

CLIMATE CHANGE AND INTERNAL DISPLACEMENT IN KERALA: A GROWING CRISIS

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"Climate change is a terrible problem, and it absolutely needs to be solved. It deserves to be a huge priority."

– Bill Gates

Abstract

Kerala, renowned for its distinctive terrain and wildlife, is becoming increasingly exposed to the effects of climate change, such as rising sea levels, frequent floods, and landslides. These trends have caused substantial internal displacement, posing social, economic, and health issues for impacted communities. This article investigates the causes and implications of climate-induced displacement in Kerala, focusing on the role of governance, legal frameworks, and sustainable development. Through case studies and legal research, it reveals inadequacies in disaster management and environmental protection, calling for a holistic approach to resilience-building and human rights protection. Addressing this developing catastrophe will need community involvement, legislative reforms, and international cooperation to limit the effects of climate change and secure sustainable futures for vulnerable people.

Keywords: Kerala, Climate change, Rising sea levels, Landslide, Internal displacement, Climate-induced displacement, Legal frameworks

Introduction

Kerala, known for its beautiful landscapes, distinct terrain, and rich wildlife, is now facing the effects of climate change. Over the last decade, the state has seen an increase in extreme weather occurrences, such as rising sea levels, repeated floods, and destructive landslides. These events have not only caused severe environmental harm in Kerala, but they have also displaced several households, resulting in massive internal displacement. This escalating catastrophe poses significant social, economic, and health concerns for impacted communities, revealing flaws in governance, emergency management, and legal systems. Despite Kerala's history of progressive policies, the state has significant gaps in tackling climate-induced displacement, with present efforts falling short of achieving long-term resilience and sustainability. As the effects of climate change worsen, the need for comprehensive policies that combine sustainable development, human rights protection, and community engagement has never been higher. This paper investigates the underlying causes of displacement in Kerala, considers the role of governance and legal systems,

and recommends for an inclusive, multi-stakeholder strategy to creating climate resilience and protecting vulnerable people's futures.

Climate Change and Kerala's Vulnerabilities

Kerala's geographical and demographic characteristics make it especially vulnerable to climate change. The state features a 590-kilometer coastline, a network of rivers and backwaters, and heavily inhabited cities and rural regions. Kerala, located between the Western Ghats and the Arabian Sea, has a distinct topographical and biological character. The state is a biodiversity hotspot, with monsoon-fed rivers, marshes, and lush terrain. However, Kerala's unique geography and closeness to the sea make it especially sensitive to the effects of climate change. Rising sea levels endanger its low-lying coastal areas, and irregular monsoon patterns have hampered conventional farming techniques and water resource management. Kerala is one of India's most climate-sensitive areas, owing to its simultaneous exposure to climatic and topographical threats. One of the most evident effects of climate change in Kerala is an increase in severe weather. Over the last decade, the state has seen a number of disastrous floods, particularly the devastating deluges of 2018 and 2019, which uprooted millions and caused significant economic damage. Landslides in the steep regions, caused by severe rainfall and deforestation, have exacerbated the situation, damaging infrastructure and killing people. These recurring disasters emphasize not just the immediate threats, but also the long-term problems of rebuilding and resilience in the face of climate change. These climatic extremes have far-reaching consequences for Kerala's social and economic fabric, in addition to causing environmental damage. Communities relying on agriculture and fishing, two crucial sectors of the state's economy, are facing decreasing livelihoods as a result of erratic weather patterns and deteriorating ecosystems. Internal displacement caused by frequent floods and landslides has resulted in housing difficulties, delayed schooling, and health issues, particularly among underprivileged communities. This relocation frequently leads to the breakdown of social cohesiveness, trapping vulnerable groups in cycles of poverty and instability.

Kerala's vulnerability is worsened by government weaknesses and ineffective disaster management mechanisms. While the state has made progress in adopting disaster preparedness measures, the scope and frequency of climate-related disasters have outpaced current systems. Poor implementation of environmental legislation, unplanned urbanization, and deforestation have exacerbated the hazards, resulting in a delicate balance between development and ecological sustainability. These concerns highlight the critical need for strong policies that include climate resilience into long-term planning. Addressing Kerala's climate vulnerabilities necessitates a multifaceted strategy that involves legislative changes, sustainable development, and community participation. Strengthening local government, implementing stronger environmental regulations, and investing in eco-friendly infrastructure can all help to prevent climate change. Equally crucial is the development of community-based adaptation techniques that draw on traditional knowledge while embracing modern solutions. Kerala can set the path for a sustainable future in the face of rising climate threats by focusing on resilience-building and equitable development.

