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Community engagement in climate change adaptation: Lessons from recent world experiences and applications for Sri Lanka

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Abstract

Sri Lanka faces escalating climate-related risks such as floods, droughts, and rising sea levels, which disproportionately affect vulnerable communities. While the government has taken steps to address these challenges through the National Adaptation Plan (NAP), the integration of community engagement into climate change adaptation remains limited. This paper examines the current status of community involvement in adaptation planning in Sri Lanka, identifying key barriers including top-down governance, low awareness at the grassroots level, insufficient decentralization, and a lack of institutional frameworks for participation. Despite these challenges, Sri Lanka's well-established local administrative structures and the growing presence of civil society organizations offer promising entry points for strengthening community-based adaptation (CBA). Drawing on global principles of CBA—such as local empowerment, equity, and the use of indigenous knowledge—the paper argues that inclusive, participatory approaches are essential for building climate resilience. Enhanced community engagement not only ensures that adaptation measures are context-specific and sustainable but also supports climate justice by amplifying the voices of those most affected by climate impacts.

Keywords: Community-Based Adaptation; Climate Change Adaptation; Participatory Planning; Climate Governance

1 Introduction

The impact of climate change on global ecosystems, economies, and societies is becoming increasingly severe, with disproportionately detrimental effects on vulnerable communities, particularly in developing countries. In response to these challenges, adaptation strategies have emerged as essential tools to mitigate the adverse effects of climate change and foster resilience. In this context, community engagement plays a pivotal role in the formulation and implementation of adaptation strategies, ensuring that interventions are locally relevant, equitable, and sustainable ((IPCC), 2023) (Reid, 2016). Community-based approaches, which actively involve local populations in decision-making processes, not only enhance the effectiveness of adaptation strategies but also foster greater community ownership, increasing the likelihood of long-term success (Ensor, 2019).

There is a growing body of evidence supporting the effectiveness of participatory processes in climate adaptation. Notable case studies from diverse regions demonstrate the value of incorporating local knowledge into climate resilience planning. For example, in Bangladesh, community-based adaptation (CBA) projects have been instrumental in addressing flood risks by integrating indigenous knowledge with scientific data, thereby improving agricultural practices and community preparedness (Ayers & Forsyth, 2009). Similarly, in Kenya, participatory scenario planning has empowered local farmers to adapt their agricultural practices in response to changing climatic conditions, facilitating more sustainable water and crop management practices (Tall, Kristjanson, Chaudhury, & McKune, 2014). These global examples underscore the importance of local engagement in the adaptation process and highlight the effectiveness of incorporating both scientific and traditional knowledge in building climate resilience.

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At the international level, frameworks such as the Paris Agreement and the Sendai Framework for Disaster Risk Reduction emphasize the need for inclusive, bottom-up approaches to adaptation and disaster risk management. Both frameworks advocate for community involvement in decision-making as a means of ensuring that adaptation strategies are not only context-specific but also equitable and participatory (UNFCCC, 2015) (UNDRR, 2015).This perspective is particularly relevant in addressing the complex social and environmental challenges posed by climate change, as it allows for the identification of locally appropriate solutions while fostering social equity and justice.

Despite the growing recognition of community engagement in climate adaptation, many developing countries, including Sri Lanka, face significant challenges in translating these participatory principles into practice. While Sri Lanka has developed national-level climate adaptation policies, such as the National Adaptation Plan for Climate Change Impacts (NAP) and various sectoral strategies, these often fail to reach the grassroots level, where climate change impacts are most acutely felt (Ministry of Environment, 2021). Structural barriers, including centralized governance, limited local capacity, and insufficient public awareness, hinder the effective implementation of community-driven adaptation initiatives (Wickramasinghe & Morsella, 2019) .

The integration of lessons learned from global experiences in community-based adaptation is crucial for overcoming these barriers and enhancing the effectiveness of climate adaptation efforts in Sri Lanka. By examining successful case studies from around the world, this paper seeks to identify key principles and strategies that can be applied within the Sri Lankan context, thereby promoting more inclusive, context-sensitive, and sustainable adaptation outcomes.

