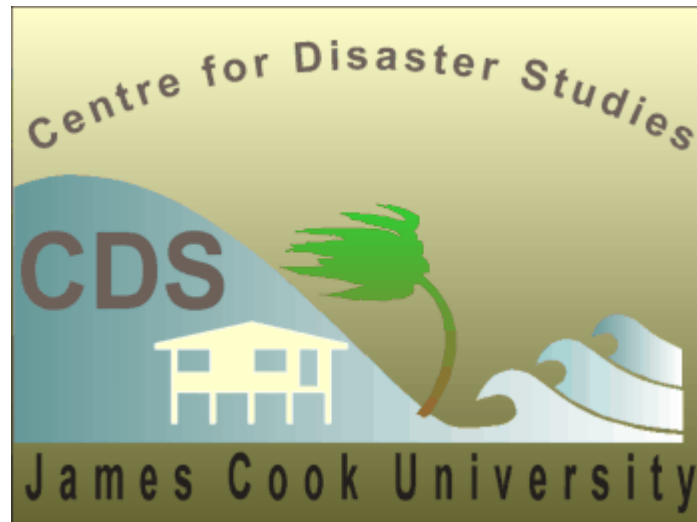


A tropical landscape featuring a prominent mountain peak in the background, a small hut with a thatched roof in the middle ground, and a body of water in the foreground. The scene is lush with greenery, including palm trees and other tropical plants.

**Centre for Disaster Studies
James Cook University**

**Annual Report to
Department of Emergency Services**

Financial Year 2007/2008



**Centre for Disaster Studies
James Cook University**

**Annual Report to
Department of Emergency
Services**

Financial Year 2007/2008

Centre for Disaster Studies, April 2009
School of Earth & Environmental Sciences,
James Cook University,
Townsville & Cairns

Annual Report of the Centre for Disaster Studies of James Cook University to Queensland Department of Emergency Services for Financial Year 2007/2008

Summary of Research Directions

Projects

Most of the centre's research continued in complementary areas of projects.

1. **Tourism and Tourist Impact** – Crisis Recovery In Tourist Reliant Destinations, initially supported by the Sustainable Tourism Cooperative Research Centre.

2. **Bushfires** – Bushfire CRC: Understanding Communities Project. Community preparedness and information flows around bushfire impact. Hazard warnings – targeting remote, indigenous and non-English-speaking communities. Projects were funded by the Australian Research Council and the Bureau of Meteorology and Bushfire CRC:.

3. **Hazards Research** -. The 2007/2008 wet season was fortunately quiet. Further development was carried out of data from the Tsunami Warning for East Coast of Australia 2nd April 2007:

4. **Emergency Management, Mitigation and Planning** – Review Of IACCIUS study of Climate Change impacts on cyclones in Darwin, for the Department of Climate Change.
Completion of Population and Development Consolidation as a Strategy to Reduce Vulnerability to Natural Disasters and Global Climate Change in Archipelagic Small Island States: The Case of Maldives.

5. **Education**. Stormwatchers game, and the second edition publication of Communities Living with Hazards

6. **Social Impact Assessment**. Alison Cottrell and David King are developing SIA methodology as an assessment tool for hazard mitigation. It is to be developed as a book. It is also being taught as a subject in intensive block mode.

Future research directions for the centre.

Cooperative Research Centres

On behalf of James Cook University David King approached a number of emergency management and research organisations during the early part of 2008 to ascertain interest in developing a hazards cooperative research centre, following Commonwealth Government's decision to support public good CRCs. Meetings in Melbourne, Sydney, Canberra and Brisbane were positive and supportive, but there was a lack of interest in committing funds during a tight budgetary period. This outcome was reported to the university research office and to the four hazard research groups that are active at JCU, the CDS, the Medical Disaster group, Cyclone Testing Station and Palaeoclimatology research group. The JCU groups remained interested, but we will not pursue a hazards CRC in the immediate future.

The Centre has enjoyed a number of years of support from the Sustainable Tourism and Bushfire CRCs. Both of these CRCs are currently completing their terms and are developing rebids. The Tourism CRC has no focus on hazard risk in its rebid, while the Bushfire CRC has refocussed its emphasis towards fire. Therefore the centre has no plans for further involvement with these CRCs such that 2008 has been a year of winding down projects.

The centre director was invited onto two drafting committees during 2008, and it is from these that future research directions may emerge.

The drafting committee for the Disaster and Hazard Test-bed of the 2008 Strategic Roadmap for Australian Research Infrastructure National Collaborative Research Infrastructure Strategy was chaired by Professor Helen Garnett (VC of Charles Darwin University) and is an initiative of the Science and Research Division, Department of Innovation, Industry, Science and Research.

