

Land Use Change in Sinharaja Forest: A Study Focusing on the Kalawanai Region

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Abstract

This study identifies land use changes in the Sinharaja Forest Reserve, located in the Kalawana Region of Sri Lanka (Irakkuwanai), a UNESCO World Heritage Site renowned for its biodiversity. The main objective of the study is to assess the extent, causes, and consequences of land use changes in the Sinharaja region over the past 10 years. Data have been obtained using a combination of remote sensing technologies, GIS analyses, secondary data, and field surveys to achieve the objectives of the study. The study examines land use changes in the study area due to population growth, the expansion of agricultural lands, and infrastructure construction under socio-economic factors, including the expansion of agricultural areas, transportation networks, waste management, deforestation, and increasing human settlements. The study concludes by highlighting how the loss of habitat, biodiversity loss, and deforestation are impacting sustainable development. It also emphasizes the critical need for coordinated action between government agencies, conservationists, and local stakeholders to mitigate the negative impacts of land use changes and preserve the ecological balance of the Sinharaja Forest Reserve.

Keywords: Sinharaja forest, land use, changes, impacts, agriculture, economy, population, buffer zone