

## Professor Barry T Hart



- Nationality:** Australian
- Marital Status:** Married (Margaret), 5 children.
- Qualifications:** Dip.App.Chem. (Bendigo, 1959); Dip.Chem.Eng. (Swinburne, 1963); B.Sc. (Hons) (first class, Monash, 1969); Ph.D. (Chemistry) (Monash, 1972).
- Present Positions:** Emeritus Professor, Monash University (personal chair, 1994; retired December 2003; contract with Monash (Feb 2004-Feb 2009)  
 Director, Water Science Pty Ltd (environmental consulting company)  
 Non-Executive Director, Alluvium Consulting Australia Pty Ltd
- Experience:** Director, Water Science Pty Ltd (2003-Present)  
 Director, Water Studies Centre, Monash University (30 years, 1976-2006)  
 Head, Department of Chemistry & Biology (10 years, 1976-1986)  
 Deputy Director/Director Research, CRC for Freshwater Ecology (9 years, 1993-2002)  
 33 years teaching and research
- Areas of Specialisation:** Water resource decision making, Environmental flows, Ecological risk assessment, Environmental flow decision making, Natural resource management, Water quality management, Environmental chemistry, Biogeochemical cycling of elements.

### Awards

- Member of the Order of Australia (AM) June 2012
- Centenary Medal from the Australian Government (2003)
- Senior Gledden Fellowship, University of Western Australia (2002-2003)
- Fellow Royal Australian Chemical Institute

- Applied Chemistry Medal from Royal Australian Chemical Institute (1998)
- Environmental Chemistry Medal from Royal Australian Chemical Institute (1996)
- Australian Society for Limnology Medal (1982)

## **Boards**

### ***Current***

- Board Member, Murray Darling Basin Authority (2009-2017).
- Non-Executive Board Member, Alluvium Consulting Pty Ltd (2015-present)

### ***Past***

- President & Board Chair, Greening Australia-Victoria (2008-2012).
- Member Board, Greening Australia Limited (2009-2012).
- Member Board, Victorian Environment Protection Authority (2000-2006).

## **Advisory and Other Committees**

### ***Current***

- Deputy Chair, Scientific Inquiry into Hydraulic Fracturing of Onshore Unconventional Reservoirs in the Northern Territory (2016-2017).
- Chair, DLEWP Environmental Flows Technical Advisory Panel (2002-present).
- Member, Campaspe Environmental Water Advisory Group (2016-present)

### ***Past***

- Member, Independent Technical Review Panel, Stockman Base Metal Project (2015-2016)
- Member, Hidden Valley External Stakeholder Advisory Committee (ESAP), PNG (2011-2016).
- Chair, Fitzroy Partnership, Scientific Advisory Committee (2010-2014).
- Chair, Melbourne Water – Waterways Advisory Committee (2009-2013).
- Chair, Commonwealth Environmental Water - Science Advisory Committee (2008-2013).
- Chair, Scientific Advisory Committee, Victorian Waterways Management Strategy (2009-2013).
- Chair, Yarra Coordinating Committee (2006-2010).
- Chair, Gippsland Lakes & Catchment Taskforce (2006-2011, member since 2001).
- Member, DSE Secretary's Reference Group for the implementation of the Victorian Government Land and Biodiversity White Paper (2008-2009).
- Member, Porgera Environment Advisory Komiti (PEAK) (2004-2009).
- Chair, Vic EPA Science Futures Panel (2006-2009).
- Member, Victorian Environment Assessment Council (2004-2009).
- Member, Science Reference Committee for the Victorian Government's Land & Biodiversity White Paper (2007-2009).
- Chair, Science Advisory Panel, Great Barrier Reef Water Quality Partnership (2005-2008).
- Chair, Scientific Advisory Committee, Victorian Healthy Rivers Strategy (2002-2007).

