

EDITH COWAN UNIVERSITY

Faculty Research Group

2007 Annual Report



Consortium for Health and Ecology

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Introduction

The Consortium for Health and Ecology is a research unit based at Edith Cowan University in Western Australia that crosses academic areas of ecology and public health, and draws on the fields of sociology and economics, to tackle societal issues requiring a transdisciplinary approach. The Consortium uses facilitation and brokering network models to draw on the experiences and skills of contributing researchers from the variety of discipline backgrounds, to undertake particular tasks (like publications, consultancies, conferences, assisting government, non-government, industry and/or communities).

Over the period 2002-2007 the Consortium has aimed to:

- embrace a transdisciplinary focus by drawing on a range of disciplines and research areas to undertake activities that require a health and ecology focus
- identify priority areas of research that transcend the disciplines of health and ecology, where the University has expertise, industry contacts, international affiliations and junior staff interest. These areas will become focal points for the initiation of research
- develop and document a network of researchers at Edith Cowan University and beyond who enthusiastically support the idea of linking the fields of health, ecology, and sustainability
- establish postgraduate course(s) in health and ecology stimulate debate, encourage and assist the submission of joint proposals and other research initiatives, and promote the publication of research papers in international journals.

The Consortium is classed as a “Level 1 Research Group” in the Faculty, meaning that it is one of the smaller groups of research activities that together make up the University’s Research Centres (Level 2) or Research Institutes (Level 3). The Consortium is unique in the sense that it originated from a perceived need for research across two Schools, namely the School of Natural Sciences, and what was formerly known as the School of Nursing and Public Health. It has a Director (Pierre Horwitz), and academic staff from all campuses and each Faculty of the University have contributed to its activities since it was established in 2002. The Consortium received funding support from the Faculty and both Schools over the years 2002-2004.

During 2007 discussions were held with a number of academic staff and researchers to develop the themes of water, ecology and health with a view to reconfiguring the Consortium’s activities.

Membership

The Consortium has a Director, but otherwise has no “membership” *per se*. Instead the Consortium provides the support to broker and facilitate the development of critical research activities without diminishing the strength of existing research groups in the Faculty and University at large. Please refer to Postgraduate accomplishments, and to documentation of activities listed below for details on the contributors to the Consortium’s activities, and the Appendix for staff working on Consortium activities.

Key Activities in 2007

A significant component of the Consortium’s approach with postgraduate studies is the assistance and involvement of supervisors from outside the School of Natural Sciences. Between 2003 and 2007, a total of 16 PhD and Masters students have been enrolled and supervised by Consortium academic staff, and a total of 19 associate supervisors have been involved in their research (ten of these being academics from 7 other Schools and Research areas within ECU, and the remaining 9 coming from other Universities or Government Departments in Australia). These arrangements are invaluable for, and in the spirit of, the collaborative transdisciplinarity that lies at the basis of the Consortium’s research philosophy.

The Consortium for Health and Ecology continues to provide a supportive, scholarly environment for postgraduate studies. Several postgraduate students commenced their studies in earnest, and others are nearing completion or have been finalised in 2007. Bea Sommer graduated with a PhD after her thesis on the sediments of lakes on the Swan Coastal Plain was passed by examiners. May Carter's PhD project on the relationships between green space and human health in the Perth metropolitan area advanced significantly and will be submitted in 2008. Similarly Ute Goeft's work on the centrality of water will be submitted in early 2008. Zoe Car continued her studies on dugong and turtles, and western and Indigenous knowledge crossover in northern Australia. Pat Karatna completed her field work on mangrove forest communities in south-eastern Thailand and commenced her analysis in preparation for her PhD write-up. Rob Campbell is working with a farming community in the Bremer region on the south coast on matters of communication, capacity and soil health.

The relationships between urban development, wetland ecology, fire and human health continued in the Consortium for Health and Ecology in 2007, with several significant outcomes. The collaborative research arrangements with the State's Fire and Emergency Services (FESA) continued with the funding of two significant projects in 2007: one is a PhD project undertaken by David Blake that examines the downstream water quality effects of fire in wetlands. The other documents the risks associated with fire in wetlands on the Swan Coastal Plain, is being coordinated by Dr Horwitz and includes contributions from David Blake, Dr Andrea Hinwood, Dr Eddie Van Etten, and Dr Ray Froend.

Dr Andrea Hinwood's research continues, assessing community exposure to air and water pollutants and the health effects of chemical exposures.

