

Centre for Resource and Environmental Studies
Annual Report 2003

Overview

CRES celebrated its 30th year in 2003. A symposium and dinner marked the occasion, providing an opportunity for CRESites old and new to reflect on the I-word; that is, interdisciplinarity. Former students and staff from around the world spoke frankly about CRES' successes and failures. Future prospects were universally believed to be bright. A major challenge to deeply integrative interdisciplinary work remains that identified by the first Director of CRES, Professor Frank Fenner, namely the dominance in funding and promotions of disciplines.

The effective solutions of the environmental and natural resource problems of concern to CRES are complex and involve the relationship between the human and non-human world. Therefore, research should (must) be interdisciplinary, but rooted in strong training and understanding of the disciplines. And the disciplinary range is large, stretching across the humanities, social sciences, and natural sciences.

So that interdisciplinarity can grow from disciplinarity, CRES staff and students (and a few others) are writing a multi-authored book called *Understanding the Environment*. Each chapter explores the disciplines that we need to understand. Chapters have been reviewed, by established academics and students, and have been the subject of intense workshop sessions. This process has helped to improve understanding of each other's disciplines, and has stretched the horizons of many people. Other workshops and meetings have addressed integration, and this process is continuing.

There have of course been many research highlights during the year. These can be found on the CRES website <http://cres.anu.edu.au>.

CRES can claim to have met in its own area of work many of the goals of the ANU. Environmental research at the ANU is ranked 61st in the world, and CRES' part in that ranking is not insubstantial. CRES is internationally known, and attracts visitors and attention from many countries.

With respect to the goals the University has set itself for 2005, CRES can report the following:

- CRES has focused on rural issues of natural resource management and environmental protection, while acknowledging that the urban environment is poorly studied in Australia. CRES has a small and growing involvement in urban studies but a major commitment would not be achievable without greater resources and some reorientation.
- CRES has worked hard to develop interdisciplinary research, as outlined earlier. This can sometimes be a disadvantage when publishing work or applying for external funding. Many funding bodies support and encourage interdisciplinary work, but there are major funding bodies which still favour predominantly disciplinary projects. It is clear that many decision makers in the higher education sector view interdisciplinarity as something that happens for example between a physicist and a chemist, and therefore is easy and simple to achieve. CRES takes a different view: that interdisciplinarity occurs when discipline is changed during the engagement. For example, a historian might be prepared to more strongly embrace theory and generalisation, and ecologists might soften their hard-line systems view of the world when thinking about people. This is deep engagement, not superficial.
- CRES has been very successful in securing external funds and is now operating at close to 50% external funding. It is doubtful that significantly more can be done without jeopardising strategic directions.

- Policy relevance has been one of CRES' goals for 30 years. Much of the current research continues to have this as its aim.
- Student supervision has been enhanced through the introduction of tools, such as questionnaires, to assist student/supervisor communication. Mentoring is formalised among students within CRES, and measures are in place to ensure ongoing effectiveness.
- Almost 30% of CRES students have external scholarships, and support comes from many funding bodies. CRES now has an average of 3.6 students per eligible supervisor, which is a good result within the ANU. Optimal growth may be constrained by current accommodation limitations.
- Communication of CRES research is mostly through policy channels, where our greatest impacts can be found. We also of course use the media, the standard literature, and books written specifically for a non- academic audience.

Significant Achievements in Research & Teaching

The CRES Strategic Plan (2002-05) sets out six objectives under Our Mission. Against these, CRES has achieved the following:

- at least 25% of the research in CRES (including that by students) is deeply interdisciplinary, tackling complex resource and environmental issues at a variety of spatial and temporal scales.
- the theory and practice of interdisciplinary and multidisciplinary methods has been advanced by a number of key publications, and by the completion of an assessment of CRES' research experience over the last 30 years
- collaboration with industry, government, and NGO's occurs in at least 50% of CRES' research projects.

Students

CRES continues to enjoy a high level of demand for student places. In 2003 CRES had forty-five students on course, with eighteen commencing students, and an attrition rate of only 4.4%. CRES students continue to be predominantly mature-age students (approximately 85%).

