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Linking Ecological Sanitation and Agriculture in Sub-Saharan Africa

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Abstract

The poster illustrates first findings of the interdisciplinary research project “Potentials and Constraints to the Link of Urban Agriculture and Ecological Sanitation” carried out at Hamburg University of Technology. A vital part of the studies is the investigation of the safe reuse of faeces and urine in agriculture and the social acceptability of re-circulation of human-derived nutrients.

By 2020, the number of people living in developing countries will grow from 4.9 billion to 6.8 billion. Ninety percent of this increase will be in rapidly expanding cities and towns. Growth in urban poverty, food insecurity, and malnutrition will accompany urbanisation. Severe environmental degradation and hygienic problems caused by the lack of infrastructure are additional problems. The linking of urban and peri-urban agriculture and ecological sanitation, in short UPA-Ecosan-Concept, could play an important role for the solution of the mentioned problems. Agriculture within city limits, so-called urban agriculture, became a survival strategy for many poor families in the last decades. These families would not be able to secure their nutrition without urban agriculture. This form of agriculture can be a vehicle to increase food security and health, to generate economic opportunities for people with low income, and to promote recycling of waste and wastewater. The philosophy of Ecosan is based on the consequent implementation of the “closing the loop approach” (nutrient cycling). Urine and faeces are regarded as resources to be used as fertiliser respectively as soil conditioner.

Hence linking Ecosan with agriculture, in particular urban agriculture is crucial for the sustainability of both Ecosan and agriculture and will be essential for the achievement of the Millennium Development Goals. Different from urban areas, the scarcity of land is not the most pressing problem in rural areas. Loss in soil fertility, environmental degradation, scarce water sources, and lacking hygiene are problems common in rural and urban areas. The study aims at introducing the concept of ecological sanitation to people involved in agriculture, to evaluate the potentials and constraints of the concept, and to discuss and learn from existing experiences, failures and success in different cultural, political, and economic environments.

Keywords: Ecosan, hygiene, socio-economics, Sub-Saharan Africa, urban agriculture