

Wastewater Production, Treatment, and Use in Liberia

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Wastewater production and treatment

- Production – no estimate available.
- Rainfall – no water catchment system
- Domestic wastewater production in cities
- Treatment – some companies treat wastewater and discharge it to wetland, river, ocean etc.
- Example: the largest rubber plantation in West Africa (Firestone) produces a lot of wastewater.
- Firestone conducts primary and secondary treatments.
- Chemical is added to the wastewater in the plant before it is discharged to the wetland.
- Effluent is discharged to the wetland through a constructed pipe from the plant. **NOT FOR AGRICULTURE PRODUCTION**
- **Wastewater treatment is enforced mainly for industries but not adequately monitored.**

Wastewater use and/or disposal

- Vegetable farmers use wastewater from wells, rivers etc.
- Irrigation canal for increase production – 3 cropping season through the construction of head dye/dam, main canal, peripheral canals etc.
- Increase income through crop rotation (rice vs vegetable)
- **No treatment is consider. Therefore there are diseases related implications**
- Integrated approach- irrigation link to infrastructure is an advantage.
- There is abundance of wastewater from industries but non is recycle or use for agriculture purposes.
- Government is struggling with companies to properly dispose of wastewater. The process is not adequately monitored.
- Most of the companies dispose wastewater into wetlands. Yet some dispose wastewater into the rivers, etc.

Regulations and implementation of guidelines

- WHO recent standard - Government is committed to international regulations but implementation remains a shortfall.
- Minimum standard on waste management.
- Waste management officer hired but lacks the capacity (technical and logistical) to fully operate.
- Government focus is on solid waste.

Challenges

- Lack of data on wastewater management.
- Government institutions are weak relative to enforcing wastewater management,
- Lack of technical institution (CSO) to drive the process (policy formulation and monitoring)
- Industries unwilling to open up to monitoring/survey.
- Lack of public awareness on water management.
- The disposal of wastewater is not adequately monitored by government.
- No system is in place to recycle wastewater.
- Lack of funding/national budget for wastewater management. Government seeking for donor funding.

Government's approach to wastewater management

- Very little is been done on wastewater management. Focus is on solid waste which is been supported by USAID and other international partners.
- Minimum standard on waste management.
- Holding industries accountable and ensuring proper disposal of waste by the industries.

Possible solutions

- Commission a survey on wastewater production, treatment, use and disposal.
- Simulate the formation of a vibrant Civil Society Organization (CSO) to drive the wastewater management process.
- Develop the capacity of relevant ministries and technical staff.
- Link CSO with regional network for support on wastewater management.
- Develop national regulations on wastewater management.
- Public awareness on water management.



THANK YOU