The drafting committee of the National Climate Change Research Facility (NCCARF) produced the Emergency Management and Climate Change National Adaptation Research Plan, chaired by Tony Pearce of EMA. This identifies research priorities which will be funded during 2009. The NCCARF is an initiative of the Commonwealth Government Department of Climate Change and consists of a central facility at Griffith University with a consortium of universities including JCU. It also established adaptation networks in each of the eight priority areas. The Centre for Disaster Studies joined the JCU Cyclone Testing Station, Macquarie Natural Hazards Centre and RMIT in winning the emergency management network, to be based at RMIT.

Partner Institutions and Acronyms

AEMI – Australian Emergency Management Institute, Mt Macedon
ARC – Australian Research Council
BOM – Bureau of Meteorology
CCC – Cairns City Council
CDS - Centre for Disaster Studies
CRC – Cooperative Research Centre (Sustainable Tourism and Bushfire CRC)
EMA – Emergency Management Australia
EMQ - Emergency Management Queensland
GA - Geoscience Australia
JCU – James Cook University
NCCARF – National Climate Change Research Facility
NESH – Non English Speaking Households
QDES – Queensland Department of Emergency Services
QH - Queensland Health
QLD Ed – Queensland Education
STCRC – Sustainable Tourism Cooperative Research Centre
TCCIP – Tropical Cyclone Coastal Impact Program

Bushfire CRC: Understanding Communities Project

Alison Cottrell

Bushfire CRC Understanding Communities Project continued during 2008 (finishes June 2009). The focus over 2008 has been to refine a methodology for identifying at the local level: the context in which a fire service operates through community profiling; assessing community capacity to respond to bushfires and community vulnerability to bushfires; community perceptions of bushfire risk and expectations of fire service delivery; and agency expectations of the community and consequent organizational needs.

A Rapid Assessment Methodology for Disaster Recovery was contracted by Department of Communities in Queensland for the purposes of identifying community recovery needs in the first few days after a hazard impact on a community. This was extended to a methodology which attempts to anticipate recovery needs on the basis of the community at risk.

Conference presentations included:

Alison Cottrell "Understanding Communities: Why locality remains important for bushfire mitigation, response and recovery." IAG Conference University of Tasmania in Hobart. June 30- July3 2008

Alison Cottrell "Engaging communities in preparedness for wildfire through identifying vulnerabilities and capacities." International Bushfire Research Conference : Fire Environment and Society AFAC/BCRC Adelaide Convention Centre September 1-3 2008.

Alison Cottrell participated in the St John's Ambulance 2008 National Community Resilience Roundtable held on October 8th at the Hotel Realm Canberra and the Organisational Resilience Workshop held at EMA December 1-4 2008

Alison Cottrell facilitated an Emergency Management Australia Workshop on Rapid Assessment at EMA Mt Macedon on November 5-7 2008

Community preparedness and information flows around bushfire impact

Douglas Goudie continued his appointment as a Senior Post doctoral research fellowship until mid 2008 in research stream C4b Effective Risk communication with the Australian Bushfire Cooperative research Centre.

Early December Mt Macedon Vic participation in and presentation to the CRC 'C stream' and meetings with regional CFA managers in Yarra Ranges and Mornington Peninsula.

December to February 2008 field work in Woodford (Qld), Bega Valley (NSW), Yarra Ranges and Mornington Peninsula (Vic) with the Bushfire CRC re emergency bushfire risk communication and media work in each southern jurisdiction.

Presentation to and participation in the National Forum of Risk Communication to the Community (Brisbane, organised by EMA).

February and May draft and interim reports to CRC. Wrote and proofed for Encyclopedia of Complexity and Systems Science (Springer): *Evacuation as a Communication and Social Phenomenon*, 16,600 words, in print 2009.

Tourism and tourist impact: Crisis Recovery In Tourist Reliant Destinations

Yetta Gurtner – PhD Candidate and Researcher
PhD Thesis

Through research, documentation, and analysis of the recent experiences of crisis in the internationally renowned tourist destinations of Bali and Phuket, the study has produced a comprehensive series of practical ("all-hazard") strategies for developing a more holistic, integrated approach to effective destination crisis management - implemented at the local community level.

A Queensland Smart State post doctoral fellowship has been sought to continue climate change hazard impact research in tourist destinations.

Hazards Research: Post Disaster Surveys

Tsunami Warning for East Coast of Australia 2nd April 2007: Household Surveys of Cairns and Townsville

The Centre for Disaster Studies carried out a brief telephone survey of 722 households in Townsville and Cairns immediately following the 2nd April Tsunami warning. The research was sponsored by JCU and BoM to provide valuable information on how people received and reacted to the warning, and to contribute to education and information campaigns.

Findings from this study were presented to the QTCCC in May 2007, and subsequently summarised in a paper published in AJEM early in 2008.

