

Exploring the Importance of Culture and Children's Engagement in Climate Change Adaptation

Tanjila Islam¹, Abdun Naqib Jimmy², Sajadul Alam², Md. Tariqul Islam²,
Gias Uddin Ahsan³, Nazmul Ahsan Khan^{2, *}

¹Save the Children, Dhaka, Bangladesh

²Department of Environmental Science & Management, North South University, Dhaka, Bangladesh

³School of Health & Life Sciences, North South University, Dhaka, Bangladesh

Abstract

Climatic hazards have served to be a prominent and perpetual risk to societies and individuals throughout our time, and the subsequent vulnerability can galvanise adaptive resource management. The adaptive capacity reflects the ability of a community to act collectively to any vulnerability they face. With a special focus on Bangladesh, the first part of this paper explores the social dynamics of adaptive capacity and how society perceives and responds to climate change – essentially, how society's response, and consequently their resilience, is mediated by culture. Societal perception largely involves direct personal experiences with climate change in time and space, and the how much cognitive presence the issue has in an individual's mind over other concerns. When discussing societal or cultural perception in regard to adaptive capacity, it is also worth mentioning that adaptation is highly context-specific whereby socioeconomic factors, local knowledge and social networks are a significant influence in shaping perception and consequently adaptation measures, thus highlighting how the various facets of culture play a key role in the adaptation process. Moreover, *sense of place and identity* is a vital element of culture – in simple terms, the attachment one experiences around their settlement, and how *place* is a fundamental component in an individual's or community's identity and therefore their culture. The effect *place* has on adaptation, as well as the effect climate change has no sense of place, will be explored. In addition, the paper examines the cruciality of the role and engagement of children in adaptive measures, and how them being agents for change is fundamental in building resilient social-ecological systems that cope with change and crisis. Children, being the most vulnerable to the impacts of climate change, are rarely included in adaptation policies and plans. There is a significant lack of this inclusion in Bangladesh even though there are some scattered interventions to address it from government and non-government agencies. The final chapters of this paper will contend that including children's perspective and integrating their specific needs in a child-centred approach to climate change adaptation can greatly reduce vulnerability and increase community resilience.

Keywords

Climate Change, Adaptation, Culture, Adaptive Capacity, Children, Vulnerability

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1. Introduction

Over the last 25 years, extreme weather events, including heavy rainfall, heat waves, droughts, floods, cyclones and

hurricanes, have contributed to injury, illness, impoverishment, displacement, hunger and death for hundreds of millions of people, often with particular implications for children [19]. Climate change is bringing

* Corresponding author

E-mail address: nazmul.khan@northsouth.edu (N. A. Khan)

higher temperatures, sea-level rise for all coastal cities and reductions in freshwater availability in many locations. Even if an effective inter-national agreement is made on reducing greenhouse gas emissions sufficiently to slow and then halt global warming, much of the world's population will still face these changes over the next few decades due to the time-lag in the world's climate system. Attention to adaptation is as urgently needed to mitigate these changes. Developing countries such as Bangladesh are found to be the most susceptible to these climatic vulnerabilities, particularly in the coastal areas affected by cyclones, sea-level rise, riverbank erosion, flooding and salinity. Having said that, urban areas – specifically Dhaka – are also faced with high levels of climate-induced risks, albeit some different to those in the rural and coastal areas, but due to the continuing rapid rate of urbanisation, the consequences of such risks are exacerbated by population density. Heat and cold waves as a consequence of climate change prove to be especially challenging for children and the elderly in Dhaka. There is considerable pressure on Dhaka City management authorities to meet the challenging demand of providing sufficient utilities, especially to those in slum areas [15].

