



PROFILE

Rick has been continuously involved in applied science related to water quality and aquatic ecosystem protection since 1990. For much of this time he has worked at the interface of science and regulation.

Prior to working as an independent consultant, Rick was the Director of the Environmental Research Institute of the Supervising Scientist (ERISS), leading a multidisciplinary research program of over 25 staff with an annual operating budget of approximately \$4 million.

Rick has an extensive background in applied research on the impacts and risks of contaminants to aquatic environments. He also has extensive knowledge and experience on inter/national guidance for the management and assessment of water quality (including the Aust/NZ Water Quality Guidelines)

Rick has an extensive network across multiple sectors, including the mining industry, government, and other scientists. He also brings 20 years of management and leadership experience.

CONTACT

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Dr Rick van Dam

Independent aquatic ecosystem and water quality specialist

QUALIFICATIONS

Doctor of Philosophy (Aquatic Toxicology), 1992-1996

Royal Melbourne Institute of Technology (RMIT) University

BSc (Hons) (H1; Marine Ecology), 1986-1990

The University of Adelaide

RECENT CAREER

Independent environmental consultant (Sole Trader)

Sept 2018–present

Provision of independent advice, guidance, assessment, analysis and mediation on water quality management issues

ERISS, Department of the Environment & Energy (Darwin) - Director and Senior Principal Research Scientist

Nov 2012–May 2019

Lead the development and delivery of the ERISS research and biological monitoring program (including necessary stakeholder liaison);

Provide technical and scientific advice to the Department / Minister

Adjunct appointments

Adjunct Associate Professor of RMIT University

Honorary Fellow of Charles Darwin University

KEY EXPERTISE

- Ecotoxicology
- National water quality management framework
- Metals bioavailability and toxicity
- Development of toxicity test methods
- Issue conceptualisation
- Ecological risk assessment
- Derivation of water quality guideline values
- Risks/impacts of wastewater discharges (incl. saline waters)
- Evidence-based water quality regulation
- Multidisciplinary research

KEY PROJECTS (LED OR OVERSEEN)

Technical manager for the derivation of default water quality guideline values for toxicants for Australia and New Zealand

Guidance for selecting and evaluating approaches for deriving local water quality guideline values

Co-technical coordination for the 2018 revision of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality

WEB

www.wgadvice.com.au

ABN

19 281 600 310

Development of the Supervising Scientist's Key Knowledge Needs for the rehabilitation of Ranger uranium mine

Development of the Supervising Scientist's rehabilitation standards for the Ranger uranium mine

Development of a duration-based water quality limit for magnesium

Review and development of tropical marine toxicity test methods for northern Australia

Assessment of assets and threats to Australia's tropical rivers (TRIAP)

Guidance and recommendations for direct toxicity assessment in Aust/NZ

KEY PEER-REVIEWED PUBLICATIONS

(*>90 peer-reviewed publications and >100 conference presentations*)

van Dam RA, Hogan AC, Harford AJ & Humphrey CL 2019. How specific is site-specific? A review and guidance for selecting and evaluating approaches for deriving local water quality benchmarks. *Integrated Environmental Assessment & Management* 15(5), 683-702.

Warne MStJ, Batley GE, **van Dam RA**, Chapman JC, Fox DR, Hickey CW & Stauber JL 2018. Revised Method for Deriving Australian and New Zealand Water Quality Guideline Values for Toxicants. Prepared for the revision of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Governments and Australian state and territory governments. 48 pp.

Van Dam JW, Trenfield MA, Streten C, Harford AJ, Parry D & **van Dam RA** 2018. Water quality guideline values for aluminium, gallium and molybdenum in marine environments. *Environmental Science and Pollution Research* 25(26), 26592- 26602.

van Dam RA, Hogan AC & Harford AJ 2017. Derivation and implementation of a site-specific water quality limit for uranium in a high conservation value ecosystem. *Integrated Environmental Assessment & Management* 13, 765–777.

Bartolo RE, Harford AJ, Bollhoefer A, **van Dam RA**, Parker S, Breed K, Erskine W, Humphrey CL & Jones DR 2017. Causal models for a risk-based assessment of stressor pathways for an operational uranium mine. *Human and Ecological Risk Assessment* 23, 685-704.

van Dam RA, Humphrey CL, Harford AJ, Sinclair A, Jones DR, Davies S, Storey AW 2014. Site-specific water quality guidelines: 1. Derivation approaches based on physico-chemical, ecotoxicological and ecological data. *Environmental Science and Pollution Research* 21, 118-130.



- van Dam RA, Harford AJ & Warne MStJ 2012. Time to get off the fence: The need for definitive international guidance on statistical analysis of ecotoxicity data. *Integrated Environmental Assessment and Management* 8(2), 242-245.
- van Dam RA, Hogan AC, McCullough C, Houston M, Humphrey CL & Harford AJ 2010. Aquatic toxicity of magnesium sulfate, and the influence of calcium, in very low ionic concentration water. *Environmental Toxicology & Chemistry* 29(2), 410-421.
- van Dam RA, Harford AJ, Houston MA, Hogan AC & Negri A 2008. Tropical marine toxicity testing in Australia: A review and recommendations *Australasian Journal of Ecotoxicology* 14(2/3), 55-88.
- van Dam RA & Chapman JC 2001. Direct toxicity assessment (DTA) for water quality guidelines in Australia and New Zealand. *Australasian Journal of Ecotoxicology* 7(2), 175-198.