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Third-Sector Organizations as Intermediaries in Climate Action: Engaging Vulnerable Communities in Co-Production in Bangladesh

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ABSTRACT

Addressing “wicked” problems like climate change requires collaborative efforts from public, private, and third-sector organizations (TSOs), making a co-productive approach especially promising. However, traditional co-production research often overlooks the contributions of TSOs and the voices of marginalized populations. This study addresses these gaps by exploring the role of TSOs as intermediaries in co-producing climate actions by empowering vulnerable communities. Through a case study of a project led by BRAC, a prominent hybrid TSO in Bangladesh, we find that creating a relational space for co-production—in this case, Climate Action Groups—is the key strategy used to foster active engagement and build long-term climate resilience. These spaces reach their full potential when intentionally supported by mechanisms such as awareness raising and shared goals, the incorporation of local knowledge, and inclusive engagement strategies. Our research contributes to the literature by demonstrating how TSOs facilitate meaningful co-production with vulnerable groups, thereby broadening our understanding of their role in climate governance and providing a comprehensive, practice-based model of sustainable, community-led adaptation. These findings offer valuable insights and emphasize the vital role of TSOs in developing practical and sustainable strategies for climate change adaptation.

1 | Introduction

Climate change disproportionately affects vulnerable populations, exemplifying a wicked problem in public policy—a complex issue that lacks clear solutions and involves multiple stakeholders with differing perspectives, values, and interests (Pollitt 2016; Kagan and Dodge 2023). Addressing such problems requires not only policy innovation but also collaborative governance that transcends traditional sectoral boundaries, involving public, private, and third-sector actors (Muccione et al. 2019; Pisor et al. 2022).

Co-production presents a promising approach to tackling climate challenges. Although the concept remains contested

(Nabatchi et al. 2017), we adopt Loeffler and Bovaird's (2021) definition, which views co-production as a collaborative process where public service organizations and citizens work together actively to achieve outcomes of public value. Although co-production often highlights public sector involvement, we focus on third-sector organizations (TSOs) acting as crucial intermediaries that empower marginalized citizens in such arrangements (McMullin 2021; Haug 2024). As intermediaries, TSOs can amplify the voices of the most affected, enhance legitimacy, and leverage grounded expertise from vulnerable communities (Brandsen 2021; Bremer and Meisch 2017)—potentially leading to more equitable and lasting outcomes. Thus, TSOs growing role in facilitating climate-related actions includes not only filling governance and service delivery gaps

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left by the state but also being expected to empower service users, ensuring co-production efforts are inclusive, sustainable, and adaptive (LeRoux 2007; Pestoff 2014; Haug 2024; Kagan and Dodge 2023; Yi et al. 2025).

Despite the vital role that TSOs play in empowering citizens through co-production arrangements, the traditional literature typically focuses on their function as public service providers (Yi et al. 2025). Moreover, extant literature often sidelines individuals from disadvantaged socio-economic backgrounds—those who could benefit most from co-production (Vanleene et al. 2018; Fledderus 2018). For instance, this omission perpetuates inequalities and overlooks the specific capacities and needs of those most vulnerable to climate impacts. To this end, a notable gap remains in understanding how to facilitate co-production with and empower vulnerable populations, primarily through TSOs, and how their actions and mechanisms contribute to equitable climate governance (Brandsen 2021; Loeffler and Bovaird 2021; Trætteberg et al. 2024).

Addressing this gap, our research investigates how TSOs act as intermediaries in co-producing climate actions by empowering vulnerable communities. To do so, we adopt a qualitative case study approach, drawing on the rainwater harvesting project led by BRAC—a globally recognized, hybrid TSO operating across Bangladesh's coastal belt (Eckstein et al. 2021; Ahmed et al. 2023; Banks et al. 2024).

Our analysis illuminates the concrete mechanisms through which TSOs empower vulnerable citizens' co-production and enable meaningful participation: from building trust to integrating local knowledge and sustaining behavioral change. BRAC's model—anchored in creating spaces of coproduction via platforms like Climate Action Groups (CAGs)—demonstrates how structured yet adaptive engagement can foster long-term resilience. In sum, our findings point out that the creation of relational spaces of co-production can be a central strategy used by TSOs to foster co-production with vulnerable communities. However, the mere existence of such spaces does not guarantee inclusive or transformative outcomes. These spaces must be intentionally inhabited with practices that foster trust, build capacity, and lower participation barriers. Thus, we identify three supportive mechanisms that enable these spaces to fulfill their co-productive potential, making TSOs like BRAC to effectively support vulnerable populations in co-producing climate adaptation strategies that are both locally rooted and systemically impactful.

2 | Co-Production Toward Climate Action: The Role of TSOs and Vulnerable Citizens

Co-production of public services and outcomes involves public service organizations and citizens leveraging each other's assets and resources to achieve better outcomes or efficiency (Loeffler and Bovaird 2021). It challenges traditional service models by actively involving citizens throughout the policy cycle, including co-commissioning, co-design, co-delivery, and co-assessment (Loeffler 2021).

Co-production, manifested through active contributions from both citizens and public service organizations, is critical for addressing wicked issues like climate change (Ferlie et al. 2011; Pollitt 2016; Bremer and Meisch 2017; Loeffler and Bovaird 2021). Effective climate action often involves local communities, non-governmental organizations, and the public sector in both the planning and implementation stages (Pollitt 2016; Bremer and Meisch 2017; Muccione et al. 2019; Pisor et al. 2022). Without these collaborations, climate interventions risk being top-down, misaligned with local needs, and ineffective in achieving long-term adaptation and resilience goals.

Engaging vulnerable communities is crucial not only because they are disproportionately affected by climate change (Kagan and Dodge 2023) but also because their experiences provide valuable insights for effective responses (Darjee et al. 2023; Bremer and Meisch 2017). However, symbolic and systemic barriers significantly hinder the participation of vulnerable groups in co-production. Symbolic barriers include stigma, negative perceptions, tokenism, and power asymmetries, which often lead to exclusion (Amann and Sleight 2021; French and Raman 2021). For example, vulnerable communities may be perceived as passive recipients rather than active contributors, which limits genuine engagement and perpetuates existing inequalities (French and Raman 2021). Systemic barriers, including rigid institutional structures, a lack of resources, inflexible regulations, and inaccessible knowledge and information, further restrict the capacity of vulnerable populations to engage meaningfully (Berry 2005; Mulvale and Robert 2021; Røhnebæk and Bjerck 2021). Consequently, these barriers exacerbate inequalities by reinforcing marginalization rather than promoting inclusivity (Fledderus et al. 2015). These dual-layered barriers must be systematically dismantled to create inclusive governance spaces that facilitate active citizen agency.

To address these complex challenges, intentional efforts must be made to democratize co-production, particularly by including marginalized voices and recognizing their inherent value (Durose and Richardson 2016). Literature emphasizes the need for asset-based approaches that reframe vulnerability as a form of capability rather than a weakness (French and Raman 2021). This approach facilitates meaningful participation by valorizing lived experience, empowering marginalized citizens, and shifting perceptions from symbolic exclusion toward genuine inclusion.

