



Tropentag, October 6-8, 2009, Hamburg

“Biophysical and Socio-economic Frame Conditions  
for the Sustainable Management  
of Natural Resources”

## Information Technology for Agriculture and Rural Development in Africa: Experiences from Kenya

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### Abstract

Access, efficiency and affordability of agricultural information continue to be a major impediment for raising agricultural productivity among smallholders in Africa. Recently information and communication technology (ICT) has provided a possible pathway to ameliorate this scenario. A variety of innovations that integrate ICTs into the dissemination of agricultural information to farmers (Farmers Information Services - FIS) have been developed at local, national and regional levels. They have currently demonstrated a promising field of new research and application in e-agriculture whilst bringing new sources of information and new tools for local knowledge dissemination. This paper reviews and discusses the role of ICT and its practical contributions to agriculture and rural development in Kenya. Data from various sources- Kenya's agricultural departments, ICT providers, NGOs and grey literature reviews were used. Results indicate use of ICTs especially mobile telephones is currently widespread in the rural areas of Kenya. Approximately one member of smallholder farming households own mobile phones. Extension service providers have harnessed this technology by putting it into profitable use in rural Kenya. For example, Kenya Agricultural Commodity Exchange (KACE) has developed a short messaging service- SMS SOKONI in partnership with Safaricom mobile phone provider. Any farmer anywhere in the country can access updated and reliable market information on prices and commodity offers at an affordable rate using their mobile phones. So far, the service is easy to use, reliable, convenient and affordable. The average monthly usage of this service increased from 1,273 in 2006 to 24,716 in 2008, demonstrating its subsequent usefulness and eagerness of farmers to explore the market information and linkage systems. Farmers are also able to access information on the right Hybrid Maize seeds to plant in their respective agro-ecological zones by way of texting to Kenya Seed Company Ltd a major seed distributor in East African region. This paper recommends adoption of such technologies by institutions such as Metrological Department to enhance provision of updated data on climate for appropriate decision making by agricultural farmers. This paper is critical to enhancing awareness on appropriate transferable technologies of 21<sup>st</sup> century that are still compatible to diverse cultural perceptions.

**Keywords:** Affordability, agricultural productivity, information technology, rural development