



Climate Change and Its Impacts on Tribal Culture of Assam, North East India

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Abstract

Climate change is a global phenomenon throughout the world that has significant challenges to the environment and societies, with tremendous consequences for vulnerable communities of India, particularly indigenous tribes of North-east India. The complex link between environmental change and its effects on the tribal culture of Assam, a state in northeastern India, is explored in this abstract. Tribal people in Assam have an extensive heritage of culture tightly linked with the natural world, rendering them particularly vulnerable to the disturbances brought on by shifting climate trends. The research explores the many facets of Assam's climate change. It explores how it may affect several factors of tribal culture, such as traditional means of subsistence, cultural practices, social systems, and religious practices. Tribal agricultural practices are disrupted by changing patterns of rainfall, increasing temperatures, and an increase in adverse weather conditions, which causes a shortage of food and water. The study emphasizes how climate-related occurrences are forcing tribal communities to move, which is eroding their traditional lands, community cohesiveness, and distinctive identities. Tribal populations frequently experience pressure to merge into mainstream culture as a result of challenges to their livelihood, which puts the safeguarding of their distinctive cultural legacy at risk. This abstract highlights the urgent requirement for comprehensive policies that incorporate local knowledge, community involvement, and scientific know-how to address the interdependent issues of climate change and the safeguarding of tribal culture in Assam and other comparable regions of India. In the face of climate change, collective efforts that enable tribal people to adapt while respecting their distinctive history can help to create a more sustainable and culturally varied future.

Keywords: Climate change, tribal culture, North East India, indigenous communities, adaptation, cultural heritage, traditional livelihoods.

Introduction

Climate change stands as one of the most significant global challenges confronting humanity in the present era. This introduction explores the complex relationship between climate change and its significant effects on Assam's tribal traditions, a fascinating and biologically varied area in North East India. Climate change, a phenomenon mostly fueled by human activity, has been recognized as one of the most critical global problems of our time, endangering the basic foundation of humanity and upsetting ecosystems and weather patterns. Indigenous tribes are especially susceptible among the many populations feeling the effects of climate change because of their reliance on and complex relationships with nature.

Assam has been known for its beautiful landscapes, productive plains, and dynamic tribal people. Throughout its history, the state has been distinguished by a peaceful cohabitation of environment and culture. The state is home to a large number of indigenous communities, each of which has its own unique language, customs and history. Together, these groups form a cultural mosaic that represents the region's rich variety. Agricultural, fishing and forest-based economies are just a few examples of how these tribal civilizations have survived for millennia while also cultivating a spiritual bond with the area they call home.

However, this equilibrium faces a never-before-seen threat from the changing climatic dynamics. The ecological equilibrium that these indigenous groups have long relied on is changing as a result of rising temperatures, irregular rainfall patterns, and other climate changes. The effects are extensive, going beyond simple environmental changes and having a significant influence on the very foundation of tribal communities. This transition threatens cultural traditions, societal cohesiveness, and the maintenance of indigenous knowledge systems in addition to upsetting livelihoods. We aim to contribute to a deeper comprehension of the complex interactions between Assamese tribal cultures and climate change through a thorough analysis of these problems, while also highlighting the urgent need for inclusive as well as culturally responsive strategies to address this urgent global issue.

The issue is mostly caused by the tribal cultures of Assam being particularly susceptible to the effects of climate change. These groups of people, which are closely entwined with their surroundings, rely on age-old customs and knowledge to support their way of life and protect their unique identities. The delicate balance that has permitted the coexistence of tribal cultures and their natural environment is in danger due to the changing climate dynamics,

which are marked by rising temperatures, unpredictable rainfall, and a rise in extreme weather events.

How is Climate Change Impacting Culture of Tribes in North East India?