Against this background, TSOs have become central to co-production processes, engaging with both governments and citizens in multiple capacities (Yi et al. 2025). For instance, Haug (2024, 1082) positions TSOs as key co-production intermediaries, defined as “formal, non-state organizations that participate in public service delivery by supporting or substituting the public service provider or empowering service users”. The intermediary roles TSOs can perform in co-production are contingent on the power distributions in such arrangements and not exclusive, that is, the same TSO can perform more than one role in any given time period (Haug 2024; Yi et al. 2025).

As noted TSOs play an important role as intermediaries empowering citizens. However, traditionally, the literature emphasizes their roles in supporting (e.g., adding resources or

expertise) or substituting (e.g., stepping in when government services fail) public service delivery (Yi et al. 2025; Haug 2024). Structural and political incentives often shape these specific intermediary roles. As Frederiksen and Grubb (2023) note, TSOs are typically encouraged to prioritize service delivery functions over citizen empowerment, as governments tend to prefer partnerships with service-focused rather than advocacy-oriented organizations. This growing integration into state-led systems can lead TSOs to shift their focus toward delivery and compliance, risking the erosion of their autonomy and distinct role in civil society (Brandsen and Pestoff 2006).

The role of TSOs as intermediaries in empowering citizens through co-production is often overlooked (Yi et al. 2025; Haug 2024). While existing literature highlights TSOs' capacity-building functions—providing training, resources, and tailored support to address structural barriers such as language, resource deficits, and unfamiliarity with institutional systems (Dodge and Ospina 2016; Amann and Sleigh 2021; Mulvale and Robert 2021)—they also play a more active role. For instance, while advocacy traditionally implies representing or amplifying citizens' interests, co-production shifts the focus toward building the capacity of citizens to speak and act for themselves. This transformation from advocacy “for” to co-production “with” reflects a more participatory and egalitarian model of governance (Bovaird et al. 2015; Eriksson 2019). It also requires TSOs to rethink their position, not only influenced by the outside, but cultivating the conditions for shared ownership and decision-making from within. Thus, TSOs not only represent citizen needs but also actively empower marginalized groups and mediate their communication with public service providers, helping to overcome symbolic and systemic barriers (LeRoux 2007; Pestoff 2014; Dodge and Ospina 2016; Eriksson 2019; McMullin 2021; Haug 2024).

This literature points out that TSOs, in their role as empowering intermediaries, can act as vital enablers of representative co-production, effectively bridging the gap between vulnerable communities and public service systems (Eriksson 2019). In comparison to individual citizens, TSOs are powerful actors in a co-production arrangement (Haug 2024), and can call for representative co-production, where groups participate through representatives - something particularly valuable for vulnerable communities facing barriers like language or unfamiliarity with public services (Eriksson 2019; Røhnebæk and Bjerck 2021).

For climate action specifically, TSOs may validate and amplify diverse knowledge systems, including traditional knowledge (Bremer and Meisch 2017). By doing so, they support culturally sensitive and locally relevant climate interventions, which are essential for promoting behavioral changes that lead to effective climate action (Røhnebæk and Bjerck 2021; Whitmarsh et al. 2021). According to Brandsen (2021), this role of TSOs in co-production can tailor public services to better meet community needs, particularly among vulnerable groups, enabling greater responsiveness.

As noted, co-production must transform practices perpetuating power imbalances (Booth 2019). For instance, Lino et al. (2019) argue that co-productive arrangements are only activated if they are designed to support active and meaningful participation by

all stakeholders. Without attention to how these spaces are inhabited—through, for instance, their inclusive design—co-production remains latent or symbolic. Against this background, TSOs acting as intermediaries, will work bridging the gap between public service providers and vulnerable communities, ensuring marginalized citizens' needs are represented and promoting service delivery systems that better accommodate co-production processes related to climate action.

Despite co-production gaining attention in climate research, areas such as the collaboration between citizens and public service providers are underexplored (Bremer and Meisch 2017). As noted, much of the literature focuses on the role of TSOs as substitute or supporting service delivery, but their intermediary role to empower citizens in facilitating climate action still requires more attention (Yi et al. 2025; Haug 2024; Kagan and Dodge 2023). This oversight underscores the need for further exploration of inclusive and participatory approaches to climate governance, where TSOs play critical roles, local communities are meaningfully engaged, and the value of diverse knowledge systems is recognized and integrated into climate action. Only by recognizing these interdependencies one can design co-production frameworks that are truly transformative and resilient to future climate shocks.

In sum, while co-production is increasingly expected to play a central role in climate governance, most research still emphasizes either state-citizen partnerships or the actions of TSOs in service delivery. What remains underexplored is how TSOs act as intermediaries that empower marginalized citizens and activate meaningful co-production in practice—particularly in contexts marked by exclusion and vulnerability. This requires a deeper understanding of how TSOs move beyond service delivery to create and sustain inclusive co-production processes, particularly by designing spaces and creating conditions that empower vulnerable communities.

3 | Context and Background

Bangladesh remains highly vulnerable to climate change, ranking as the seventh most disaster-prone country globally (Eckstein et al. 2021), and is exposed to frequent natural disasters like floods, cyclones, and droughts. Our study focuses on Mongla Upazila in Bagerhat district, part of Bangladesh's southern coastal belt. Mongla region is one of the most climate-vulnerable in the country. It faces severe challenges, including soil and water salinity, with most of its population lacking access to safe drinking water and many living in extreme poverty (DANIDA 2021).

3.1 | Climate Change Project and BRAC

“Enhancing Safe Drinking Water Security and Climate Resilience Through Rainwater Harvesting” is an ambitious 3-year climate change project with both short- and long-term components. Funded with 29 million DKK by the Danish International Development Agency (DANIDA), the project is implemented by BRAC, a TSO founded in 1972 that has grown into one of the

world's largest (Ahmed et al. 2023; Banks et al. 2024). BRAC tackles a range of development challenges via rights-based community mobilization and programming in microfinance, health, education, and legal services (Banks et al. 2024). Its scale, diverse activities, and global funding partnerships afford it substantial infrastructure and capacity, especially compared to smaller grassroots or peer-led TSOs, often seen as more effective in fostering trust, empowerment, and participation among vulnerable groups (Amann and Sleight 2021; French and Raman 2021; Røhnebæk and Bjerck 2021).

That said, BRAC's vast, decentralized field presence—operating in all 64 districts of Bangladesh with local offices and community-based staff—gives it a unique “arms-length” proximity that allows for deeper engagement with local communities than more centralized but comparably large NGOs. BRAC was chosen to implement this project due to its decades of experience with water interventions in Bangladesh and its strong ties in Mongla, supporting its grasp of local knowledge and community priorities (DANIDA 2021).

In the short term, the project aims to expand access to safe drinking water for the most climate-vulnerable individuals in Mongla Upazila by installing rainwater harvesting systems at the household, community, and public building levels. To this end, BRAC plays an intermediary role as a substitute for the government (see Haug 2024), relying on a co-productive strategy that builds on experiential knowledge to select where tanks must be installed, and on traditional rainwater harvesting techniques already known to communities in coastal Bangladesh, but integrating affordable filtration technology (DANIDA 2021). It also includes training for residents in system maintenance, encouraging community ownership.

The project's longer-term objectives enable BRAC to play another role as a co-production intermediary. For instance, the long-term goals are to bolster climate resilience via a community-centric, locally led model engaging (vulnerable) citizens, government, and non-governmental actors (DANIDA 2021). Key intermediary activities are thus related to empowering citizens (see Haug 2024), including raising awareness of climate adaptation and efficient water use, as well as establishing Climate Action Groups (CAGs).

