



Safe Use of Wastewater in Agriculture in Mauritius

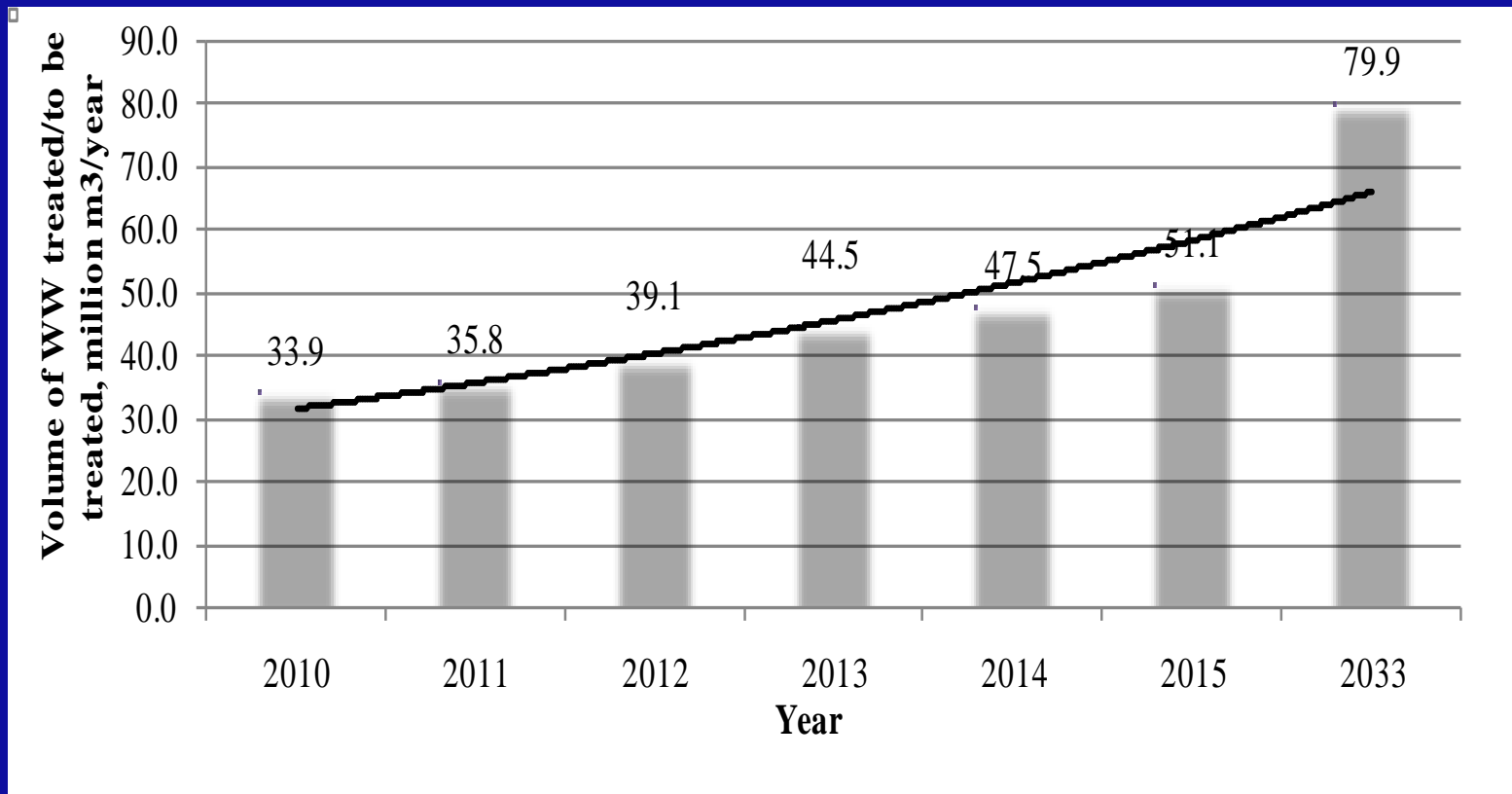
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Wastewater Production and Treatment

Volume treated/to be treated (Mm³) for period 2012-2033



Wastewater Production and Treatment

WWTP	Type of Treatment	Year Commissioned	Design Treatment Capacity, m³/day	Actual Volume Treated, m³/day
Baie du Tombeau	Preliminary	2002	48 000	28 000
St Martin	Tertiary	2005	69 000	40 000
Grand Baie	Tertiary	2006	5 500	2 000
Mt Jacquot	Primary	2007	48 000	32 000
TOTAL			170 500	102 000

Wastewater Use and/or disposal

- **Reuse**
- 14 Mm³ /yr for irrigation after 3ary treatment
- Diluted at 1:1 and Used to irrigate some 600 ha
- Treated Waste Water released into canal system
- Used to irrigate sugar cane
- Treated effluent monitored on 24 hrs basis
- **Disposal**
- 21 Mm³ /yr to sea outfall after 1ary treatment

Regulations and Implementation of Guidelines

- **The Environment Protection Act 2002 (FAO/WHO) regulates standards to be complied by treated waste water to be used for irrigation of sugar cane & lawns**
- **The GN 2003, Regulation 4 on release of effluents into watercourse/ Land underground**
- **Water Quality control at WW Treatment Plant level, Institution Level (WMA) and Ministry Level (MoEnv)**

Challenges /Constraints

- **High costs for (civil works, O&M, etc) =>High rates being charged for treated effluent to farmers**
- **Topography : WWTP collects effluents from upstream lands by gravity**
- **Social acceptance for irrigated food crops**
- **Lack of capacity building and engineering staff**
- **Health and Environment risks : close monitoring and enforcement required**
- **High demand for irrigation water for food crop production in water deficit areas**

Government's Approach to Wastewater Management

- Regulations on standards for quality of treated effluent being enforced (EPA 2002 under review)
- The Sewrage Master Plan completed in 1994 (1994-2013)
- Sewerage Master Plan updated for 2014-2033 (29% @ June 2012 and 80 % by 2033)
- Total water management through merging of all water authorities(CWA,WMA,IA,WRU)
- Protection of underground water for domestic purpose by eliminating septic tanks
- Equilibrium between farmer's capacity to pay and cost of treating effluents to 3ary level

Possible solutions

- **Commitment to sustain affordability of reuse of 3ary treated effluent**
- **Capacity building from top management to users of treated effluent**
- **To empower technical personnel in terms of analytical skills to monitor health and environment risks**
- **Campaigns of awareness to remove doubts in public mind on reuse of treated water**
- **Set up a Monitoring Team for Africa to have experience on developed countries**

Thank you

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