Digital Inclusion Through Blockchain-Enabled Customary Land Tenure: A Nigerian IGeocode Framework for Sustainable Land Administration Beyond 2030

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SUMMARY

Nigeria's customary land tenure system governs about 70% of the country's land, affecting more than 180 million people, yet much of this land remains invisible in formal administration. This invisibility fuels poverty, gender inequality, and exclusion from basic services, while also slowing progress toward the sustainable development goals. This paper presents a new framework that brings together blockchain technology and IGeocode a home-grown alphanumeric addressing system to support transparent, inclusive, and climate-resilient land administration for customary areas. IGeocode works by converting GPS coordinates into short, state-prefixed codes (for example, OD-7F9K2Q for Ondo State). In doing so, it creates "addresses for the addressless," giving rural households a digital presence that can be recognized by both communities and government. When combined with blockchain, these addresses link to records of customary land rights that are tamper-proof, transparent, and still respectful of traditional authority. The framework connects directly with key SDGs: reducing poverty by securing tenure (SDG 1), supporting gender equity in inheritance (SDG 5), lowering inequalities by including rural communities (SDG 10), and strengthening climate resilience through better land planning (SDG 13). Unlike most blockchain land projects, which focus on urban registries, this approach starts from the grassroots, recognizing customary systems as valid and building on them rather than replacing them. A proposed pilot in Ondo State shows possible gains: quicker government service delivery, fewer land disputes, stronger community trust, and improved resilience to climate change. The study also discusses real challenges such as cultural acceptance, digital literacy, and infrastructure, and suggests practical strategies to manage them. This research speaks directly to FIG's theme of "The Future We Want", showing how surveyors can use geospatial innovation to bridge traditional and modern systems and ensure no community is left behind in the digital future.