

Ella Bay Development, Far North Queensland
Expression of Interest in Conducting Research:

Research Topic:

Disaster Mitigation Planning

Research Team

<u>Name</u>	<u>Positions</u>	<u>Qualifications</u>
David King	Director of CDS	BA Hons, Cert.Ed , PhD
Alison Cottrell	Program Leader	BA, MSPD, PhD, Graduate Certificate Education
Centre Research Staff		

Background and research questions

The Innisfail coastal area is extremely Hazard prone. During the last decade teams from the Centre for Disaster Studies have carried out post disaster surveys in Innisfail and Johnstone Shire on three separate occasions. Following Cyclone Larry members of the Centre have been extensively involved in analyses of cyclone response and the recovery process. Researchers with the Centre have a detailed and specific knowledge of the area, of hazard research in coastal North Queensland, and of the legislation, processes and structure of multi-hazard risk assessment. On the one hand our researchers have been involved in carrying out natural disaster risk mitigation studies for a number of Shire Councils, and on the other hand we have completed an extensive evaluation of the whole program of natural disaster risk mitigation studies in Queensland. A significant component of these studies has involved land-use planning, the roles of planners and compliance with the Integrated Planning Act and the State's Natural Hazards Planning Policy. The approach to hazard planning in coastal Queensland must involve emergency managers and planners within the context of detailed scientific understanding of the local environment and potential natural hazards. However, multi-hazard risk assessments are carried out in existing communities. In this case the community is yet to come into being. Therefore, disaster planning for the Ella Bay community must take place in conjunction with the urban design team.

The research will:

1. Conduct a Natural Disaster Risk Mitigation Study of the proposed development utilizing standard Queensland Government/National procedures and processes

Aims and objectives

The primary aim is to maximise the safety of the Ella Bay community through mitigation of the impacts of natural hazards. This will be achieved through:

1. A systematic identification of all hazard risks, within the context of the Ella Bay environment.
2. Application of hazard risk assessment to a generated socio-demographic profile and planned layout and style of community.
3. Identification of all hazards and likely community vulnerability.

4. Identification of mitigation treatments that may be incorporated into the planning and design of the community.

We are prepared to work with hazard researchers and planners from other institutions, and are willing to develop a research proposal in partnership with colleagues.

Methodology

The study will be guided by the Queensland and Federal guidelines and manuals for natural disaster risk mitigation strategies. Some of these documents are listed in the references below. The primary members of the Centre for Disaster Studies are also members of the Planning Institute of Australia and work within the context of land-use planning and are well acquainted with appropriate planning legislation. These areas of the planning legislation will also structure and guide the risk assessment.

Socio-demographic profiles of existing coastal communities, within the region, will be generated from the census in order to assess aspects of vulnerability and resilience in the potential community. Existing natural disaster risk mitigation studies that incorporate coastal communities will be analysed as a basis for risk assessment of the new community, thus identifying likely vulnerability and resilience indicators.

The urban design of Ella Bay community will be analysed in the context of its natural environment in order to identify all potential hazards. This part of the research will draw extensively on existing geophysical knowledge, site analyses, bathymetry, and the predicted style and layout of the Ella Bay community in comparison with the styles and layouts of existing coastal communities. This aspect of the research will be carried out in close cooperation with the urban design and environmental impact components of the overall study.

Interviews with key informants and stakeholders will take place in Johnstone Shire, and community consultation will be carried out in nearby communities.

Outcomes

The outcome will be recommendations leading towards a hazards safe community that is able to minimise its vulnerability to natural hazards and maximise its community resilience. Building and designing for a sense of community and place will enhance the resilience, sustainability and safety of the community that is yet to be.

Funding

<i>Activity</i>	<i>Funding Requirements</i>	<i>Source of Funding</i>
Research Assistance Salaries	20,000	requested
Travel and accommodation	10,000	requested
Principal researchers time commitment	11,000	In kind CDS/JCU
CDS office and staff	4,000	In kind CDS

References

Asian Disaster Reduction Center. (2005). Total Disaster Risk Management – Good Practices. Asian Disaster Reduction Center, Kobe.

