

Wastewater Production, Treatment, and Use in Zimbabwe

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Wastewater production and treatment

- Data on wastewater production is sketchy
 - 35 million cubic metres per annum are produced, equivalent to 65% of potable water
 - High tech treatment plants that require huge operational and maintenance costs are operating at 0-30%
 - No information on wastewater from other socio-economic activities

Wastewater use and/or disposal

- Location of major settlements in the at the top of catchments....wastewater is discharged into rivers and reservoirs
- Consequently a number of cities are looking for new water sources
- Common uses of wastewater
 - Irrigating pastures on municipal farms
 - Tobacco irrigation
 - Irrigating recreational parks
 - Conventional irrigation

Regulations and implementation of guidelines

- The Environmental Management Act of 2002 is the overall legislative framework...supported by more specific statutory instruments
 - Statutory Instrument 6 of 2007 (Effluent and Solid Waste Disposal) :
 - Statutory Instrument 10 Of 2007: Environmental Management (Hazardous Waste Management) Regulations
- Environmental Quality Standards and Enforcement Committee, Licensing mechanisms, Waste management plans, waste prevention targets, Designated waste management collection points
- There are maximum thresholds for irrigation using waste water

Challenges

- Lack of information on the quantity and quality of wastewater produced
- Lack of capacity to enforce regulations due to
 - Poor monitoring
 - Limited human capital
 - Inadequate financial resources
 - Inadequate penalties

Government's approach to wastewater management

- The Government of Zimbabwe has put in place a legislative and institutional framework designed to ensure effective wastewater management
- However there are a number of challenges as observed above.

Possible solutions

- Research into assessment of the quantity and quality of wastewater is needed
- The Environmental Management Agency, which is responsible for managing the environment needs to be capacitated in relation to licensing, monitoring and enforcement
- Deterrent penalties are required
- There is a need for alternative lost technologies