According to DANIDA (2021), each CAG should comprise around 25 members from varied backgrounds, with half of them being women, and include at least one representative from local governments. BRAC is known for participatory approaches prioritizing local consultation (M. R. Chowdhury et al. 2017). As mentioned, in this case, CAGs are also connected to local government structures (e.g., with elected officials as advisors)—making this mechanism central to the co-production of climate resilience. CAG members help plan and implement rainwater systems, raise awareness, and share knowledge about climate impacts in their communities. They also receive training and capacity building to strengthen their role in managing water-related crises and implementing adaptive solutions.

Our research examines the empowering role of TSOs as intermediaries in co-production, contributing to more equitable

climate solutions that are co-produced with, rather than delivered to, climate-affected communities.

3.2 | Citizen Engagement and Barriers to Co-Production in Bangladesh

Co-production in Bangladesh, especially involving vulnerable groups, faces numerous barriers rooted in socio-economic, cultural, and political conditions (Ahmed et al. 2023; Rezaul Islam 2017; Islam and Morgan 2012; Tanima et al. 2023). Systemic poverty, unemployment, transport limitations, and time constraints—particularly affecting women—undermine sustained engagement (Rezaul Islam 2017; Ahmed et al. 2023). Many TSOs offer services, but livelihood insecurity often leads recipients to act as passive beneficiaries rather than active participants (Islam and Morgan 2012).

Public participation in local governance is often more symbolic than substantive. As Panday (2019) notes, local governments may hold public hearings merely to fulfill legal requirements, with little input from citizens. In contrast, M. R. Chowdhury et al. (2017) found that when TSOs are involved, these forums tend to be more effective. Acting as intermediaries, TSOs help officials recognize the importance of authentic engagement, thereby fostering more meaningful participation.

Several additional obstacles hinder effective co-production in the Bangladeshi context. Although local governments are legally required to promote citizen involvement, M. S. Chowdhury and Aktaruzzaman (2016) note that limited staffing and funding constrain their ability to do so. Low levels of public awareness and education reduce understanding of participatory processes, while weak information dissemination means many citizens are unaware of available opportunities. Decision-making often favors the wealthy and politically connected, marginalizing poorer communities. Furthermore, complex bureaucratic procedures create additional barriers to participation, reinforcing the exclusion of the most disadvantaged groups.

4 | Research Methodology

To address the role and actions of TSOs as intermediaries in co-producing climate actions by empowering vulnerable communities, we adopted a qualitative approach grounded in a detailed case study (McNabb 2010), which has long been regarded as valuable to public administration (Barzelay 1993). This methodological choice was driven by the desire to explore and understand the nuanced mechanisms through which TSOs—like BRAC—facilitate co-production with vulnerable communities, promote climate action, and mitigate socio-economic disparities exacerbated by climate change.

One of the authors, a Bangladeshi and former NGO worker, leveraged her field connections to uncover TSOs that were potentially engaging in co-production. After a discussion among all co-authors, we purposefully selected BRAC's rainwater harvesting project as the focal case (Patton 2002). This project was

chosen for its innovative approach to climate change adaptation and its potential to offer transferable insights into co-production in TSOs. Access to the field was organized between October and December 2022 in cooperation with BRAC's research department and the Program Director of the Climate Change Program. The in-depth case study was carried out between May and June 2023. During this period, BRAC's climate change project was in its 2nd year of operations.

4.1 | Data Collection and Analysis

To achieve a rich, comprehensive, unbiased, and contextualized understanding of this interpretative case study, multiple data collection methods were employed, including semi-structured interviews, observations, solicited diaries, and document analysis (Patton 2002; VanWynsberghe and Khan 2007).

Semi-structured interviews were conducted with a diverse group of participants (see Table 1), including BRAC staff, volunteers, public sector representatives, and community members, to capture varying perspectives on the role of TSOs in the co-production of climate action (Nowell and Albrecht 2019). Using a snowball technique (Rapley 2014), the initial group of BRAC members and beneficiaries was expanded, resulting in

approximately 16 h of one-on-one face-to-face interviews in Bangladesh during May and June 2023. The interviews, lasting between 20 min to an hour, were conversational, designed to elicit detailed accounts of participants' experiences in the co-production processes.

In addition to interviews, observational methods provided direct insights into daily practices and interactions within the case (Marvasti 2014). One author observed three CAG meetings in different regions (Chila, 23rd May; Mitha Khali, 31st May; and Burirdanga, 5th June). Further observations made during travel and meetings with CAG members and beneficiaries were promptly recorded in a researcher's notebook, providing invaluable direct insights into the community's relationship with BRAC and the role of CAG leaders.

While interviews capture a retrospective account (Briggs 1986) and observations are limited to specific moments, we asked six CAG members to keep a solicited diary narrating their views and feelings on the activities they were involved with BRAC in contributing to the community. This allows researchers to capture participants' immediate reflections on unfolding events over a given period (Rauch and Ansari 2022). CAG members were selected because literacy levels at Bangladesh's grassroots are not always sufficient for maintaining a diary. All six members were invited to a meeting at the BRAC office and given

TABLE 1 | Overview of empirical data collection.

Quantity	Group	Index	Methods	Dates	Total time	Comments
14	Beneficiaries	Ben (1–14)	Interview	23 May–04 Jun-23	05 h 15 min	Grassroots population
6	CAG members	CAG (1–6)	Interview	24 May–07 Jun-23	02 h 50 min	Community leaders
1	Upazila chairman	UPC	Interview	23-May-23	37 min	Elected local government representative
1	Upazila nirbahi officer	UNO	Interview	31-May-23	20 min	Government officer
1	Project manager	PM	Interview	01-Jun-23	35 min	BRAC local branch
1	Area manager	AM	Interview	06-Jun-23	36 min	BRAC local branch
1	Monitoring & evaluation officer	MEEL	Interview	06-Jun-23	28 min	BRAC local branch
4	Project officer	PO (1–4)	Interview	07 Jun–08 Jun-23	02 h 30 min	BRAC local branch
2	School teacher	ST (1–2)	Interview	29-May-23	47 min	Community school
1	Deputy manager	DM	Interview	24-May-23	29 min	BRAC head office
1	Program manager	PMH	Interview	31-May-23	34 min	BRAC head office
1	Program head	PH	Interview	11-Jun-23	42 min	BRAC head office
1	Capacity building officer	CBO	Interview	04-Jun-23	23 min	BRAC head office
5	CAG leaders	CAGJ (1–5)	Journal entry	25 May–07 Jun-23	—	Community leaders
40	—	—	35 one-on-one interviews/5 journal entries	23 May–08 Jun 2023	16 h 6 min	—

instructions on completing the journal, along with the return dates. One participant was unable to return the journal due to personal issues. The five remaining wrote about their own experience working on the project during that time.

BRAC staff provided key documents and reports, including project proposals, CAG guidelines, training modules, and monitoring and evaluation reports. Informed consent was obtained from all participants, and ethical guidelines were followed to protect their rights and well-being.