New Grants

CRES had 20 new grants and consultancies awarded in 2003. These amounted to \$1.2M with funds coming from a wide range of organisations including the Australian Research Council, Land & Water Australia, Australian Greenhouse Office, ACTEW Corporation, the Hermon Slade Foundation, Stanford University, and National Geographic.

Major Prizes and Awards

Ms Bernadette Hince was awarded an Australian Antarctic Division Humanities Fellowship to enable a visit to Macquarie Island.

Dr David Lindenmayer topped The Bulletin's "Smart 100 - Environment" list.

Prof. Tony Jakeman was the Inaugural Fellow of the International Environmental Modelling and Software Society.

Dr Libby Robin was the winner, Victorian Premier's Literary Awards, inaugural biennial Science Writing Prize 2003, for *The Flight of the Emu: A hundred years of Australian Ornithology 1901-2001* (Carlton: Melbourne University Press).

Prof. Ian White was awarded the Centenary Medal for Service to Australian society in environmental science and technology.

Budget Performance

The Centre's recurrent budget for 2003 was \$2,980,000 including a carry forward surplus from 2002. The Centre ended the year with a \$344,000 carry forward which is fully allocated for existing appointments and commitments in 2004 and 2005. Additional funds from surpluses and external grants were \$1,331,000 in 2003.

Gender Equity Performance

In 2003 CRES had eight (57%) academic positions filled by women, out of a total of twenty-two. This was up from seven (35%) in 2002. Three of these positions were externally funded. Of the general staff, there were nine (53%) women of a total of seventeen positions. Most of these were involved in administration with all but one having a part-time employment arrangement.

Future Directions

Academically, the future involves further development of integrated research and methods. Administratively, CRES intends to build on new support structures and processes implemented during 2003 and maintain the flexibility and multi-skilling necessary to adapt to new priorities and reporting demands.

Involvement in the National Institutes

CRES provided significant input into the National Institute for Environment in 2003. The Director of CRES continued to hold the NIE Convenor position in 2003 and CRES administration continued to provide accounting, IT, and administrative support to NIE. A number of CRES academics were involved with NIE in specific roles, such as Graduate Convenor and members of the NIE Board of Management, as well as participating in NIE events.

Joint research projects undertaken with universities, CSIRO and other institutions:

Acidity barriers for improving downstream water quality of estuaries in acid sulfate soils by Prof I WHITE with Dr BC.T.Macdonald (CRES ANU), Assoc. Prof. M.D. Melville (University of New South Wales), Prof. T.D.Waite (University of New South Wales) and Dr R.T. Bush (Southern Cross University).

An agro-climatic classification incorporating bioregional boundaries in Australia by Prof M.F. HUTCHINSON and J.L. STEIN with Dr S. MCINTYRE (CSIRO), Prof R.J. HOBBS (Murdoch University), Dr S. GARNETT (Qld Parks and Wildlife) and J. KINLOCH (CSIRO).

Analysis and Modeling of OH Column Abundances by Dr. F.P. MILLS with Dr. S.P. Sander, Dr. R.P. Cageao, and Dr. M. Allen (NASA Jet Propulsion Laboratory, USA) and Prof. Y.L. Yung (California Institute of Technology, USA)

An Australia-wide system of protection for rivers, river reaches and estuaries of high conservation value by J. L. STEIN with Dr. R. Kingsford (NSW Department of Environment and Conservation), Dr. H. Dunn and Dr. P. E. Davies (University of Tasmania), Dr J. Doolan (Victorian Department of Sustainability & Environment), S. Fairfull (NSW Fisheries), Dr R. Muston (Meyrick and Associates), J. Tait (ECONCERN), J. Neville (Only One Planet Consulting).

Augmented sustainability measures for Scotland by Dr J.C.V PEZZEY with Prof. N.D. Hanley (University of Glasgow).

