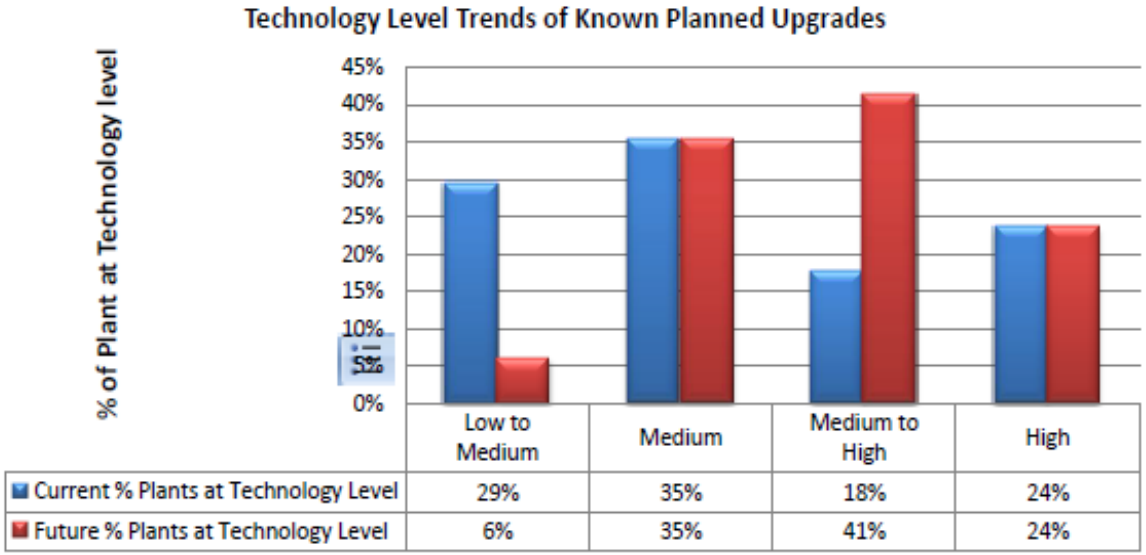
WW Tech Decision Support Tool

Unathi Jack

Why Develop a decision support tool for wastewater treatment technology selection?



(Bhagwan, 2012)

- Water Sector has a 'feel' that the most suitable technologies are not always considered and necessary drivers are not employed to arrive at sustainable technology choices.

- Recommended a programme/model to guide users in making a logical selection.

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Aspects to consider in selecting Wastewater treatment technology

- Plant size or flow rate
- Land availability
- Type of influent
- Size of contributing community
- Treated wastewater quality
- Receiving environment
- Costs
- Operation & Maintenance
- Existing infrastructure