- Chair, Gippsland Water, Technical Advisory Group, (2000-2008).
- Chair, Gippsland Integrated Natural Resource Management Forum (2002-2005)
- Chair, Alligator Rivers Region Technical Advisory Committee (2001-2005)
- Member, Victorian Catchment Management Council (1997-2005).
- Chair, State Water Quality Monitoring & Assessment Committee (1997-2004).
- Member, Victorian Catchment & Land Protection Council (1994-1997).
- Member, Technical Advisory Panel, National Pollution Inventory (1997-1998)
- President, International Association Sediment-Water Science, (1993-1996), Board Director (1984-1993).
- Australian Water Research Advisory Council (AWRAC) (1985-1987).
- Chair, RACI - Environmental Chemistry Division (1989-1992).

### **Review Committees**

- Chair, Review CRC for Water Sensitive Cities research projects (2015)
- Member, Review of the CRC for Water Sensitive Cities (2015).
- Chair, Science Review of the DSE Arthur Rylah Institute of Environmental Research (2012-2013).
- Member, Review of the CSIRO Water for a Healthy Country Flagship (2013)
- Chair, Review of the surface water management and monitoring associated with the Ranger Uranium Mine, Northern Territory, Australia (2012).
- Chair, Review of the Port Curtis Independent Environmental Monitoring Program (2012).
- Chair, Horseshoe Bend Project, West Gippsland CMA (2011).
- Chair, East Gippsland Water's Mitchell River Aquifer Storage and Recovery (MiRASR) Project Steering Committee (2009-2010).
- Member, External Expert Advisory Committee River Red Gums and Woodland Forests Assessment, NSW Natural Resources Commission (2009)
- Chair, National Urban Water Governance Program Steering Committee (2006-2009).
- Member, CSIRO Ecological Outcomes of Flow Regimes Project Steering Committee (2008-2010).
- Member, External Review Panel, Queensland Health Waterways Partnership, Environmental Health Monitoring Program (2008-2009).
- Member, Tasmanian River Condition Index Expert Review Panel (2007-2009).
- Member, eWater CRC Review Panel (December 2008).
- Member, Yarra Replacement Flows Acceptance Panel (2007-2008).
- Chair, Gippsland Water Factory Independent Peer Review Panel (2006).
- Member, Review of the Porgera riverine monitoring program using a risk-based approach for Porgera Joint Venture, PNG, (2004-2006).
- Member, Expert Review Panel, Swan-Canning Cleanup Action Program, Swan River Trust (2004-2005).
- Member, Science 'Champions' Group, Qld Dept Natural Resources, Mines & Energy (2004).
- Member, Victorian Water Industry Review Expert Advisory Taskforce (June 2003 – May 2004).

- Chair, Technical Review Committee, CRC for Catchment Hydrology (August 2003, May 2004).
- External Technical Review Committee, South East Queensland Water Quality Management Strategy, Brisbane (1997-present).
- Internal Reviewer, In-stream Flow Requirements for Lesotho Highlands Development Project, Lesotho (1997-2000).
- Peer Review Group, Health & Ecological Risk Assessment, Ok Tedi Mining Ltd, PNG (1997-2001).
- Reviewer, Catchment-hydrodynamic-ecological model for the Swan-Canning River system, Swan River Trust and WA Waters & Rivers Commission, Perth (1998).
- Chair, Review of the Victorian Water Quality Monitoring Network (1996-1997).
- Chair, Review of the Department of Geography and Environmental Studies, Melbourne University (July 1995).
- Review of the Department of Chemistry, University of South Pacific (August, 1994).
- Member, LaTrobe Valley Ocean Outfall Inquiry (1989-1990).