Climate change represents a significant menace to cultural preservation in the contemporary world. Across various regions worldwide, properties designated as World Heritage sites are currently grappling with the repercussions of climate change – ranging from escalating wildfires to floods, droughts, desertification, and ocean acidification. The displacement of communities due to climate change poses a substantial risk to entire ways of life, including the continuation and transmission of living heritage. Oral traditions, performing arts, social customs, celebratory occasions, and indigenous knowledge, which encompass vital environmental insights, are all susceptible to the impacts of climate change.

Furthermore, climate change is also contributing to missed economic prospects within the realms of cultural and creative industries, as well as cultural tourism. Ultimately, climate change is disrupting the daily lives of communities globally, significantly curtailing their capacity to engage with and benefit from their cultural heritage.

Why is Cultural aspects Important for Addressing Climate Change?

Culture presents a potent asset in addressing the consequences of climate change. Sites of natural heritage play a pivotal role as crucial "sinks" for greenhouse gas emissions, while also serving as vital safeguards for biodiversity preservation. Intangible cultural heritage practices have demonstrated their remarkable efficacy in aiding communities to prepare for, manage, and recover from the repercussions and crises linked to climate change. These practices encompass the transmission of traditional methods for ensuring food security and insights into shifting weather patterns, along with the utilization of time-tested architectural techniques that can withstand natural calamities. Moreover, cultural heritage locations can function as havens—both physically and emotionally—for neighbouring communities in times of emergencies and during their aftermath.

Culture becomes intertwined with the prevailing methods of production, consumption, ways of life, and social structures that contribute to the emission of greenhouse gases. The implications of these emissions, leading to the effects of climate change, acquire significance through cultural interpretations of scientific findings and risk assessment. Equally, culture remains pivotal in comprehending and executing adaptive measures: the recognition of risks,

choices concerning reactions, and methods of implementation all undergo cultural mediation. Cultures exhibit a dynamic and reflexive nature, thus being influenced by the concept of climate change in return. Consequently, culture, along with its examination, emerges as a central aspect in comprehending the origins and significance of climate change, as well as human reactions to it.

Culture and Climate Change in Assam, North East and India

According to the IPCC, a change in the current condition of the climate is referred to as climate change if it can be determined (e.g., using statistical tests) by changes in the mean and/or variability of its attributes and if the change lasts for a significant amount of time, often decades or more. It describes any climatic change over time, whether it is brought on by human activity or natural variability (IPCC, 2007). The United Nations Framework Convention on Climate Change (UNFCCC) uses the term "climate change" differently than this, referring to a change in the climate that can be directly or indirectly linked to human activity that modifies the composition of the earth's atmosphere in addition to natural climate variability seen over comparable time periods.

With almost 300 incidents reported in the last 100 years, Africa has experienced severe drought more frequently than any other continent and subcontinent, representing 44 percent of the global total. Sub-Saharan Africa has recently seen the catastrophic effects of climatic incidents increasing in frequency and intensity. Drought harmed more than 1.4 billion people between 2000 and 2019 (Taylor et al., 2017; Guha-Sapir, D. et al., 2021).

More than 66 million people in South-East Asia have been impacted by droughts during the past 30 years. After storms (44%) and floods (17%), this represents 17 percent of all residents in the area who are impacted by natural hazards (34 percent). This may be conservative, though, as many drought-related occurrences go unreported. Drought has most severely afflicted Thailand, then Cambodia, the Philippines, and Vietnam. More than 4.8 million people in the southern portion of the ASEAN area were impacted by drought in the third quarter of 2018 alone according to monitoring reports from the ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management. Every farmer in Central Thailand lost 60 percent of their agricultural yield due to drought in 2016. While the effects of drought on employment in the agriculture industry across all ASEAN nations have yet to be defined (United Nations, 2020).

There have been extensive drought conditions in Asian nations like India and China. Global warming has been blamed for the recent rise in the frequency and severity of extreme weather events such as droughts, floods, heat waves, cyclones, delayed or early rain, frequent dry spells, etc. As drought conditions persist for several seasons and years, their effects soon spread to another agricultural sector in many countries, especially those with more complicated economies. Droughts have a substantial influence on transportation, recreation and tourism, the energy industry, forest fires, and the environment in Asia, harming plant and animal species and worsening soil erosion. (National Disaster Management Authority, Government of India, 2010).