Data analysis followed an iterative and multi-stage process, beginning with transcribing and translating interview recordings and participants' handwritten diaries into English. This task was carried out by the researcher responsible for data collection, ensuring familiarity with the material from the outset. The resulting data were systematically analyzed using simultaneous coding (Saldaña 2009), allowing for multiple layers of interpretation within single data segments. We combined deductive and inductive approaches. Deductively, we applied codes informed by existing literature on co-production, notably the different modes of co-production and relevant topics such as representative co-production, to validate the presence of co-production with vulnerable groups in the case under analysis. Inductively (see Figure 1), we employed holistic coding (Saldaña 2009) to identify first-order codes emerging directly from the data, especially concerning the mechanisms in use by the implementing TSO to engage vulnerable groups (e.g., learning from the community, experience sharing, recognition of traditional methods). At this stage, the constant comparative method was also employed to identify similarities and differences across the triangulated data sources. These initial codes were subsequently grouped into broader themes (e.g., local knowledge integration), through thematic analysis (Braun and Clarke 2006). The final themes guided the organization of the findings section, ensuring a clear connection between the coded data and the presentation of results. To enhance reliability, (i) the coding process was reviewed collaboratively by multiple authors and refined through discussion, and (ii) member

checking was conducted to validate findings with participants (Lincoln and Guba 1985).

5 | Findings

The following sections examine BRAC's role as an intermediary in facilitating the co-production of climate action in Bangladesh, particularly through its citizen-empowering role in implementing a broader rainwater harvesting project. At the heart of BRAC's strategy lies the creation of CAGs—structured, community-rooted spaces that function as relational infrastructures for co-production. These are not simply committees or project delivery vehicles; instead, they are designed as deliberate, participatory arenas where vulnerable citizens (through their representatives) can interact with members of the public and third sector to shape climate adaptation strategies. In contexts like Bangladesh, where systemic exclusion and power asymmetries often inhibit the direct participation of marginalized groups, CAGs represent an institutional innovation: a crafted co-production space (Lino et al. 2019) serving the purpose to actively engage with vulnerable citizens. These spaces are meaningfully inhabited through targeted practices that build trust, activate local agency, and foster inclusive participation. The remainder of this section unpacks how BRAC not only creates this relational space, but equips and sustains it through mechanisms that overcome symbolic and systemic barriers. Overall, the analysis demonstrates the significant role TSOs can play in fostering sustainable, co-produced, and inclusive climate adaptation strategies.

5.1 | Climate Action Groups: Fostering Co-Production for Climate Action With Vulnerable Citizens

In the rainwater harvesting project, BRAC incorporated proactive measures to foster behavioral change and ensure long-term community engagement. These strategies, aligned with co-

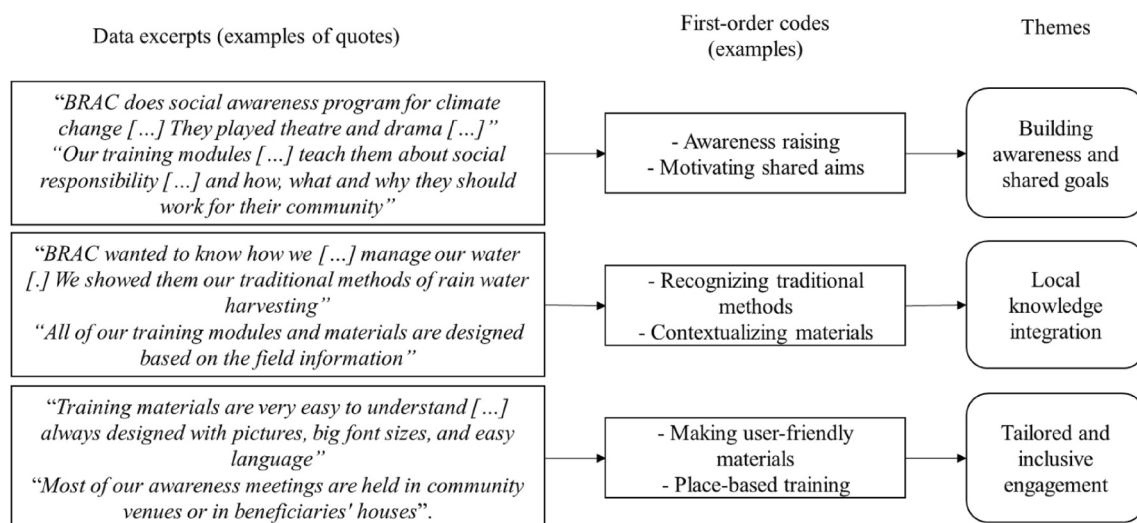


FIGURE 1 | Data analysis inductive coding. Source: the authors.

production principles, were integrated from the project's inception, underscoring BRAC's commitment to a collaborative, community-driven approach to climate action. For instance:

The first step we took to engage the community was to let them know about our strategy. After a baseline survey, we invited the community to let them know about our presence to support for climate change. We called for a community meeting in every Ward in all Unions [Parish Councils] and invited all the local elites, respected people, and the general public from all corners of the village.

(PO 3)

BRAC's kick-off meetings serve multiple purposes related to co-production. First and foremost, these meetings are fundamentally about building trust. By openly sharing its strategy and inviting community-wide participation from the outset, BRAC establishes transparency and demonstrates respect for local knowledge and voices, which is crucial for successful co-production, as emphasized by Loeffler and Bovaird (2021). Additionally, by involving both local elites and the public, BRAC works to create legitimacy for the project, positioning itself as an intermediary that facilitates the co-production process (Haug 2024). Finally, such meetings were crucial for network mapping (Moore and Evans 2021), as they were vital for establishing CAGs and selecting their members. BRAC's Project Officers described how villagers were encouraged to volunteer as CAG members during these initial engagement meetings, while local leaders were identified to address community needs (PO 3, PO 2). CAGs are a crafted co-production space (see Lino et al. 2019), in which citizens, through their representatives, and public officials actively engage to address pressing issues related to climate challenges.

Importantly, "CAG members are not necessarily the direct beneficiaries" (PO 1) of the project, who are identified based on vulnerability criteria from the baseline survey. Instead, "most of them are capable local representatives who can speak on behalf of the community, provide advice and support to address community issues, and help us [BRAC] plan actions in the community" (PO 1). The diversity of CAG members, with their varied backgrounds, abilities, and skills, is a crucial resource to the effective functioning of the group.

CAG members are from diverse groups: teachers, community leaders, social workers, Union members and Chairman, government officers, and religious leaders from all parts of the community. These people are also somehow connected with other authorities, for example, the UP members are elected authority in the ward and union.

(AM)

Implementing CAGs, with plural members recognized as legitimate representatives by their peers, addresses cultural and systemic barriers that often hinder vulnerable groups' participation. By empowering members of the community to take part in CAGs, BRAC aligns service provision with grassroots needs. CAGs

themselves enable a more responsive and inclusive approach, fostering long-term behavioral change. In Bangladesh, where beneficiaries often lack resources and tend to be passive recipients of aid, BRAC empowers CAG members to challenge this dynamic, promoting active community engagement and leadership.

We are training to make the CAG's members and our beneficiaries capable of interacting, negotiating, liaising, and advocating with various departments of government. [...] We are making them vocal and teaching them to speak up for their rights. Rural people are not aware of where they can seek help for what services, through CAGs members we are trying to pursue this knowledge and make them aware of what they can do to establish their rights.

