

Assessing the Prospects and Policy Frameworks for Genetically Modified Crops in São Tomé and Príncipe: An African Silvicultural Perspective

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| Abstract

The debate on genetically modified (GM) crops is significant in Africa, where food security is a pressing concern. São Tomé and Príncipe, as a small island developing state, offers a unique context due to the close interdependence of its agricultural systems and forest landscapes. This study assessed the prospects for GM crop adoption in São Tomé and Príncipe and critically analysed the existing and potential policy frameworks for agricultural biotechnology, with a focus on implications for integrated land use and forest-agriculture interfaces. A qualitative, policy-oriented research design was employed. Data were collected through a systematic review of national policy documents and legislation, supplemented by semi-structured interviews with key stakeholders from government, agricultural research institutions, farmer associations, and environmental non-governmental organisations. The policy environment is nascent and cautious. Policymakers predominantly favoured a precautionary approach, citing biosafety concerns and potential market effects. A majority of interviewed farmers expressed openness to GM technologies if they addressed specific crop pests, but stressed the need for strong regulatory oversight. Existing policies lack operational detail for GM crop evaluation and management. The prospect for GM crops in São Tomé and Príncipe is currently limited by an underdeveloped regulatory framework and capacity constraints. Successful integration would require

policies that explicitly consider the silvicultural context, including impacts on adjacent forest ecosystems and agroforestry practices. São Tomé and Príncipe should prioritise developing functional, transparent biosafety legislation and a regulatory authority. Capacity building in risk assessment and post-release monitoring is essential. Future policy must be informed by inclusive stakeholder dialogue and research into crop traits suited to local agro-silvicultural systems. agricultural biotechnology, biosafety policy, forest-agriculture interface, genetically modified organisms, integrated land use, São Tomé and Príncipe, silviculture, small island developing states. This research provides a foundational analysis of the GM crop debate within a specific African silvicultural context, offering evidence to inform the development of coherent biotechnology and land-use policy in São Tomé and Príncipe.
