy actions and responses to climate change (Nachbaur et al., 2017). In the same way, people's voice really matters. If people cannot raise their voices, there is little or no chance to reflect their opinions, demands, and choices in government policies and priorities (Sovacool, 2018). Nowadays, the participatory approach is generally included in most climate adaptation policies. Participation and collaboration efforts will impact the capacity to bring about resilience. The active and meaningful participation of community people in the governance process helps them to build resilience in climate-induced disasters. As disasters are a consequence of climate variability, resilience on this point is considered a factor that influences people's capacity to prepare and plan for hazards and to implement measures before, during, and after an event (Schipper & Langston, 2015). Furthermore, although the BCCTF oversees implementing, monitoring, and evaluating its supported adaptation projects, it is not responsible for monitoring and evaluating the other adaptation activities. More importantly, the ability of poor people and women to participate in local planning, budgeting, and implementation is critical to ensure they are represented and have a voice to get equitable benefits from disaster risk reduction (Tanjeela & Rutherford, 2018). Further efforts are needed for poor people and women to get representation in local government institutions, especially the Union Parishad so that these institutions know their needs and priorities in tackling climate risks and promoting secured livelihoods.

Conclusion

Bangladesh is recognized as one of the most vulnerable countries to the worst effects of climate change in the world. However, climate governance in Bangladesh is not in a satisfactory state. Interestingly, there are many laws, rules, and regulations as well as institutions for governing climate change and enhancing community resilience. However, national and local level institutions continue to suffer because of the persistence of corruption, accountability, and transparency challenges in climate change adaptation, which creates obstacles to building a resilient community to climate change.

Although efforts have been made to involve people in the project initiation phase, rarely are people taken into confidence. It is also revealed that people are not consulted when implementing these projects. One of the consequences of such a situation is the lack of people's interest in government-sponsored climate change adaptation programs, thus deteriorating their resilience to climate change.

Good governance is, therefore, essential for increasing the resilience of communities and societies to a changing climate. The existing climate governance framework in Bangladesh involving the various government ministries needs to develop and subsequently utilize inter-department coordination to implement appropriate adaptation interventions. Except for government officials, all other key stakeholders mainly observed that effective climate governance is nothing else but rhetoric in enhancing coastal community resilience. In other words, governance constraints both at the national and local levels make the coastal communities more vulnerable to climate change, which eventually deteriorates their resilience capacities. This study thus recommends further strengthening the coordination among the government agencies and involving the NGOs and local-level actors in the governance mechanisms.

Moreover, government adaptation interventions need to deal successfully with climate change, climate-induced disaster risks, and other risks affecting households. From a governance lens, the effectiveness of climate change risk management depends on the collective efforts of the formal institutions (government agencies) and informal sectors (e.g., NGOs). Moreover, things should be done not only in the situations following a climate-induced disaster. Thus,

successful climate change adaptation and disaster reduction strategies consist of careful initiatives and actions to combine technical knowledge and expertise, institutional capacities, and practical experience for optimum outcomes, all of which require collaboration between formal institutions and informal sectors.

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Data availability The data and material of the current study are available from the corresponding author upon reasonable request.

Declarations

Conflicts of interest The author has no relevant financial or non-financial interests to disclose.

Informed consent A detailed consent form was developed and distributed among the potential respondents of the study; however, only those considered as study respondents who were willing to participate in KII and FGD voluntarily.

Research involving human participants Since the respondents of the study are human beings, so necessary consent and willingness to participate in the KII and FGD were ensured. Therefore, all the respondents voluntarily participated in the study.

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