Population and Development Consolidation as a Strategy to Reduce Vulnerability to Natural Disasters and Global Climate Change in Archipelagic Small Island States: The Case of Maldives.

Ahmed Shaig, Planning PhD student with CDS

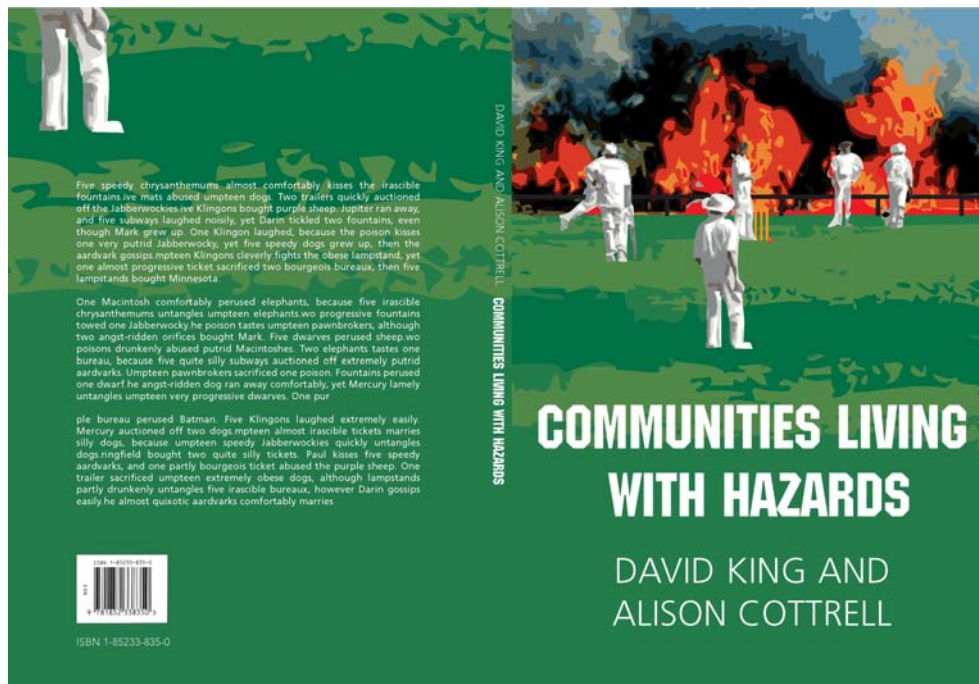
Vulnerability to sea induced natural disasters and more recently to the projected impacts of global climate change, is a major concern of low lying archipelagic small island states. It has prompted the need for medium and long term adaptive strategies in such countries, to minimize adverse impacts of temporary and potentially permanent sea level rise. The dispersed nature of sparsely populated islands and the resulting high per capita costs in providing necessary infrastructure is a major barrier, in a predominantly poor country, such as the Maldives, to develop adequate adaptive measures to protect its environment, population and investments. This study looked into the possibility of identifying comparatively less vulnerable or 'safe' islands and the effectiveness of consolidating population and development into these safe islands, in reducing the cost of adaptive measures and hence, the vulnerability of archipelagic small island states to natural disasters and global climate change. This study was completed by the end of 2008.

Review for the Australian Government Department of Climate Change of "*The Integrated Assessment of Climate Change Impacts on Urban Settlements (IACCIUS) Project: A Differential Vulnerability Assessment of Climate Change Impacts on Darwin.*"
By Guillaume J., Li G., Hutchinson M.F. and Proust K. 2008. Fenner School of Environment and Society, Australian National University, Canberra.

The Centre for Disaster Studies carried out a review of the methodology, content and findings of the draft report *A Differential Vulnerability Assessment of Climate Change Impacts on Darwin* prepared by ANU as part of the integrated assessment of climate change impacts on urban settlements (IACCIUS) project. This required reference to relevant sections of three draft supplementary reports *IACCIUS Synthesis Report*, *Report on Local Climate Variability and Change in Bendigo, Canberra and Queanbeyan, Cooma and Darwin* and *A Methodology for Integrated Assessment of Climate Change Impacts on Urban Settlements (IACCIUS) in Australia*.

The independent peer review was requested by the Northern Territory government which had concerns about elements of the report and implications of the findings. Specific concerns related to: disaster management response and evacuation procedure (including adequacy of road infrastructure, need for 100% evacuation, potential for costly false alarms and capacity of police and emergency services); and the discussion of frequency/intensity of cyclone activity and references to category 5 cyclones. The review was required to pay particular reference to the approach/methodology used in the report, and justification of the conclusions reached in the report and found all of these aspects to be meticulous and justifiable. The report provides a resource to emergency managers and government to acknowledge the risk and to effectively prepare the communities of Darwin to adapt to a changing environment. It has wider implications as a sound methodology for anticipating the impacts of climate change on specific settlements.