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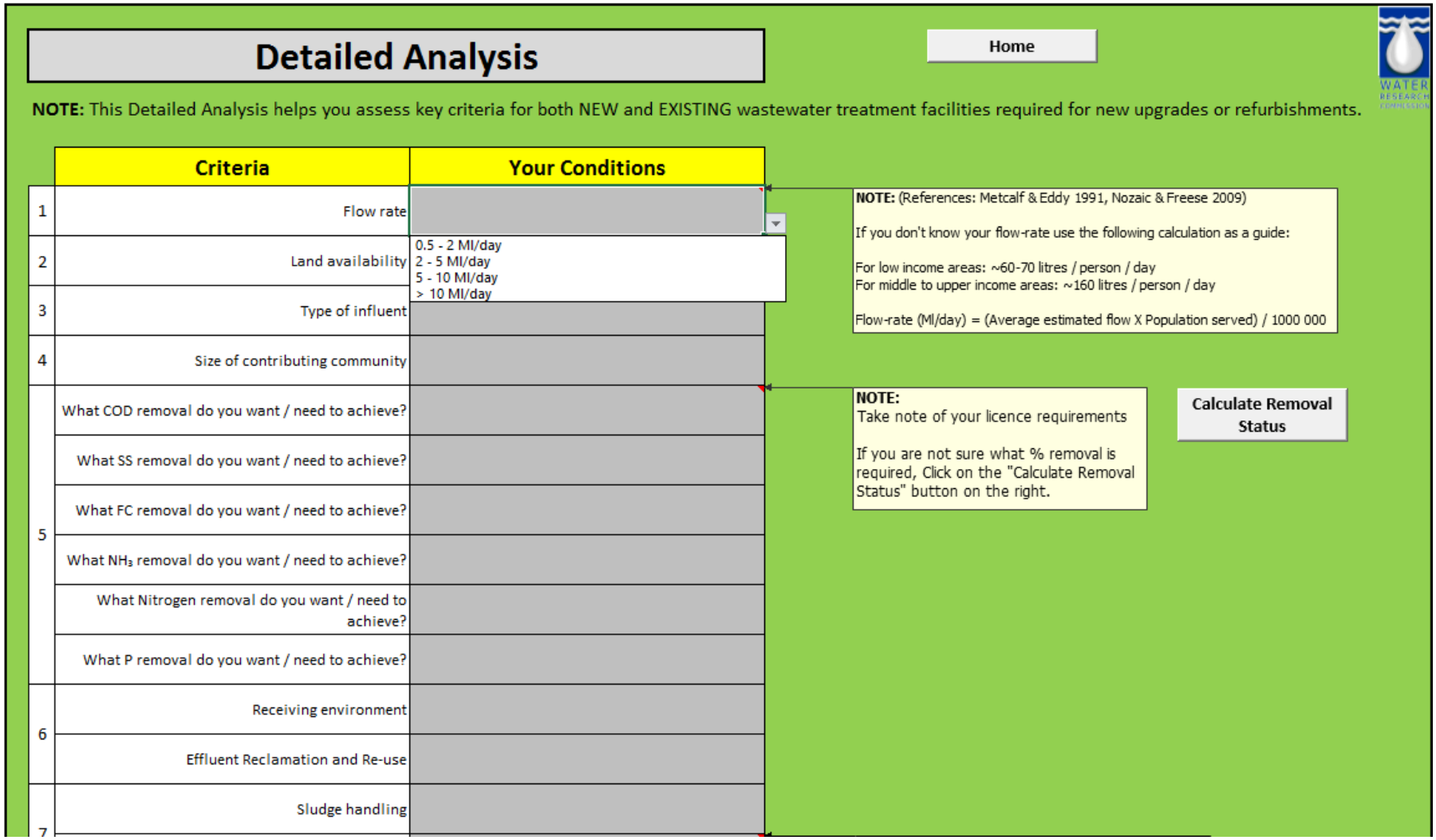

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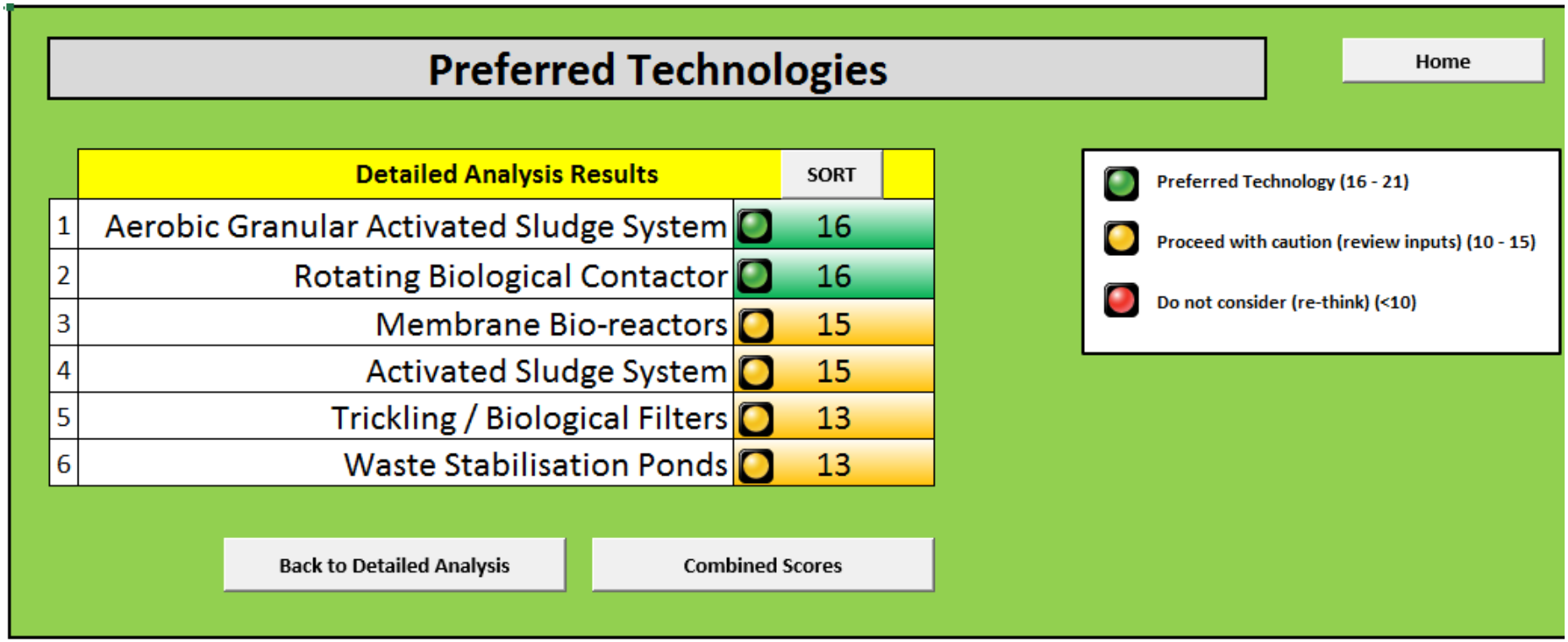

