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“Filling gaps and removing traps
for sustainable resource management”

Rural-Urban Transformation Processes in India and West Africa

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Abstract

In recent decades global population growth and rural-urban migration have led to rapidly increasing transformation of landuse systems with concomitant changes in agricultural intensities and enhanced reliance on the multiple services that agro-ecosystems are expected to provide. This is particularly visible in the dynamic interface of megacities in Asia and Africa. By 2050 the global share of urban population has been estimated to reach 68 % compared with 55 % today, the majority of which is accounted for in Asia while Africa shows the highest urban growth rate. The corresponding loss of agricultural areas around cities, which are of particularly high productivity, has been estimated at 2 % globally, with 60 % of it occurring in Asia. Serious threats to agricultural production, urban food security, natural habitats, biodiversity, and air and water resources are the consequence. Based on a comparative analysis of the status quo in the rural-urban interface of Bengaluru in South India and of Ouagadougou and Tamale in West Africa we use a social-ecological systems framework to quantify spatial changes in landuse patterns, wetland structure and flows of resources that affect the sustainability of the three cities. Key bottlenecks of future development are water cycling and use, strategic planning in the use of rural and urban spaces in a multi-functional landscape and maintenance of soil productivity.

Keywords: India, matter flow, multi-functional landscapes, resource governance, rural-urban interface, urbanisation, West Africa