



13th WEDC Conference

**Rural development in Africa
Malawi: 1987**

DISCUSSION GROUP REPORT

Water treatment and distribution

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The group considered options available for the treatment of waters with high levels of turbidity particularly those with large seasonal variations in flow and quality. The discussion centred on horizontal-flow roughing filters (HRF). Dr Mashauri commented on the effectiveness of such systems in Tanzania. Results appear very encouraging and possibilities for development work definitely exist. It was suggested that IRCWD, Switzerland would be interested in suitable field evaluation sites and delegates with sites in mind should contact IRCWD. High levels of performance are possible with a wide range of media and are not significantly grading dependent. Innovation in hydraulic design to facilitate clearing is an area suitable for investigation.

Iron removal was discussed. It was considered extremely important that the nature of the problem be defined, wither in terms of iron concentrations in the raw water or as a contamination problem from iron containing components in the abstraction and distribution system. Several delegates reported success in iron treatment using cascade aeration. Mr Lupiya requested information on the treatment of iron in borehole water.

The discussion relating to chlorine disinfection (particularly by batch process) centred on operator responsibility, motivation and training. The group was strongly of the opinion that this process with obvious overlap in other operator dependent phases of treatment was critically affected by operator efficiency.

It was concluded that it is essential to adequately inform, motivate and train operators. However it was not considered obvious or easy to achieve this training. Attention should be given to language, culture and technical factors in establishing a training structure, which should include a clearly defined localisation plan. Mr Saeseli indicated the existence of a caretaker manual from Lesotho which might act as a model for the design of training schemes. (Details available from Mr Saeseli).

References for Discussion Group on Water Treatment

IDRC 1981 Rural Water Supply in China, Ottana, Ontario IDRC-TS25e 15BN 0889362610

Hofkes, E (Editor) 1981 Small Community Water Supplies: Technology of Small Water Supply Systems in Developing Countries. International Reference Centre for Community Water Supply and Sanitation, Rijswijk, The Netherlands.

John, SAA 1981 Traditional Water Purification in Tropical Developing Countries - Existing methods and potential applications. Manual 117 GTZ Eschbom W Germany.