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Compare Wastewater Treatment Technologies

Back to Combined Scores

NOTE: This comparison helps you determine other technologies which might be appropriate for your conditions. These are typical conditions for the selected wastewater treatment technologies.
Your conditions are highlighted in yellow, as well as in the comparison technologies.

Your System's conditions		Compare	Waste Stabilisation Ponds	Compare	Trickling / Biologica
Criteria	**Detailed Analysis**				
Flow rate	5 - 10 Ml/day		0.5 - 2 Ml/day		2 - > 10 Ml/day
Land availability	< 0.6 ha		>= 3 ha		< 3 ha
Type of influent	Domestic only		Domestic only / Partially Treated (e.g. via septic tanks, ponds)		Domestic / Partially Treated (e.g. via
Size of contributing community	50 001 - 250 000		< 5000		5000 - > 250 000
Licence conditions	Domestic only		0.5 - 2 Ml/day		2 - > 10 Ml/day
What COD removal do you want / need to achieve?	Good (70 - 100%)		Good (70 - 100%)		Fair (30 - 69%)
What SS removal do you want / need to achieve?	Good (70 - 100%)		Good (70 - 100%)		Fair (30 - 69%)
What FC removal do you want / need to achieve?	Good (70 - 100%)		Good (70 - 100%)		Good (70 - 100%
What NH_3 removal do you want / need to achieve?	Fair (30 - 69%)		Fair (30 - 69%)		Poor (0 - 29%)
What Nitrogen removal do you want / need to achieve?	Good (70 - 100%)		Fair (30 - 69%)		Fair (30 - 69%)
What P removal do you want / need to achieve?	Fair (30 - 69%)		Poor (0 - 29%)		Poor (0 - 29%)
Receiving environment	Not a listed river as per GA		No discharge / Not a listed river as per GA		Not a listed river as
Effluent Reclamation and Re-use	Landscape irrigation		Landscape irrigation		Landscape irrigation / Other (e.g. fl
Sludge handling	Composting		Anaerobic digestion / Belt press / Composting / Stockpile on-site / Drying beds / Slugde lagoons		Belt press / Composting / Drying be
Sludge Disposal / Re-use methods	Agricultural use (e.g. composting / fertiliser)		Agricultural use (e.g. composting / fertiliser) / Licenced landfill disposal		Industrial use (e.g. brick making, cement r use (e.g. composting / fertiliser) / Lic
Ability to secure capital	Yes (100%)		Yes (100%)		Yes (100%)
Ability to cover operational and maintenance cost	Medium (~140c/m³)		Low (~79c/m³)		Medium (~140c/r

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Thank you!

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