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## Conference Issue Paper

### East Africa Regional Conference “Accelerating Access to Sanitation”

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#### How to set an appropriate legal and planning framework to facilitate sustainable sanitation

##### Challenges

###### Land ownership

In East African countries<sup>1</sup> like elsewhere in the world, land ownership is a serious problem for the development of a sustainable infrastructure in rapidly growing cities. In Kenya it is estimated that 60% of the urban population live in low income settlements. Often real landowners do not have any mechanisms of controlling the illegal settlements that emerge. Squatters take advantage of lack of development control to use unoccupied land parcels according to their own rules. Within the context of these settlements ‘secondary’ landlords emerge. These landlords have no legal ownership but develop rental housing units and even trade in pieces of the land. Such land tenure problems affect sanitation infrastructure in particular. The reason is that compared to other public services, e.g. water supply or solid waste removal, sanitation always requires considerable on-site investment. Secondary landlords have little incentive to install services and residents have to cope with the lack of sanitation. Owner occupants without secure land tenure also limit their investment. Furthermore, all inhabitants of informal housing areas are often “invisible” for local utilities. Somebody without address cannot become a registered client.

###### Regulations and enforcement

Sanitation systems beyond simple on-site facilities involve different levels of responsibility and different institutions for proper operation and maintenance (households, private service providers, public utilities). The institutions responsible for operation and maintenance generally have to rely on cost recovery from beneficiaries (polluters). However, the sector is fragmented and mostly there is no formal arrangement between the different actors. If deficiencies occur in sanitation services, they are not as apparent as in water supply. As a consequence, the deficiencies are lower on the political agenda and appropriate regulation is often lacking.

##### **Why treat the sludge from septic tanks if you can dump it easily?**

Dakar (Senegal) has three sludge treatment plants constructed in 2006 with a capacity of 220 m<sup>3</sup> per day. However, total daily sludge production from latrines and septic tanks is estimated at 700 m<sup>3</sup> per day.

<sup>1</sup> may be except Ethiopia

This limits for example sanctions for illegal dumping of sludge. Hence cost recovery for appropriate treatment and/or disposal of sludge removed by private service providers is difficult. Similarly, there is often a lack of regulation and/or enforcement of user fees for the operation of central sewer systems (sewer cleaning, maintenance and wastewater treatment).

### Urban planning

Urban growth expands rapidly to areas not covered by urban plans. Even where plans exist, the registration of land titles and the realisation of foreseen infrastructure do not keep pace. This is also due to the fact, that physical plans often foresee an infrastructure, which is expensive and land development revenues are very limited or inexistent. A lack of user involvement in the planning process often limits the number of technical options, which are explored, while ignoring the specific requirements of poor users.

As a result, the access to water and sanitation services in the peri-urban areas is often lacking behind service rates achieved in core cities or even in rural areas. During the process of urban densification, central sanitation systems are often neither financially nor technically viable: infrastructure cost is too high compared to population served (e.g. less than 150 inhabitants/hectare) or water consumption is too low to flush the sewers correctly (e.g. < 60 lpcd). But if plots get smaller, on-site sanitation generally requires disposal and treatment capacity for sludge as complementary off-site facilities. Such facilities are often lacking and are not included in urban plans.

At the same time, a number of factors such as missing of secure land tenure, a lack of hygiene awareness or poverty limit the establishment of adequate on-site systems. As a result, health and environmental risks remain high.

Still, water supply investment are planned and implemented without considering the sanitation side. Politicians as well as water users are often not aware that hygiene and sanitation is a crucial element to fully benefit from improved water resources. Insufficient hygiene awareness limits the demand for sanitation facilities.

### Legal framework for the reuse of treated waters, urine, compost or sludge

Presently, untreated waste water, sludge or polluted surface water are used for agriculture in peri-urban areas without any control. This constitutes a high health risk not only for the farmers but also for the consumers of the agricultural products. In addition, it also contributes to further environmental pollution.

## **Way forward**

### **Let people have an address**

- Make people including the poor visible citizens of their city
- Enable people to become clients for water, solid waste and sanitation services
- Enable existing settlements to be included in the urban planning

### Secure land tenure and legal address

Secure ownership is a prerequisite for sustainable investment in housing and public infrastructure. House owners are more likely to invest in on-site facilities and in perspective in centralised systems such as condominium sewers. In a longer run, land ownership is a prerequisite for asset backed loans which than will broaden access to property and support investment in improved housing

Secure land tenure can develop in steps, a full cadastre being generally the last and most expensive level. There are a number of intermediate steps possible. Clearly locating inhabitants and giving them an address is one of them and allows people to become registered clients for public services.

#### Plan for all inhabitants

Informal settlements often take place where urban planning has not foreseen any settlement. Urban planning has to include all inhabitants, even if they live where they were not supposed to live. As a consequence, plans have to consider cost efficient disposal, treatment or reuse of sludge from latrines or septic tanks from all urban areas. Preferable points for sludge acceptance are treatment plants, but in order to avoid excessive transport cost, selected inlets into the existing sewer system might also be an option.

#### Encourage reuse

Reuse concepts for water, nutrients (urine, sludge, compost) and by-products such as biogas need to be integrated into national strategies and planning framework and encouraged through the sector institutions (regulators, service providers, financing mechanisms). Since reuse is a cross cutting issue water sector institutions need to closely cooperate with other sectors such as health, agriculture, private sector, etc.

#### ... and get people involved

For an efficient sanitation, it is important to overcome the fragmentation of the sector. Health, environment and water people have to join forces and coordinate their activities within a national sanitation strategy. The national implementation concept has to involve all relevant actors not only on national but also on regional and local level, e.g. in sanitation task teams. Users and user groups have to be involved in planning and get shared responsibility for on-site investments and their operation. And national regulators, utilities and municipalities have to set up clear institutional arrangements between households, private service providers (cess-pit emptying) and utilities.