(CBO)

To empower CAG members, BRAC adopts a needs-based training model that is both contextually grounded and strategically oriented. This includes capacity-building on leadership, motivation, climate change adaptation and mitigation, climate resilience, and advocacy skills. As will be explained later, these trainings are not one-size-fits-all modules but are carefully tailored to meet the lived realities and existing knowledge gaps of the communities. By aligning training content with local needs and challenges, BRAC ensures that community members not only gain technical knowledge but also develop the confidence and critical thinking needed to engage meaningfully with institutions and governance processes.

The transformative potential of these interventions is perhaps best captured through Nielsen's (2021, 107) notion of enabling individuals to "see what they are [usually] blind to." In other words, BRAC's training initiatives function as a form of critical consciousness-raising, helping participants to recognize the structural and environmental forces shaping their vulnerabilities, while equipping them with tools to intervene and influence outcomes. As mentioned by a CAG member:

All the trainings and meetings are a learning opportunity for us. We go to meetings in government and non-governmental organizations offices with BRAC staff. This is a big opportunity for many of us to improve our skills about how to approach the appropriate person, how to demand our needs and get solutions to our problems.

(CAG 6)

One of the most powerful outcomes of BRAC's community engagement strategy through CAGs is its contribution to the emergence of engaged local leadership, particularly from historically marginalized and vulnerable groups. The participatory model is designed not only to improve climate awareness or deliver services, but to cultivate inclusive leadership capacities—ensuring that those most affected by climate change are also active in shaping the response. A central aspect of this transformation is the intentional focus on gender empowerment, encouraging women's active participation in local governance and community decision-making processes.

After joining CAG a noticeable change I feel among our members is their confidence. Previously, if we sat in a meeting, only a few people used to participate. In front of the chairman, a male, many women used to feel shy and never discuss about our problems. But in training and awareness meetings they always encourage us to engage. Now I think people's attitudes are changing, they participate.

(CAG 2)

This reflection speaks to a profound cultural shift—from silence and deference to confidence and agency—particularly among women who have traditionally been excluded from public forums. To this end, by crafting a space of co-production like CAGs, vulnerable communities are empowered—also through their representatives. Particularly, the members of CAG have been selected by their peers to represent their voices and display a high level of commitment to maintaining co-production, an important condition for involving vulnerable populations, as mentioned by Hoppen et al. (2025).

While CAGs primarily function as grassroots platforms for citizen engagement and collective action, their sustainability and effectiveness often hinge on strategic collaboration with formal public sector governance structures. At the other end of the participatory spectrum, CAGs supported by BRAC have actively sought to engage local government representatives and elected officials—a critical step toward embedding co-production within existing institutional frameworks. This form of engagement does not merely seek endorsement from authorities; rather, it represents a deliberate effort to institutionalize citizen voices within local governance systems, ensuring that community priorities are both heard and acted upon.

Another unique strategy in our project is to engage the Union Chairman with CAGs to make the group stronger, powerful and sustainable. The local government is the grassroots administrative support in the Bangladesh government system. If they [CAG members] are involved with this authority it will be easy to reach their voice to this authority which can take effective actions to meet the local needs.

(PO 3)

As mentioned by an elected official (UPC) several individuals working with projects under the Ministry of Disaster Management and Relief also joined in CAGs, pointing toward increasing interactions among the local government and citizens. Moreover, a civil servant (UNO) recognizes that “BRAC introduced this [CAG] group to our [LG] various departments, and it is supporting them to develop their leadership skills to speak on behalf of the community”.

A particularly significant outcome of BRAC's facilitation of CAGs is the emergent responsiveness of local government institutions. This evolving engagement with elected officials has started to reshape the dynamics of local governance and decision-making. Through sustained dialog and participatory

practices, CAGs are not only voicing local climate concerns but are also beginning to influence how local governments set priorities and allocate resources. The testimony of a UPC clearly illustrates this shift.

The CAG group is working hard against climate change problems in my area. I had a few meetings with them, discussing about a few problems in my area. I solved a few agendas, and I will continue my support.

(UPC)

The above evidence the CAGs role as a space in which the TSO facilitates interactions toward co-production. The participants confirm the importance of this relational space, as “in our CAG committee, the local Chairman and members sit with us in the local area with local people, not in their government office. We feel more connected with our elected members and chairman, we can easily communicate with them, and talk to them about our problems” (CAG 2). It should be noted that, due to the context of Bangladesh, before the implementation of CAGs those interactions were, at best, rare. CAGs bring changes to the power dynamic, leading to interaction between local government representatives and citizens:

Our Union members join this group [CAG]. They come and do the meeting with our community people. The general public gets a chance to talk to them easily. Which was not very much available in the past.

(BEN 11)

CAGs play a pivotal role in fostering both immediate and long-term community resilience to climate change. They are not merely vehicles for delivering resources but act as facilitators of *endogenous development*, catalyzing a deeper awareness of environmental risks and embedding sustainable behavioral change at the grassroots level. Anchored in an assets-based approach, CAGs do not view community members as passive recipients of aid but as active participants with valuable local knowledge, skills, and adaptive capacities. This perspective enables communities to take ownership of climate adaptation processes, strengthening social capital and ensuring that responses are locally appropriate and sustainable.

We do not intend to do spoon-feed services [...] [Beyond] giving them water tanks; for intangible support, we are supporting them in such a way that they will have the ability to fight their battle with climate change. We are giving effective awareness development training, assistance, and creating the local-lead development approach. We are using the community's potential.

(PO 3)

CAGs serve as critical intermediaries empowering vulnerable communities to claim their rights in front of the often fragmented or inaccessible structures of the public sector. By actively bridging the gap between grassroots realities and

institutional frameworks, CAGs function not only as facilitators of service delivery but also as enablers of accountability and inclusive governance. Their role goes beyond technical implementation—they address deep-rooted cultural, gender-based, and systemic barriers that traditionally limit the engagement of marginalized groups in co-production, particularly women and low-income households, in public discourse and decision-making around climate adaptation, as highlighted below:

The ultimate objective of CAGs group is to establish knowledge sharing opportunities, local leadership development, bringing women forward in social contribution, mass awareness [on climate issues], making them educated about climate change and confident to ask for their rights on any platform.

(PM)

This quote encapsulates the multidimensional aspirations of the CAG model: to educate, empower, and elevate. The focus is not only on disseminating information about climate change but on embedding that knowledge within a broader capability-building agenda—one that fosters confidence, civic agency, and the ability to claim entitlements within formal institutional arenas.

A defining feature of BRAC's climate adaptation work through CAGs is its commitment to deep-rooted, context-sensitive capacity building. Through targeted awareness-building and training initiatives, BRAC goes beyond conventional knowledge transfer; it deliberately cultivates a sense of ownership, agency, and leadership among community members. The organization recognizes that sustainable development cannot be achieved through top-down interventions alone. Instead, it must emerge from within the community—anchored in local realities, led by local voices, and reinforced by local capabilities. As summarized by BRAC staff:

All of our efforts for awareness-building activities, training, and engaging with GO-NGOs are aimed at making the CAGs members' leadership skills stronger and effective. This is our sustainability approach by using the community's potential. We want them to mobilize such way that they will be capable to claim their rights, learn where they should seek help for which purposes, also be capable to organize themselves for planning, organizing and delivering their action plans. We would like to handover our awareness activities responsibilities to them [...] We want them to be self-responsible citizen to take the initiative for their personal development, community development, and identify nature-based solutions to make the community more resilient and better adaptation strategies.