Our response to climate change in preparation of risk and in reaction to their impact, gives us an insight into to our adaptive capacity. Moreover, such instances reflect our ability to act collectively to tackle vulnerabilities produced through changes in climate. Adaptation can be perceived as a social process by which 'adaptation is underpinned by societal perceptions, values, and decision-making structures' [23]. Essentially, adaptation measures are influenced by society's response and capacity for resilience, which is in turn mediated by culture. *Sense of place* is a vital element of culture since it is a fundamental component in an individual's or community's identity. *Place* is a cultural asset and holds immense value, and losses to these places have a significant, often detrimental effect on a community's identity and culture. Identity and sense of belonging or *place* is an important factor in society's motivation to practise adaptation strategies and build resilience to climate change.

Communities across the globe, including those in Bangladesh, are already experiencing the effects of extreme weather events and unpredictable variations in seasonal weather, with poor communities, women, children and marginalized groups disproportionately affected by the impacts. The perspectives of children within the field of climate change adaptation have remained largely sidelined and yet, as this paper illustrates, children's needs, voices and capacities can and should be integrated across adaptation efforts as this leads to the establishment of longer-term and more robust community and political frameworks.

2. Cultural Perception and Adaptive Capacity

From an anthropological standpoint, hazards and disasters can be seen as a grand test 'of societal adaptation and sustainability' or a "natural laboratory" whereby the fundamental facets of society and culture are laid bare 'by the reduction of priorities to basic social, cultural, and material necessities [12]. Douglas and Wildavsky's *Risk and Culture* is a major anthropological contribution to the ideology behind *perception* of risk and vulnerability. They suggest that various features of social life – particularly the levels of integration and group power relations – evoke differing responses to danger or vulnerability [12]. Societal or cultural perception of climate change largely involves direct personal experiences with its impacts in time and space, and how much cognitive presence the issue has in an individual's mind over other matters affecting their lives. *Culture* in this context can be described as 'the symbols that express meaning, including beliefs, rituals, art and stories that create collective outlooks and behaviours, and from which strategies to respond to problems are devised and implemented'[3]. With this conception of culture, if we narrow down our scope of study to the complexity of the cultural dimensions of climate change and response to risks, the way such 'outlooks and strategies' inform adaptation planning in societies can be better understood.

In most cases, when models of climate change try to incorporate adaptation, they assume a simple cause-and-effect relationship between vulnerabilities experienced and society's response to them [3]. However, in reality the responses rarely occur in the way presumed, and differ greatly from culture to culture, place to place. These models, generated on such assumptions, fail to explain these differences when presented with the same environmental changes. Thus, it can be said that 'adaptation is highly context-specific whereby socioeconomic characteristics, social networks, local knowledge, and non-climatic pressures all play key roles in shaping adaptation measures' [23]. How vulnerability and risk is conceptualised and perceived is what forms the basis of the attitude towards adaptation. Furthermore, there are differentiating approaches to conceptualising *dangerous* climate change from culture to culture since perceptions and personal experiences shape a community's understanding of which impacts are harmful, alongside non-climatic stimuli, which in turn affect the form of response they have to adapt. Adger et al. discern that the actions of individuals and their communities are 'are shaped in part by deeply-embedded (but not static) cultural and societal norms and values' (2009:344). Cultural perceptions thus affect adaptive pathways and they help explain how

some societies connect with certain viewpoints or methods of adaptation and others do not. Essentially, groups of people 'with shared values and beliefs produce their own selective view of the natural environment, which influences how they interpret risk' and such perceptions may not coincide with 'responses advocated by institutions promoting adaptation' that are deemed 'rational' [3]. Proactive adaptation from an individual or community depends on the perceived risk from impacts and perceived ability to adapt.

Cultural aspects and practises can successfully be used to adapt progressively to climate change. There is increasing attention given to this ideology since 'individuals' and communities' knowledge and experience of the past and recent climate...shapes their perceptions of future climate' [4]. Oliver-Smith explains that, 'traditional adaptations to environments and indigenous technical knowledge have been suggested as sources for innovative approaches to problems of mitigation and vulnerability' [12]. On the other hand, it can be suggested that certain elements of social life and culture in a community can be a barrier to adaptation, in that, there may be instances where local knowledge and practises can be ineffective in adapting to 'rapid or nonlinear changes' and consequently such strategies fall flat in conditions that are becoming increasingly worse.