Internal Displacement in Kerala

Kerala has been dealing with an alarming increase in internal displacement caused by climate related calamities. The state's geological characteristics, along with catastrophic weather occurrences like floods, landslides, and increasing sea levels, have displaced thousands of households. The devastating floods in 2018 and 2019 alone uprooted millions, with many losing their homes, livelihoods, and community ties. Displacement in Kerala is not restricted to rural or coastal areas; urban areas are also affected as a result of unplanned construction and poor drainage systems, demonstrating the crisis's widespread impact. The socioeconomic consequences of internal relocation in Kerala are significant. Displaced populations frequently experience home insecurity, loss of income, and restricted access to education and healthcare. Vulnerable populations, such as women, children, and disadvantaged communities, are disproportionately harmed because they face increased danger of exploitation and prejudice. Resettlement attempts have frequently gone short, with many people relocating to temporary shelters with limited services and infrastructure, exacerbating their problems and lowering their quality of life. Addressing internal displacement in Kerala necessitates a comprehensive and inclusive strategy. Beyond urgent relief efforts, it is necessary to address the underlying causes of migration by including climate resilience into planning and development plans. Critical efforts include improving disaster preparedness, enforcing environmental laws, and including displaced people in decision-making processes. Furthermore, promoting collaboration among governments, civil society, and international organizations may increase resources and knowledge for mitigating the effects of displacement and creating sustainable futures for impacted communities.

Legal and Policy Framework

India lacks a dedicated legal framework for addressing internal displacement caused by climate change. However, several laws and policies indirectly address the issue:

- i. **Disaster Management Act, 2005:** Provides the framework for disaster preparedness and response but lacks specific provisions for climate-induced displacement.
- ii. **Environment Protection Act, 1986:** Aims to safeguard the environment but has limited enforcement mechanisms.
- iii. **Forest Rights Act, 2006:** Protects the rights of tribal communities, often the most affected by displacement.

In Kerala, the government has launched schemes like the Rebuild Kerala Development Programme (RKDP) to address post-disaster rehabilitation. The Rebuild Kerala Development Programme (RKDP) is a bold project initiated in the aftermath of the terrible 2018 floods to rebuild and revitalize Kerala, with an emphasis on resilience and sustainability. The RKDP, spearheaded by the Kerala government, aims to remedy the massive devastation caused by the floods, which harmed infrastructure, livelihoods, and communities throughout the state. The initiative takes a holistic strategy, stressing climate-resilient infrastructure, disaster preparedness, and ecological restoration to reduce the effects of future disasters. Sustainable development and governance reforms are critical components of the RKDP. The initiative incorporates climate adaption measures into urban design, agriculture, and water resource management to ensure long-term viability. It also stresses inclusive development by addressing the needs of vulnerable groups, such

as those uprooted by floods or hit by economic downturns. The RKDP seeks to build a strong foundation for risk reduction while encouraging environmentally friendly growth by combining current technology and traditional expertise. The RKDP emphasizes the significance of teamwork and resource mobilization. The initiative has received funding from national and international entities, notably the World Bank, to fund large-scale projects and provide technical knowledge. The RKDP prioritizes community participation, including attempts to incorporate local stakeholders in decision-making and implementation procedures. By promoting partnerships and stressing resilience, the RKDP hopes to convert Kerala into a model of long-term recovery and climate adaptation, paving the path for a safe and prosperous future for its citizens.

Climate-Induced Displacement in Kerala: Social and Economic Impacts

Climate-induced relocation in Kerala has far-reaching societal consequences, impacting the lives of many individuals and groups. Displacement separates families from their homes, cutting links to their communities, cultural heritage, and support networks. Communities that rely on localized social networks for mutual help and collaboration confront major hurdles in re-establishing trust and cohesiveness in new settings. Vulnerable populations, including as women, children, and the elderly, are disproportionately affected, with limited access to education, healthcare, and safety in overcrowded or under-equipped shelters. The psychological toll of relocation, which includes stress, worry, and trauma, exacerbates impacted persons' social issues. Economically, displacement causes long-term damage to livelihoods and productivity. Agricultural workers and fishermen, who rely on stable ecosystems and regular weather patterns, are facing fewer earning prospects as farmlands are damaged and fish populations decline. The loss of houses, possessions, and savings exacerbates many people' financial instability, driving them into debt cycles. Displaced families usually struggle to find permanent jobs in new communities, resulting in underemployment or dependency on informal labour. This economic uncertainty impacts not just individual households, but also local economies, impeding overall growth and recovery efforts. The widespread social and economic consequences of relocation necessitate broad and coordinated responses. These issues can be mitigated by improving catastrophe preparedness and recovery systems, such as resilient housing and livelihood support programs. Additionally, targeted measures to safeguard vulnerable populations and guarantee fair access to resources are required. Policies that foster long-term recovery and economic participation, along with community-based measures, can assist displaced communities in regaining stability while also contributing to Kerala's overall objective of sustainable development.

