

Social and Cultural Aspects of Safe Wastewater Use in Agriculture

- Mauritius

Treated wastewater for sugar cane – irrigators then requested use for vegetable crops – indicates acceptance of wastewater even though not allowed wrt regulations at present

Committed to good farming practices

Promoting drip irrigation for health benefits and to minimise water use.

Tourism is main industry so environment must be protected for economic reasons.

Strong consumer association – report health risks

Stakeholder working groups

- Seychelles

Space to grow crops is limited. Much food is imported, strong education on safe use of food, e.g. running water to wash food.

Surface water can be more polluted than treated wastewater because of septic tanks

Also strict about discharge from hotels, etc

High environmental awareness as for Mauritius. Education from school level

- Zanzibar

Contrast to Mauritius and Seychelles – tourism economy still relatively new so there is not yet awareness of need to protect the environment for economic reasons

Farmers not willing to use wastewater; awareness campaigns needed.

Cultural influence – Muslim taboo on waste products.

- Zimbabwe

Limited options for water supply in dry areas (Bulawayo)

Municipality does not permit use of wastewater, but it is used because no other source. Demand from people is providing impetus for municipality to consider change.

Farmers who see benefit want to use wastewater.

Street food sector can be major contributor to risk if not handled safely.

Free acceptance of animal manure for crops, but lack of acceptance of wastewater – contradiction.

River water which has received wastewater is sold as “water” without emphasising that it has wastewater as main component.

- Uganda

Like Zimbabwe, lack of acceptance.

High end market and low end market

Perception is that high end produce is 'safe'

Low end market; driven by need, do not ask about source.

Washing not thorough – dipping in same bucket

Public health campaign to use vinegar for washing raw food

Most food is cooked.

Informal sector is big so not possible to enforce laws effectively.

Any opportunity to make money to feed family will be exploited.

- Zambia

Most people not accepted wastewater use. Crops rumoured to be irrigated with wastewater are avoided. So producers avoid disclosure.

Wastewater is only an issue when it becomes politicised.

- Malawi

Have regulations for discharge, but not enforced well.

Not high priority for allocation of funds

Wastewater use in agriculture is happening, but not formalised.

Farmers are willing to use waste, consumers not aware of origin of produce.

General

- Availability of other options influences acceptance. If there is no other source of water, wastewater use is accepted.
- When nutrient benefit is demonstrated, wastewater can be a preferred.
- Extension officers lack training in use of polluted water/wastewater for agriculture. Information on risk, benefit and actions to address risk needed.
- Municipalities likely to become more accepting if they have information.
- Consumers usually buy on basis of price and appearance, do not ask about health risks associated with water source.

- High level of environmental protection adds to cost of living; resistance to treatment of wastewater can come from costs incurred for residents.
- Economic status of country is a driver of whether good regulations are put into practice. Corruption is a problem
- Political will is important for enforcing . A charismatic champion is important to drive campaigns.
- WHO 2006 promote a stepwise approach to improving on health risks, so that is applicable to developing countries