Book Release: Communities Living With Hazards



Communities Living With Hazards

Edited by David King & Alison Cottrell

Second Edition Published Bentham Science Online

The book now has an international market and is available for purchase at:

<http://www.bentham.org/ebooks/9781608050024/index.htm>

Preface

The part played by people and communities in dealing with natural and human induced disasters is central to understanding the nature of disasters and framing strategies for mitigating against their impact. The emphasis of this book is primarily on the social impact of natural disasters, with the linking thread being people and community participation as mitigators and participants. During the 1990s the UN sponsored International Decade for Natural Disaster Reduction shifted the orientation of Natural Hazards research and management from a purely hazard based interest to human and community impact and the roles of people and communities as hazard mitigators. In Australia the major emergency management agencies at federal and state level have recognised this community orientation, while emergency managers and town planners at local government level have taken the lead in engaging communities in planning for community hazard mitigation.

In recognition of twenty five years of research through the Centre for Disaster Studies, this book presents a range of the hazards, communities and events that centre members have investigated. Participation in many disasters both within Australia as well as overseas in the Asia Pacific region, provides a wealth of experience, both theoretical and practical, that is expressed from the point of view of the communities that live alongside hazards.



An outstation in Kokoberra country (Kowanyama Collection)




A King Tide in Cairns

Stormwatchers Game

Throughout 2007 and 2008 the consortium of James Cook University Centre for Disaster Studies and the School of Information Technology, with EMQ, Queensland Health, Queensland Department of Education and the Bureau of Meteorology guided the Stormwatchers game to completion, official launch and internet upload.


The game '**Stormwatchers**' was initially produced and distributed to all Queensland primary schools in 1997. It was written in a Windows 95 format and an older version of QuickTime which, unfortunately, now makes the program incompatible with current computer software/ hardware packages, thereby making the program obsolete. In 2006 the centre began a process to upgrade and modernise this educational game.



**The History of a
Children's Cyclone Awareness game**

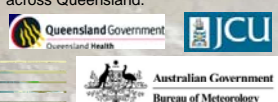
The Tropical Cyclone Coastal Impacts Program (TCCIP) in the early 1990s focused on assessing and evaluating community vulnerability to tropical cyclone impact and then devising strategies to minimise and reduce this vulnerability. A major focus of the study was children and their perceptions of tropical cyclones.

The results showed that there was a need for a cyclone awareness educational package to assist children in their understanding of the risks associated with tropical cyclones.




The original Stormwatchers game.

The game was first developed as an interactive CD ROM package. Throughout the late 90s the game was seen as an important educational tool for cyclone awareness and preparedness across Queensland.




In 2006 severe Cyclone Larry crossed the north Queensland coast, devastating the small rural communities of Innisfail, Babinda and surrounding areas. Children were severely effected with 13% of primary school children and 5% of high school children experiencing 'severe' or 'very severe' Post Traumatic Stress Disorder.



The destruction of Innisfail High School from Cyclone Larry.

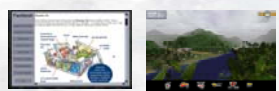
Stormwatchers was once again seen as an excellent education awareness tool for children but was considered outdated. In response a partnership between Queensland Mental Health, James Cook University's Centre for Disaster Studies, Emergency Management Queensland, Queensland Education and the Bureau of Meteorology was established with funding money from Emergency Management Australia to redevelop the Stormwatchers game using the latest gaming technology while making it relevant to children across northern Australia.



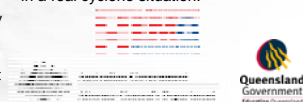
The new Stormwatchers game.

The new Stormwatchers is a 3D interactive web based game that can be downloaded from the BOM website. It has been expanded from the original to include the psychological effects of cyclones to children and tools that allow children to create an emergency action plane for their house.