(PO 3)

This underscores a clear shift from externally driven interventions to an empowerment-based development paradigm, where the role of external actors, such as BRAC, is to facilitate

the emergence of self-directed, self-reliant, and informed community leaders.

The project documentation (DANIDA 2021) highlights that establishing a strong linkage between the CAGs and local governments throughout the project period will enable it to remain active after the project's completion, thereby allowing for long-term behavioral change toward co-production. As summarized by one Project Officer, "to address all these crises we took a local-led strategy to engage the community, let the community be aware of their problems and find solutions through their efforts" (PO 3). Local government representatives recognize the importance of CAG groups:

In my understanding, it is a good strategy to engage the local community - especially the group [CAG] who can raise their voice for the most vulnerable. [...] This type of approach is helping us to keep in the loop [e.g., understand community needs]

(UNO)

The impact of BRAC's community engagement model is beginning to manifest in tangible and intangible ways. As one CAG member observed, citizens "are more aware about their rights and know where to knock" (CAGJ 2). This simple yet powerful statement encapsulates a broader shift in civic consciousness—a movement from passive dependency to active citizenship. The knowledge of rights and the confidence to engage with institutions reflect the success of BRAC's deliberate investment in rights-based awareness and participatory capacity-building.

While BRAC's direct interventions—such as providing water tanks or facilitating training sessions—serve as important entry points, their role is ultimately catalytic. These material supports are not ends in themselves, but means to stimulate more profound, community-led transformation. The ultimate value of BRAC's work lies not in the infrastructure it installs, but in the mindset it cultivates. The organization plays an intermediary role, bridging technical expertise and community realities, to gradually step back as local leadership and agency take root.

In sum, the intermediary role played by BRAC in substituting or supporting the public sector through direct intervention (i.e., installing water tanks) someday will come to an end. Still, the changes related to an active intermediary role in empowering citizens via building a rights-based, co-productive mindset in the community are expected to last:

BRAC is helping us to develop our leadership skills, our knowledge and awareness about the adversity of climate change. We are local people, we know better about our resources and strengths. BRAC is helping us to utilize them in a positive way to bring changes to our society. They are supporting us to be a change maker.

(CAG 1)

BRAC serves as an intermediary in establishing CAGs, demonstrating a strong commitment to long-term, sustainable climate resilience through co-production with vulnerable

communities and local governments. It addresses immediate needs and fosters a sense of ownership among participants. The CAGs are a vital link between grassroots needs and government actions, ensuring community voices are heard and driving lasting behavioral change, where citizens actively contribute to their development and climate adaptation strategies.

5.2 | Supportive Mechanisms to Foster Co-Production for Climate Action

Implementing CAGs as a relational space for co-production is BRAC's central strategy for facilitating long-term active engagement between the communities most vulnerable to climate change and local governments. To ensure that CAGs effectively foster behavioral change, overcome symbolic and systemic barriers, and promote climate adaptation, BRAC employs a set of supportive mechanisms. Figure 2 summarizes the holistic approach. These actions range from amplifying citizen voices to driving community-led actions, related to an empowering intermediary role of TSOs. The following section explores these specific mechanisms and their role in making the relational space of co-production to realize its potential.

5.2.1 | Building Awareness and Shared Goals: Motivating Co-Production in Climate Action

BRAC employs a range of mechanisms to enhance citizens' understanding of climate action goals and to promote their self-efficacy, particularly through education and training. Fostering a shared understanding and knowledge base is critical "to ensure that people are motivated to engage in the change that is needed because they care about the issue and now see it from a new perspective" (Nielsen 2021, 107). Co-production in climate change heavily depends on community behavioral change (Whitmarsh et al. 2021). As one BRAC's Project Officer explained:

We have various awareness-building activities, some of them for the mass population, no matter if they are our beneficiaries or volunteers, some awareness programs only for the beneficiaries and some for the CAGs [members]. We take different approaches for the different groups.

(PO 4)

The varying levels of knowledge about climate resilience and the differing abilities, skills, and needs of beneficiaries and CAG members require tailored approaches to building awareness and fostering a shared sense of purpose around climate actions. As noted by a Project Officer (PO1) noted, "our training modules [are designed] for different levels of people and objectives". For instance, members of CAGs are taught "about social responsibility, motivational topics, and how and why they should work for their community" (PO 1). For the beneficiaries, the focus is more practical:

For the beneficiaries, we offer courtyard meetings [...] [about] water safety protocols, water rationing, climate change effects, understanding climate change, basic hygiene factors, and rainwater preserving systems. [...] For rainwater harvesting, we give them practical training by operating all the activities in front of them.

(PO 2)

In addition to these targeted efforts, BRAC has developed innovative public awareness campaigns to trigger broader behavioral change within the community:

To make the general public aware of the climate crisis and adaptation strategies, last year we performed 10 street theater and drama in the most popular and busy

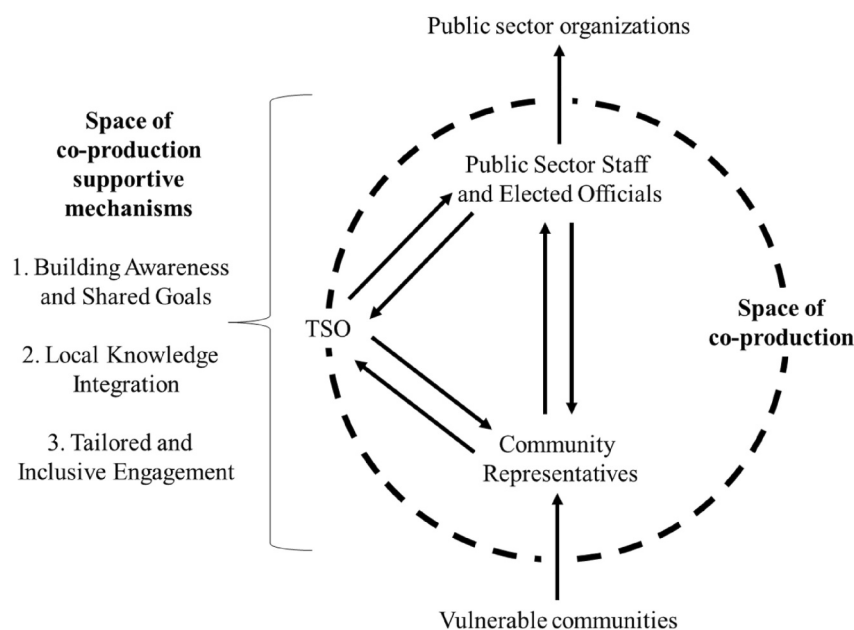


FIGURE 2 | The role of TSOs in promoting climate action: main strategy and supportive mechanisms. *Source:* the authors.

locations. We also celebrate World Water Day, and World Environment Day by organizing rallies, displaying posters with awareness slogans, and distributing leaflets. We also arranged art and essay competitions in primary and secondary schools to make the new generation aware.