In India, there were 1141 significant forest fires between April 3 and April 11 of 2022, which is just nine days. However, this issue has grown in significance. April has seen a lot of forest fires in India due to a shortage of water vapour in the atmosphere. Delhi in 2022 saw a 44°C April. According to a survey on climate change done by the Overseas Development Institutes on June 8, 2022, climate change would cause India's GDP to fall by 3% to 10% by the end of the century. The survey predicts a 3.5% increase in India's poverty rate. This indicates that by 2040, 7 of the core population will experience new poverty (Down To Earth, 2022).

In the month of October and November of 2021, United Nations Climate Change Summit was organized in the United Kingdom. This conference was also named COP26. In 2020 Just a report from the United Nations special agency World Meteorological Organization i.e. WMO came. In this report, WMO said that India suffered a loss of \$87 billion (about Rs 645 billion) due to natural disasters. 2020 jointly set records as the warmest year. The Earth warmed by 1.39 degrees Celsius in the year 2022. India is in second position in terms of losses. Not only this, in 2020 itself three cyclones including Amphan, the most powerful cyclone in the Bay of Bengal, hit India. 2020 was also the year when locusts from Africa invaded the fields. 2020 was also the year when one-third of India's districts, or about 250 districts, experienced drought or recorded severe rainfall deficit while the same number of districts received much more rainfall than normal (Down To Earth, 2022).

Tribal communities in the northeastern region of India are currently grappling with shifting monsoon patterns that are leading to changes in their traditional cultivation methods and age-old economic practices. These changes are pushing them towards adopting new financial systems. Similarly, in Andhra Pradesh and Telangana, irregular rainfall patterns are disrupting the established agricultural cycles of local communities, which in turn are impacting their economic decision-making and behaviors. In central India, where tribal

economies heavily depend on agriculture and forestry resources, the effects of climate change are exacerbating vulnerabilities in terms of transactional risks. A comprehensive study conducted by the authors, involving specialists with relevant expertise, focused on examining transactional risks and adaptive strategies among indigenous communities in select districts of Odisha, Jharkhand, and Maharashtra states in India. This research effort has yielded valuable insights and lessons. An endeavor to analyze temperature and rainfall data spanning a century was undertaken in order to identify the discernible impacts of climate change and its potential consequences. Although monthly temperatures, when averaged over a century, appeared relatively consistent, a distinct upward trend of 0.5 to 1 degree Celsius was observed in November and December temperatures across all surveyed districts. Furthermore, a detailed assessment revealed notable shifts in rainfall patterns in most districts, particularly during October and November, with a heightened occurrence of precipitation. (Arvind Kumar Jha, 2023).

Different districts of Assam are experiencing unexpected and longer dry spells (Down To Earth 2021). The Hindu News Paper published a report on September 17, 2022, which is based on Assam government data presented by Keshab Mahanta minister of Information, Science and Technology Assam in the legislative assembly on climate change that out of 25 districts most vulnerable to climate change in India, 15 districts of India were in Assam. And of these 15 districts of Assam, Karimganj district was the most climate vulnerable in India followed by Golaghat, Goalpara, Dhubri, Darrang, Sonitpur, Cachar, Barpeta, Kokrajhar, Tinisukia, Baksa, Morigaon, Dibrugarh, Sivasagar and Hilakandi district.

In 2021 Down to Earth published an article on the Climate crisis in North East India: Assam's Golaghat hasn't had a normal monsoon in 30 years in which the Golaghat district of Assam, overall precipitation and rainy days have dropped, while severe rainfall days have increased. These patterns have not been seen elsewhere in the state. The pattern of rainfall in North East India has changed: while the deficit of precipitation has reached an all-time high, unexpected floods are becoming more frequent.