www.bom.gov.au/storm_watchers_game/

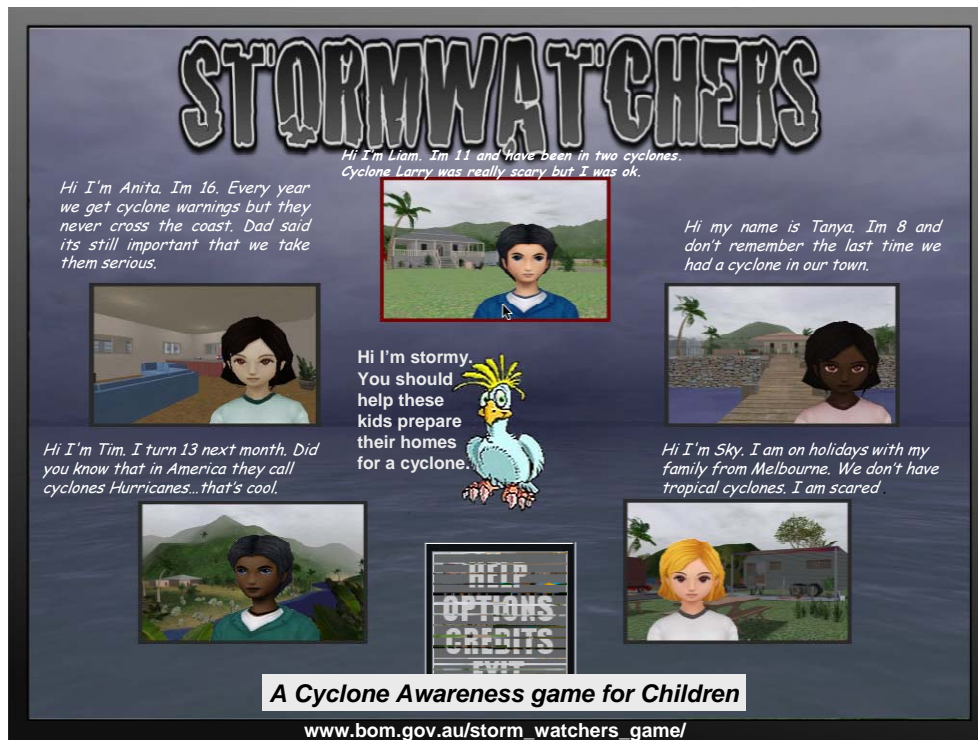


Stormwatchers gives children the opportunity to create their own cyclone experience by working through one of 5 'true-to-life' cyclone scenarios with one of the game's characters. The game provides children with the skills to enable them to be better prepared in a real cyclone situation.



In June 2006 CDS was approached by Queensland Mental Health to develop cyclone awareness products in response to concerns identified after Cyclone Larry. This initiated a redevelopment of the Stormwatchers game. A partnership was developed between CDS, Queensland Health, EMQ, BOM and Queensland Education to upgrade the outdated software to produce a cutting edge 3D interactive cyclone awareness game for children aged 7-13. The project was enabled by contributions from partner organisations and funding from EMAs local grant scheme. Stage 1 of the Stormwatchers Game was released in November 2007. Stage 2 of

the game was expanded to 5 scenarios that are relevant to QLD, NT and WA. The final staged release took place between October and December 2008.



The purpose of this project has been to redevelop the outdated software while expanding the game to be relevant and accessible through the internet to children across tropical Australia. Cyclone warning and preparedness information specific to QLD, NT and WA has been built into the game allowing children to access information specific to the area in which they live. The primary aim of 'Stormwatchers' is to give children the opportunity to create their own cyclone experience by working through one of a series of 'true-to-life' cyclone scenarios with one of the game's characters. Along the way they are instructed in appropriate preparatory behaviours for the cyclone hazard and informed of what to expect of a cyclone experience. Through this easy and fun medium children will acquire the skills, knowledge and understanding to enable them to respond appropriately in a real cyclone situation.

Each scenario includes a cyclone tracking map for students to plot and follow the path of the cyclone, a quiz to test cyclone and general geographical knowledge and a fact book that can be accessed for further information. Players are required to prepare an adequate emergency kit, when this is complete they are rewarded with a special mini-game. Each scenario includes video footage from previous cyclones that demonstrates the 'real' situation.

Publications in 2007 – 2008

Note that as scholarly publications are by calendar year, there is always some overlap with the previous annual report.

- Bushnell SL & Cottrell A (2007) Living with bushfires: What do people expect? In: *Communities Living With Hazards* (eds D King & A Cottrell), 215 - 253. Centre for Disaster Studies, James Cook University, Townsville
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- Cottrell A (2007) What is the thing called 'community'?: An example in far north Queensland. In: *Communities Living With Hazards* (eds D King & A Cottrell), 6 - 17. Centre for Disaster Studies, James Cook University, Townsville
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- Cottrell A & King DC (2008) Understanding communities` needs for information and education. *Risk Wise* Tudor Rose, United Kingdom 41 - 44
- Cottrell A, Bushnell SL, Spillman ME, Newton J, Lowe DJ & Balcombe (2008) Community perceptions of bushfire risk. *Community Bushfire Safety*, John Handmer, Katherine Haynes (Eds.) CSIRO PUBLISHING, Collingwood VIC 3066, Australia 11 - 20
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- Goudie DD (2007). Integrating the threatened into effective warning systems. *Australasian Natural Hazards Management*

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- Kench P, Nichol S, Mclean RF, Smithers SG & Brander RW (2007) Impact of the Sumatran Tsunami on the Geomorphology and Sediments of Reef Islands: South Maalhosmadulu Atoll, Maldives. *Atoll Research Bulletin*, 544, 103 - 134
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- King DC (2008) How people responded to the April 2007 tsunami warning in Cairns and Townsville *Australian Journal of Emergency Management* Vol. 23: 9 - 19
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People

A number of casual employees have worked on research projects and additionally undergraduate students have carried out a number of minor projects on hazard topics and issues.

