

BUILDING RESILIENT URBAN MOBILITY THROUGH THE ACCRA URBAN TRANSPORT PROJECT – THE POKUASE FOUR-TIER INTERCHANGE

ABSTRACT Ghana's capital, Accra relies on motorised road transport. Growing demand causes persistent congestion, unsafe travel, and flooding from intense rainstorms, reducing accessibility and requiring urgent strategic intervention.

The Accra Urban Transport Project (AUTP) Phase 1 represents a landmark effort by the Government of Ghana to modernise urban mobility, ease congestion, and enhance climate resilience within the Greater Accra Metropolitan Area. Supported by the African Development Bank, the project entailed the design and construction of the Pokuase Interchange—now Ghana's first and West Africa's only four-tier stack interchange—at the critical junction linking the Awoshie–Pokuase corridor and the Accra–Nsawam–Kumasi Highway.

A comprehensive Environmental and Social Impact Assessment (ESIA) guided project implementation, ensuring alignment with Ghana's Environmental Assessment Regulations (LI 1652, 1999 now LI 2504, 2025) and the African Development Bank's Integrated Safeguard System. The assessment established baseline biophysical and socio-economic conditions, identified potential impacts, and proposed context-specific mitigation and enhancement measures. During construction, short-term impacts such as dust generation, noise, traffic disruption, and vegetation loss were effectively managed through strict adherence to occupational safety, waste control, and environmental monitoring protocols.

The project's long-term outcomes include significant reductions in travel time and vehicle operating costs, improved road safety, and enhanced regional accessibility. Integrated complementary measures such as pedestrian and cyclist facilities, tree planting, road safety education, and community infrastructure development further reinforced social inclusion and environmental resilience.

The Pokuase Interchange demonstrates how multidisciplinary planning, environmental integration, and stakeholder participation can deliver transformative transport infrastructure within a rapidly urbanising context. By combining engineering excellence with sustainable environmental and social practices, the project sets a precedent for resilient transport systems that respond effectively to urban growth and climate variability in sub-Saharan Africa.

Keywords: resilient transport, four-tier interchange, urban mobility, environmental and social impact assessment, Ghana, sustainable infrastructure, climate resilience