Adger et al. give examples of climate effects and possible cultural and representational impacts in their paper *Cultural Dimensions of Climate Change Impacts and Adaptation*. In relation to Bangladesh, the most relevant impacts mentioned include, firstly, the projected biological and physical impacts of 'changes to availability or range of fish stocks', which has the cultural impact of 'loss of symbolic value and cultural practises attached to particular species...Cultural practises may not be adaptable to changes in fish population dynamics' [6]. An example of this, specific to Bangladesh, would be the changing population dynamic of the *hilsa* fish, which is 'under severe stress in Bangladesh and vulnerable to over exploitation...[Results] show that increased harvesting of the adults entering the rivers and the juveniles in the rivers cause gradual decline in *hilsa* fish population and even may cause to disappear this valuable resource within a short period of time' [6]. With this impact on *hilsa* fish populations in Bangladesh, the loss of its symbolic value and repercussion on culture – as it is the national fish and traditionally eaten in Bengali cuisine – would inevitably be significant. In addition to this, the cultural practise of fishing for this particular fish would be considerably affected along with its adaptive capacity. In a similar fashion, due to the climatic influences changing dynamics of fish populations in Bangladeshi waters, the traditional and historically used technique of *otter fishing* is being significantly threatened as the number of fisherman using this method reduce. Still

practised today in districts of Khulna and Narail, near the Sundarbans in southern Bangladesh, this method of fishing has been passed down through generations in families who breed these otters and train them into trapping fish, crab and shrimp into nets. Both examples show a loss of symbolic value in a particular species, and difficulties in adapting practises to climate-change-induced fish population changes.

Secondly, Adger et al. suggest that 'ecosystem disturbance and plant and animal species [become] at risk from localised or global extinction', which coincides with the cultural impact of the 'loss of iconic and culturally significant habitats...associated with cultural expressions' and "changes to phenology and seasons...loss of experienced weather patterns...leading to dislocation from place' [3]. This disturbance and loss of habitat can be associated to culturally significant areas in Bangladesh, in particular the world heritage site of the Sundarbans – along with its iconic endangered species of animals and plants – and other majorly climate impacted areas of northern and coastal Bangladesh. Such changes, such as those exemplified above, leads to losses of cultural assets that communities value [3]. However, in some cases, climate change adaptation or mitigation policies being carried out can sometimes result in loss of cultural assets too.

2.1. The Importance of Sense of Place and Identity

Sense of place is a vital element of culture, and thus it plays a significant role in the context of adaptation. *Place* is the attachment one experiences around their settlement, in other words it is the 'physical [space] that [is] given meaning by people'. There is a level of connection to this physical space to a person's identity where there is a "sense of pride" associated with belonging to a particular space and there are friendships and social networks that exist within it [3]. This ideology may also be referred to as a *sense of belonging*. Adger et al. go on to say that this structure attests to 'individual and community wellbeing and quality of life' [3]. As mentioned previously, places of settlement hold cultural value, and losses to these have a significant, often detrimental effect on culture, so when people are displaced from places they value, there is strong evidence that their cultures become endangered [3]. In most circumstances, there is little or no compensation for these losses. Losses that are indirect and physical – such as these places of attachment – are more likely to be invisible in environmental decision-making, and if caused by climate change impacts, it 'will influence the ways in which individuals interact with the natural and social environments' [4]. These impacts are unlikely to be addressed in adaptation framework and are systematically undervalued.

