

# Urban expansion and the loss of agricultural land in Uganda: a challenge to soil protection

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Majority of the cities in sub-Saharan Africa (SSA) developed in areas which were good for agricultural production. These areas attracted settlement and sustained the population. However, urban growth is increasing at alarming rates due to rapid population growth and rural-to-urban migration converting peri-urban areas into built-up and other urban uses. This conversion involves agricultural land, wetlands, forests, and savannahs. Using multi-temporal land use/cover classification of Landsat images, auxiliary soil information, legacy soil maps and field soil sampling and analysis, household and market survey, we explored the effect of urban intensification and expansion on reduction of agricultural land, focusing on a megacity and a regional center in Uganda: Kampala and Mbarara, respectively. We found that urban growth in both centres is systematically targeting prime agricultural land, 24.81% change in the landscape from agricultural land to built-up in Kampala and 14.78% from agricultural land to built-up in Mbarara between 2001 and 2015. We also found that about 75% of the urban and peri-urban areas is high agricultural productivity class and about 10% medium productivity, quite high compared to national average where only 8% of the land area of Uganda is classified as having soils of high productivity, and 14 % as soils of medium productivity. From the household and market survey we found that 69.6 % of the urban poor don't farm because of lack of land, and 60.2% of the farming households is substance. The observable features of urban growth in Kampala and Mbarara are so similar to other cities in SSA, thus, urban growth is contributing to the loss of prime agricultural land, reduction of soil diversity and food insecurity in several urban centre in SSA. Further recommendations require policy makers, soil scientists, and urban planners to team up to design a suitable framework for sustainable urban planning and development.