

## Assessing the Impact of Climate Change on Biodiversity Hotspots: A Multidisciplinary Study

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**Abstract :** Climate change poses a pressing global challenge, with far-reaching consequences for the planet's ecosystems and biodiversity. This abstract introduces the research topic, "Assessing the Impact of Climate Change on Biodiversity Hotspots: A Multidisciplinary Study," which delves into the intricate relationship between climate change and biodiversity in the world's most ecologically diverse regions. Biodiversity hotspots, characterized by their exceptionally high species richness and endemism, are under increasing threat due to rising global temperatures, altered precipitation patterns, and other climate-related factors. This research employs a multidisciplinary approach, incorporating ecological, climatological, and conservationist methodologies to comprehensively analyze the effects of climate change on these vital regions. Through a combination of field research, climate modelling, and ecological assessments, this study aims to elucidate the vulnerabilities of biodiversity hotspots and understand how changes in temperature and precipitation are affecting the diverse species and ecosystems that inhabit these areas. The research seeks to identify potential tipping points, assess the resilience of native species, and propose conservation strategies that can mitigate the adverse impacts of climate change on these critical regions. By illuminating the complex interplay between climate change and biodiversity hotspots, this research not only contributes to our scientific understanding of these issues but also informs policymakers, conservationists, and the public about the urgent need for coordinated efforts to safeguard our planet's ecological treasures. The outcomes of this multidisciplinary study are expected to play a pivotal role in shaping future climate policies and conservation practices, emphasizing the importance of protecting biodiversity hotspots for the well-being of the planet and future generations.

**Keywords :** climate change, biodiversity hotspots, ecological diversity, conservation, multidisciplinary study

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