



# Oil and Gas Extraction's Decadal Impact on Angola's Marine and Coastal Ecosystems

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## Abstract

Oil and gas extraction activities in Angola have significantly impacted coastal and marine ecosystems over the past few decades. The study employs a mixed-methods approach combining remote sensing data with ground-based surveys. A generalized linear model (GLM) is used to analyse the relationship between extraction activities and environmental indicators. Over the decade-long period studied, there was a statistically significant increase in oil spill frequency by  $p > 0.05$ , indicating an increasing risk of marine pollution. The research highlights the need for continued monitoring and regulation to mitigate ongoing ecological threats from oil and gas operations. Enhanced environmental impact assessments, stricter enforcement of regulations, and development of adaptive management strategies are recommended to protect Angola's coastal ecosystems. Oil extraction, Gas extraction, Marine ecosystem, Coastal degradation, Environmental impacts

**Keywords:** *Sub-Saharan, African, Ecosystems, Multiscale, RemoteSensing, CaseStudy, EnvironmentalImpact*

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