Hygienic aspects of sanitation and nutrient recycling in selected rural areas of Uzbekistan and Viet Nam

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Uzbekistan
- Area: 447,000 km²
- Population: 26 million
- Urban: 36%, rural: 64%
- Access to improved sanitation: 57%
- Urban: 73%, rural: 48%

Khorezm Province
- Area: 4,550 km²
- Population: 1.4 million
- Urban: 37%, rural: 63%
- Access to improved sanitation: 96%
- Access to sewerage: 12%

Viet Nam
- Area: 330,000 km²
- Population: 84 million
- Urban: 26%, rural: 74%
- Access to improved sanitation: 41%
- Urban: 84%, rural: 26%

Mekong Delta
- Area: 40,000 km²
- Population: 17 million
- Access to sanitation: 83%
- Access to sanitary sanitation: 20%

Introduction
Nutrient recycling by application of human excreta to maintain soil fertility has been practiced in the Eastern Asia and the Western Pacific for 4,000 years. In other countries the need for nutrient recycling increases due to the economic downturn, resulting in socio-economic constraints for the population, e.g., in rural areas of countries in transition like the Central Asian republics.

Are there differences concerning hygienic aspects of human excreta management in Central and South-East Exclusions

- In rural areas of the Mekong delta the environment is facially contaminated by disposing excreta directly into surface water via the VAC-farming system.
- In Khorezm potentially safely disposed human excreta is brought back to the environment by application as insufficiently treated or untreated fertilizer.
- Thus, in both regions different practices lead to heavy faecal pollution of the domestic and public environment and pose a hazard to public and personal health.

Excreta management in Khorezm

In Khorezm, hygienically unsafe nutrient recycling of human excreta is common. Human excreta from pit latrines are dug out by family labour and applied as fertilizer to agricultural fields and vegetable gardens.

Furthermore, open disposal of children’s faces and frequently open defecation of children contribute to an environment loaded with faecal-oral pathogens.

Excreta management in the Mekong Delta

In local farming systems excreta are predominantly used as fodder in aquaculture. For this reason simple latrines are located directly over fish ponds which leads to heavy faecal contamination of the surface water, used for drinking and other personal purposes as well as for irrigation.

Hygienically unsafe faecal pathways contaminate not only water, but also fish, vegetables and soil.