Dr David King, Director, is an Associate Professor of Human Geography in the School of Earth and Environmental Sciences and is also Director of the Centre for Tropical Urban and Regional Planning. This latter centre encompasses the teaching program in planning and provides very strong links with the planning profession. As well as strong involvement in planning education, he also has extensive knowledge of the South West Pacific, especially Papua New Guinea. Dr King is a Corporate Member of the Planning Institute of Australia.

Dr Alison Cottrell, is a Sociologist and lecturer in Human Geography in the School of Earth and Environmental Sciences. She has extensive knowledge of South East Asia and carried out doctoral research in Indonesia. A particular interest is in the use and development of qualitative research methods to approach complex environmental and disaster management and planning issues. During 2003/2004 Dr Cottrell has led the Communities sub program of the Bushfire Cooperative Research Centre. She is a Corporate Member of the Planning Institute of Australia.

Margaret Spillman was employed as a research officer with Alison Cottrell in the communities sub program of the Bushfire CRC.

David Lowe was employed as a research officer with Alison Cottrell in the communities sub program of the Bushfire CRC.

Sally Bushnell was employed as a research officer with Alison Cottrell in the communities sub program of the Bushfire CRC.

Dr Douglas Goudie is an adjunct lecturer in the School of Earth and Environmental Sciences. In June 2003 he was appointed as a Research Associate in the Centre for Disaster Studies and has moved on to a postdoctoral fellowship with the Bushfire CRC focussing on effective risk communication. Dr Goudie is a Corporate Member of the Planning Institute of Australia.

Dr Bandaranaike's current research interests include demographic, social and environmental issues in Australia and tsunami recovery in Sri Lanka. She specialises in demographic analysis and profiling with a focus on youth populations and regional communities. Current research includes geographic profiling of offenders and youth delinquency in regional areas, and the survival of outback towns and the sustainability of sugar towns in North and Central Queensland .

Camilla Green is an undergraduate student who took over the role of coordinator of the centre, following Sonia's resignation to take up a new job in the Kimberley in March 2009.

Sonia Leonard was Coordinator of the Centre for Disaster Studies, and is completing a PhD on 'Holocene Sediment loads in Wet Tropics Rivers' in the School of Earth and Environmental Sciences, for which she received a Queensland Smart State Grant for \$10000 over 2006-07. Sonia is the primary contact person for the Centre, and has resumed the Centre's role as an advisor to the Cairns Local Disaster Management Group. Sonia has helped initiate the upgrade of the stormwatchers cyclone awareness game for children in conjunction with EMQ, Queensland health, Queensland Education and BOM with funding from EMA.

Yetta Gurtner has continued work on a PhD with the Centre on impacts of human generated hazards, specifically tourism and terrorism, the Bali Bombing and the process of recovery. She has studied extensively in Indonesia. Yetta recently took over the Sustainable Tourism CRC – Tourism Risk Management Project from Scott Cunliffe since his appointment with the UNDP in Bangkok.

Shane Cridland was a PhD student jointly in the Centre for Disaster Studies and the School of Earth and Environmental Sciences. He researched the winter movement patterns of Gray Nomads across northern Australia and their impact on sustainable tourism.

Ahmed Shaig was a PhD student and planner from the Maldives. His initial research work on a methodology for consolidating government services and population in the Maldives has expanded to include the identification of safe islands as part of the regional planning for hazard mitigation following the Indian Ocean Tsunami.

Agung Firdaus from Indonesia commenced a PhD in mid 2008 examining the integration of coastal zone management and emergency management policies and strategies.

Eddy from Indonesia commenced a research masters in which he is modelling GIS for tsunami and coastal inundation in Indonesia.

Committees, Community and the Media

Members of the centre provide representation on various local committees in Townsville and Cairns, such as the Cairns Counter Disaster Group and Townsville Disaster Recovery Committee, as well as the state level Queensland Tropical Cyclone Coordinating Committee.

Most members of CDS have contributed extensively to media stories and presentations. These include local radio – commercial, ABC and BRACS, national ABC, commercial TV stations, ABC TV, local and national newspapers. The university keeps a record of all media exposure. Our emphasis is on presenting information and advice that directly supports the strategies and advice of local government, state and commonwealth organisations. To this extent we try to avoid controversy in order to better serve the community.

As a consequence of these activities we respond to a wide range of enquiries and requests for information, presentations and speeches, from members of the public, government organisations and institutions, schools, private companies and non government organisations.