Assam has been historically susceptible to the wrath of natural forces for countless generations. Positioned within seismic zone V, the state is particularly vulnerable to experiencing earthquakes of moderate to high intensity. Almost every year, the region contends with flooding, a recurring phenomenon. Following India's independence, the years 1954, 1962, 1972, 1977, 1984, 1988, 1998, 2002, 2004, 2012, 2019, 2020, and 2022 have all witnessed devastating floods inflicting widespread destruction and chaos (Chandan Sarma,

2023). Over the past twenty years, the frequency of these occurrences has surged, resulting in an annual financial toll of over INR 200 crore due to these calamities.

In 2022, Assam experienced a distressing initial bout of flooding caused by substantial pre-monsoon rainfall in May, leading to the loss of numerous lives. Further, an extraordinary hailstorm blanketed the town of Moran in the upper Assam region with white sheets in December of the same year. The state now witnesses unusual scorching summers and abbreviated winters as a prevailing pattern. An additional unprecedented shift is the erratic nature of weather within a single monsoon season. Rapid and intense bursts of rainfall induce varying degrees of flooding in different geographic areas of the state. These occurrences are then followed by prolonged dry spells, creating a situation akin to drought. These extreme variations can be attributed to a broader global phenomenon - climate change. Climate change projections for the state indicate that by 2050, there is an expected temperature rise of approximately 2 degrees Celsius. Alongside this, instances of heavy rainfall are anticipated to increase by more than 35% compared to the reference period of 1971-2000. Conversely, periods of drought are projected to rise by 75% using the same baseline (Chandan Sarma, 2023).

These extreme fluctuations in temperature and precipitation, coupled with the emergence of new pests and diseases, are likely to result in decreased productivity of food crops in a predominantly rural state. Additionally, yields of cash crops like tea, fish, milk, and bamboo may also be affected. Given that less than 30% of the state's area is equipped with assured irrigation, prolonged dry spells due to climate change could lead to various consequences, including food insecurity and the potential for migration driven by distress.

During this timeframe, industrial activities have seen remarkable growth, largely driven by the combustion of fossil fuels such as oil, gas, and coal. These activities release greenhouse gases like carbon dioxide, methane, and nitrous oxide into the atmosphere. These human-induced greenhouse gases act as an increasing layer of insulation, trapping the sun's heat and contributing to climate change (Chandan Sarma, 2023). In terms of quantifiable impact, the global average temperature has risen by about 1 degree Celsius since 1880. Over the last fifty years, the rate of increase has averaged around 0.15 to 0.20 degrees Celsius per decade.

The often-cited "1.5 degrees target" involves limiting the temperature increase to 1.5 degrees Celsius above pre-industrial levels, which were around 13.8 degrees Celsius in 1880. In 2022, the average temperature was measured at 14.76 degrees Celsius. In essence, we are

transitioning from a state of being "comfortably habitable" below 14 degrees Celsius to a condition of being "less comfortably habitable" above 15 degrees Celsius. The impact is not limited to only severe droughts in parts of Africa, recent intense wildfires across Europe, increased occurrences of floods and dry spells in Northeast India, or even the harsh cold storms experienced in the United States. The causes of climate change in Assam are a combination of external and internal factors. The state's dire climate crisis is directly influenced by greenhouse gas emissions originating from global human activities. Simultaneously, there is a significant local contribution that exacerbates the situation. Despite more than 30% of the state being covered in forests, Assam has lost over 2600 square kilometers of tree cover in the past twenty years – an area twice the size of Delhi. Alongside this alarming deforestation, other major contributing sectors include agriculture, particularly the rapid shift to inorganic farming, construction, and industrial activities. Addressing this new reality, climate change falls into the category of what can be termed a "wicked problem." The 'State Action Plan on Climate Change' is a positive initial step, but it requires further elaboration in terms of actionable steps and grassroots engagement. It is crucial to approach the issue from three angles: awareness, adaptation, and mitigation. Climate change, its repercussions, and methods to reduce individual carbon footprints should be integrated into the school curriculum, accompanied by an extensive awareness campaign in the state, potentially modeled after the successful Swachh Bharat Mission. Regarding adaptation, bolstering embankments along both the Brahmaputra and Barak rivers becomes a critical priority. Given its predominantly rural nature, enhancing irrigation infrastructure and providing support to small landholders would significantly reduce their vulnerability to the impacts of climate change. Promoting crop diversity and transitioning away from sole reliance on paddy cultivation can help mitigate the challenges posed by variable weather within the same season. To counter ongoing deforestation, implementing large-scale plantations of indigenous species and subsidizing low-carbon footprint agricultural practices can play pivotal roles in mitigation efforts. UN Secretary-General Antonio Guterres recently cautioned that at the current pace, Earth could become an inhospitable place to live, with a "yawning gap between climate pledges and the reality" of governments worldwide. Given its vulnerability and urgency, Assam could potentially be among the frontrunners in establishing a long-term goal and taking tangible actions to address this existential crisis (Chandan Sarma, 2023).