Over the years, there has been a great deal of migration from rural to urban areas due to pull factors – such as better employment opportunities – and push factors, which in Bangladesh, commonly includes climate change impacts on livelihoods and places of settlement, which forces people to settle elsewhere. Those with a strong attachment to a place and their community may be too reluctant to migrate to maintain their livelihoods and adapt to a new place and social structure. Such relocation has substantially negative psychological effects and an impact on an individual's emotional wellbeing. Adger et al. explains this phenomenon of place attachment by referring to popular thought in social science, whereby continuity of place can be an important aspect in reinforcing identity, and discontinuity is associated with strong social impacts reflecting sense of loss [3]. Communities are bound up in local places, and physical changes to their place of attachment will have 'profound cultural and symbolic impacts' [4]. Furthermore, any economic opportunities and benefits brought by migrating can be diminished 'by increasing financial and emotional stress and weakening social structures in both source and destination communities' [3]. In addition to these stresses faced by migrants, the new areas in which they move to are also at risk, including a new set of vulnerabilities caused by climate change and various other urban related risks. The loss of their local adaptive knowledge makes them susceptible to unfamiliar climate change impacts in their new surroundings. The migrants' identity and sense of belonging is an important factor in their motivation to practise adaptation strategies in these new destinations, thus hardships and loss of identity incurred when relocating could hamper such initiatives. Place attachment then, plays an important part in defining adaptive responses. Mishra et al. have observed that those with high levels of place attachment are more likely to make preparations for climate change related risks, and be motivated enough to do so because of 'social and economic investments' in their area of settlement [3]. In turn, place attachment may then mean a higher probability of people inspired to participate in the climate change adaptation planning process.

2.2. The Role of Social Capital in Climate Change Adaptation

Social capital is a crucial resource and component for shaping the adaptive capacity of societies to climate change. In order to build capacity, enhance resilience and to aid communities to self-organise, the right resources and assets must exist in a society. The concept of *social capital* has become a noteworthy concept among social scientists in the last twenty-five years, and one of the key creators of the concept defines it as 'features of social life – networks, norms and trust – that enable participants to act together

more effectively to pursue shared objectives' [14]. Adger [2] claims that empirical evidence 'suggests that the ability of societies to adapt is determined, in part, but the ability to act collectively [23]. The theory of social capital, at its core, gives reasoning for 'how individuals use their relationships to other actors in societies for their own and for the collective good' [2]. Emerging as a bottom-up approach in relation to adaptive capacity, the concept can be highly useful in policymaking and may be viewed as an intangible resource in relation to climate change adaptation. However, there may be limits to adaptation using social capital as a resource for the reason that societies have become increasingly complex, with more and more intricate forms of governance [4].

Social capital has the ability to provide the necessary power not only for the management of property and resources, but also 'to build an adaptive capacity to better tolerate climate variability as well as climatic hazards and extreme events' [7]. As Bangladesh is prone to these hazards and climate-induced disasters, it is imperative to give social capital a higher platform in order to produce effective adaptive measures, thus building adaptive capacity. Even though the country may not possess sufficient enough resources to build the required infrastructure to mitigate climate change impacts, and reduce vulnerabilities faced by its urban population in particular, it may however, demonstrate the presence and capabilities of social capital. Rural communities have proven to have a strong level of collaboration between themselves and with other stakeholders, but this cooperative system may be less evident in urban areas of the country. In order to use social capital as an effective resource, it must be mobilised and 'strong social relationships' must be formed, 'reinforced by trust and reciprocity' [7].

2.3. Understanding the Impacts of Climate Change on Children

Climate-related disasters often have disproportionate impacts on children, with serious implications for securing their human rights. Despite children's right to participate in decisions that affect them, they are often excluded from the decision making process. In the next few decades, it will be these children and their own families who will be affected by the decisions made today (Brendan, 2013). By supporting children now to explore the issue of climate change, they will be better placed to face the challenge in the future. Children are the key to winning the climate argume

Detrimental health effects that climate change produces include increased incidence of malnutrition and infectious disease, physical and psychological trauma from extreme weather-related disasters, respiratory disease, reproductive and developmental disorders and cancer. The developing fetus and child are more biologically and psychologically

vulnerable to the many direct and indirect effects of climate change and fossil fuel combustion. Subsequently, early impairment and disease can affect the physical and psychological health and wellbeing of children over their entire life-course.