- Centre for Disaster Studies. (2006). Review of the Practices and Outcomes of the Natural Disaster Risk Management Study Programme. Queensland Department of Emergency Services.
- DOTARS, (2006) Department of Transport and Regional Services, Natural Disaster Mitigation Program <http://www.dotars.gov.au/disasters/ndmp/index.aspx> viewed 1 June 2006
- DOTARS/COAG, (2004). Natural Disasters in Australia: Reforming Mitigation, Relief and Recovery Arrangements. **A report to the Council of Australian Governments by a high level officials group.** DOTARS, Commonwealth of Australia.
- Emergency Management Australia. (2000). **The Good Practice Guide.** Commonwealth of Australia, Canberra
- Queensland Department of Emergency Services. (2001). **Natural Disaster Risk Management: Guidelines for Reporting.** Queensland Government, Brisbane.
- Queensland Department of Emergency Services. (2004). **A Guide to Disaster Risk Management in Queensland Aboriginal and Torres Strait Islander Communities.** Queensland Government, Brisbane.
- Tasmanian State Emergency Service. (2006). **State Summary: The Tasmanian Emergency Risk Management Project; a community perspective.** Published by the State Emergency Service, Hobart, Tasmania
- Zamecka A. & Buchanan G. (1999) Disaster Risk Management. Queensland Department of Emergency Services, Brisbane
- Zamecka A. & Buchanan G. (2000) Disaster Risk Management Guide: A How-to Manual for Local Government, Queensland Department of Emergency Services, Brisbane.

Appendix 1: Short Curriculum Vitae's of the Research Team

CURRICULUM VITAE: - DAVID KING

Principal Employment:

- 2003-date Associate Professor of Geography
- 1999-date Director Centre for Tropical Urban and Regional Planning, James Cook University
- 1996-date Director, Centre for Disaster Studies,

Funded Research and Consultancy: 2000-2007

- 2007 Tsunami Warning Survey, Bureau of Meteorology & JCU
- 2006 Review of the National Disaster Risk Management Strategies, Queensland, Queensland Department of Emergency Services
- 2006 Cyclone Monica Post Cyclone Survey, Bureau of Meteorology
- 2006 Cyclone Larry Post Disaster Survey, Bureau of Meteorology
- 2005 Tsunami post disaster appraisal, Thailand, Bureau of Meteorology, CDS
- 2005 Weather warnings for Non English speaking background residents, Bureau of Meteorology
- 2004 Indigenous weather knowledge, Bureau of Meteorology
- 2004 Destination Risk Management Modelling, Sustainable Tourism CRC
- 2004 Climate change and coastal zone management: assessment of risk for tourism, Sustainable Tourism CRC
- 2003 Melbourne Storm December 2003: Household Phone Survey, Bureau of Meteorology
- 2003 – 2004 Indigenous Weather Knowledge: Bureau of Meteorology, CDS
- 2003 Backpacker Awareness of Cyclone Hazard: Cairns City Council, CDS
- 2003 – 2005 Tourism, climate, and needs of Australian tourist destinations. Tourism CRC, Climate and Natural Disasters Project.
- 2002 JCU Special Studies Program. Community Recovery after the Sierra Leone Civil War.

- 2002-2004 Australian Research Council Linkage Award, Post Doctoral Fellowship. Study of risk, vulnerability, behaviour, attitudes and perceptions of warnings, with Bureau of Meteorology
- 2001 Marine Weather Forecast Users Survey, Bureau of Meteorology
- 2000 Hidden Valley Landowner Baseline and Socio-Economic Surveys, July 2000 and 1993 Summary, Report prepared for Morobe Gold.
- 2000 Cities Project Multi-Hazard Analysis Methodology Review, AGSO
- 2000-2002 Australian Post Graduate Award Industry Partnership. Vulnerability of Remote and Indigenous Communities to Natural Hazards, with Queensland Health.

Publications – Career Total: 81 Journal papers, conference papers, monographs, chapters, and books. 36 funded consultancy and research reports.

Research Degree Supervision: 8 Masters, 16 PhDs

Address: School of Tropical Environment Studies and Geography
James Cook University, Townsville, Q 4811, Australia

Telephone: (61 747) 81 4430 and (61 740) 42 1215

Fax: (61 747) 81 4020 and (61 740) 42 1214

Email: David.King@jcu.edu.au

Nationality: Australian and British

Qualifications: BA Hons 2.i. Geography, SOAS, London, 1972

PostGraduate Certificate in Education. Cambridge University, 1973

PhD, School of Oriental & African Studies, London University, 1979

‘Diamond Mining settlements in Central Kono District, Sierra Leone’

Corporate Member of Royal Australian Planning Institute

Member of Natural Hazards Society and The International Emergency Management Society

CURRICULUM VITAE: ALISON COTTRELL

BA, MSPD, PhD (University of Queensland), Graduate Certificate Education (James Cook University)

Senior Lecturer

School of Earth and Environmental Sciences,

James Cook University, Townsville, Queensland 4814, Australia.

