

Restoring our landscapes: The use of Artificial Intelligence in curbing Global warming

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Global warming, fueled by fossil fuel combustion, deforestation, and industrial pollution, endangers ecosystems, notably the biodiverse Great Rift Valley. This study explores four Artificial Intelligence (AI) strategies to mitigate climate change through landscape restoration: (1) AI-optimized agroforestry, boosting yields by 20% in India while sequestering carbon; (2) Integrated landscape initiatives in Africa, using drones to restore 500,000 hectares; (3) AI-driven forest fire management, predicting wildfires 48 hours in advance; and (4) Smart Archive Models, enhancing climate data accessibility to inform restoration policies. These approaches reduce greenhouse gas emissions by 15–20%, protect biodiversity, and foster sustainable rural development. Based on a systematic review of 200+ studies, we urge policymakers to invest in AI-driven solutions to restore 10 million hectares by 2030, safeguarding regions like the Great Rift Valley.

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