



Implementing Climate-Resilient Farming Techniques Among Smallholder Farmers in Malagasy Rice Fields: A Policy Analysis

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Abstract

Climate change poses significant challenges to agricultural productivity in Malagasy rice fields, particularly affecting smallholder farmers who are largely dependent on rain-fed agriculture. A mixed-methods approach was employed, including focus group discussions with local farmers, expert interviews, and a survey targeting over 100 farmers across different regions to assess their current agricultural practices and preferences for new technologies. The findings indicate that approximately 75% of smallholder farmers are open to adopting climate-resilient techniques such as drought-resistant crop varieties and improved irrigation systems. However, a majority (80%) face financial constraints in implementing these changes. Policy recommendations include subsidizing seed and fertilizer costs for innovative farming technologies, enhancing access to credit, and providing training on sustainable agricultural practices that can improve resilience against climate-induced shocks. Develop targeted incentives for farmers interested in adopting climate-resilient techniques. Strengthen financial support mechanisms such as microfinance schemes specifically tailored for smallholder rice farmers.

Keywords: *Geographical Indicators of Africa, Smallholder Agriculture, Climate Resilience, Integrated Pest Management, Sustainable Agricultural Practices, Participatory Rural Appraisal, Agroecology*

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