Tel: +61 07 47 814653; Fax: +61 77 815581

Email: Alison.Cottrell@jcu.edu.au

Languages: English, Indonesian

EMPLOYMENT

1995 to date Senior Lecturer, James Cook University, School of Tropical Environment Studies and Geography. (Social aspects of Environmental Science, Regional Planning, Disasters and Development Studies. 1995-2000 @ 50%, 2001 to date @ 75%)

Teaching areas include: social planning, community participation, urban studies, disaster studies, impact assessment research methods and environmental studies.

MEMBERSHIP OF ORGANISATIONS

Planning Institute of Australia (Corporate Member)

International Sociological Association RC39 Committee on Disasters

International Association for Impact Assessment

RECENT PROJECTS INCLUDE:

- Academic Research Leader for the Understanding Communities Project in the Bushfire Cooperative Research Centre.
- A study of women's preparations for the wet season in Northern Australia.
- The study of a community action group in the context of disaster management.

RELEVANT PUBLICATIONS

COTTRELL, A., forthcoming Quiet Achievers: women's resilience to a seasonal hazard. In: K. Gow and D. Paton. Resilience: The Phoenix of Natural Disasters.

COTTRELL, A., forthcoming (2007) 'What is this thing called 'Community': issues for hazard studies.' In: D. King and A. Cottrell (eds) Communities Living with Hazards. Centre for Disaster Studies, James Cook University, Townsville.

BUSHNELL, S. and **COTTRELL, A.**, forthcoming (2007) 'Community perceptions of fire hazard and its impact.' In: D. King and A. Cottrell (eds). Communities Living with Hazards. Centre for Disaster Studies, James Cook University, Townsville

COTTRELL, A., (2006) 'Women's roles in disaster resilience.' In: D. Paton, and D. Johnstone *Disaster Resilience: An Integrated Approach*. Charles C. Thomas Publisher, Springfield, Illinois, USA.

COTTRELL, A. (2005) Communities and bushfire hazard in Australia: More questions than answers. *Environmental Hazards*, 6, 109-114.

COTTRELL, A. (2005) Sometimes it's a big ask, but sometimes it's a big outcome: community participation in flood mitigation. *The Australian Journal of Emergency Management*. 20 (3):27-32. ISSN: 1324 1540. Refereed paper.

KING, D., **COTTRELL, A.**, **GOUDIE, D.**, AND **CUNLIFFE, S.**, (2005) Community hazard awareness and resilience in northern Australia. Know Risk. Geneva, United Nations ISDR. Pp324-325 ISBN 92-1-1-132024-0

COTTRELL, A., forthcoming (2005) 'What is this thing called 'Community': issues for hazard studies.' In: D. King and A. Cottrell (eds) Communities and Disasters. Centre for Disaster Studies, James Cook University, Townsville.

COTTRELL, A., forthcoming (2005) 'Quiet achievers: women's preparations for seasonal hazards in northern Australia.' In: D. King and A. Cottrell (eds). Communities and Disasters. Centre for Disaster Studies, James Cook University, Townsville.

COTTRELL, A. & **ANDERSON-BERRY, L.** 2003 Women's preparations for the Wet Season in Northern Australia. Report to Emergency Management Australia, Small Grants Program, Project 13/2002. (90% contribution)

COTTRELL, A., **CUNLIFFE, S.**, **KING, D.** and **ANDERSON-BERRY, L.** 2001 Awareness and Preparedness for Natural Hazards in Remote Communities: Bloomfield River Region and Rossville. Centre for Disaster Studies James Cook University. (70% contribution)

PROFESSIONAL CONSULTANCY

2006 Defence Science and Technology Organization. Disaster Research Methodology paper \$10,000

2000 Northern Land Council: Analysis and assessment of the implications for the community of an environmental impact statement on part of the proposed Alice Springs to Darwin railway. \$2500

1999 Facilitator of focus groups for Centre for Disaster Studies and the Cairns City Council Water and Waste Water Services: Y2K Incident Management and Contingency Plans for Cairns City Council.

RESEARCH TRAINING AND SUPERVISION

Registered post-graduate supervisor for James Cook University and University of Tasmania and a registered Student Research Monitor for James Cook University.

Supervision of 6 PhD, 4 Masters and 11 Honours students who have graduated. Currently (jointly) supervise 7 PhD, 2 Masters and 1 Honours student. Also supervise smaller student research projects.