2 Theoretical Background: Community-Based Adaptation (CBA)

Community Based Adaptation (CBA) is a participatory approach to climate change adaptation that emphasizes the active involvement of local communities in the decision-making processes related to climate resilience. This approach is grounded in participatory development theory, which stresses the importance of local knowledge, needs, and capacities in creating sustainable solutions to environmental challenges (Ayers & Forsyth, 2009). CBA represents a shift from top-down, centralized climate adaptation strategies toward approaches that empower local communities to take ownership of their adaptation processes and ensure that climate actions are contextually relevant and sustainable. This section explores the theoretical foundations of CBA, its key principles, and its relationship with concepts such as climate justice, environmental governance, and disaster risk reduction.

2.1 Defining Community-Based Adaptation (CBA)

Community-Based Adaptation refers to the process of involving local communities in identifying, planning, and implementing adaptation strategies to cope with the impacts of climate change (Sullivan, Mehta, & Bond, 2017).Unlike traditional, expert-driven approaches to climate adaptation, which often ignore local knowledge and the lived experiences of vulnerable communities, CBA is rooted in the belief that local populations are the most knowledgeable about their own environments and are best positioned to identify the risks they face and the solutions that will work in their specific context (Parry, Canziani, Palutikof, van der Linden, & Hanson, 2009). This participatory approach involves communities in all stages of the adaptation process, from the assessment of vulnerabilities to the development and implementation of adaptation strategies.

The role of local knowledge in CBA is critical because it allows for the integration of traditional practices and indigenous wisdom with modern scientific knowledge, ensuring that adaptation efforts are culturally appropriate and context-specific (Sánchez, 2020). Indigenous knowledge systems, for example, often contain valuable insights into sustainable land management practices, water conservation techniques, and resilient agricultural practices that have been honed over generations in response to environmental changes.

2.2 Theoretical Foundations of CBA

Community-Based Adaptation is deeply rooted in participatory development theory, which advocates for the active involvement of communities in the development processes that affect them. Participatory development emphasizes the empowerment of local communities and the inclusion of marginalized groups, ensuring that decisions are made by those who are most affected by development interventions (Chambers, 1997). In the context of climate change, participatory development aligns with the notion that adaptation strategies should not be imposed from the outside but should reflect the priorities, needs, and capabilities of the people who will live with the outcomes.

CBA is also linked to the concept of climate justice, which calls for a fair distribution of both the causes and consequences of climate change. Climate justice stresses the need to address the historical inequities in greenhouse gas emissions, particularly between developed and developing countries, and recognizes that vulnerable communities are

disproportionately affected by climate impacts. CBA helps to address these inequities by ensuring that the voices of the most vulnerable, including women, indigenous groups, and marginalized communities, are heard in the decision-making process (Roberts & Parks, 2007).

CBA is closely aligned with principles of environmental governance, which emphasizes the need for multi-level and multi-stakeholder approaches to environmental decision-making. Environmental governance involves collaboration between local communities, government agencies, NGOs, and the private sector to address environmental challenges. CBA supports this model by fostering collaboration at the local level, where community members, government representatives, and NGOs work together to identify risks, assess vulnerabilities, and implement adaptation strategies that are tailored to the specific needs and capacities of the community (Pelling, High, Dearing, & Smith, 2008).

CBA is a key component of disaster risk reduction (DRR) strategies. Climate change exacerbates the frequency and intensity of natural disasters, such as floods, droughts, and storms, which disproportionately affect vulnerable communities. By building local capacity to adapt to climate change, CBA enhances resilience and reduces the risks posed by these disasters. CBA's emphasis on local knowledge, participation, and empowerment is critical to reducing disaster risks, as communities that are actively involved in identifying and addressing local risks are better equipped to respond to and recover from climate-induced disasters (Wisner, Blaikie, Cannon, & Davis, 2004).

