

CONCISE CURRICULUM VITAE

CARMEL ANNA POLLINO

CURRENT APPOINTMENT

- **Research Fellow** - Integrated Catchment Assessment and Management Centre (iCAM), The Australian National University, Canberra, ACT 0200, Australia

DEGREES

- B.App.Sc. (Applied Biology and Biotechnology) (Hons I in Ecotoxicology; RMIT University) 1996
- PhD (Ecotoxicology, RMIT University) 2000
- M.Env.Law (Macquarie University) 2005

PRIZES

- Biennial award for Early Career Research Excellence (General Systems), Modelling and Simulation Society of Australia and New Zealand (2005)

OTHER APPOINTMENTS AND EXPERIENCE

- Research Fellow, Water Studies Centre, Monash University, Melbourne, Australia, May 2002 to Sept 2006
- Postdoctoral Fellow, Centre for Coastal Pollution and Conservation, City University, Kowloon Tong, Hong Kong Sept 1999 to May 2002
- Laboratory Demonstrator, Department of Applied Biology and Biotechnology and Department of Medical Laboratory Science, RMIT University, Melbourne, Australia, 1996 to 2000
- Research Assistant, Faculty of Life Science, RMIT University, Melbourne, Australia, 1998 to 1999
- Research Assistant, Key Centre for Applied and Nutritional Toxicology, RMIT University, Melbourne, Australia, 1996 to 1997

MAJOR ORGANISATIONAL ACTIVITIES

- Organiser of special session at MODSIM 2005 Melbourne, December 2005.
- Co-organiser Australasian Society of Ecotoxicology conference (Melbourne), December 2005.
- Victorian representative of the Australasian Society of Ecotoxicology, 2005 – 2006
- Co-organiser of special session at Second International Environmental Modelling and Software Society (iEMSs 2006) held in Vermont, USA, July 2006.
- A.C.T. representative of the Australasian Society of Ecotoxicology, 2006

RESEARCH CONTRIBUTIONS

- Ecological modelling and modelling in natural resource management
- Development of risk assessment processes
- Development of integrated assessment processes
- Development of decision support tools, including Bayesian models
- Methods for uncertainty analysis in decision support tools
- Participatory processes in natural resource management
- Links between science, natural resource management and policy
- Ecotoxicology, including fish physiology and endocrine disruption

INDICATIVE CONSULTANCIES AND RESEARCH PROJECTS

- Landscape Logic: linking land and water management to resource condition targets (CERF, DEH), commenced September 2006
- Implications of future climate change for natural resource management in the Central West Catchment (NSW) (CWCMA), commenced September 2006

- International expert, Training course in transboundary Risk Assessment, Mekong River Commission (United Nations Development Program), Vientiane, Laos (Mekong River Commission), September 2006 to February 2007
- Assessment of the risks of ARD to Environmental Regime Values in the Ok Tedi and Fly River (PNG) (Ok Tedi Mining Limited), August 2004 to April 2006
- Qualitative modelling and Bayesian Belief analysis for risk-based decisions making in complex systems (ACERA), 2006
- Use of Bayesian decision support tools in sustainable water management (LWA), 2006
- Developing Risk-based Approaches for Managing Contaminants in Catchments (LWA and MDBC), 2003 to 2005
- Delivering Sustainability through Risk Management (NPSI and LWA), 2003 – 2005
- Ecological Risk Assessment for Irrigation Schemes: Case study of the Goulburn-Broken system (Phase 2) (NPSI and LWA), 2002 to 2003
- Development of risk-based water quality guidelines for turbidity (EPA Victoria and CRCFE), 2002 - 2003
- Review of existing water quality monitoring protocols in the Goulburn Broken catchment (Goulburn Broken Catchment Management Authority), 2003
- Testing the lethal and sub-lethal effects of suspended solids on the areolated grouper (Hong Kong SAR), 2001
- Studies on important toxicants in coastal waters of Hong Kong: A risk assessment approach (Research Grants Council of Hong Kong), 2000 to 2002

GRANTS

Land and Water Australia, Murray-Darling Basin Commission, National Program for Sustainable Irrigation, Goulburn Broken Catchment Management Authority, EPA Victoria, Ok Tedi Mining Limited.

