Synthesis of a Theoretical Framework for Understanding Factors that Catalyse and Influence Household Adoption of Rainwater Harvesting

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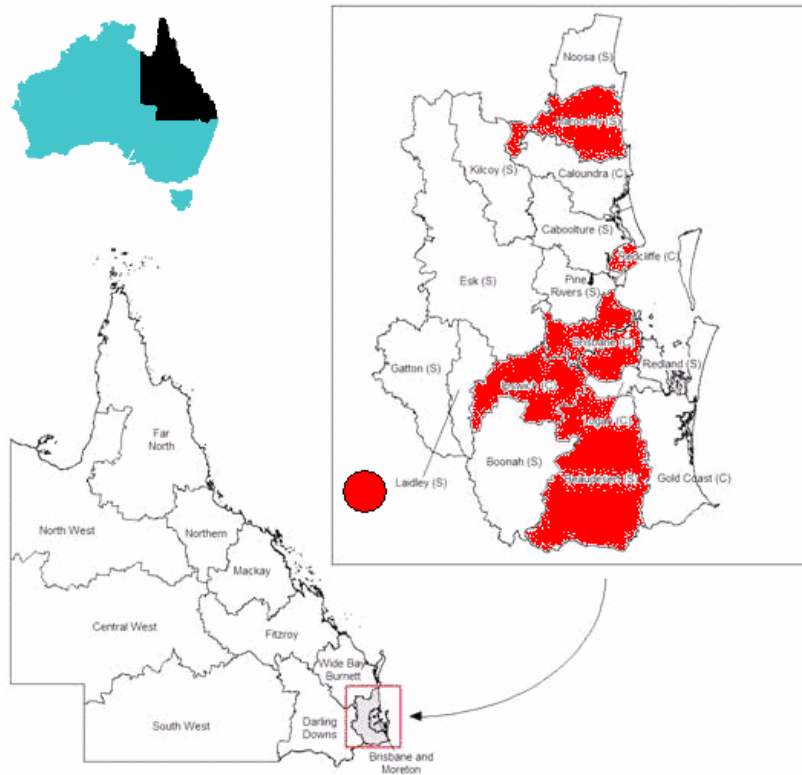
Background

FIGURE 1: South-East Queensland Local Government Area Divisions
Source: Australian Bureau of Statistics (2003) 1387.3

- Regional growth
- Supply limitations
- 'Green drought'
- Governance environment
- RH penetration
- Research questions
- Research aims

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Ecological modernisation theory

- Huber (1985) 'direct effects' of PE technological innovation decoupling economic development from environmental degradation

- Janicke (1988) contextualised pro-environmental innovation with 'indirect effects' of public sector governance and policy reform

- Spaargaren and van Vliet (2000) 'close the loop' by recognising the wider social community and the role of consumption
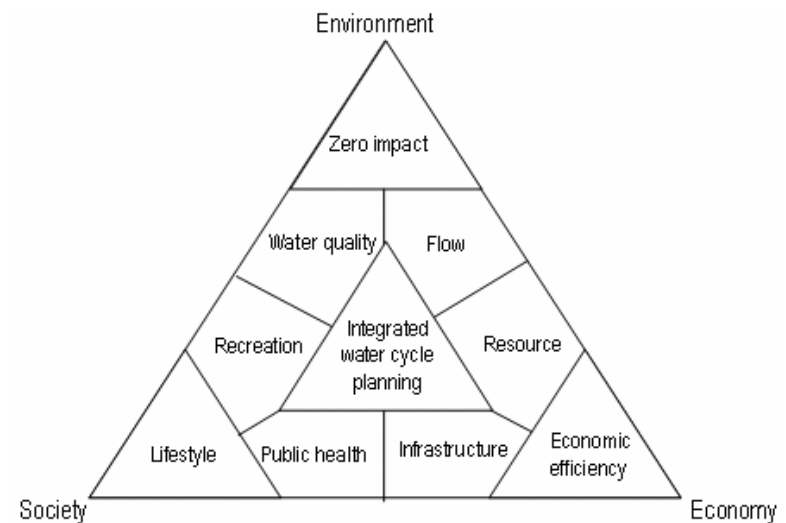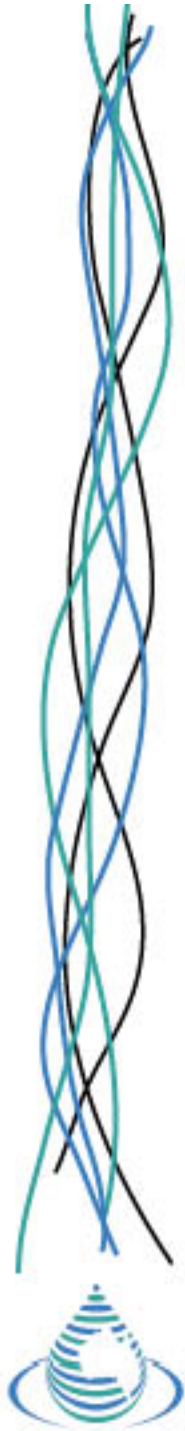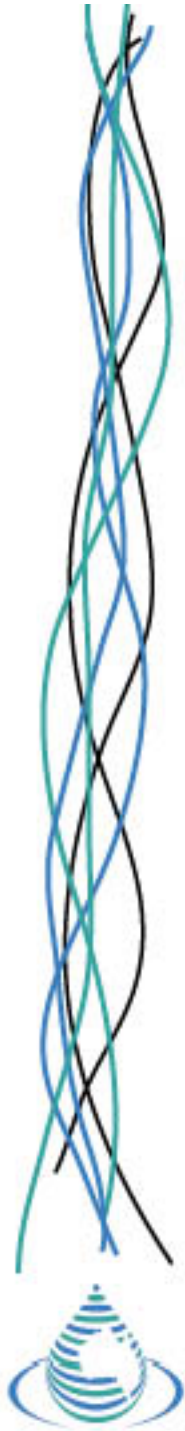