2.3 Key Principles of Community-Based Adaptation

The theoretical underpinnings of CBA are reflected in its key principles, which guide the process of developing and implementing adaptation strategies. These principles ensure that the process is inclusive, effective, and sustainable. The following are the key principles of CBA:

2.3.1 Local Empowerment

Local empowerment is at the core of the CBA approach. It involves building the capacity of communities to make decisions about their adaptation strategies and to manage and implement these strategies over time. Empowerment refers to the process of providing individuals and communities with the tools, resources, and knowledge needed to take control of their own futures (Narayan, 2005). In the context of climate change, local empowerment helps to break down the dependency on external actors and enables communities to take proactive steps to address their vulnerabilities. Empowering local communities ensures that adaptation strategies are more likely to be sustainable and successful, as they reflect the priorities and knowledge of those who are directly affected by climate change.

2.3.2 Equity and Inclusion

Equity and inclusion are fundamental principles in CBA, ensuring that all segments of society, particularly marginalized and vulnerable groups, are involved in the adaptation process. Climate change disproportionately affects the most vulnerable populations, including women, children, indigenous groups, and the poor. CBA seeks to address these inequities by ensuring that the voices of these groups are heard and that adaptation strategies are designed to meet their specific needs (Blaikie, Cannon, Davis, & Wisner, 1994). This can be achieved by promoting gender-sensitive approaches, ensuring that marginalized groups have equal access to information and resources, and facilitating their active participation in decision-making processes.

2.3.3 Use of Indigenous Knowledge

Indigenous knowledge plays a crucial role in CBA, as it represents a rich resource of local and traditional knowledge that has been developed over generations in response to environmental changes. This knowledge is often more context-specific and sustainable than conventional scientific knowledge, particularly in terms of local biodiversity, resource management, and climate forecasting (Dawson, Fahy, & Ó Cinnéide, 2013). Integrating indigenous knowledge into climate adaptation strategies allows for the development of solutions that are culturally appropriate and more likely to be accepted and maintained by local communities. It also promotes the recognition of indigenous peoples' rights and contributions to climate resilience.

2.3.4 Bottom-up Decision-Making

One of the defining characteristics of CBA is its emphasis on bottom-up decision-making, where local communities lead the process of identifying vulnerabilities, setting priorities, and designing adaptation strategies. This approach contrasts with top-down decision-making, where policies and interventions are designed by central governments or external agencies with little or no involvement from local communities (Cohen & Uphoff, 1977). Bottom-up decision-making ensures that adaptation strategies are more responsive to local needs and conditions, as communities themselves have

the most intimate knowledge of their environment and the challenges they face. It also fosters a sense of ownership and commitment to the success of adaptation efforts, as local communities are more likely to engage with strategies they have helped to create.

3 Global Experiences in Community Engagement in Climate Change Adaptation

Effective community engagement has become a cornerstone in climate change adaptation strategies globally. A growing body of literature highlights the importance of participatory approaches that integrate local knowledge, empower vulnerable populations, and build adaptive capacity. This section reviews global experiences in community engagement in climate change adaptation (CCA), focusing on lessons from Australia, Bangladesh, the Netherlands, and Kenya. These cases illustrate how different governance models, stakeholder involvement, and local adaptation strategies can enhance resilience to climate change impacts.

3.1 Australia: Collaborative Governance and Indigenous Partnerships

Australia's experience in climate change adaptation is significantly shaped by its governance models and recognition of indigenous knowledge systems. In response to climate impacts such as bushfires and floods, several regions, including Victoria and Queensland, have developed structured participatory frameworks that promote collaborative governance between governments, communities, and stakeholders. Programs like the Victorian Climate Adaptation Plan and Queensland's Climate Resilient Councils Program have emphasized the importance of local engagement in creating climate adaptation strategies (Berkes, Colding, & Folke, 2003) (McDonald, Nelson, & Young, 2017). These initiatives demonstrate that long-term partnerships between government agencies and local communities are essential in fostering trust and ensuring the sustainability of adaptation measures.