Climatic impacts on fire frequency distribution in Australia by Dr J.J.SHARPLES with Prof. M.F. Hutchinson (ANU) and Prof. A.M. Gill (CSIRO)

Cotter Catchment Fire Remediation Project by Prof R.J. WASSON with Dr B. F. Croke (iCAM, ANU), Prof M. McCulloch (ANU), Mr N Muller (Ecowise) Dr J Olley (CSIRO), Mr B Starr (Land and Water Management consultant, Dr A. Wade (ActewAGL), Dr I. White(CRES, ANU) Dr T. Whiteway (ECOWISE Environmental), Ecowise.

Development of the GROWEST-PLUS plant growth index modelling system by Prof M.F. HUTCHINSON and Dr C. DIETRICH with T. BRINKLEY (BRS) and Dr G. LAUGHLIN (BRS).

Digital elevation model for the Cotter catchment from Airborne Laser Scanning data by Prof. M.F. HUTCHINSON, J.A. STEIN, and J.L. STEIN with T. WHITEWAY (ECOWISE).

Downstream water quality impacts of broadacre soil acidification by Prof IAN WHITE with BC.T.Macdonald (CRES ANU) and Dr Anna Ridley (Victorian Department of Natural Resources).

Economic evaluation of fisheries by Dr. R.Q. GRAFTON with Prof. D. Squires (University of San Diego) and Prof. J.E. Kirkley (College of William and Mary).

Economic growth and environmental performance in Canada by Dr. R.Q. GRAFTON with Prof. K.M. Day (University of Ottawa).

Economics of the Environment and natural resources by Dr. R.Q. GRAFTON with Prof. Vic. Adamowicz (University of Alberta), Dr. H. Nelson (University of British Columbia), Steven Renzetti (Brock University), Diane Dupont (Brock University) and Assoc. Prof R. Hill (University of New South Wales).

The effect of subsistence on collapse and institutional adaptation in population-resource societies by Dr J.C.V. PEZZEY with Dr J.M.Anderies (Arizona State University).

Emissions targets for developing countries by Dr J.C.V. PEZZEY and Mr F. JOTZO with Prof. Kenneth Arrow and Prof. Lawrence Goulder, Stanford University.

Equitable groundwater management for the development of atolls and small islands by Prof IAN WHITE with Mr A.J. Falkland (ECOWISE Environmental), Dr P. Perez (CIRAD, France), Ms A. Dray (CIRAD, France), Mr M. Overmars (SOPAC, Fiji), Mr C. Carpenter (SOPAC, Fiji), Mr T. Metutera (Public Works Department, Republic of Kiribati) and Mr E. Metai (Public Works Department, Republic of Kiribati).

Fine scale digital elevation model for Canada by Prof M.F. HUTCHINSON and J.A. STEIN with Dr D.W. MCKENNEY (Canadian Forest Service).
Hydraulic Properties of Swelling Clay-Gel Soils: Electrolyte and Temperature Effects by Prof IAN WHITE with B.C.T. Macdonald (CRES ANU), Prof. T.D. Waite (University of New South Wales), and D.E.Smiles (CSIRO Land and Water).

The impact of changing agroforestry mosaics on catchment water yield and quality in Southeast Asia by Dr B.F.W. CROKE with Dr D. Post (CSIRO Land and Water) and Dr M. VAN NOORDWIJK (International Centre for Research in Agroforestry, Indonesia).

The impact of climate change on snow conditions in mainland Australia by Prof. M.F. Hutchinson and Dr J.J. SHARPLES with Dr K. HENNESSY (CSIRO) and Dr Penny WHETTON (CSIRO).

Integrated Water Management in the Lower Richmond Catchment by Prof IAN WHITE with Mr R. Brodie (Bureau of Rural Science) and Dr J. B. Prendergast (Bureau of Rural Science).

Interactions between sulfur, nitrogen, and iron cycles in the sustainable management and use of acid sulfate soils by Prof IAN WHITE with BC.T.Macdonald (CRES ANU), Assoc. Prof. M.D. Melville (University of New South Wales), Dr O.T. Denmead (CSIRO Land and Water) Prof. T.D.Waite (University of New South Wales), Mr M.P. Tunks (Tweed Shire Council) and Mr R.N. Beattie (NSW Sugar Milling Co-operative).