### **Delegations**

- *Indonesia* - Leader Department of Education, Employment & Training delegation (R&D Links between Indonesian and Australian Universities in Water Quality; January 1994; June 1994; October 1994; January 1995; May 1995; September 1996).
- *South Africa* - Leader DITRD Bilateral Links/LWRRDC delegation (River Classification and Assessment, February 1994).
- *Germany* - Member Australia-Germany Bilateral Science & Technology delegation (Water and the Environment, October 1992)
- *Korea* - Member Australian Academy of Sciences delegation (Water & Wastewater Management, July 1993)
- *China* - Member Australian Academy of Sciences delegation (Water Resources, July 1984)

### **Membership Professional Societies**

- Royal Australian Chemical Institute (Fellow)
- International Society for Sediment & Water Science (past President and Director)
- Australian Society for Limnology (past President)
- River Basin Management Society

### **Editorial Boards**

- Australasian Journal of Water Resources (2015-present)
- Journal of Health & Environmental Risk Assessment (2005 to present)
- Australasian Journal of Ecotoxicology (1994 to present)
- Editor, International Association of Sediment-Water Science (1988 to 1995)
- Environmental Technology (1980 to 1995)
- Journal of Environmental Toxicology and Chemistry (1986 to 1990)

- Australian Journal of Marine & Freshwater Research (1980 to 1983)

## **Publications**

- Over 175 publications in refereed scientific literature (copies available)
- 12 books and monographs
- Many un-refereed articles and reports
- Many invited lectures in Australia and overseas

## **Consultancy**

### ***Current Projects***

- Sydney Water Supply Catchments Audit (Client: Alluvium Consulting Australia for Water NSW (2016-17))
- Healthy Waterways Strategy: Waterway Science Conceptual Models (Client: Alluvium Consulting Australia for Melbourne Water (2016-17))
- Gellibrand River Estuary Low Flow Investigation ((Client: Alluvium Consulting Australia for Corangamite CMA (2017))

### ***Recently Completed Projects***

- *Recommended Load Targets for the Port Phillip Bay Environmental Management Plan* (Client: Melbourne Water (2016))
- *Costs of achieving the water quality targets for the Great Barrier Reef* (Client: Alluvium Consulting Australia for Qld Department of Environment and Heritage Protection, 2016)
- *Independent Technical Review Panel for the Stockman Project* (Client: Independence Corporation)
- *Water quality offset framework* (Client: Alluvium Consulting Australia)
- *External Stakeholder Advisory Panel* (Client: Hidden Valley Joint Venture, PNG, 2011-present).
- *Review of the Victorian Environmental Flows Monitoring and Assessment Program (VEFMAP)* (Client: Victorian Department of Land, Environment, Water and Planning, November 2014)
- *Closure Criteria for the Ranger Uranium Mine, NT* (Client: Energy Resources of Australia Ltd (ERA), October 2014)
- *Independent Review of the Current and Future Management of Water-related Assets in the Geographe Catchment, WA* (Client: WA Minister for Water and Department of Water, March 2014)
- *Ramu II Hydropower Project* (Client: ERIAS Group for Ausenco, March 2014)
- *Review of the Water for a Healthy Country Flagship Program* (Client: CSIRO, August 2013)
- *Science Review of Arthur Rylah Institute* (Client: ARI, January 2013)
- *Independent Surface Water Working Group* (Client: Energy Resources Australia Ltd & Gundjeihmi Aboriginal Corporation, 2012-2013)
- *Co-produced water - issues associated with quantity, quality, timing and potential risks to aquatic ecosystems and their environmental values* (Client: SKM for SEWPaC, August-September 2012)