The integration of indigenous knowledge in climate adaptation efforts is another key aspect of Australia's approach. Aboriginal communities have long managed land through traditional ecological knowledge (TEK), and increasingly, this knowledge is being incorporated into co-management and land care programs, particularly in the context of climate adaptation (Garnett, et al., 2018). Studies indicate that this collaboration enriches scientific knowledge and provides a more holistic understanding of local ecosystems, contributing to better climate resilience (Cundill, et al., 2018). A crucial lesson from Australia's experience is the need for respectful engagement with indigenous communities, recognizing their historical ties to the land and the relevance of their traditional practices in modern adaptation planning (Davies & White, 2012).

Local councils in Australia serve as key intermediaries in engaging communities in climate adaptation efforts. The effectiveness of this model relies on the councils' ability to bridge the gap between governmental policies and local needs, ensuring that adaptation measures are context-specific and inclusive (Gero, Fletcher, & Nelson, 2018). Moreover, the involvement of local communities in decision-making processes fosters ownership and promotes the sustainability of adaptation actions (Dovers, 2017).

3.2 Bangladesh: Community-Led Resilience in Coastal and Flood-Prone Areas

Bangladesh, a country highly vulnerable to flooding and cyclones, has become a global leader in community-based adaptation (CBA) efforts. The government, along with non-governmental organizations (NGOs), has pioneered the implementation of CBA in flood-prone regions, focusing on community-led actions to reduce vulnerability and enhance resilience. Notable initiatives include the development of community-based early warning systems, cyclone shelters, and participatory hazard mapping] (Ayers & Huq, Supporting adaptation to climate change: What role for official development assistance?, 2009) (Alam, Dominey-Howes, & Chouksey, 2015).

A key lesson from Bangladesh's experience is the importance of community trust-building. Local facilitators, often drawn from within the communities, play a critical role in fostering trust and ensuring effective communication of adaptation strategies. These facilitators are essential in creating local ownership of adaptation actions and ensuring that interventions are tailored to community needs (Rahman, Alam, & Alam, 2018). The literature highlights the role of grassroots organizations in enhancing local capacity to manage climate risks, which is particularly important in countries like Bangladesh, where communities face frequent natural disasters (Huq & Ayers, 2008).

Gender-sensitive approaches have also been a defining feature of CBA in Bangladesh. Women, who are often disproportionately affected by climate change, have been actively involved in the design and implementation of adaptation measures. Studies suggest that including women in decision-making processes enhances the effectiveness of adaptation programs, as women bring unique insights into resource management, particularly in water and agriculture (Prowse, Grist, Sourang, & & Béné, 2010). The integration of local voices in disaster planning has proven to

be an effective strategy in addressing the diverse vulnerabilities of different social groups, ensuring that no one is left behind in the adaptation process (Feldman, Gaventa, & Haque, 2017).

3.3 Netherlands: Stakeholder Engagement in Technological Adaptation

In the Netherlands, climate change adaptation is heavily reliant on technological innovations, particularly in flood management. The Room for the River program, which aims to reduce the risk of flooding in the Rhine and Meuse river basins, involves a wide range of stakeholders, including farmers, municipalities, NGOs, and citizens. This participatory approach emphasizes the importance of public consultations and open data platforms, allowing all stakeholders to have a say in the design and implementation of flood mitigation measures (De Lange, Biesbroek, & van Buuren, 2010) (Van der Brugge & Van Raak, 2007).

Transparency and open dialogue are central to the success of stakeholder engagement in the Netherlands. Studies indicate that fostering an inclusive decision-making process, where all stakeholders have access to the same information and can contribute their perspectives, is essential for building trust and ensuring the legitimacy of adaptation actions (Wesselink et al., 2011). Furthermore, institutionalizing stakeholder processes, as seen in the Netherlands, allows for continuous engagement throughout the implementation and evaluation of adaptation projects. This institutionalization also ensures that stakeholders remain actively involved in the long-term management of climate adaptation efforts (Loorbach, Frantzeskaki, & Avelino, 599-626).