Jervis Bay Biodiversity Monitoring Ecological Burning Experiment, D.B. LINDENMAYER with R.B. Cunningham (CRES), C. McGregor (CRES), M. Crane (CRES), D. Micheal (CRES), A.M. Gill (CSIRO), M. Fortescue (Environment Australia)

Kinship with Country: Pitjatjantjara homelands, Dr. D.B. ROSE and Ms D. JAMES, Land and Water Australia (Ph.D. Scholarship)

Landscape-scale population dynamics of open forests in the Australian monsoon tropics by Prof. P.A. WERNER with Dr. D.M.J.S Bowman (Charles Darwin University), Dr. B.W. Brook (Charles Darwin University), & Dr. R.J. Williams (CSIRO).

A large scale study of the effectiveness of landscape restoration for biodiversity conservation, D.B. LINDENMAYER with R.B. Cunningham (CRES), C. McGregor (CRES), M. Crane (CRES), D. Micheal (CRES), P. Smith (DIPNAR, NSW).

Long-term Monitoring of Vertebrate Fauna in the Central Highlands of Victoria, D.B. LINDENMAYER with R.B. Cunningham (CRES), C. McGregor (CRES), M. Crane (CRES), D. Micheal (CRES), M. McCarthy (University of Melbourne), J. Dubach (Brookfield Zoo, Chicago) and A. Taylor (Monash University, Melbourne)

Pathogen Budget For Prioritisation of Land Uses and Rectification Actions to Reduce Public Health Risks from Pathogens by Dr B.F.W. CROKE with Prof. N. Ashbolt and C. Ferguson (University of New South Wales).

Photochemical Modeling of the Venus Middle Atmosphere by Dr. F.P. MILLS with Dr. M. Allen (NASA Jet Propulsion Laboratory, USA) and Prof. Y.L. Yung (California Institute of Technology, USA)

Potential impacts of salinity on frogs of temperate south-eastern Australia - an ecological synthesis by Dr D. HAZELL with Dr S. Briggs (NSW National Parks and Wildlife Service, now Dept. Environment and Conservation)

Productivity effects in individual output controls in fisheries by Dr. R.Q. GRAFTON with Prof. D. Dupont (Brock University) and Prof. D. Gordon (University of Calgary).

Productivity measurement in fisheries by Dr. R.Q. GRAFTON with Dr. K.J. Fox (University of New South Wales), Dr. T. Kompas (ANU) and Dr. Nhu Che (Australian Bureau of Agricultural & Resource Economics).

Real time manipulation of major floodgates to mitigate acid sulphate soils discharge, Lower Macleay Catchment, New South Wales. Dr S BEAVIS with Kempsey Shire Council. Funded by the Coastal Acid Sulphate Soils Program (CASSP)

Research into Kinship with the Natural World, Stage 2, Dr D.B. ROSE, with 'National Parks and Wildlife Service, NSW.

Review of the sediment budget for the Ganges- Completed reconnaissance field work in the Ganges River Basin (India) to identify the source of sediment in the river. Prof R.J. Wasson with Prof M. McCulloch (RSES), with Prof. A.K. Singhiri and Dr M.M. Sarin, (PRL, India), Assoc. Prof. R Sinha (IIT Kanpur, India).

The Regulation of Indigenous Rights through Environmental Legislatio', Dr D.B. ROSE and Ms J. WEIR, Land and Water Australia (Ph.D. Scholarship).
Social capital and environmental performance by Dr. R.Q. GRAFTON with Dr. S. Knowles (University of Otago).

Restoring hydrological connectivity of surface and ground waters: Biogeochemical processes and environmental benefits for river landscapes by Prof IAN WHITE with Dr R.T. Bush (Southern Cross University), Assoc. Prof L.A. Sullivan (Southern Cross University), Dr Annabelle Keene (Southern Cross University), Dr Wayne David Erskine (NSW Department of Infrastructure Planning and Natural Resources) and Dr Greg Bowman Erskine (NSW Department of Infrastructure Planning and Natural Resources).