Each and every societal and cultural property and resource are suffering from the effects of droughts, floods and desertification. The marginal communities are getting threats byways of

life, oral traditions, social practices, festive events, and traditional knowledge about the environment. Drought is also contributing to the loss of economic opportunities in the cultural sphere. Local cultural practices are highly effective tools for helping communities to respond and recover from climate change-related impacts and emergencies. Each and every community has their own traditional food security strategies and knowledge about changes in weather patterns. Therefore, a critical understanding of the fundamental relationship between culture and drought is very much important today.

Climate change will have an impact not solely on our economies, but also on aspects such as health, safety, food production, security, and other facets. To offer a remedy, it will be imperative to engage in cross-cultural communication. Individuals hailing from diverse countries and backgrounds must share their thoughts and viewpoints on addressing this issue. The cultural distinctions among these individuals affect both the substance of their communication and the manner in which it is conveyed (Shadid, 2007). Kramer (2013) suggests that viewing climate change through the lens of social justice, rather than solely as a scientific issue, is crucial. This perspective acknowledges that those disproportionately impacted by climate change are often not responsible for its causes. Hence, understanding the sociological dynamics of global inequality, especially within specific settings in developing nations, becomes imperative.

In numerous indigenous societies, culture and the sense of cultural identity arise from the landscape and are rooted in reciprocal relationships with animals, plants, fungi, and ecosystems (Anderson 2005, Whyte 2013, and Wildcat 2009). The displacement from a specific location leads to the forfeiture of both traditional lifestyles and the entitlement to collective self-determination. This loss of traditional lifestyles transpires when shifts in the environment undermine the sustainability of cultural practices and, consequently, cultural identity (Maynard 2014, Wildcat 2009).

Culture assumes a pivotal role in shaping humanity's response to climate change. The repercussions of climate change extend to cultural facets of existence and sustenance, encompassing tangible and experiential aspects of culture, identity, the bond within communities, and the attachment to specific locations. Significant cultural dimensions underlie the ways societies address and adjust to risks associated with climate. Culture acts as a mediator between shifts in the environment and shifts within societies (Adger, W. Neil; et al, 2013).

Creativity emerges as an indispensable asset in devising innovative approaches to environmental challenges. Artists and creators assume a substantial role in igniting climate action through their capacity to inspire and mobilize. Culture serves as a valuable reservoir for climate adaptation, as cultural heritage, natural heritage, and traditional wisdom collectively bolster the resilience of communities in addressing climate change effects, spanning from severe weather events to natural disasters and conflicts. Intangible cultural heritage practices emerge as potent instruments in assisting communities to adapt to the evolving climate. Cultural and natural heritage sites stand as sanctuaries, providing solace and support for communities both during and following climate-related crises. The role of creativity is indispensable in the pursuit of fresh solutions to environmental predicaments (Mearns, Robin and Andrew Norton, 2010).