Evidence-based decision-making is another key lesson from the Netherlands. The use of scientific data, alongside input from citizens, helps in designing flood mitigation strategies that are both effective and widely accepted by communities (Gersonius, Ashley, Pathirana, & Zevenbergen, 2013). This approach not only enhances the technical effectiveness of adaptation strategies but also fosters a sense of ownership among local communities, as they see their input reflected in the final decisions.

3.4 Kenya: Drought-Resilient Livelihoods Through Local Action

In Kenya, particularly in arid and semi-arid regions, climate change adaptation efforts are centered around enhancing community resilience to droughts. Programs such as Wajir Community-Based Climate Change Planning focus on local action in managing water resources, agriculture, and land use. These community-driven initiatives are critical in building resilience, as they provide locally appropriate solutions to climate challenges (Saito, Shrestha, & Noguchi, 2018) (McCord, Dell'Angelo, Gower, Caylor, & Evans, 2017).

A central lesson from Kenya's experience is the importance of community ownership of adaptation projects. Local communities are best positioned to understand their specific vulnerabilities and have the knowledge necessary to develop effective adaptation strategies (Nyong, Adesina, & Osman Elasha, 2007). By involving communities in decision-making and implementation, these projects ensure that adaptation measures are not only effective but also sustainable in the long term (Sallu, Twyman, & Stringer, 2010).

The strengthening of local institutions is another key factor in Kenya's successful adaptation efforts. Local community groups, supported by governmental and non-governmental organizations, play an essential role in managing natural resources and implementing climate adaptation strategies. This institutional support is critical in ensuring the continuity of adaptation measures and fostering a culture of local governance that can address future climate risks (Ghebru, 2017). Additionally, tailoring adaptation strategies to the socio-cultural context is vital for their acceptance and success. This approach ensures that local customs, values, and practices are incorporated into adaptation planning, leading to more culturally sensitive and contextually appropriate solutions (Olsson, Folke, & Berkes, 2004).

4 Sri Lanka: Current Status of Community Engagement in Adaptation

Sri Lanka, an island nation in the Indian Ocean, is increasingly experiencing the adverse impacts of climate change, including floods, droughts, landslides, and rising sea levels. These climate-related challenges are posing significant threats to livelihoods, food security, and infrastructure, particularly in vulnerable communities. As climate change continues to exacerbate existing vulnerabilities, the need for effective climate adaptation strategies has become more urgent. The Government of Sri Lanka has responded by developing the National Adaptation Plan (NAP), which outlines priorities for addressing climate change impacts. However, despite these efforts, the plan offers limited guidance on how community engagement should be integrated into the adaptation process. In practice, local participation is often restricted to awareness campaigns or externally-driven donor-funded projects. This paper explores the current status of community engagement in climate change adaptation in Sri Lanka, identifying the challenges and opportunities for more effective local involvement in adaptation planning.

4.1 Climate Impacts and Vulnerability in Sri Lanka

Sri Lanka's vulnerability to climate change is primarily driven by its geographic location and socio-economic conditions. The country is exposed to a variety of climate-related risks, including intense rainfall, prolonged droughts, extreme temperatures, coastal erosion, and rising sea levels (Ministry of Environment, 2016). These impacts are felt most acutely in rural areas, where agriculture and fisheries dominate livelihoods. In addition to immediate threats to food security and water resources, the economic costs of climate change are expected to increase over time, particularly as climate-induced disasters become more frequent and severe (Perera et al., 2017).

Sri Lanka's vulnerability is compounded by its socio-economic challenges, including poverty, unemployment, and limited access to health services. Rural communities, particularly in flood-prone and drought-affected areas, are especially vulnerable. The Sri Lankan government, in response to these challenges, developed the National Adaptation Plan (NAP) to address climate change impacts and provide a framework for adaptation actions at various levels. However, the NAP has faced criticism for its limited focus on community-based approaches to adaptation. While the plan outlines important priorities, it provides little direction on how to integrate community participation in decision-making processes.