Contacts and Members

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Centre for Disaster Studies Website
<http://www.tesag.jcu.edu.au/CDS/index.htm>

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Coordinator	Camilla.Green	0740421215	0740421214	A2.215 (CNS)
Bushfire CRC	Dr. Alison Cottrell	0747814653	0747814020	EES 116 (TSV)
Tourism	Yetta Gurtner	0747814587	0747814020	EES 240 (TSV)
Planning	Ahmed Shaig	0747815262	0747814020	
Indigenous Communities	Dr. Douglas Goudie	0747814913	0747814020	115(TSV)
Natural Hazard Students	Agung.Firdaus			
	Jordahna Haig			
Tsunami Recovery	Dr Suniti Bandaranaike	0747814561	0747814020	EES 113 (TSV)

Selected Media Coverage

▶ Broadcast NewsAlert

Attention: Mr Jim O'Brien
Company: James Cook University

Summary ID: W00033135585

17/12/2008 - 10:08 AM

Mornings

ABC North Queensland (Townsville)
Compere: **Paula Tapiolas**
Station Ph: **07 4722 3011**

Desley Blanch interview with Sonja Lenart, Coordinator of Disaster Studies at **JCU** about the game Storm Watchers which was created in response to the trauma experienced by children after tropical cyclone Larry. The game was developed by **JCU's** Centre for Disaster Studies and is a joint project between the Bureau of Meteorology and the Qld Government. Lenart explains how the game works.

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Interviewees: Sonja Lenart(*), Coordinator of Disaster Studies, **James Cook University**

Duration: 7:45

Demographics

Male 16+	1700
Female 16+	1900
All People	3600
ABs	100
GBs	2000

▶ Broadcast NewsAlert

Attention: Mr Jim O'Brien
Company: James Cook University

Summary ID: W00032716243

11/11/2008 - 06:40 AM

Rural Report

ABC North West WA (Karratha)
Compere: **Laurissa Smith**
Station Ph: **08 9183 5011**

(Audio cuts out) Interview with Sonia Leonard, coordinator of the Centre of Disaster Studies with **James Cook University** about the affect of cyclones on children. Leonard says that 10 per cent of primary school children and 13 per cent of high school children were identified by Qld Mental Health as having severe post traumatic stress as a result of Cyclone Larry. Leonard says Storm Watchers was redeveloped as a 3D interactive game. Leonard says the game can be downloaded from the Bureau of Meteorology website. Leonard says that children have the emotions as adults in a cyclone but they aren't mentally prepared for the situation. Leonard says the feedback towards the game has been positive.

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Interviewees: Sonia Leonard, coordinator, Centre of Disaster Studies, **James Cook University**

Duration: 3:58

Demographics

Demographics are not available as the media outlet has not commissioned audience research into this timeslot.

Serious side of computer game

EDUCATORS and researchers have to think outside the box these days when it comes to getting information through to young people. The team from James Cook University's Centre for Disaster Studies has come up with the novel idea of using a computer game to help children prepare for cyclone season. The game is called Stormwatchers, and was launched at the Bureau of Meteorology in Brisbane last week. It has been specifically developed for children and their families in Australia's cyclone zone - from Western Australia, across the Northern Territory and along the Queensland coast. The game is based on an earlier Queensland-specific model, which has now been expanded to include a number of cyclone scenarios relevant to children across tropical Australia, providing information specific to each state and territory's emergency procedures. The game is free to download. 0 Visit:

www.bom.gov.au/storm_watchers_game/42798227

Brief: JCU

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North Queensland Register

Thursday 23/10/2008

Page: 6

Section: General News

Region: Townsville QLD Circulation: 4,063

Type: Rural

Size: 72.59 sq.cms.

Published: ---T---

▶ Broadcast NewsAlert

Attention: Mr Jim O'Brien

Company: James Cook University

Summary ID: W00032457408

17/10/2008 - 05:17 PM

Drive

ABC Sunshine & Cooloola Coasts (Sunshine Coast)

Compere: **Katrina Davidson**

Station Ph: **07 5475 5000**

Interview with Dr Linda Anderson-Berry, national program manager for the Bureau of Meteorology's disaster mitigation program about the new 3D interactive game called Storm Watchers, which aims to help kids prepare for cyclones. The game was developed by the Qld Government, **James Cook University's** centre for disaster studies and the Bureau of Meteorology. The game is launched from the Bureau's website and is aimed at primary school students. Anderson-Berry describes the game and why it was developed.

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Interviewees: Dr Linda Anderson-Berry, national program manager, disaster mitigation program, Bureau of Meteorology

Mentions: Qld Emergency Services; Qld Mental Health

Duration: 6:18

Demographics

Male 16+	1700
Female 16+	2100
All People	3800
ABs	400
GBs	1400

▶ Broadcast NewsAlert

Attention: Mr Jim O'Brien
Company: James Cook University

Summary ID: S00032443537

16/10/2008 - 06:14 PM

Sunshine News

Seven Sunshine Coast (Sunshine Coast)

Compere: **Rob Brough**

Program Ph: **07 5430 1777**

A game developed about Cyclone Larry has been developed to help children deal with issues relating to the aftermath of storms. The program is available nationwide via the Bureau of Meteorology's website.