The impact of human-induced climate change is widely recognized as endangering the future resilience of societies and communities across the globe. The origins and repercussions of climate change are intricately interwoven with global disparities. Climate change operates as an amplifier of preexisting vulnerabilities in a world undergoing warming and transformation. It poses a risk of undoing the progress made in alleviating poverty and advancing toward the Millennium Development Goals, which have already been attained (UNDP 2007). The repercussions stemming from storms, droughts, and gradual climate shifts are influenced by the societal, political, and economic susceptibilities of individuals and communities on a local level. The ramifications linked to climate change disproportionately affect impoverished populations, leading to heightened susceptibility to the loss of livelihoods and assets, displacement, as well as increased levels of hunger and famine in the face of altering climate conditions.

The strains imposed by climate-related pressures propel these communities beyond an already precarious threshold, subjecting them to insecurity and destitution that infringe upon their fundamental human rights (ICHRP 2008; Moser and Norton 2001). Droughts lead to diminished welfare, economic setbacks, famine, hunger, loss of livelihoods, and displacement. Within households reliant on agriculture, land stands as the paramount productive resource (World Bank 2007).

While the general effects of climate change on environments and communities have received a lot of focus, there is still a crucial study vacuum regarding the complex and context-dependent relationships between climate change and the unique tribal cultures of Assam, North East India. The existing study frequently ignores the significant and distinctive effects

on the social and cultural fabric of indigenous groups in this area, focusing instead exclusively on the ecological effects of climate change and broader socioeconomic implications. Closing this gap can help us understand aboriginal people's problems more deeply, shed light on their adaptation tactics, and help us make policy suggestions that protect both their cultural legacy and adaptability in the face of climatic changes.

Objectives of the Study

The primary objective of the article is to thoroughly examine the multifaceted connection between climate change and its effects on Assamese tribal culture. Secondly, to examine the precise ways in which Assamese indigenous tribal people's traditional livelihoods, rituals, and social dynamics are impacted by changing climate patterns.

Material and Methods

To comprehend the issue, the study has employed both primary and secondary data. For the primary data, 50 in-depth interviews with important informants, such as tribal elders, people associated with culture, traditional healers, and locals, were undertaken. These interviews have gathered in-depth information about tribal communities' cultural customs, historical viewpoints, and reactions to the effects of climate change. 20 focus groups with tribal inhabitants have been arranged to examine common views, values, and group reactions to climate change. These conversations have given participants a forum to express their opinions and have a conversation about how their cultural practices are evolving. The historical, ethnographic, and environmental aspects of the tribal groups have been contextualized by using secondary material that has been gathered from a variety of sources, including JSTOR, Research Gate, Google Scholar Platforms, and other websites. Climate information has been gathered from relevant databases, climate research groups, and meteorological authorities.

Results and Major Findings

Tribal culture is affected by climate change in a variety of ways, including:

Livelihood Disruption and Resource Scarcity:

The major information gathered through in-depth interviews and focus group discussions demonstrated a recurring pattern of disruptions to conventional livelihoods brought on by the

climate. The accessibility of forest products has diminished, agricultural yields have declined, and fishing grounds have changed as a result of changes in precipitation patterns and unexpected weather occurrences. Food and water shortage has resulted from this, causing serious problems for the survival of indigenous groups. The results highlight how traditional livelihoods are vulnerable to shifting climatic circumstances. Erratic weather patterns result in lower harvests, failed crops, and a shortage of natural resources, putting tribal people's socioeconomic stability in jeopardy.

Cultural Practices and Ritual Transformations:

Cultural activities, rituals, and festivals that are strongly linked to nature are disrupted by climate-induced changes. Ancient wisdom, sacred places, and cherished landscapes are all in jeopardy, which slowly erodes cultural assets and lessens the distinctive identities of ethnic communities. The investigation revealed significant changes in tribal societies' traditional ceremonies and customs. Respondents emphasized how shifting weather patterns led to changes in the time and kind of ceremonies. Extreme weather events have had an influence on sacred locations and natural monuments that have significant spiritual value, damaging the cultural and religious traditions linked with these locations. The results highlight the difficult trade-off between maintaining cultural assets and making adjustments to changes brought on by the environment.

