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Discussion paper: Urban linkage to rural sanitation development

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VoR (Version of Record)

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REPOSITORY RECORD

Brandberg, Bjorn. 2019. "Discussion Paper: Urban Linkage to Rural Sanitation Development". figshare.
<https://hdl.handle.net/2134/29885>.

URBAN LINKAGE TO RURAL SANITATION DEVELOPMENT - DISCUSSION PAPER

by B.Brandberg, Sanitation Adviser

Background

The Water Department, Ministry of Works and Supplies together with Technical Advisory Group (TAG) of the World Bank is undertaking an Urban Low Cost Sanitation Demonstration Project (INT/81/047) aiming at demonstration of appropriate sanitation systems for planned and unplanned urban low cost housing areas.

The Housing Situation

The urban areas, which are served with low cost sanitation include planned and unplanned areas of both high and low density. Income and form of tenancy varies from place to place. The outer urban fringe areas are actually no different than rural areas.

Technology

Considering the wide spectrum of physical, legal, social and economic housing conditions prevailing in the concerned areas, a range of technical options for low cost sanitation have been developed, starting from a simple sanitation platform (San-Plat) up to upgradable ventilated septic latrines. The cost is from K3.00 up to some hundred kwacha depending on technical standard and number of users.

Sanitation Centres

As part of the demonstration activities a proposal for the delivery system is presently under development and field testing. The proposal is based on the existence of local sanitation centres (San Centres). Four such centres are so far in operation, one in each of Lilongwe, Blantyre, Mzuzu and Zomba.

The function of the San Centres is principally to provide sanitation services to the neighbouring population by the sale of prefabricated sanitation components (i.e. San-Plats and screened vent pipes) on a cost recovery basis. The San-Centre is also a place for training of project staff, local contractors and self help builders. Various types of demonstration latrines are being demonstrated at the centre.

Linkage to Rural Sanitation

In connection with the DANIDA funded Karonga Lakeshore Integrated Water Supply Project a delegation with participants from Ministry of Health, Ministry of Community Services and Ministry of Works and Supplies surveyed and analysed the situation of rural sanitation in the Karonga Lakeshore Area.

In connection with the GTZ funded project in Liwonde, 600 new or existing traditional latrines have been improved using San-Plats and another 400 are under way. Total 1,000 improved latrines in less than one year.

It was concluded that the prevailing situation in many aspects was similar to the situation in the peri urban areas, and that an integrated approach could be used to improve both peri urban and rural sanitation.

Three Steps for Improvement'

The principal objective of improving sanitary conditions is to safeguard hygienic conditions as a base for health improvements. Other aspects are user acceptability and improved sanitation economy. These objectives are principally to be met through:-

1. Introduction of well designed slabs
2. Introduction of vent pipes
3. Introduction of long lasting pits.

The San-Plat (Step 1)

The most cost effective way to improve hygienic conditions for new or existing latrines is to

install a San-Plat (price at San Centre K2.95). With no or small extra costs a San-Plat can easily be installed by any self help builder. The San-Plat will give:-

- Better hygienic conditions
- Reduction of smell
- Control of fly circulation
- Improved hygiene
- Child safety

The San-Plat is illustrated in the pamphlet "San-Plat" and presented more closely in the paper "Some Whys and Hows".

VIP Latrines (Step 2)

Ventilation of the latrine pit is today a well known way to eliminate bad odours and flies from the latrine. Large scale construction of ventilated improved latrines (VIP Latrine) implies, however, technical and economic implications, which may require relatively strong institutional support and probably also considerable subsidies, if the programme shall reach out to the majority of the rural population.

Long Lasting Pits (Step 3)

One well known reason for not investing in a better latrine is the often limited expected life time. The latrine is generally seen as a temporary structure due to fill up, and be replaced at regular basis.

Introduction of vent pipes will exclude the need of putting ashes into the latrine pit, for smell and fly control, hence prolonging the life time of the pit. Large volume pits eventually lined with local building materials might therefore extend the expected life time of the pit up to over 30 years.

Such improvements will make investments in hygienic permanent building materials more attractive for the owner.

Implementation Strategy

Priority has so far been given to urban sanitation. The reason for this is principally that the danger of inappropriate sanitation generally is higher in areas where more people live and where the population density is higher.

Another reason is that development in urban centres do have spin off effects in rural areas. Most urban inhabitants have their "home village" and are more likely to transfer inventions from their urban environment to the rural areas than opposite. Consequently, relatively small investments in urban areas (the centre) could have great promotional impact in large rural areas (the periphery).

Peripheral San Centres

In connection with the Karonga Integrated Lakeshore Project, the establishment of peripheral San-Centres has been discussed. A local San-Centre can be established in the township (Boma) of Karonga which could serve the "urban" population of the Boma, following the same principles as other San Centres, with sales to the public, demonstration, training etc. The Karonga Boma San-Centres could be monitored from the Lunyangwa San Centre in Mzuzu and could also supervise more peripheral San Centres in i.e. Kapungu, Ngula, Chilumba etc.

Demonstration latrines

For the purpose of education and information to the public demonstration latrines can be built at public places like:-

- San Centres
- Schools and Educational Centres
- Health Posts and Clinics
- Churches
- Market places etc.

Promotion and Subsidies

Experience from successful rural sanitation programmes (i.e. in Zimbabwe) shows that promotion and incentives are necessary requirements to motivate the population in a programme aiming at large scale implementation and good coverage. This will require the involvement of institutions with strong executive capacity in the concerned areas and a committed involvement of one or more donor organisations.

Institutionalization

Considering the necessary executive power in the field, the involvement of the right institutions is essential for the success of the programme. The personal opinion of the Sanitation Adviser is that a multisectoral approach involving i.e. Office of the President and Cabinet, Ministry of Health, Ministry of Agriculture, Ministry of Local Government, Ministry of Works and Supplies and Ministry of Community Services could be necessary.

The role of each institution could vary from location to location depending on conditions and needs.

For the coordination of the programme a steering committee should be formed, with representatives from the involved institutions.

Training

As mentioned earlier training of project personnel can be executed through existing San Centres under the guidance and supervision of the Sanitation Adviser provided that funding, time and necessary clearances etc are available.

Special attention must be given to the motivation and training of extension workers and promoters.

Nation wide coverage

The principles outlined in the paper for peri urban areas and the Karonga Lakeshore area could with adaptations be used for other areas as well.

The objective is consequently to achieve nation wide coverage of improved sanitation.

NOTE: This discussion paper presents the opinion of the author, which does not necessarily reflect the official position of the Government of Malawi nor of the World Bank.