Social divergence and economic performance by Dr. R.Q. GRAFTON with Prof. P.D. Owen (University of Otago) and Dr. S. Knowles (University of Otago).

Sources and dynamics of natural pollutants in the Cotter catchment Prof IAN WHITE with Dr A. Wade (ActewAGL Pty Ltd), Dr B. McPhail (ANU) and Mr N. Mueller (Ecowise Environmental).

Sustainable production of oysters in eastern Australia islands by Prof IAN WHITE with A. Rubio (CRES ANU), P.W. Ford (CSIRO Land and Water) and D. Ogburn (NSW Fisheries).
Targets for greenhouse gas emissions from developing countries by Dr J.C.V. PEZZEY and Mr F. JOTZO with Prof. K. Arrow and Prof. L.H. Goulder (Stanford University).

The Tumut Fragmentation Experiment, D.B. LINDENMAYER with R.B. Cunningham, C. McGregor, M.L. Pope (SFNSW), M. McCarthy (University of Melbourne), H. Nix, H. Possingham (University of Queensland), R. Lacy (Brookfield Zoo, Chicago), R. Peakall (ANU BOZO), J. Fischer, D. Tubelius, H. Tyndale-Biscoe (RSBS, ANU) and A. Taylor (Monash University, Melbourne)

Topographic influence of soil moisture patterns by Dr J.J. SHARPLES with Prof. M.F Hutchinson (ANU) and Dr. A.W. Western (University of Melbourne)

Ultraviolet Characterization and Remote Sensing of Aerosols by Dr. F.P. MILLS with Dr. A. Eldering (NASA Jet Propulsion Laboratory, USA)

Update of monthly climate surfaces and investigation of climate impacts on non-CO2 emissions by Dr J.L. KESTEVEN (ANU/AGO) with Prof M.F.HUTCHINSON and Dr J.J. SHARPLES.

Wild bottlenose dolphins and humans in the waters of Northwest Florida by Prof. P.A. WERNER with Dr. W.E. Jones, Dr. R.R. Carthy, Dr. D.L. Miller, Dr.S. Wood & Prof. M.L. Clarke (University of Florida, USA).

Wild Country Science Project by PROF. M.F. HUTCHINSON, PROF. H.A. NIX, J.A. STEIN and J. L. STEIN with Dr. B. G. Mackey and S.Gilmore (SRES, ANU), Dr. R.G. Lesslie (Bureau of Rural Sciences), Prof. H. Possingham (University of Queensland), Prof. R. Hobbs (Murdoch University), V. Young (Wilderness Society) and others

Cooperation with government and other public institutions:

CROKE, Dr B.F.W., work with Royal Project Foundation Thailand, including several government institutions (Land Development Dept, Royal Irrigation Dept, Royal Forestry Dept) funded by ACIAR.

CROKE, Dr B, Impact of changing agroforestry landscape mosaics on catchment water yield and quality in Southeast Asia with Dr D Post (CSIRO) and Dr M. van Noordwijk (International Centre for Research in Agroforestry)

CROKE, Dr B, Sediment, particulate and dissolved carbon, iron and manganese input to Corin Reservoir with Prof R.J. Wasson and Prof I. White (CRES, ANU), Prof. M.M. McCulloch, (RSES, ANU), N. Mueller and T. Whiteway (ECOWISE Environmental), Dr J. Olley (CSIRO Land and Water), Mr. B. Starr (consultant) and Dr A. Wade (ActewAGL)

CROKE Dr B, Pathogen Budget – For Prioritisation of Land Uses and Rectification Actions to Reduce Public Health Risks from Pathogens with Prof N. Ashbolt (UNSW) and C. Ferguson (UNSW/Sydney Catchment Authority)

CROKE Dr B, Development of a Regional Integrated Management Information System with Mr G Walker (CSIRO) and Mr L Lynch (NSW DIPNR)

DOVERS, Dr S., appointed as Adviser, Integration Initiative, Land & Water Australia (Commonwealth).