Gendered Impacts of Displacement in Kerala

Displacement caused by climate-related disasters in Kerala has disproportionately affected women, underscoring the gendered nature of such crises. Women are frequently vulnerable before and after relocation as a result of pre-existing social, cultural, and economic disparities. In temporary shelters and relief camps, they typically face insufficient privacy, poor sanitary facilities, and an increased risk of gender-based violence. The disintegration of social networks and support systems further isolates women, compounding their difficulties in obtaining healthcare, education, and protection for themselves and their children. Economically, relocation increases the strain on women, who frequently have the simultaneous obligation of managing

domestic tasks and contributing to household income in uncertain situations. Many women in Kerala rely on small-scale agriculture, fishing, or informal work, all of which are strongly impacted by climate changes. The loss of livelihoods and assets leads women to negotiate perilous financial conditions, frequently with little institutional assistance or resources to re-establish economic independence. This economic marginalization hinders their ability to participate in decision-making processes and perpetuates poverty cycles. Addressing the gendered implications of relocation in Kerala necessitates a targeted and inclusive strategy.

Relief and rehabilitation initiatives must address women's specific needs, including access to gender-sensitive facilities, healthcare, and legal safeguards. Capacity-building efforts that empower women by providing skill development and employment opportunities are critical for creating resilience and recovery. Furthermore, incorporating women's views into planning and decision-making processes might improve disaster management techniques by supporting fair and long-term solutions to displacement concerns.

Sustainable Solutions: Climate Change and Internal Displacement in Kerala

Addressing climate change and the accompanying internal displacement in Kerala necessitates a move toward sustainable and long-term solutions that incorporate ecological, social, and economic resilience. Strengthening climate-resilient infrastructure is an important step toward mitigating the effects of extreme weather occurrences. This involves building flood-resistant houses, improving drainage systems, and restoring natural ecosystems such as mangroves and wetlands, which serve as natural barriers to flooding and increasing sea levels. Incorporating sustainable urban design and green technology assures that development efforts do not worsen existing weaknesses. Community engagement is essential for long-term solutions because it develops ownership and ensures that initiatives are contextually appropriate. Empowering communities via awareness campaigns, skill development, and resource availability can help them adapt more effectively. Traditional ecological knowledge, when integrated with current scientific methodologies, can lead to creative catastrophe preparedness and recovery strategies. Supporting climate-resilient livelihoods, such as sustainable agricultural techniques and environmentally friendly companies, can also help to mitigate the economic effects of displacement and promote long-term stability.

Policy changes and multi-stakeholder engagement are critical for establishing long-term solutions. The government must impose tighter environmental rules to avoid deforestation, uncontrolled development, and resource overexploitation, all of which worsen climate risk. Climate resilience is integrated into governance frameworks and catastrophe management strategies, ensuring a proactive rather than reactive response to disasters. Partnerships with international organizations, non-governmental organizations (NGOs), and academic institutions can also provide knowledge, financing, and new practices. By focusing on sustainability, inclusion, and resilience, Kerala can successfully confront the issues of climate change and internal displacement, paving the way for a safe and sustainable future for its people.

Conclusion

Kerala is at a critical juncture, with the growing effects of climate change necessitating immediate and persistent action. Recurring floods, landslides, and rising sea levels have revealed the state's weaknesses, displacing people and testing its social, economic, and environmental resilience.

These crises highlight the critical need for comprehensive solutions that address not just the immediate repercussions of displacement, but also the underlying causes via sustainable development and good governance. Building a resilient future for Kerala necessitates a multifaceted strategy that includes climate-resistant infrastructure, community-based adaptation initiatives, and inclusive policy changes. Empowering vulnerable groups, particularly women and disadvantaged communities, and include their viewpoints in decision-making processes are critical measures. By integrating traditional knowledge and contemporary technology, Kerala can create creative solutions that improve its adaptive ability while conserving its distinct biological legacy. Resolving the problem of climate-induced displacement entails more than just repairing houses; it is also about protecting lives, livelihoods, and dignity. Kerala has the potential to turn this catastrophe into an opportunity for long-term prosperity and resilience if governments, civil society, and foreign partners work together. The lessons acquired here have the potential to inspire similar projects throughout the world, emphasizing the significance of proactive, inclusive, and long-term solutions to the mounting challenges of climate change.

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