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**Social-ecological resilience  
through education for sustainability:  
A case study of community scale resilience**

Thesis submitted by

**Neus (Snowy) EVANS**

**BEd (Hons)**

in December 2010

for the degree of

**Doctor of Philosophy**

**in the School of Education**

**James Cook University**

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## Statement of Sources

### Declaration

I declare that this thesis is my own work and has not been submitted in any form for another degree or diploma at any university or other institution of tertiary education. Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given.

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**Signed on the author's behalf by:**

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**Head of School**

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**Date**

## Statement on the Contribution of Others

Nature of Assistance	Contribution	Name, title and affiliation
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Data	Data collection design	Dr Hilary Whitehouse, School of Education, JCU  Dr Margaret Gooch, School of Education, JCU
	Interview transcriptions	Ms Wendy Cahill, School of Education, JCU

## Declaration on Ethics

The research presented and reported in this thesis was conducted within the guidelines for research ethics outlined in the *National Statement on Ethics Conduct in Research Involving Human* (1999), the *Joint NHMRC/AVCC Statement and Guidelines on Research Practice* (1997), the *James Cook University Policy on Experimentation Ethics. Standard Practices and Guidelines* (2001), and the *James Cook University Statement and Guidelines on Research Practice* (2001). The proposed research methodology received clearance from the James Cook University Experimentation Ethics Review Committee (approval number H2765).

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Neus (Snow) Evans

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Date

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## Abstract

This doctoral research applies a social-ecological resilience lens to investigate how principals, teachers and students in four schools in Far North Queensland, Australia, organise and enact the principles and practices of education for sustainability. Resilience builds capacity to mitigate disruptions, self-organise, learn and adapt. Education for sustainability is an educational approach which promotes capacity for change towards sustainability. The premise of this thesis is that successful education for sustainability provides the skills, knowledge and understandings of students, staff and others in the school community to build capacity to manage change in ways that open rather than limit future options. The sustainability work that schools undertake is known to produce positive local-scale benefits. Such benefits may include school community-scale resilience. Yet to date no known research in Australia has addressed if and in what capacity school initiatives can and do enhance social resilience.

This study applies a case study approach to investigate social resilience through education for sustainability from a social-ecological perspective. Sources of data include individual interviews with principals and teachers, group interviews with students, document studies, archival records, sustainability reviews of each school, and a questionnaire administered to the wider teaching staff. Data analysis applies a four stage process to study each school's everyday management and teaching and learning practices from a social resilience perspective.

One tangible outcome of this study is the production of a proposed set of qualitative indicators of social-ecological resilience at school community level that align with the Australian Government's *Framework for Environmental Education for Sustainability* outlined in *Educating for a Sustainable Future: A National Environmental Education Statement for Australian Schools*, which is a nationally agreed description for best practice. The indicators combine understandings from the education for sustainability and social-ecological resilience fields to describe education for sustainability with intent



to build resilience. A second outcome of the study is a set of propositions for how education for sustainability can be enhanced to promote resilience.

This research suggests education for sustainability has capacity to foster social-ecological resilience and highlights a need to plan for resilience within education for sustainability. The study found many of the principles, practices and processes of implementing a whole-school approach to education for sustainability parallel research on social-ecological resilience. Schools can foster resilience by teaching and modelling practices which provide the skills, knowledge and understandings to build capacity to manage change in ways that enhance future opportunities. It appears schools that nurture resilience-enhancing attributes such as critical thinking, self-organisation, flexibility, creativity, diversity, and social capital building improve the school community's adaptive capacity.

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