(PO 4)

The impact of these efforts is becoming evident to different stakeholders. An elected official (UPC) highlighted “BRAC arranged a cultural program in my Ward where they played theater and drama in a rural setting, which was an interesting way of teaching rural people about climate change, the future impact and what to do during cyclone time - it was really useful”. Beneficiaries also share the same opinion, as noted:

Our awareness about climate change is increasing. A few months ago, they performed a street drama about climate change and how we can change ourselves to protect [the environment]. In the drama, they taught us in a fun way, and everybody had the chance to watch it—not only the tank beneficiaries. They are trying to send messages to the mass people so that everybody can play their own role.

(BEN 8)

In summary, BRAC's multifaceted approach to enhancing citizens' understanding and engagement in climate action relies on tailored education and training programs that foster a shared sense of purpose and empower individuals to take actionable steps toward climate change adaptation. The positive feedback from beneficiaries and integrating innovative public awareness campaigns, such as street theater and school activities, further broadens the reach and impact of BRAC's initiatives, promoting widespread behavioral change.

5.2.2 | Local Knowledge Integration

As Brandsen (2021) argues, a major barrier to vulnerable people's participation lies in the fact that their knowledge (based on lived experiences) deviates from the formal knowledge that public sector organizations regard as adequate to guide actions. By integrating local knowledge into their actions, BRAC aims to facilitate the participation and value of all participants.

In the community meetings, we called people from all backgrounds [which] gave us the opportunity to find out the real situation, the struggles of the community, their probable solutions, working strategies, and guidelines. [...] We identified the real needs of the community. They also suggested to us what we could do to solve the community problems.

(MEAO 1)

Thus, BRAC follows a dialogical approach that relies on the lived experiences of the citizens facing extreme situations. One powerful illustration of this integration of local knowledge is seen

in empowering citizens to co-design BRAC's core intervention on rainwater harvesting, developed in response to acute water scarcity and salinity intrusion in climate-vulnerable regions.

We follow the bottom-up approach of development. We always learn from the community, we ask them how they are surviving in this water crisis. We observed the traditional method of rainwater harvesting; from that, we developed a modern, technical rainwater harvesting system to ensure 100% safe drinking water.

(PM 1)

This is further corroborated by one of the CAG's members:

They [BRAC] asked us how we are managing our life with this high salinity water and other problems due to climate changes. They wanted to know from us. We showed our traditional methods of water collection from rain.

(CAGJ 5)

This highlights a synergistic process in which traditional ecological knowledge and modern technology are combined to produce context-specific, practical, and scalable solutions. This bottom-up model contrasts sharply with conventional top-down aid strategies, which often overlook indigenous practices and undermine local agency.

Beyond improving traditional water harvesting techniques learned from experts through experience, BRAC has a Knowledge Management and Communication department that produces materials and develops strategies to raise community awareness of climate issues.

As mentioned by one participant, “to make our field activities successful this department is continuously producing effective materials [such as] posters, training materials, and training modules [...] [based on] field visits and assessment prior to producing any materials - so that it could be more connected with real-life examples and situations (PO 4). Overall, this approach is positively assessed by beneficiaries, as “BRAC staff didn't just design the project; they worked with us throughout the process. This hands-on approach made sure that we were fully engaged and responsible for the project's success.” (BEN 3).

BRAC relies on local knowledge integration, incorporating traditional practices and local wisdom into its proposed solutions. By valuing and integrating various forms of knowledge, BRAC strengthens community cohesion and ensures that climate resilience and adaptation efforts are both relevant and practical. This inclusive approach might address the immediate challenges of climate change and build long-term resilience by fostering a collaborative and informed community.

5.2.3 | Tailored and Inclusive Engagement Strategies

The organization of participatory mechanisms and co-production arrangements significantly influences citizen

engagement (Brandsen 2021; Nabatchi 2012). Barriers, such as inadequate language, including jargon or technical terms, can hinder effective co-production (Loeffler 2021). Key factors that enhance co-production include member diversity, balanced power dynamics, and the selection of familiar and comfortable meeting locations (Brandsen 2021; Lino et al. 2019). Ultimately, engagement strategies must be carefully designed and tailored to maximize the effectiveness of co-production initiatives.

In its efforts to raise awareness about climate change and its impacts through CAGs, BRAC adopts a communication strategy that is both context-sensitive and deeply inclusive. Recognizing that “most of the beneficiaries are uneducated or have very little education” (PO2), BRAC places a strong emphasis on bespoke communication methods designed to resonate with the everyday realities of the communities it serves. These methods are not merely about disseminating information but about facilitating genuine understanding and enabling co-production by ensuring that knowledge transfer is accessible to all, regardless of literacy levels or educational background. At the heart of this strategy is the development of training materials that are easy to interpret and grounded in the local context.

As one program officer noted, “All our training materials are designed according to the local context, easy to illustrate, with eye-catching pictures and easy-to-understand messages based on real-life examples” (PO3). These materials serve as more than educational tools; they function as bridges between complex climate science and the lived experiences of community members.

Visual aids play a particularly crucial role in this process. Flipcharts, posters, and pictorial representations are widely used to convey messages in a way that transcends linguistic and literacy barriers. “We have flipcharts, posters, with very easy language and pictures on them so that everybody can interpret the message we are trying to pass” (PO1). These tools ensure that messages are not only received but also interpreted correctly and meaningfully by diverse audiences, including women and older individuals who may face additional barriers to accessing information.

BRAC's approach to climate change education emphasizes accessibility and inclusivity. Recognizing the diverse needs of their learners, BRAC has developed training materials that are not only informative but also tailored to the participants' specific abilities and cultural contexts. The following statement exemplifies this approach:

All of our training materials are prepared with a focus on learners' abilities. For example, in a training module for climate change awareness presented to village people, where the majority of women may not be able to read or understand formal language, we added pictures next to the text [...]and speak in local dialect.

(PM)

Creative ways of engaging with the community are leveraged. For instance, a project officer mentions that “sometimes we do

drawings with the children and their parents to understand their perceptions and ideas [about climate change], which helps us engage the community from the start” (PO 1). As highlighted by CAG's members and beneficiaries, the “user-friendly” approach brings positive impacts toward climate change adaptation strategies:

The books, posters and pictures they showed us in the training helped me to learn a lot about climate change. We all are not highly educated people. Not everyone can read and write. But their posters, leaflets and training books are with pictures and messages with big and colorful fonts are attractive and interesting, very easy to understand for all. The field workers explain all the information. we share our knowledge with our community people to make them aware too.

(CAG 2)

In our awareness meetings, she [CAG leader] teaches us very nicely. Explains things very easily so that we all can understand. [...] All the meetings are very useful.

(BEN 11)

As people usually do not have the time to participate in co-production arrangements or have the financial resources to do so in different places, aligned to the discussion by Brandsen (2021), one BRAC's project officer highlights that “to deliver the awareness message most of our awareness meetings are held in community venues or the beneficiaries' houses. So that maximum attendance can be ensured, cost-effective and time savings for the attendance. We reach out to them to pass the messages, rather than bringing them to us” (PO 4).

In conclusion, the design and organization of spaces of co-production are pivotal in influencing citizen active engagement. Effective, locally tailored communication is crucial for overcoming barriers such as complex language, promoting inclusivity, and amplifying the impact of these initiatives. BRAC's strategy for raising climate change awareness highlights the importance of adapting communication to local contexts, demonstrating that thoughtful, context-sensitive engagement is key to realizing the full benefits of co-production and citizen participation.

