



Impacts and Achievements of the MTSRF

Copy of abstract and presentation given at the
2010 Annual Conference of the
Marine and Tropical Sciences Research Facility (MTSRF)
http://www.rrrc.org.au/news/2010_conference.html

Showcasing the Australian Government's investment
in the MTSRF for improved sustainability of the
North Queensland region, and Australia

18-20 May 2010
Pullman Reef Hotel & Casino
Cairns, North Queensland



Abstract

[MTSRF Project Number 4.9.7](#)

What contribution can schools make to community scale resilience?

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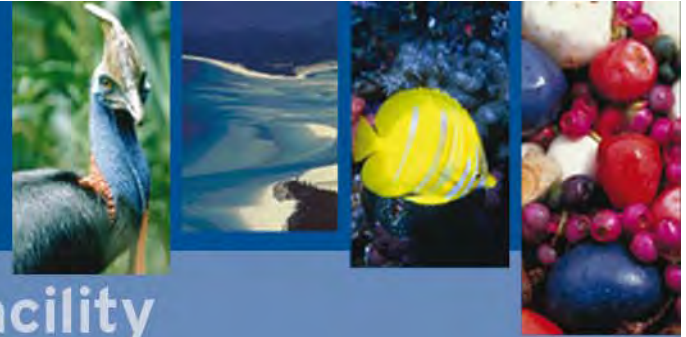
Nineteen percent of Australia's population attends schools around the country every day in a work or learning capacity (ABS, 2005). Schools are often a focal point for community activities and these can bring positive local scale benefits. Such benefits may contribute to social resilience – a characteristic which enables a community to be proactive in the face of change, so that it continues to maintain its structure, function and identity. Yet to date no known research in Australia has addressed if and in what capacity school initiatives can enhance community scale resilience. My research was conducted as a multi-site case study of four Far North Queensland schools. Using the Australian Government's "Framework for Environmental Education for Sustainability" (2005) my PhD explores the different ways that sustainability initiatives might foster resilience in school communities.

In part, results of the research indicate schools can foster resilience by teaching and modeling practices which provide the skills, knowledge and understandings to build capacity to manage change in ways that open rather than limit future options. A major outcome of the research is a set of qualitative indicators which infer resilience through Education for Sustainability. The indicators combine understandings from the Education for Sustainability and social-ecological resilience fields and attempt to describe Education for Sustainability with intent to build resilience. The presentation will review findings of the research, illustrate and explain the indicator framework.



Australian Government

Department of the Environment and Water Resources



Marine and Tropical Sciences Research Facility

What contribution can schools make to community scale resilience?

Snowy Evans

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Background to this research

- PhD research
- Forms part of project 4.9.7 to develop indicators of social resilience at various scales



Why investigate school communities?



Research Question

What is the role of education for sustainability in fostering social-ecological resilience within school communities?





Some explanations

- Education for sustainability
- Social-ecological resilience





Research aim

To investigate whether and to what extent whole-school approaches to Education for Sustainability (EfS) promote school community level resilience to environmental changes, particularly changes in water quality of the GBR and catchments.



Research approach

Case study investigating how EfS is constructed in four FNQ schools with a reputation for prioritising EfS.





Research Outcomes

- A set of relational indicator variables which reflect the characteristics of a whole-school approach to EfS integrated with a social-ecological resilience perspective.
- Emergent understandings about how EfS can and does promote resilience.