4.2 Government Response: National Adaptation Plan (NAP)

The NAP serves as a blueprint for addressing climate change and outlines strategic actions across several sectors, including agriculture, water resources, health, and infrastructure (Ministry of Environment, 2016). The NAP, however, is primarily structured around national-level interventions with a focus on policy and institutional frameworks. While it acknowledges the importance of local-level adaptation, it offers limited guidance on how to integrate community participation in decision-making processes. This top-down approach has led to a disconnect between the national adaptation strategies and the realities faced by local communities.

In practice, local engagement has often been confined to awareness-raising campaigns or projects funded by international donors, which do not always align with the priorities of affected communities (Huq, Yamin, Rahman, & Ayers, 2013). These externally-driven projects often prioritize project outcomes over community needs, and the adaptation strategies developed in these projects may not be sustainable without local ownership and long-term commitment from communities.

4.3 Challenges to Effective Community Engagement in Adaptation

Several key challenges hinder the integration of community engagement into adaptation planning in Sri Lanka. These challenges stem from both governance-related issues and broader socio-economic factors that limit the capacity of local communities to participate effectively in climate adaptation efforts.

4.3.1 Top-Down Governance Structure

A major barrier to community engagement in climate adaptation in Sri Lanka is the top-down governance structure that characterizes the country's decision-making processes. The central government and its associated ministries dominate climate planning and implementation, with limited input from local communities or civil society organizations (Fernando, Weerasinghe, & Ratnasiri, 2020). This hierarchical structure limits the flexibility and responsiveness of adaptation strategies, as policies are often developed without adequate consultation with those who are most affected by climate impacts.

In a top-down approach, decisions are typically made at the national level by government officials and experts, with limited attention given to local knowledge or needs. This disconnect often results in adaptation measures that are not tailored to the specific vulnerabilities and capacities of local communities, leading to a lack of ownership and low levels of participation in adaptation processes. The emphasis on centralization also undermines the role of local government bodies and communities in addressing climate change.

4.3.2 Low Awareness at the Community Level

A significant challenge to community engagement in climate adaptation is the low awareness at the community level about the causes and impacts of climate change. While climate change has become a significant global issue, many communities in Sri Lanka, particularly those in rural and remote areas, remain unaware of the specific risks they face and the adaptation options available to them. In many cases, the lack of information and understanding about climate change limits the ability of local communities to actively participate in adaptation processes.

In Sri Lanka, awareness-raising campaigns are often one-way communications from external actors (such as government agencies or NGOs) to communities, rather than interactive dialogues that engage local populations in decision-making. This approach is insufficient for fostering meaningful participation, as it does not allow communities to express their concerns, share local knowledge, or contribute to the design of adaptation strategies. As a result, climate adaptation interventions may not align with the realities and needs of local communities.

4.3.3 Lack of Institutional Frameworks for Participation

Another challenge is the lack of institutional frameworks for participation in climate adaptation planning. Although Sri Lanka has a number of local-level governance structures, including district and divisional administrative units, these structures are often not sufficiently empowered to engage in climate adaptation decision-making. The institutional capacity of local governments to plan and implement climate adaptation measures is generally weak, with limited resources, expertise, and mandates for tackling climate change.

In many instances, local government institutions are not equipped to handle the complexities of climate change adaptation, and there is a lack of institutionalized mechanisms for community participation in decision-making. As a result, community involvement is often limited to small-scale, donor-funded projects that do not have the broader institutional support necessary for long-term impact. Strengthening local government capacity and creating institutional frameworks for participation are critical to ensuring that communities can play a central role in the adaptation process.

4.3.4 Insufficient Decentralization of Climate Planning

A further challenge to community engagement is the insufficient decentralization of climate planning in Sri Lanka. While the NAP provides some guidance on local-level adaptation, climate planning remains predominantly centralized, with most decisions made by national ministries and agencies. Local governments, despite their proximity to the communities they serve, have limited authority and resources to develop and implement adaptation strategies.

Effective climate adaptation requires a multi-level governance approach, where national, regional, and local authorities work collaboratively to address climate change impacts. In Sri Lanka, the lack of decentralization means that local governments and communities are often excluded from meaningful participation in the development of climate policies and interventions. This top-heavy approach reduces the effectiveness of adaptation measures, as it fails to account for the unique circumstances of local communities.