EcoHealth – the Journal and the Global Network

The Consortium for Health and Ecology continued to be involved in a global consortium to establish a professional international association and publish an international journal. The journal, published by Springer, has gained ISI listing in 2006. Dr Horwitz continued in his role as Co-Editor of the journal. Dr Horwitz was also elected Vice-President of the International Association for Ecology and Health.

Keynote Presentations, Workshops and Symposium contributions

Researchers delivered the following presentations during 2007. Only Presentations representing core Consortium activities are reported here.

Invited Keynote talk at national conference

P.Horwitz. "Reservation requirements for Biodiversity". Parks and Protected Areas Forum. Fremantle, September 2007.

Invited Papers at Symposia/Workshops/Conferences

P.Horwitz. "Climate change water and wetlands". Conservation Council's State Conference "Conservation in a Changing Climate" March 17th 2007

A. Hinwood. "A Review of the Health Risks Associated with Fires on the SCP". Workshop organised by FESA early in 2007.

Other Conference Talks/Papers and Contributions

Six papers were delivered at the Asia Pacific EcoHealth Conference, Melbourne, December 2007.

1. David Blake: Potential environmental and human health problems associated with fire in wetland sediments of the Swan Coastal Plain. Western Australia
2. May Carter: What happens to a neighbourhood when you strip the landscape bare?
3. Robert Campbell: Dancing about soil health
4. Pierre Horwitz: Catchment health on the Gngangara Mound

5. Ute Goeft: Beyond sustainability: water as a change agent
6. Wesu Ndilila: Recruitment and communicating science to local communities- Zambia, central Africa.

One paper was delivered at the Ecological Society of Australia national conference in Perth, November 2007.

1. Pierre Horwitz: Catchment health on the Gngangara Mound – new perspectives on an urban groundwater dependent ecosystem

Publications

Only publications from core Consortium activities are presented here.

Monograph

Horwitz, P. (Ed)(2007). Ecology and Health: People and Places in a Changing World: Five Essays. Organising Committee Asia Pacific EcoHealth Conference.

Editorial Published

Horwitz, P. (2007). Aquatic ecosystems, indicators, and adaptive management. *EcoHealth* 4: 117-118.

Peer Reviewed Journal Articles

Rodriguez C., Tonkin R., Horwitz, P., Heyworth J., Kusel M., de Klerk N., Sly P.D., Franklin P., Runnion T., Blockley A., Hinwood A (2007) The relationship between outdoor air quality and respiratory symptoms in young children. *International Journal of Environmental Health Research*. 17(5); 351-360

Hinwood A.L, Rodriguez C, Runnion T, Farrar D, Murray F, Horton A, Glass D, Sheppard V, Edwards J.W., Denison L, Whitworth T, Eiser C, Bulsara M, Gillett R, Powell J, Lawson S, Weeks I, Galbally I. (2007) Risk factors for Increased BTEX Exposure in Four Australian Cities *Chemosphere* 66:533-451.

Book Reviews Published

Horwitz, P. (2007). Environmental Impact Assessment in Australia: Theory and Practice, 4th Edition - by Ian Thomas and Mandy Elliott. *Geographical Research* 45: 110-2.

Non-Refereed Conference Papers Published

Horwitz, P. (2007). Requirements for the reservation of biodiversity in space and time. *Parks and Protected Areas Forum. A sense of place for all people for all time*. Fremantle, Australia, September 2007. pp. 37-39.

Refereed Conference papers

Victoria Lazenby, Andrea Hinwood and Peter Franklin (2007) Personal exposure of children to formaldehyde in Proceedings of 14th Annual IUPPA Conference Brisbane Australia.

Report

Horwitz P, Sommer B, Calvert T (2007). Water chemistry and invertebrate responses to fire in Yanchep wetlands with pyritic organic-rich soils. Final Report to the Western Australian Department of Water. Edith Cowan University, School of Natural Sciences, Consortium for Health & Ecology, Perth, W.A.

Other Activities

1. Grant application: ARC Discovery – A. Hinwood et al.
2. Steering Committee of Conference - Asia Pacific Ecohealth Conference 2007, Deakin University, Melbourne – P. Horwitz
3. Invited Expert, Intersession of the Scientific and Technical Review Panel, Ramsar Convention (South Korea) – P. Horwitz
4. Developing research collaboration: Dr Pierre Horwitz with Dr Jeremy Northcote and Dr Pascal Scherrer – Faculty of Business and Law – Social and environmental impacts of tourism along Ningaloo coastline.
5. Research Visitor: Dr Peter Daszak, Director Consortium for Conservation Medicine, New York

Appendix 1: Staff Affiliated with the Consortium for Health and Ecology 2007

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