

# **BUILDING ECOLOGICAL RESILIENCE TO MITIGATE CLIMATE CHANGE-INDUCED DISASTERS**

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**Abstract:** As the world continues to face the effects of climate change, the need to tackle the generated disasters has become almost urgent. Floods, and droughts are all results of climate change that have been causing irreparable damage to cascade systems, societies, ecosystems, and the economy. An alternative paradigm is needed to confront these challenges, one rooted in ecological resilience in climate change adaptation and disaster mitigation. Ecological resilience refers to the capacity of an ecosystem to endure and recover from disturbances, some caused by climate changes. The review study demonstrates that ecological resilience could be one of the crucial components in minimizing the dangers resulting from natural catastrophes and climate change. This study explores the main concepts of resilient ecosystems that provide services (flood/drought regulation, carbon sequestration, and biodiversity conservation) on disaster risk reduction. It presents successful cases of ecosystem-based management and resilience in multiple regions of the world, reducing disaster risk. The review study recognizes possibilities and constraints that include unsustainable land use practices, rapid urbanization, and uncoordinated legislation. It also highlights the significance of community engagement and government policies for promoting ecological resilience. Such international cooperation, as it was in the Paris Agreement is important because it creates an effective global context for climate activities. This article explores innovative strategies and technologies that can further enhance ecological resilience, offering hope for a more sustainable and resilient cascade systems. In conclusion, it highlights the need for prioritizing ecological resilience as an integral part of our response to climate change, urging collective action to safeguard our planet and its inhabitants from the growing threat of climate change-induced disasters.

**Keywords:** Cascade systems; Climate resilience; Disasters; Disaster risk reduction; Ecological resilience