FIGURE 2: Triple Bottom Line Components for the Australian Water Industry (Source: Schneider, Davison, Langdon, Freeman, Essery, Beatty and Toop, 2003)

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Diffusion of innovation theory

- "A slow advance in the beginning, followed by a rapid and uniformly accelerated progress, followed again by progress that continues to slacken until it finally stops: These are the three ages of … invention…. If taken as a guide by the statisticians and sociologists, [it] would save many illusions." (Tarde: 1903,127).

- Focus on Characteristics of the Innovation

- These five factors have been "widely used for the past twenty years" and in a meta-analysis of DI studies explain "47% to 87% of the variance" in adoption (Rogers 1983: 211).

- Despite a claim they are conceptually distinct, Rogers concedes: "Each of these moderators is somewhat empirically related with the other four" (Rogers 1983: 211) …

- "As yet, there has been very little diffusion research designed to determine the relative contributions of each of the five types of variables" (Rogers 1983: 234).

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Theoretical synthesis

Moderators derived from EM

- PE technological innovation
- RH system sophistication
- PE governance and policy
- Cost and economy
- Voluntariness
- Household independence
- Community norms and values

Moderators derived from DI

- Relative advantages of RH
- RH system ease of use
- Past RH experiences
- Image or status
- Compatibility
- Visibility
- Demonstrable benefit
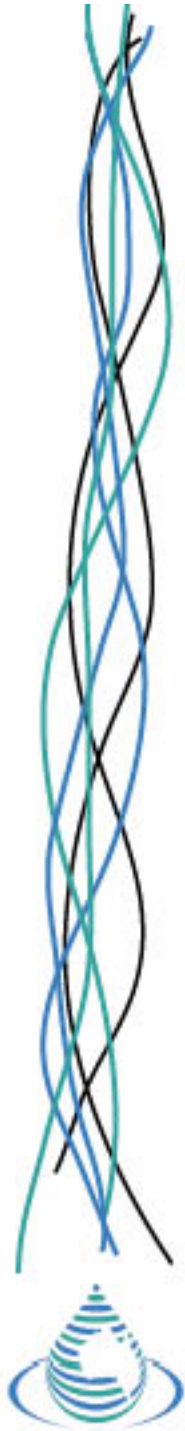
Methodology

- Data collection decisions

- Sampling
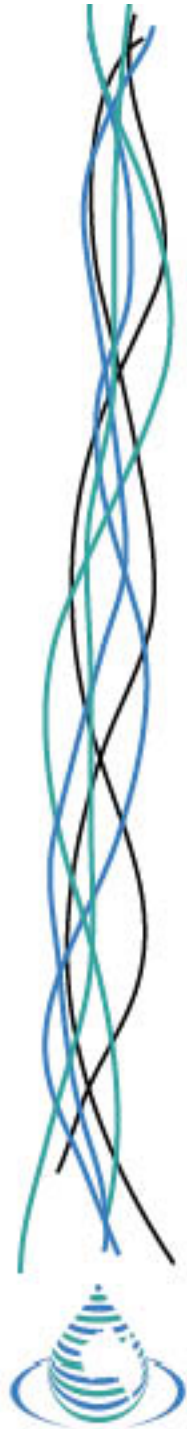
Rainwater Harvesting System		Local Government Area (LGA)
No RH System present		Beaudesert
RH System retrofitted by current occupants	X	Brisbane
RH System fitted before purchase by current occupants		Ipswich
		Redcliffe
		Toowoomba

- Data analysis
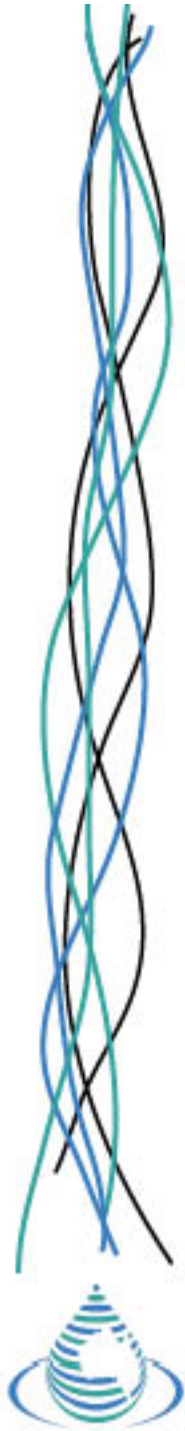
Acknowledgments

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