DOVERS, Dr S., appointed to Expert Advisory Panel, Integrated Natural Resource Management, Victorian Dept of Sustainability and Environment.

GRAFTON, Dr. R.Q. continuing appointment to the Socioeconomic Working Group, National Ocean's Office.

GRAFTON, Dr. R.Q. external referee for Social Sciences and Humanities Research Council of Canada

GRAFTON, Dr. R.Q. reviewer for Royal Commission on Renewing Newfoundland's Place in Canada

HAZELL, Dr D. Appointed as consultant for project: Development of guidelines for delivery of conservation incentives by regional organisations, Environment Australia

HAZELL, Dr D., Appointed to steering committees for two federally funded projects entitled: Integration of Biodiversity into Regional NRM Planning Projects, Land and Water Australia

HAZELL, Dr D., Review panel member (invited) for the Natural Heritage Trust funded Cane Toad Biological Control project, Environment Australia.

HUTCHINSON, Prof M.F., member of synthesis group for Biospheric Aspects of the Hydrological Cycle of the International Geosphere-Biosphere Program (IGBP).

HUTCHINSON, Prof M.F., joint author for the the Australian Soils and Land Survey Handbook Series, Volume 2, by CSIRO Division of Land and Water

JELLETT , Mr D.R. A catchment scale streamflow and groundwater model with applications with Prof. Ian White (ANU), Prof. Michael Hutchinson (ANU), Dr. Mirko Stauffacher (CSIRO), Dr. Lu Zhang (CSIRO) and Dr. Alan Wade (ActewAGL).

LETCHER, R., JAKEMAN, A.J., NEWHAM, L., work with Environmental Trust Management of Diffuse Source Pollution in the Ben Chifley Catchment, NSW, funded by Environmental Trust

LETCHER, R, Development of a Decision Support System for Water Allocation in the Gwydir and Namoi Valleys with NSW Dept Agriculture and the Cotton Research and Development Corporation

JAKEMAN, Prof A.J., and Dr R.A. LETCHER and MS. S.M. CUDDY, Improved Water Management Incorporating Risk and Climate Awareness with Dr F Chiew (Uni Melb) and Ms B. Nancarrow (CSIRO)

JAKEMAN, Prof A.J., with Royal Project Foundation of Thailand, Institutional Strengthening for Integrated Water Resource Management in Thailand, funded by ACIAR

JAKEMAN, Prof A. J., Tools to achieve landscape redesign giving environmental/economic targets project with Dr B Watson (WAREC) and Mr L Lynch (NSW DIPNR)

LINDENMAYER, Dr D.B. Leadbeater's Possum Recovery Team. Department of Sustainability and Environment (Victoria)

LINDENMAYER, Dr D.B. Observer to Wreck Bay Community Advisory Board (Jervis Bay) and Environment Australia – re: ecological burning studies at Booderee National Park

NEWHAM Dr L, Development of a catchment contaminant cycle model for stakeholder use with Dr K Rutherford (CSIRO)

ROBIN, Dr L. Land and Water Australia (2 PhD students Main ANU33 (completing 2004), Connell ANU38 (completing 2005)).

ROBIN, Dr L. Land and Water Australia R&D Grant: Co-understanding of place, people and water in Central Australia ANU42 - 2003-4.

ROBIN, Dr L. National Museum of Australia (Advisory group on environmental history) Museums Australia (public lecture).