- *Review and Comment on Changes made to the Standard Criteria for the Recognised Environmental Credentials Scheme for Commercial Cleaning Products* (Client: Accord Australasia Ltd, Sept 2012)
- *Review of the Port Curtis Integrated Monitoring Program* (Client: PCIMP Inc., Gladstone, Qld, February 2012)
- *Mitchell River Aquifer Storage and Recovery (MiRASR) Project* (Client: East Gippsland Water, Chair Independent Steering Committee, 2009-2011).
- *Lake Tai (China) Water Pollution Treatment Project* (Client: Earth Tech Pty Ltd, Melbourne, 2010).
- *Frieda River (PNG) Hydro Lake Limnology Project* (Client: Water Research Centre and Coffey Natural Systems, 2009-present).
- *Review of the Port Curtis Independent Environmental Monitoring Program*: Client PCIEMP Inc, 2012.
- *Lake Tai (China) Water Pollution Treatment Project* (Client: Australia China Environment Development Program, 2009-2010).
- *Review of research projects associated with ESAS Project 10.10: Recycling and re-use of waste streams in the dairy processing industry* (Client: Vic Department of Primary Industry, 2009).
- *Business case for the long-term health of the Latrobe River* (Client: Alluvium Pty Ltd and West Gippsland Catchment Management Authority, 2009).
- *Potential of Urban Streams* (Client: EDAW and Melbourne Water, 2009).
- *Review of the MDBA Native Fish Strategy* (Client: Murray Darling Basin Authority, 2008-2009).
- *Risk Assessment of the Proposed Haul Road Crossing of Serpentine Dam* (Client: Alcoa World Alumina Australia, 2007-2008).
- *Yarra Replacement Flows Acceptance Panel* (Client: Vic Department of Sustainability & Environment, 2008).
- *Review of the Fitzroy Water Quality Issue* (Client: Queensland Premier, 2008).
- *Bayesian modelling approaches as a basis for risk-based environmental water allocation decisions* (Client: National Water Commission, 2007-2008).
- *Training program in ecological risk assessment* (Client: Mekong River Commission, Lao PDR, 2006-2007).
- *Risk assessment of the environmental and human health impacts of mine-derived trace metals in the OkTedi and Fly river systems* (Client: OTML, PNG, 2004-2006).
- *Review of the Porgera riverine monitoring program using a risk-based approach* (Client: Porgera Joint Venture, PNG, 2004-2006).
- *Training program in ecological risk assessment* (Client: Mekong River Commission, Cambodia, 2003-2004).
- *Ecological risk assessment of the Goulburn Broken irrigation system - Phase II* (Client: Goulburn Murray Water/NPIRD, 2002-2004).
- *Environmental risks from salinity increases in the Goulburn Broken catchment* (Client: Goulburn-Broken Catchment Management Authority, 2002-2004).
- *Transboundary water quality study* (Client: Mekong River Commission, Cambodia, 2001).

## Research

Major funding sources: LWA, DSE, NEMP, DIST, DEETYA, ARC, NHT, NPIRD, NPSI, Industry

### Projects

- *Bayesian Decision Support Tools in Sustainable Water Management* (with Dr Mike Grace) Land & Water Australia Grant \$250,000 (2006-2009).
- *Development of risk-based approaches for managing contaminants in catchments* (with Dr Mike Grace & Dr Angus Webb (Monash), Prof Mark Burgman, Prof Rodger Grayson & Prof David Fox (Melb Univ), Dr Elisabeth Bui (CSIRO Land & Water), Land & Water Australia Grant \$500,000 (2003-2006).
- *Delivering sustainability through risk management* (with Dr Mike Grace, Prof Chris Cocklin and Prof Mark Burgman (Univ Melb), NPSI Grant \$200,000 (2003-2006).
- *Ecological risk assessment: a tool for management of aquatic resource* (with Dr M Grace and Prof Mark Burgman (Melb Univ), CRCFE Grant \$350,000 over 3 years, 2000-2004).
- *Development of an ecological risk assessment protocol for the irrigation industry* (with Dr Angus Webb, Prof M. Burgman (Melb Univ) & Dr G. Allison, NPIRD Grant \$60,000 over 2 years, 2002-2004).
- *Algal Blooms in the Gippsland Lakes: Assessment of the Importance of Sediment-bound Nutrients* (with Dr B. Light (Vic EPA), A. Longmore (MAFRI) & A. Buckley (Gippsland Coastal Board), NHT Coast & Clean Seas Grant \$80,000, 2002).
- *Sustainability of wetlands with regard to wastewater disposal* (with Dr S. Bourgues, NSW Environment Trust Grant \$110,500, 2002-2003).
- *Australian-German Alliance on Management of Contaminated Sediments* (with Dr R Beckett, Monash, Prof D Waite, Univ NSW, Dr G Batley, CSIRO – DIST Grant, \$600,000 over 2 years, 1999-2001).

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