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A Case Study of Biomass Energy Utilisation and Sustainable Forestry in Malawi, 2014

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| Abstract

Malawi faces considerable energy security challenges, with heavy domestic reliance on biomass, primarily fuelwood and charcoal. This dependence places substantial pressure on forest resources, contributing to deforestation and land degradation. Balancing energy provision with sustainable forest management is therefore a critical national issue. This case study examines the interplay between biomass energy utilisation and forestry practices in Malawi. It aims to analyse the drivers of biomass demand, assess the sustainability of current woodfuel sourcing, and explore practices that could enhance the sustainability of the biomass energy sector. The study employed a qualitative, descriptive case study approach. Data were collected through a review of policy documents and published reports, supplemented by semi-structured interviews and focus group discussions with key stakeholders, including forestry officials, community representatives, and energy sector practitioners. A significant gap exists between woodfuel demand and sustainable supply, with consumption estimated to be several times the annual sustainable yield from forests. A key finding was the prevalence of informal, unsustainable charcoal production as a primary income source, which undermines forest management efforts. Community-based forest management was identified as a promising but inconsistently applied practice. The current trajectory of biomass energy use in Malawi is unsustainable and a major driver of forest

loss. Without integrated interventions, energy needs will continue to compromise forest ecosystems and their services. Recommendations include strengthening and scaling up participatory forest management, promoting improved cookstove technologies to increase efficiency, and developing policy frameworks that formally recognise and regulate the charcoal value chain to encourage sustainable practices. biomass energy, sustainable forestry, woodfuel, deforestation, Malawi, energy security This case study provides a focused analysis of the biomass-forestry nexus in Malawi, offering evidence-based insights for policymakers and practitioners seeking to reconcile energy needs with sustainable resource management.