WASSON, Prof. R.J., appointed chair of the ACT Sustainability Expert Reference Group (SERG)

WASSON, Prof. R.J. Kalgan case study (WA): Agriculture WA, UWA

WASSON, Prof. R.J. Ord case study (WA): Agriculture WA, Rivers and Waters Commission, CSIRO, Aarhus University

WASSON, Prof. R.J. Herbert Case Study (Qld): CSIRO, DNR, AIMS

WASSON, Prof. R.J. Murrumbidgee case study (NSW): CSIRO, Starr Consulting

WHITE, Prof I. Chair Oyster Research Advisory Committee (Ministerial Appointment)

WHITE, Prof I. Member Scientific Advisory Council NSW Minister for Agriculture and Fisheries (Ministerial Appointment)

WHITE, Prof I. Member Technical Advisory Board UNESCO International Hydrological Programme

WHITE, Prof I. Member National Committee on Acid Sulfate Soils – Agriculture, Fisheries and Forestry Australia

WILD RIVER, Dr. S. Environmental risk analysis for Community and Economic Development Aspects Register. Brisbane City Council.

WILD RIVER, Dr. S. Land and Water Australia General Call project extending Audit outcomes to enhance rural local government environmental capacity. Land and Water Australia; National Land and Water Resources Audit; Agriculture, Forestry and Fisheries

Australia, Department of Environment and Heritage; all state-based Local Government Associations in Australia and others.

WILD RIVER, Dr. S. Supervisor for Australian National Internships Program. Office of Senator Meg Lees.

WILD RIVER, Dr. S., provided training in Comparative Environmental Risk Assessment: CSIRO; Tasmanian Department of Primary Industries, Water and Environment; University of Sydney.

CRES Special Purpose Fund Summary as at 31 December 2003

Institution	Project	Researcher
Earthwatch	Volunteer field project assistance (Leadbeaters Possum)	Lindenmayer
LWRRDC	PhD Scholarship: Wheat / Sheep Landscapes Perceiving the Past, Present and Future	Main / Robin
ARC	Recharge of Artesian Groundwaters in the Coonamble Embayment of the Great Artesian Basin, Midwestern NSW	Hutchinson
Canberra Birds Conservation Fund	A Multi Scale Study of the Supurb Parrot, (<i>Polytsllis Swainsonii</i>), Implications for Landscape-Scale Biodiversity Conservation	Manning
Land and Water Australia	Vegetation restoration and Landscape Design for Enhanced Biodiversity Conservation	Lindenmayer
ANU	PhD Scholarship: Urban Environment	Wasson / Pu
ANU	VC's Plan for Growth – ANU Environment	Wasson
Land and Water Conservation Department of NSW	Processes and Institutions for Resource and Environmental Management: Australian Experiences	Dovers
RIRDC	PhD Scholarship: Hydrological Analysis of Spatially Explicit Integration of Agroforestry into Australia's Farming Systems	Ticehurst
LLRRDC	PhD Scholarship: Social and Institutional Implications of Landscape and Land Use Change	Stanley
LWRRDC	Implications of Australian Natural Resource Management	Dovers
NSW NPWS	Habitat Fragmentation in Alpine and Sub Alpine Regions of Australia	Lindenmayer Sanecki
NSW NPWS	Research on superb parrot	Manning
Act Environment	Research on Superb parrot	Manning
ARC	Biodiversity Conservation Vegetation Restoration and Landscape Design	Lindenmayer
ARC, Environment ACT	Rules for Interstate Water Trading	Pezzey / Pagan

Institution	Project	Researcher
	by ACT	
ARC	Biogeography of avian mating systems in Cape York & PNG Electus Parrots	Heinsohn

Land & Water Australia	PhD Scholarship: Indigenous Kinship with Country: Intercultural Values of Natural Resource Management	Rose
Land & Water Australia	PhD Scholarship: Federalism and Natural Resource Management: Water in the Murray – Darling Basin –	Robin / Connell
Australian Centre for International Agricultural Research	Institutional Strengthening for Integrated Water Resource Management in Thailand	Jakeman
Birds Australia	A Multi-Scale Study of the Superb Parrot	Manning
Productivity Commission	From Permits to Property	Grafton
The Department of Natural Resources & Environment	Monitoring Populations of Forest Vertebrates in the Central Highlands – Victoria	Lindenmayer
Ecowise Environmental Pty Ltd	Contaminant Budgeting	Wasson
Kempsey Shire Council	Real Time Control of Major Flood Gates-Lower Macleay	Beavis
Hermon Slade Foundation	The long-term Population Dynamics and Conservation of a Poorly known Australian mammal	Lindenmayer
Murdoch University	Trees and Biodiversity. An Australian Guide to Increasing the Benefits of Form Trees to native Bush	Lindenmayer
RC	Nature and National Sciences, Environment and National Identity in Australia	Robin/Rose
Pest Animal Control	Understanding the Human Context of Biotechnological Fox Control in Australia	Gilna
Australian Geographic	Conservation and Ecology of the Green Python Morelia Viridis in Australia	Wilson
Pacific Biological Foundation	Drought Assessment and Response for Small Island States in the Pacific	White