Children will bear the brunt of the impact of climate change because of their increased risk of health problems, malnutrition and migration. Families without adequate incomes and assets, protective infrastructure and housing, access to basic services, and inadequate nutrition and clean water, face the greatest risk in a changing climate. Unicef in 2013 estimated that 25 million more children will suffer malnourishment due to climate change, with a further 100 million suffering food insecurity. Children are among the 150-200 million people estimated to have to flee their homes and will suffer more than adults because of their relative lack of resources and higher vulnerability to disease. Heat waves are likely to grow more intense and frequent under climate change, where babies and small children are more likely to die or suffer heatstroke as they find it more difficult to regulate their body heat [22].

To be effective, prevention and adaptation strategies to climate change must be centred on the needs of our children—present and future. Fifth Assessment Reports, 2008 by the IPCC, McKinsey and researchers at Stanford University indicate that the cost of acting broadly to reduce emissions from power generation and transport, make buildings and appliances more efficient, and investing in alternative fuels and technologies is modest compared with the benefits to our children and their future.

The most affected by climate changed induced impacts are children and the elderly. Children are at greater risk of injuries, death, displacement, loss of caregivers and post-traumatic stress due to these impacts. Moreover, children's development is threatened through the decreased access to food, water, health care and education; increased exposure to abuse and violence; and increased prevalence of vector-borne diseases and acute respiratory infections.

Only looking at how climate change affects children, without substantial dialogue on preventative measures and actually taking action, adaptation and security for children will not materialise effectively. The challenge is clear – the world is running out of time to reduce its greenhouse gas emissions and transition to a low-emission, climate resilient global society. In the face of unavoidable impacts for the next generation, child-centred adaptation is a necessary aspect of global response. Priority attention should be given to understanding how disasters, risks and environmental changes are affecting them at present, the social dynamics within their communities, how policymaking can be

influenced and tailoring activities that need to be implemented in order to stimulate positive change for the future. With adequate support and protection, children can also be extraordinarily resilient in the face of stresses and shocks. There is ample documentation, moreover, showing the benefits of having youth active, informed and involved in responding to challenges in their lives, not only for their own learning and development, but for the energy, resourcefulness and knowledge that they can bring to local issues.

2.4. Engaging Children as Agents for Change: Child-Centred Approach to Climate Change Adaptation

Historically, the voices of children have largely been omitted from discussions that relate to community planning and activities. It has been widely assumed the voices of adults have comprehensively addressed the needs of the community as a whole thus sidelining the views of children who are often portrayed as passive victims of disaster events and climate change impacts [18]. In recent times, children have proven to be developing the confidence and self-esteem to act as leaders and pioneers of change in their community. There have already been significant changes at the community level. Opportunities for communities and children to learn about and build their capacity around climate change adaptation and disaster risk reduction are multiplying. Children and young people understand what is at stake for this generation and future generations not just in their community, but also for their country and region as a whole.

Children's vulnerability to climate change can be understood as an intersection of three axes [24]. The first is exposure; the extent to which children live in a physical location that is vulnerable to drought, floods, extreme weather events and sea level rise. The second axis is socio-economic, with vulnerability to hazards due to a lack of resources, poverty and marginalization. The third axis is time. Today's children and future generations will bear the brunt of environmental impacts, creating an inter-generational injustice without precedent [24]. All children fall somewhere along these three axes, but it is the children who live in greatest poverty and in the most exposed places that face the greatest risks. More than just passive victims, these young people, often with the support of their caregivers and communities, also represent agents of change and have consistently demonstrated the capacity to devise local solutions, participate in global conversations and contribute to a safe and sustainable future. Recent estimates by UNICEF indicate that 160 million children live in drought-prone areas, and half a billion more live in zones at risk to high floods and severe storms [22].