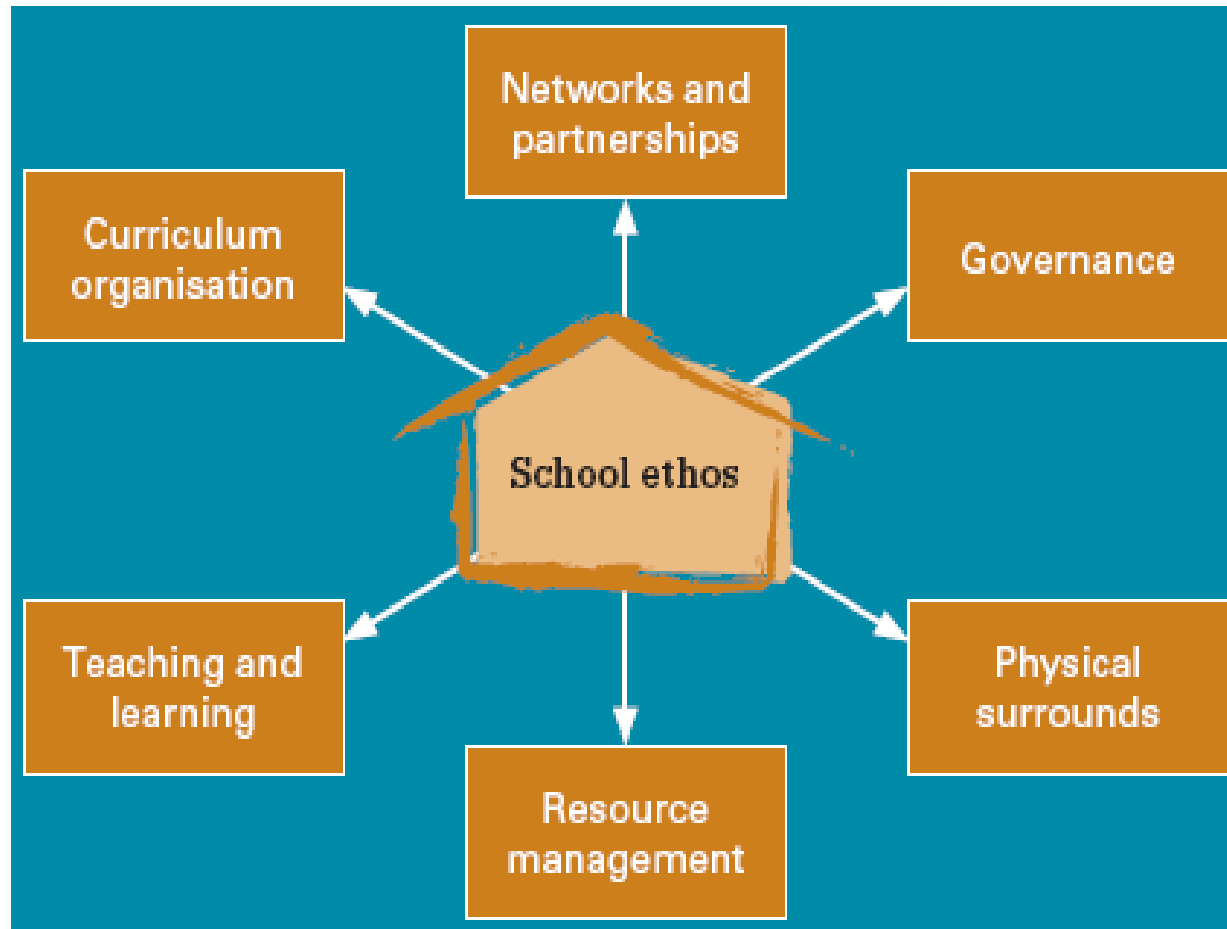


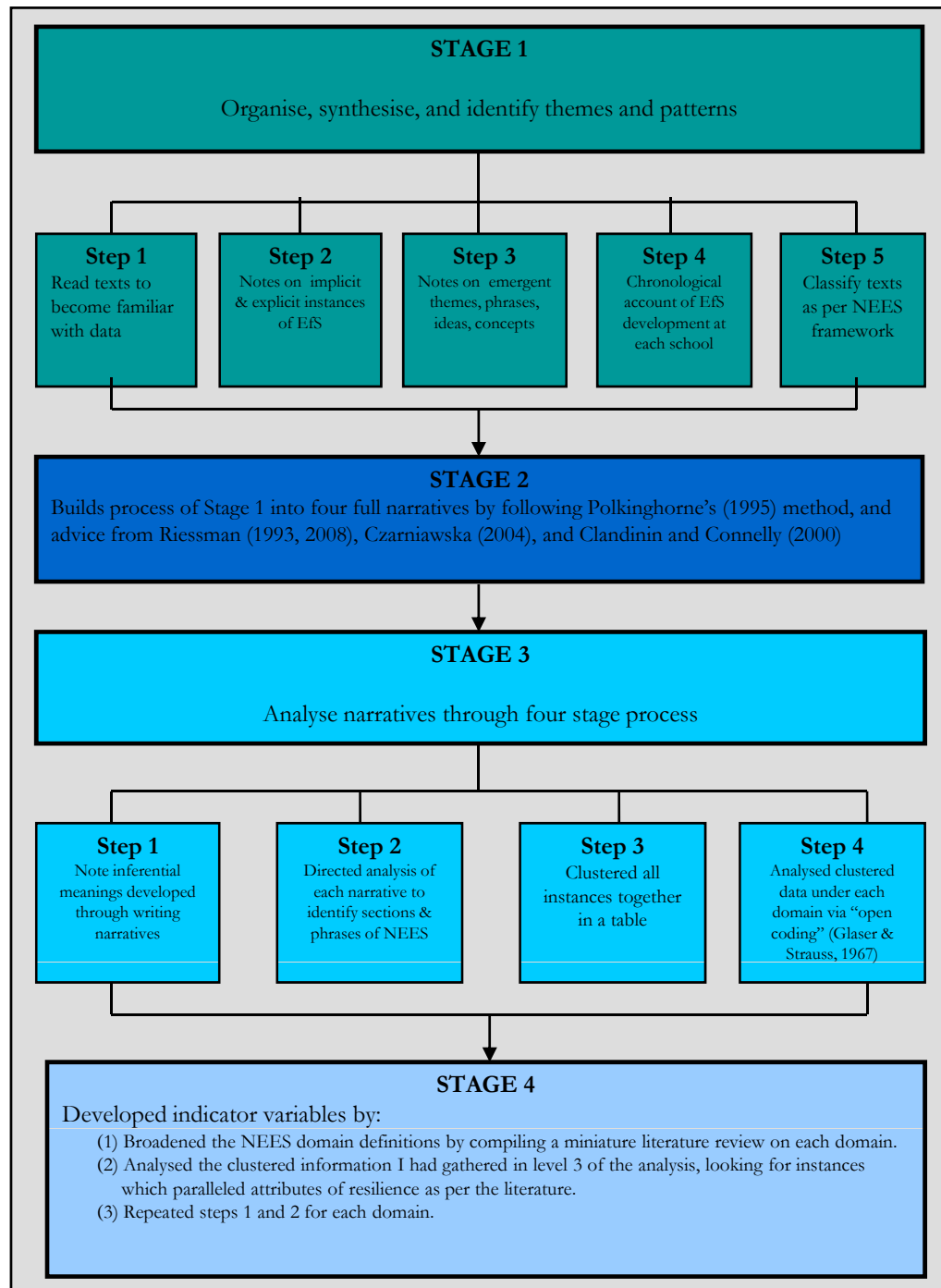
Indicator Variables Framework

Indicator variables were developed as part of the overall research analysis (stage 4) by applying the Australian Government's *Framework for Environmental Education for Sustainability*