Healthy Rivers Commission	Oyster Enquiry	White
Hermon Slade Foundation	The effects of habitat fragmentation on dispersal, population structure and reproductive success in cooperatively breeding white-winged choughs (<i>Corcorax melanorhamphos</i>)	Heinsohn / Beck
ARC/NSW Sugar Milling Co-op Ltd/Tweed Shire Council	Interactions between sulfur, nitrogen, and iron cycles in the sustainable management and use of acid sulphate soils	White
Land & Water Australia	Advisor to the integration investment plan 2003-2006	Dovers

NSW NPWS	Potential impacts of salinity on frogs of temperate south-eastern Australia—an ecological synthesis	Hazell
Environment Australia	Survey of Small to Medium Sized Mammals at Booderee National Park	Lindenmayer
Australian Geographic Pty Ltd	Breeding Biology and behaviour of a Near Threatened Species; The Grey Crowned Babbler	Blackmore Heinsohn
Sydney Catchment Authority	Minor Works for NSW EPA/SCA: Pathogen Load Estimator Planning	Croke
ACIAR	Equitable Groundwater Management for the Development of Atolls and Small Islands (phase 2)	White
National Geographic Society	Ecology and Conservation of the Green Pythons on Cape York	Heinsohn / Wilson
ARC	Hydrolic Properties of Swelling Clay-Gel Soils: Electrolyte and temperature Effects	White
BRS	PHD Research Scholarship	Dixon-Jain Jakeman
ICLARM The World Fish Centre	ICLARM Workshop	Wasson M
Environment Australia	Development of a Cane Toad Biological Control	Hazell
IDRC	Tradeable Discharge Permits for River Pollution Control in China	Pu
Herman Slade Foundation	Conservation of a Nationally Threatened Reptile, The Green Python, <i>Morelia Viridis</i>	Heinsohn / Wilson

LWA	Postgraduate Scholarship – Enhancing R&D capacity – The regulation of Indigenous rights through Environmental Legislation	Weir / Rose
LWA	Extending audit outcomes to enhance rural local Government environmental capacity	Wildriver
LWA	Co-understanding places people and water in Central Australia	Robin
LWA	Postgraduate Research Scholarship – Lowe Improving NRM Program and Project Design, Implementation and Evaluation	Lowe/Dovers
ARC	Integrated Water Management in the Lower Richmond Catchment	White
Conservation International	Spider Monkey Conservation and Reduced Impact Logging	Felton
Australian Greenhouse Office	Update monthly climate surfaces and investigations for the National Carbon Accounting System	Hutchinson
NSW NPWS	Consultancy – Research into Kinship with the Natural World	Rose
ACTEW	Institutional Constraints on Water Trading in the ACT PHD Scholarship – Worthy	Worthy/Wasson
Michael Williams & Associates Pty Ltd	Development Guidelines for Delivery of Conservation Incentives by Regional Organisations	Hazell
Development of Sustainability and Environment (VIC)	Integrated Natural Resources Management Project	Dovers
Standford University	Research Initiative on the Environment, the Economy and Sustainable Welfare	Jotzo/Pezzey
ANU	Research Fellowship in Urban Water and Energy Studies	Troy
LWA	Integration of Biodiversity into Regional NRM Planning Projects Steering Committee	Hazell
Aus AID	Australian Water Research Facility; Research Scoping	White