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# Analysing advisory and innovation support services for enhancing sustainable innovation processes in Ghana and Senegal

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**Abstract**

In Sub-Saharan Africa, agricultural transformation aimed at sustainable land management faces significant obstacles due to underdeveloped advisory and innovation support systems amidst challenges such as climate vulnerability, environmental degradation and persistent high rural poverty. There is a need to strengthen innovation support services (ISS) to promote sustainable intensification (SI) approaches to improve livelihoods and food security in smallholder farming communities.

This study examines the role of pluralistic ISS on innovation processes in Northern Ghana (Tamale) and Northern Senegal (Podor) through the lens of service-based Agricultural Innovation Systems (AIS) frameworks. The study conceptualises innovation support as configurations of public, private, NGO, farmer-based, and informal providers offering seven types of ISS. The assessment of service performance is conducted on a three-dimensional basis where service effectiveness, service quality and providers' responsiveness are measured.

The research design is based on qualitative case studies of eight innovation service situations. The data was gathered in the form of focus group discussions with 81 farmers, interviews with 16 providers and 4 key experts, and a systematic literature review. Findings revealed that there are dense multi-actor ISS networks with research institutions, extension agents, NGOs, FBOs, and private actors jointly delivering ISS; however, service coverage remains uneven, strongly project-driven, and extremely sensitive to donor funding cycles. The Ghanaian farmers consistently rated ISS effectiveness as remarkably high; similarly, the Senegalese farmers were generally positive but with slightly varying ratings. Service quality scored markedly in both areas. Analysis across innovation phases also reveals a characteristic "responsiveness tapering" as providers are most present and proactive during initiation, moderately responsive during implementation, and only residually engaged during diffusion, leaving beneficiaries to self-organise.

This study recommends restructuring of ISS portfolios to be based on innovation levels and adoption of a services portfolio approach in policy formulation of AIS. Innovation Support Providers (ISPs) should explicitly integrate market access mechanisms, gender-sensitive strategies and sustainability considerations from the outset of support scheme designs. Collectively, these measures will strengthen the resilience and effectiveness of innovation support services in promotion of sustainable land management and food security in SSA.

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