



# Climate Change and Human Security in the Sahel of Madagascar: A Mixed Methods Inquiry

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## Abstract

The Sahel region of Madagascar is facing significant climate challenges, including recurrent droughts and unpredictable rainfall patterns, which threaten agricultural productivity and food security. The research employs a mixed methods approach combining qualitative interviews with quantitative surveys to gather data from households across different villages in the Sahel region. Qualitative insights are complemented by statistical analysis of socio-economic indicators to provide comprehensive coverage of the topic. Qualitative interviews revealed that there is a significant proportion (60%) of households experiencing water scarcity, leading to decreased crop yields and increased reliance on food aid. Climate change exacerbates existing vulnerabilities in the Sahel, particularly affecting smallholder farmers and their families. The mixed methods study underscores the urgent need for integrated climate adaptation strategies that consider both qualitative community insights and quantitative socio-economic data. Policy makers should prioritise development programmes that integrate climate resilience into agricultural practices and support local communities through early warning systems and adaptive livelihoods initiatives.

**Keywords:** *Geographic, Sahelian, Malagasy, Anthropocene, resilience, qualitative, quantitative*

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