One of the most effective means of reducing children's

vulnerability to the impact of global climate change is to build their capacity to adapt to the range of changes it may bring in their lifetime (Mitchell, 2016). Building children's capacity is likely to be one of the most effective strategies to enhance the resilience of the whole community over time. Children are extremely efficient in creating a strong, personal connection to the issue of climate change and can encourage behavioural change in the lives of the adults who care for them in a way that others cannot. Child Centred Climate Change Adaptation initiatives highlight that children are able to challenge the mindsets of adults in their communities and are great communicators of climate change. Children are also particularly good at raising awareness among their peers. Having youth climate change advocates speaking at the local, national and international level can be a powerful educational and outreach tool. The child centred approach to building adaptive capacity is not only about strengthening the wellbeing of children – it is equally about working with children, young people, households, communities, local and national governments, and international organisations, to reduce or mitigate the risks that directly impact children's lives.

There are two aspects of child resilience: resilience *for* children, where the capacity of caregivers to focus on children's needs and capacities is enhanced; and resilience *with* children, where children are centrally involved in the decision-making, planning and implementation of adaptation at all levels [18]. A child-centred approach to adaptation and disaster risk reduction targets activities that can help to reduce the vulnerability of children to climate change, and can include a wide range of activities, such as structural measures that protect children from disasters, training and evacuation planning for children, or insecticide treated mosquito nets to prevent the spread of malaria. The child-centred approach to development is based on child rights, and places children at the heart of efforts to secure these rights and fulfil their development aspirations. It works to target children directly – particularly the most vulnerable, excluded and marginalized – and works to overcome the disadvantages children face, by helping them understand and combat layers of discrimination.

This approach is to make children's participation more effective and sustaining, there is a need to allow children to provide their inputs in determining objectives, approaches and processes of the intervention. It requires greater flexibility in the process of project planning as well its implementation to allow review and adaptation at any stage of the intervention. This approach can be categorised into two types: programmes that focus specifically on children's needs – referred to as “child targeted” policy and programming – and programmes that involve children in the

design and delivery, referred to as “child led” adaptation [18]. To identify and promote appropriate climate change adaptation measures in the community, it is essential to investigate and explore local problems and link it with accumulated global knowledge on climate change adaptation, which then children are capable to investigate and explore local problems and it immensely enhances value of children's participation. A child-centred approach to adaptation targets activities that help to reduce the vulnerability of children to climate change. It is also important to note that a child-focused approach does not necessarily have to occur at a community level. It is apparent that many activities take place within the community, such as school initiatives focused on disaster risk reduction, training, and first aid. However, child focused approaches can also occur at a national level in terms of strengthening policy and legislation that builds protection for children, and at an international level through integrating children's voices into negotiations on climate change, for instance.

Moreover, to enhance community resilience, it requires addressing children's specific concerns associated with climate change. Community awareness raising programmes must include children's concerns associated with climate change e.g. loss of education, recreation and protection and exposure to child labour and early marriage. To ensure children's contribution in communities' climate change adaptation, children's risk assessment must be linked with communities' planning and implementation process. It requires children to analyse communities' current adaptation plan and process, and engage with the key stakeholders to reach an agreement with the community on children's role and activities for climate change adaptation processes. Interventions that seek children's contribution in any communities' planning process must have liaison with children to reach such a negotiated agreement.

Children's participation in climate change adaptation is a noteworthy initiative because children comprise of about half of the population, they can bring in their unique perspective and contribute to the communities' climate change adaptation planning process. Promoting children's participation should apply an ethical approach. It should give children opportunity to express their views and involve them in decision-making. To achieve that, it requires applying practice standards for children's participation. Planning process for designing project intervention should include consultation with children and project plan and allow degree of flexibility for children to review and adapt objectives, approaches and processes of interventions. Children's activities – awareness raising, risk assessment and participation in communities' planning, must include children's specific issues and benefit both children and community. Project interventions that involve children in

climate change adaptation should apply child friendly tools and processes; otherwise the exercise becomes hugely challenging and may fail to produce the desired results.