SELECT PUBLICATIONS

- Clarke, T., Andrews, S., Moate, P.J., **Pollino, C.A.** and Schmidt, W.L., 1997. Evaluation of low cost in-line milk samplers for estimating cow somatic cell counts. *Journal of Dairy Research* **64**, 13-22
- Pollino, C.A.** and Holdway, D.A., 2002. Alteration in the reproductive potential of crimson-spotted rainbowfish (*Melanotaenia fluviatilis*) exposed to Bass Strait crude oil and dispersed crude oil. *Environmental Toxicology* **17**, 138-145
- Pollino, C.A.** and Holdway, D.A., 2002. Toxicity testing of crude oil and related compounds to early life stages of the Crimson-spotted Rainbowfish (*Melanotaenia fluviatilis*). *Ecotoxicology and Environmental Safety* **52**, 180-189
- Pollino, C.A.** and Holdway, D.A., 2003. Hydrocarbon-induced changes to the metabolic and detoxification enzymes of the Australian crimson-spotted rainbowfish (*Melanotaenia fluviatilis*). *Environmental Toxicology* **18**, 21-28
- Wu, R.S.S., **Pollino, C.A.**, Au, D.W.T. Zheng, G.J. Yuen, B.B.H., Lam, P.K.S., 2003. Evaluation of biomarkers of exposure and effect in juvenile areolated grouper, (*Epinephelus areolatus*) upon foodborne exposure to benzo[a]pyrene. *Environmental Toxicology and Chemistry* **22**, 1568-1573
- Pollino, C.A.** and Holdway, D.A., 2003. Reproduction of a laboratory-based population of the Australian Crimson-spotted Rainbowfish (*Melanotaenia fluviatilis*). *Australasian Journal of Ecotoxicology* **9**, 113-117
- Au, D.W.T., Chen, P., **Pollino, C.A.**, Wu, R.S.S., 2004. Cytological changes in association with EROD induction in fish on dietary exposure to benzo[a]pyrene. *Environmental Toxicology and Chemistry* **23**, 1043-1050
- Au, D.W.T., **Pollino, C.A.**, Wu, R.S.S., Shin, P.K.S., Lau, S.T.F., Tang, J.Y.M., 2004. Chronic effects of suspended solids on gill structure, osmoregulation, growth, and triiodothyronine in juvenile green grouper *Epinephelus coioides*. *Marine Ecology Progress Series* **266**, 255-264
- Pollino, C.A.**, Feehan, P., Grace, M., Hart, B.T., 2004. Fish communities and habitat changes in the highly modified Goulburn Catchment, Victoria, Australia. *Marine and Freshwater Research* **55**, 769 - 780
- Pollino, C.A.** and Hart, B.T., 2005. Can Bayesian approaches in risk assessment help make better sense of ecotoxicological information? *Australasian Journal of Ecotoxicology* **11**, 57-58

- Pollino, C.A.**, Woodberry, O., Nicholson, A.E. and Korb, K.B., 2005. Parameterising Bayesian Networks: A Case Study in Ecological Risk Assessment. In: V. Kachitvichyysnukul, U. Purintrapiban and P. Utayopas (Eds), Proceedings of the 2005 Conference on Simulation and Modelling, Bangkok, Thailand, pp. 289-297.
- Pollino, C.A.** and White A., 2005. Development and application of a Bayesian decision support tool to assist in the management of an endangered species. MODSIM 2005, Melbourne Australia.
- Pollino, C.A.**, Hart, B.T., 2006. Bayesian decision networks - going beyond expert elicitation for parameterisation and evaluation of ecological endpoints. International Environmental Modelling and Simulation Society; Vermont, USA.
- Hart, B.T., Burgman, M., Grace, M., **Pollino, C.A.**, Thomas, C. and Webb, J.A., 2006. Risk-based approaches to managing contaminants in catchments. *Human Ecol. Risk Assess.* **12**, 66 - 73
- Pollino, C.A.**, Feehan, P., Grace, M., Hart, B.T. 2006. Reply to the comment by Crook and Koster on "Temporal change in fish assemblages in the lower Goulburn River, south-eastern Australia." *Marine and Freshwater Research* **57**, 309 - 311
- Pollino, C.A.**, Woodberry, O., Nicholson, A.E., Korb, K.B. and Hart, B.T., in press. Parameterisation of a Bayesian network for use in ecological risk management. *Environmental Modelling & Software*
- Pollino, C.A.**, White A. and Hart, B.T. in press. Development and application of a Bayesian decision support tool to assist in the management of an endangered species. *Ecological Modelling*
- Pollino, C.A.**, Georgiades, E. and Holdway, D.A., in press. Use of the Australian crimson-spotted rainbowfish (*Melanotaenia fluviatilis*) as a model test species for examining the effects of endocrine disruptors *Environmental Toxicology and Chemistry*

GRADUATE STUDENT SUPERVISION

- Currently supervising 2 PhD students. Have also supervised 1 Honours and 1 Masters project.