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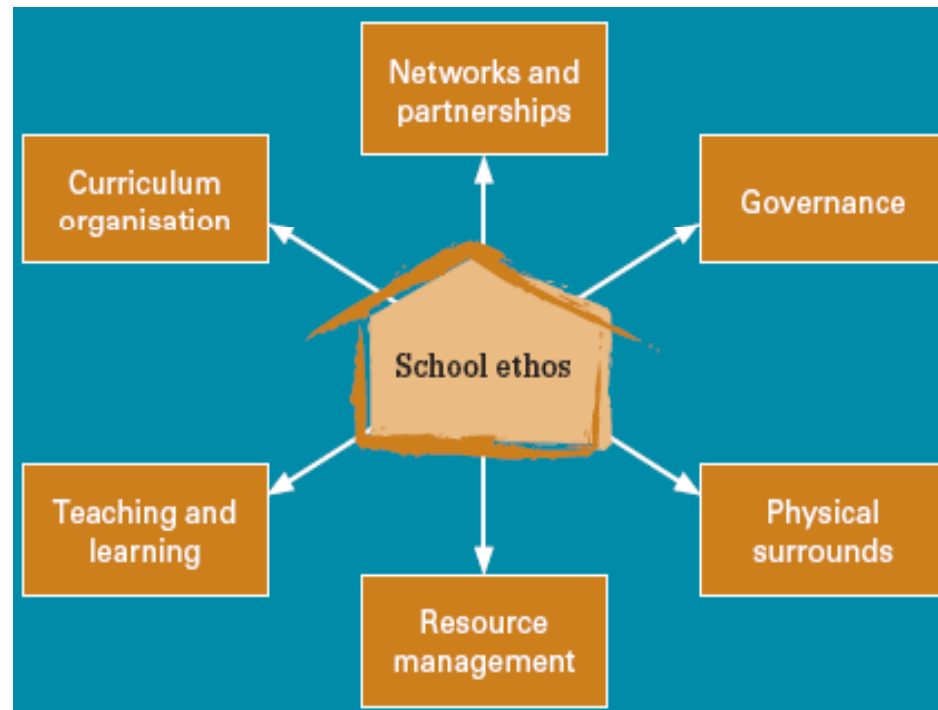






Development of indicator variables

- (1) Broadened the NEES domain definitions by compiling a miniature literature review on each domain.



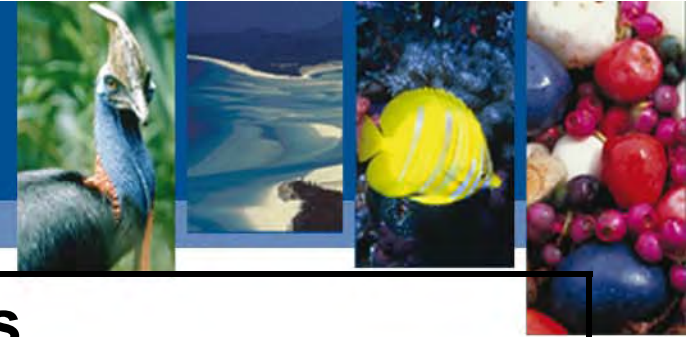


Development of indicator variables

- (2) Analysed the clustered information I had gathered in level 3 of the analysis, looking for instances which paralleled attributes of resilience as per the literature.
- (3) Repeated steps 1 and 2 for each domain.



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Domain	Indicator variables
Governance	<i>Flexibility and adaptability, creativity, democracy, altruism, tenacity and recursiveness, trust, active principal support</i>
Physical surrounds	<i>Landscape diversity, minimal litter, invasive weeds and pest animals, sustainable technologies, dominance of local native plants</i>
Resource management	<i>Locally based whole school environmental management plan (SEMP), adaptive management</i>
Teaching and learning	<i>Creativity, self-organisation, higher order thinking skills, flexible teaching and learning</i>
Curriculum organisation	<i>Flexible, local, problem based, culturally inclusive, integrated, futures based curriculum</i>
Networks & partnerships	<i>Diverse and flexible, cross-scale, school-community</i>
School ethos	<i>The school's meta-values and culture values and encourages higher order learning, knowledge of local ecology, diversity, trust and understanding and managing change</i>





Future research

- Refine the indicator variables into testable indicators
- Wide scale study to further enhance understanding about social-ecological resilience through EfS (including high schools)





Questions?