6 | Discussion

Our study contributes to the broader literature on co-production with vulnerable groups, particularly in the context of climate action. By focusing on the role of TSOs as intermediaries empowering citizens, we address critical research gaps and offer insights into inclusive and sustainable co-production mechanisms. We make three key contributions. First, we address the limited research on co-production with marginalized and vulnerable groups (Brandsen 2021; Loeffler and Bovaird 2021), showing how TSOs act as intermediaries to empower such groups and overcome symbolic and systemic barriers that hinder their engagement (Mulvale and Robert 2021). Second,

our work addresses the need for clarity on TSOs' mechanisms for advancing climate action (Bremer and Meisch 2017; Kagan and Dodge 2023). Third, we respond to appeals for evidence on sustaining co-production over time and adapting it to diverse cultural and institutional settings (Steen et al. 2023; Loeffler and Bovaird 2021). Below, we expand on each contribution.

First, our findings show how TSOs can bridge gaps between vulnerable communities and public agencies, addressing symbolic and systemic barriers identified in the literature (Brandesen 2021; Mulvale and Robert 2021; French and Raman 2021; Røhnebæk and Bjerck 2021). BRAC, acting as an intermediary in empowering citizens (see Haug 2024), enables inclusive climate adaptation by creating relational spaces for co-production (Lino et al. 2019). These spaces are realized through CAGs—structured platforms enabling regular interaction between vulnerable citizens and public sector representatives. The TSO crafts CAGs to empower vulnerable citizens and embody *representative co-production* (Eriksson 2019), where community members co-design and co-deliver services aligned with local needs. They challenge symbolic barriers—such as stigma, exclusion, and power hierarchies—by amplifying the voices of trusted, diverse community representatives and linking them to local government structures (Mulvale and Robert 2021). This model offers a replicable pathway for inclusive engagement, helping address disparities in climate participation.

Our analysis identifies three mechanisms underpinning the effectiveness of BRAC's space of co-production. First, “awareness-building and shared goal development” counters symbolic exclusion by fostering climate literacy, self-efficacy, and collective motivation (French and Raman 2021). Second, integrating local knowledge challenges systemic barriers—particularly the marginalization of experiential knowledge—by embedding traditional knowledge systems into the project design (Brandesen 2021). Third, tailored and inclusive engagement strategies help overcome inequalities like low literacy, time constraints, and bureaucratic opacity (Nabatchi 2012; Røhnebæk and Bjerck 2021), using accessible materials, local dialects, and decentralized meetings. Together, these mechanisms lower participation thresholds, reshape power dynamics, and encourage sustained behavioral change—foundational for equitable, community-driven adaptation.

Second, by exploring these mechanisms, our research advances understanding of how TSOs support climate action, expanding the “public services lens” in climate co-production—an underexplored area (Bremer and Meisch 2017; Kagan and Dodge 2023). While tangible outcomes like water tank installations are part of climate adaptation, our focus is on TSOs' intermediary role in empowering citizens and fostering long-term resilience.

Because effective climate co-production hinges on behavioral change (Whitmarsh et al. 2021), BRAC supports this shift through the creation of a dedicated space of co-production offering tailored education and training for general citizens, beneficiaries, and CAG members. This cultivates a shared sense of purpose and empowers communities to act on climate adaptation. Political self-efficacy—the belief in one's capacity to make a difference—strongly predicts successful co-production

(Bovaird et al. 2015). Awareness-building and collective goal-setting enhance this sense of agency, making participation more meaningful. Many of the participants interviewed presented high levels of commitment to participating in the space of co-production—something recently highlighted in the literature as a critical point to continue involving vulnerable communities in co-production (Hoppen et al. 2025). Embedding traditional practices and wisdom into BRAC's interventions further supports sustainable, locally rooted adaptation. Our findings underscore the need for tailored approaches, such as addressing language barriers, ensuring diversity, and conducting engagement in familiar, accessible settings (Brandesen 2021; Loeffler 2021; Lino et al. 2019).

Third, while much literature focuses on short-term participation or isolated service delivery stages (Steen et al. 2023), our study presents a holistic approach that spans co-commissioning to co-assessment. This broadens co-production from a project-based to a community-led process. We illustrate how BRAC facilitates collaborative priority-setting (co-commissioning), helps communities shape solutions (co-design), supports implementation (co-delivery), and engages citizens in evaluating impact (co-assessment). These practices anchor co-production in sustained, context-sensitive resilience-building.

Our study also demonstrates how co-production must adapt to specific institutional and cultural realities (Loeffler and Bovaird 2021). In Bangladesh, poverty, low institutional responsiveness, and uneven access to decision-making demand co-production strategies that are both inclusive and contextually grounded. BRAC's work in navigating these challenges—through trust-building, enabling local leadership, and linking communities with government in a crafted space of co-production—highlights the role of intermediaries and relational infrastructure in advancing co-production and empowering citizens in low- and middle-income settings.

7 | Conclusion

Our paper examines the role of TSOs as vital intermediaries in co-producing climate actions by empowering vulnerable communities, with a focus on BRAC's rainwater harvesting project in Bangladesh. We identified strategies that enable inclusive engagement and foster long-term climate resilience, emphasizing the importance of creating flexible platforms like CAGs for representative co-production and sustained behavioral change. By tailoring communication, integrating local knowledge, and building community capacity, TSOs like BRAC effectively support vulnerable populations' engagement in such a crafted space of co-production—making them central in adapting to climate change through innovative, context-sensitive, and community-owned solutions.

The study makes three key contributions: first, it fills a significant gap by showing how TSOs bridge vulnerable communities and public sector organizations, acting as relational intermediaries for inclusive co-production—beyond the typical role in substituting public service provision—by designing a relational space of co-production (e.g., CAGs). We emphasize that co-production

spaces, while structurally necessary, are not inherently equitable or effective: TSOs must *curate and sustain* these spaces through targeted mechanisms that empower participation and foster behavioral change. This leads to our second contribution, which expands the “public services lens” in climate change co-production by detailing enabling mechanisms of CAGs functioning that are central to these activities, such as education programs, trust-building, and tailored engagement strategies. Lastly, it presents a holistic, long-term and outcome-driven approach to co-production within the complex realities of an emerging economy.

Our findings offer practical insights for TSOs and policymakers aiming to enhance community engagement in (and beyond) climate action. Implications from our findings shows that TSOs can play an intermediary role in empowering citizens through structured platforms (like CAGs) that embed citizen engagement into existing governance systems, particularly vital in contexts where direct citizen-government interaction is weak. Moreover, co-production with vulnerable communities should strike a balance between inclusivity and functionality. Diverse, respected representatives (rather than only service recipients) can amplify community voice. Capacity-building efforts must be needs-based and contextual, addressing not only technical knowledge but also leadership, communication, and advocacy skills to ensure sustainability. These practical insights demonstrate that meaningful and sustainable climate action necessitates more than technical solutions, but also social infrastructure, trust-building, and local leadership grounded in co-production principles that TSOs in intermediary roles can facilitate. Future studies could examine the long-term impacts on community resilience and explore the transferability of these approaches across diverse global contexts. The findings underscore the indispensable role of TSOs in driving transformative, community-led climate adaptation in vulnerable regions worldwide.

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Ethics Statement

The research has been reviewed by the University of Essex Ethics Committee, and it has been awarded a favorable opinion (Application: ETH2223-1124).

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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