Social Cohesion and Community Dynamics:

The study clarified tribal community social structures, particularly in light of compelled migration and environmental relocation as a result of climate-related calamities such as drought, flooding, and rising temperatures, which shatter tightly-knit communities and exacerbate socioeconomic inequality. Participants described how people in their community had to relocate because of drought, flooding and other climatic calamities. Such occurrences have caused societal systems to be upended, traditional regions to be lost, and a sense of separation from ancestral lands. The results draw attention to the potential difficulties that climate-induced movement may provide for preserving intergenerational knowledge transfer and community cohesiveness.

Spiritual Beliefs and Ecological Connections:

The study shed light on the severe effects of climate change on the natural environment and cultural connections that support tribal societies. The losses of beloved landscapes, holy

locations, and resources that are essential to rituals and beliefs have all raised concerns among the respondents.

Adaptation Dilemmas and Cultural Resilience:

According to this research, indigenous societies have used a variety of adaptive tactics to deal with the problems brought on by climate change. Participants discussed the adoption of sustainable resource management approaches, the use of climate-resilient crops, and the integration of current agricultural processes. Collaborations with both governmental and non-governmental groups were also mentioned as initiatives to improve adaptive skills. These results show how innovative and adaptable the tribes are, even as they struggle to strike a balance between modernization and cultural authenticity. External demands to conform to mainstream society make it difficult to strike this equilibrium, endangering the distinctive cultural legacy.

Conclusion

In conclusion, this study's results and findings show the complex and multifaceted effects of climate change on the tribal culture of Assam, North East India. Climate change and cultural customs coming together highlight the need for context-sensitive policy strategies and actions that enable tribal groups to adapt while preserving their unique cultural heritage. These results provide a basis for promoting sustainable solutions that promote cultural preservation and resilience in the face of changing climatic dynamics and deepen our awareness of the difficulties encountered by indigenous groups. In Assam's tribal groups, climate change caused by human activity has resulted in disruptions to conventional livelihoods, changes to cultural traditions and rituals, changes to interpersonal relationships, and difficulties to spiritual beliefs. As they deal with water and sustenance shortages, forced relocation, and the degradation of holy places crucial to their way of life, these communities' fragility is obvious.

The tenacity of these tribes is at the core of this complicated problem. They demonstrate their ability to respond to hardship while preserving their cultural integrity by combining modern techniques with conventional knowledge, working with outside partners, and adopting creative ideas. These tactics, however, also highlight the fine line they must walk in order to protect their distinctive legacy in the face of a rapidly changing environment. We can ensure that the diverse tribal cultures of Assam, North East India, remain and develop, even in the face of environmental problems, by creating a symbiotic link between climatic vulnerability and cultural preservation.

Policymakers should develop and put into practice adaptation methods that are inclusive of all ethnic groups, taking into account the special link between Assamese tribal culture and climate change. To ensure that interventions are in line with their cultural understanding, traditions, and goals, involve tribal people directly in the design and decision-making processes. These initiatives can successfully address climatic concerns while honouring and protecting the cultural legacy of these ethnic groups by including indigenous viewpoints into policy design.

Create and support community-based resilience to climate change initiatives that provide indigenous people with the tools they need to proactively adjust to altering climate circumstances. Enhancing conventional methods, adopting climate-resilient agricultural practices, and encouraging environmentally friendly resource management should be the main objectives of these projects. Additionally, these programs ought to promote intergenerational knowledge transfer, guaranteeing that priceless cultural information is transmitted to future generations, and promote conservation efforts in addition to cultural continuity.

Organize projects to capture and protect the diverse cultural customs and traditions of the indigenous tribes of Assam. Create cultural hubs, online repositories, and educational initiatives that honour indigenous heritage and increase public understanding of the effects of climate change. These initiatives may boost cultural pride and revitalization while also providing forums for exchanging adaptable techniques and encouraging communication between indigenous groups, academics, and decision-makers.

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