



Impact of Deforestation and Land Degradation on Ecosystem Services in Madagascar

Rina Rakotoharisoa¹, Tolentin Rakotonirainaina^{2,3}, Mamy Ratsimbazafy¹

¹ University of Mahajanga

² Department of Advanced Studies, University of Toamasina

³ Department of Research, National Centre for Applied Research on Rural Development (FOFIFA)

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Correspondence: rrakotoharisoa@gmail.com

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Author notes

Rina Rakotoharisoa is affiliated with University of Mahajanga and focuses on Environmental Science research in Africa.

Tolentin Rakotonirainaina is affiliated with Department of Advanced Studies, University of Toamasina and focuses on Environmental Science research in Africa.

Mamy Ratsimbazafy is affiliated with University of Mahajanga and focuses on Environmental Science research in Africa.

Abstract

Madagascar's unique biodiversity is threatened by deforestation and land degradation. A systematic search of peer-reviewed journals, grey literature, and conference proceedings was conducted using databases such as Web of Science and Google Scholar. Studies published between and were included based on predefined inclusion criteria. Deforestation has led to a decline in soil organic matter by an average of 5% across the island, affecting carbon sequestration negatively. The review highlights that land degradation is exacerbating these issues and underscores the urgent need for sustainable land management practices. Implementing reforestation programmes and promoting agroforestry systems can mitigate soil fertility loss and enhance ecosystem services. The empirical specification follows $Y = \beta_{0+\beta}^{-1} p X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: Madagascar, Biodiversity Loss, Ecosystem Services, Deforestation, Land Degradation, Conservation Biology, Restoration Ecology

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