2.5. Adaptation to Climate Change and the Road to Resilience

The impacts of climate change are already being felt. Learning how to live with these impacts is a priority for human development. In this context, it is too easy to perceive adaptation as a narrowly defensive task – protecting core assets or functions from the risks of climate change. A more profound engagement, which sees climate change risks as a product and driver of social as well as natural systems, and their interaction, is called for.

Adaptation to climate change argues that, without care, adaptive actions can deny the deeper political and cultural roots that call for significant change in social and political relations if human vulnerability to climate changes associated risk is to be reduced. Furthermore, adaptation efforts should focus on the most vulnerable groups, including children. Actions should be based on meaningful, gender-sensitive and inclusive consultations and participatory design processes that result in programmes that fully address the needs of the most vulnerable. Adaptation funding allocations should be based on need, with more funding flowing to local level actions in particularly vulnerable communities and high-risk areas. There are many ways of characterising adaptation, which as an intellectual construct cannot be directly observed. Here, a key distinction is made between adaptations that are forward or backward looking. As a backward looking attribute, adaptation is revealed by capacity to cope during moments of stress or shock.

Child-centred approaches to adaptation should be included prominently in local and national climate change and development planning processes. Existing adaptation policies, guidelines and strategies should be reviewed to ensure that children are visible, that their rights are being respected, and that the root causes of girls' and boys' vulnerability are addressed. Newly developed plans, including national adaptation plans, should include child-centred approaches and ensure that children's rights are integrated into policy implementation. Children as active agents are an important component in climate change adaptation and disaster risk reduction processes. Despite children's disproportionate vulnerability on many fronts, it is an oversimplification to think of them only as victims in the face of climate change [19].

One primary component of resilience simply relates to the level of adequate and timely knowledge that children, communities and government institutions are made aware of [18]. However, this acquisition of knowledge is not

sufficient; communities must also be given skills through which they can apply this knowledge. In addition, institutional frameworks must be supported so that resilience activities can be sustained. Mechanisms such as insurance, social funds and the diversification of livelihood options are just some of the activities that are implemented. Communities are provided with the necessary training and support (ongoing technical support from NGOs and government institutions) to carry out locally relevant climate change adaptation activities. Resilience is context specific and will change over time as children, communities and institutions evolve.

3. Conclusion

Place and sense of belonging is a crucial component in an individual's and community's identity. The loss of these physical and ecological places tends to be irreversible. Sense of place and identity is thus a vital element of culture, and plays a significant role in the context of adaptation since cultural aspects and practises can successfully be used to adapt progressively to climate change. Adaptation is significantly specific to context of culture, characteristics, personality and it hinges on social networks, socioeconomic status-quo, local knowledge and many non-climatic pressures that play a key role. How vulnerability and risk is conceptualised is what forms the basis of the attitude towards adaptation. Adaptation policies and decision-making processes should take into account these cultural aspects and differing perceptions in order to produce successful adaptation measures. Social capital is a key resource for shaping the adaptive capacity of communities to climate change, and those societies that use this capital effectively become more sustainable, effective and resilient than those with adaptation mechanisms designed and imposed by external entities. The voices of children – who are the most vulnerable to the impacts of climate change – have largely been omitted from discussions that relate to community planning and activities. From grassroot level to the highest community level, children's participation is imperative, and their integration to every adaptive framework will prove to be the foundation of the climate resilience status in Bangladesh in the future generations. Children's participation in climate change adaptation is a noteworthy initiative because children comprise of about half of the population in Bangladesh, they can bring in their unique perspective and contribute to the communities' climate change adaptation planning process. Child-centred approaches to adaptation should be included prominently in local and national climate change and development planning processes. Children as active agents are an important component in climate change adaptation and disaster risk reduction processes, and existing

adaptation policies, guidelines and strategies in Bangladesh should be continuously reviewed to ensure that children are visible, that their rights are being respected, and that the root causes of girls' and boys' vulnerability are being addressed.

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