A Multilevel Governance Analysis of Climate-Induced Disaster Risk and Environmental Resilience

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The global climate crisis currently necessitates an urgent, multidisciplinary analysis of environmental governance effectiveness in the face of escalating climate induced Present situation with disasters. This research explores the importance of protecting the environment as a fundamental prerequisite for socio economic stability and how does the lack of effective technological integration in environmental protection affects the harmonization of legal frameworks for mitigation and adaptation across local, national, and international levels. If we consider international level, we have conventions like the United Nations Framework Convention on Climate Change (UNFCCC), its call Kyoto Protocol, and the comprehensive Paris Agreement establish binding and non binding commitments for emissions reduction, climate finance, and capacity building. These International conventions objectives are same and common, but differentiated responsibilities and intergenerational equity. In the local context, Sri Lanka has legal landscape through the National Environmental Act (NEA) No. 47 of 1980 and subsequent amendments (No. 56 of 1988 and No. 53 of 2000), alongside the Fauna and Flora Protection Act. The primary objectives of this study are to evaluate the alignment between international mandates and Sri Lankan local acts and to identify the systemic gap in early-warning recognition when comparing with India. Current recent problems involve a reliance on historical meteorological data, which fails to account for non linear climatic shifts, leading to surprised responses to extreme weather. The research methodology employs a comparative and analytical qualitative approach, utilizing secondary data from legislative reviews, global climate indices, and recent case studies of Sri Lankan climate policy and the Indian policy of right to life. Findings indicate that while legal frameworks are robust, a critical gap exists in integrating predictive AI-driven modeling and real time sensor networks to recognize climate anomalies before they manifest as disasters. Solutions proposed include the adoption of "Climate Smart" legislative clauses that mandate predictive impact assessments. The implications of this study suggest that synchronizing local enforcement with high technology predictive solutions is vital for the resilience of island nations.

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