4.4 Opportunities for Enhancing Community Engagement in Adaptation

Despite these challenges, Sri Lanka's well-established administrative system at the district and divisional levels offers an opportunity for implementing localized engagement frameworks. These administrative structures, if appropriately empowered and resourced, could serve as effective platforms for involving communities in climate adaptation efforts.

The district and divisional administrative units in Sri Lanka have the potential to play a key role in promoting community-based adaptation. By strengthening the capacity of local authorities, enhancing community awareness, and creating institutionalized mechanisms for participation, Sri Lanka can better integrate local knowledge and needs into adaptation strategies. Empowering local governments to take ownership of climate adaptation planning and implementation is essential for ensuring that adaptation measures are context-specific, inclusive, and sustainable.

Moreover, the growing involvement of civil society organizations (CSOs) and non-governmental organizations (NGOs) in climate adaptation projects provides an avenue for facilitating community participation. These organizations often have closer ties to local communities and can serve as intermediaries between the government and community members, helping to bridge gaps in communication and understanding.

5 Conclusion

Community-Based Adaptation (CBA) has emerged as a vital and transformative approach in responding to the growing threats posed by climate change, particularly in contexts where local communities are on the frontlines of climate impacts. Grounded in the principles of participatory development, CBA emphasizes the inclusion of communities not merely as beneficiaries of adaptation interventions but as active agents in shaping and implementing responses. This approach recognizes that those most affected by climate change often possess valuable knowledge, lived experience, and coping strategies that can significantly enhance the relevance and sustainability of adaptation efforts.

The theoretical underpinnings of CBA are deeply connected to concepts of climate justice, environmental governance, and disaster risk reduction. Climate justice underscores the disproportionate burden that vulnerable and marginalized communities bear in the face of global environmental change, while often having contributed the least to its causes. In this context, CBA acts as a mechanism for redistributing decision-making power, giving voice to historically excluded populations and promoting more equitable and inclusive climate governance structures. It also complements environmental governance frameworks by promoting accountability, transparency, and collaboration between state and non-state actors. Furthermore, its alignment with disaster risk reduction enhances the resilience of communities by integrating risk assessments, early warning systems, and preparedness into everyday life.

Key principles such as local empowerment, equity and inclusion, the use of indigenous knowledge, and bottom-up decision-making are foundational to effective community-based adaptation. Local empowerment ensures that adaptation measures are not externally imposed but rather reflect the values, needs, and priorities of communities themselves. Equitable processes are essential for ensuring the inclusion of women, indigenous peoples, youth, and other marginalized groups, whose perspectives are often overlooked in traditional adaptation planning. Indigenous and local knowledge systems contribute not only to understanding historical patterns of climate variability but also offer context-specific strategies for resilience that are culturally and ecologically appropriate. Meanwhile, bottom-up decision-making enables adaptation to be flexible and responsive to dynamic local contexts, thereby increasing its efficacy and long-term sustainability.

In practice, CBA faces several challenges, including limited financial resources, insufficient institutional support, and the dominance of top-down policy frameworks. However, its participatory ethos and emphasis on community agency make it uniquely positioned to deliver adaptive solutions that are both legitimate and durable. As the climate crisis deepens, it is increasingly evident that technocratic, one-size-fits-all approaches to adaptation are inadequate. Instead, what is needed are approaches like CBA that value diversity, strengthen local institutions, and prioritize social learning and capacity-building.

For countries such as Sri Lanka—where climatic hazards are intensifying, and governance structures are gradually evolving—CBA offers a pathway for integrating local communities into national adaptation agendas. When adequately supported through enabling policy environments, capacity development, and decentralized governance, CBA can contribute significantly to climate resilience and sustainable development. Going forward, scaling up and mainstreaming CBA within climate adaptation strategies at all levels—local, regional, and national—will be crucial for building societies that are not only better prepared for climate risks but also more just, inclusive, and sustainable.

Compliance with ethical standards

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