

Decentralized Wastewater Treatment System For Safe Reuse as Rural Business Model in Rural Area



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Why is waste management critical?

In developing countries, a large portion of population resides in villages where formal waste management systems do not exist.

- Approximately 90% of disease burden is due to absence of clean water and poor sanitation.
- Recycling and reuse of available waste in villages provides sustainable solutions for a waste management system and reduces environmental degradation.
- Inappropriate reuse of untreated wastewater is unsafe for farmers and consumers.





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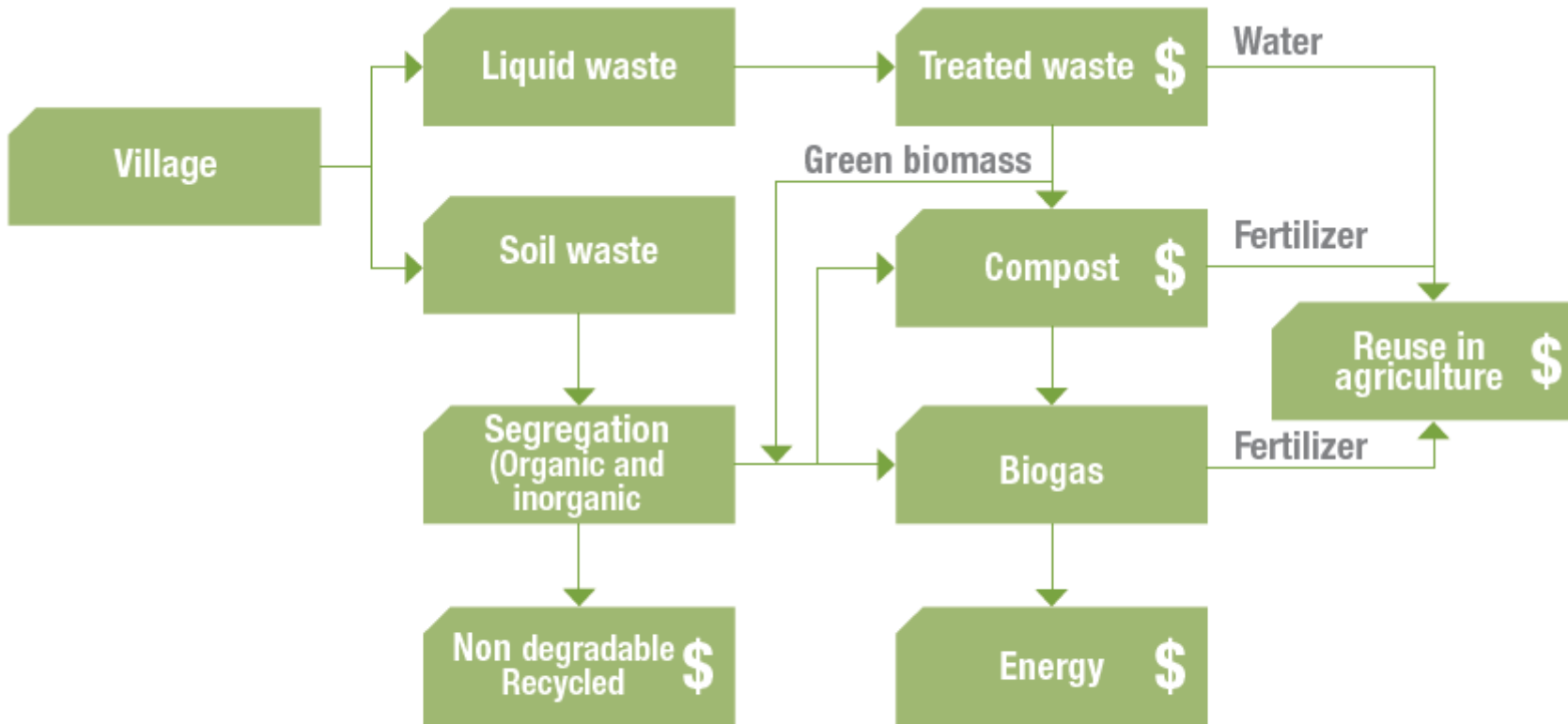
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How can it be implemented through a green business model?



- Increased use of waste through reuse of treated wastewater in agriculture and recycling solid waste as compost or bioenergy
- Involving community-based organizations, like women's Self-Help Groups (SHG), for planning, implementing and managing the DWMS as a green business model.

Green Business Model for Decentralized Waste Management System (DWMS) in Villages

HOW?

- Wastewater treatment and reuse in agriculture as integral part of *Integrated Water Resources Management*.
- Wastewater treatment and reuse as *business model* to ensure sustainability and income generation
- Involvement of *community based organization* for wastewater treatment and reuse
- *Consortium* on wastewater treatment and reuse in agriculture

WHAT

?

Constructed Wetlands: human-made wetlands built to remove various types of pollutants present in wastewater that flows through these systems.

Reuse of treated water

- Non-edible crops such as lemongrass, flowers and Fodder crop

Business model

- Use of CPRs
- Operated by SHGs or other CBOs
- Income generation by selling fodder and other by-products



What has been implemented so far?



Constructed wetland at Kothapally village in India. Treated water being used to irrigate one hectare farmland.



Farmers are trained to maintain vermicomposting units (left). Biogas generated from waste is used for cooking and lighting in Lucheba watershed in China (right).



Rural Women and Youths as Micro-entrepreneur

- Women and youth groups can manage wastewater treatment plants.
- Common degraded lands can be used to grow flowers and fodder to generate income.
- Win –Win proposition for all the stakeholders in the villages
- Being scaled-up in number of watersheds as a part of integrated water resource management (IWRM)
- Recycling of resources and generation of wealth in rural areas



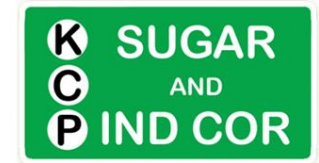
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Thank You