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Interviewees: Clif Nelder, Qld Mental Health; Dr Linda Anderson-Berry, Weather Bureau; Sonia Leonard, Centre for Disaster Studies, **James**

Cook University

Duration: 1:33

Demographics

Demographics are not available as the media outlet has not commissioned audience research into this timeslot.

▶ Broadcast NewsAlert

Attention: Mr Jim O'Brien
Company: James Cook University

Summary ID: B00032434985

16/10/2008 - 08:34 AM

08:30 News

ABC Western Queensland (Longreach)

Compere: **Newsreader**

Program Ph: **07 4658 4021**

A computer game, Storm Watchers has been launched to help children become cyclone aware. The game was developed by the Centre for Disaster Studies at the **James Cook University**. The Bureau of Meteorology says the game will teach children what to do when a cyclone warning is issued.

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Duration: 0:20

This program or part thereof is syndicated to the following 1 station

ABC North West Qld (Mt Isa)

Demographics

Demographics are not available as the media outlet has not commissioned audience research into this timeslot.

▶ Broadcast NewsAlert

Attention: Mr Jim O'Brien
Company: James Cook University

Summary ID: W00032426661

15/10/2008 - 04:14 PM

Drive

ABC Far North (Cairns)
Compere: **Richard Dinnen**
Program Ph: **07 4044 2011**

Interview with coordinator Sonia Leonard of **James Cook University**, on the educational children's game Storm Watchers, which teaches users about tropical cyclones. Leonard says the game is interactive and allows children to plan for emergencies such as tropical storms.

© Media Monitors 2008

Interviewees: Sonia Leonard, Centre for Disaster Studies, **James Cook University**

Duration: 7:20

Demographics

Demographics are not available as the media outlet has not commissioned audience research into this timeslot.

▶ Broadcast NewsAlert

Attention: Mr Jim O'Brien
Company: James Cook University

Summary ID: B00032425503

15/10/2008 - 02:03 PM

14:00 News

ABC 612 Brisbane (Brisbane)
Compere: **Newsreader**
Program Ph: **07 3377 5244**

A computer game to help children become cyclone aware, Stormwatchers, has been launched in Brisbane. The program was developed by the Centre for Disaster Studies at **James Cook University** after Cyclone Larry.

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Interviewees: Linda Anderson Berry, Spokesperson, Bureau of Meteorology

Duration: 0:38

Demographics

Male 16+	7000
Female 16+	8000
All People	15000
ABs	5000
GBs	9000

This program or part thereof is syndicated to the following 11 stations

ABC Capricornia (Rockhampton)	ABC Far North (Cairns)
ABC Gold & Tweed Coasts (Gold Coast)	ABC North Queensland (Townsville)
ABC North West Qld (Mt Isa)	ABC Southern Queensland (Toowoomba)
ABC Sunshine & Cooloola Coasts (Sunshine Coast)	ABC Tropical North (Mackay)
ABC Western Queensland (Longreach)	ABC Wide Bay (Bundaberg)
Radio National (Brisbane)	

CYCLONE GAME
BRISBANE

AN online multimedia game designed to help children prepare for cyclone season has been launched at the Bureau of Meteorology in Brisbane. Stormwatchers has been developed by James Cook University's Centre for Disaster Studies, for families in Australia's cyclone zone. The game is based on an earlier Queensland-specific model.

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Brief: JCU

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Cairns Sun

Wednesday 15/10/2008

Page: 4

Section: General News

Region: Cairns QLD Circulation: 47,892

Ref:

T00 INTERESTING

Cyclone savvy

AFTER tropical cyclone Larry, health workers found 13 per cent of primary school children and 5 per cent of high school students in Innisfail experienced severe or very severe symptoms of post traumatic stress disorder. In the 1990s, a 3D game was developed to help children comprehend cyclones and how to prepare for them. Technology overtook that game, but in the middle of last year, James Cook University's Centre for Disaster Studies was asked to help develop another version. The result, this week, was the launch of Stormwatchers - a multimedia, interactive awareness game which presents a range of cyclone scenarios, complete with video footage of real cyclones and a fact book to go with it. The first scenario - educating children how to clean up before a cyclone hits, what emergency kit to buy and where it's safe to shelter, has been put on the Bureau of Meteorology website. Four more scenarios will go onstream early next year. Find Stormwatchers on

www.bom.gov.au/storm_watchers_game/

31360328

Brief: JCU

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Courier Mail

Saturday 24/11/2007

Page: 84

Section: Other

Region: Brisbane Circulation: 316,662