

Curriculum Vitae (December 2010)**Leonard Angus McDonald, Dam Safety and Risk Consultant**

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| Date of Birth | [REDACTED] |
| Nationality | Australian |
| General Education | Leaving Certificate 1954. Aggregate place 49 th out of some 12,000 students in New South Wales, 3 rd place in Modern History. |
| Profession | Civil Engineer |
| Professional Education | Bachelor of Engineering (Civil) 1959, University of New South Wales. Water Board Gold Medal for Public Health Engineering. Certificate of Qualification as Engineer (Civil) under Local Government Act 1970. Master of Engineering Science (Public Health Engineering) 1983, University of New South Wales. |
| Professional Attainments | 52 years of professional experience. Fellow of the Institution of Engineers Australia, Chartered Professional Engineer. Secretary of Australian National Committee on Large Dams (ANCOLD) from 1992 to 1994 inclusive. Assistant Secretary of ANCOLD from 1998 to 2003 inclusive. Member of ANCOLD working groups on Risk Assessment (1987 to 1994), Design of Dams for Earthquake, and Environmental Management of Dams. Convenor of ANCOLD working group on Risk Assessment (1995 to 2003). Honorary Life Member of ANCOLD. Member of International Commission on Large Dams (ICOLD) Committee on Materials for Fill Dams (1995 to 2000). Member (1998 to 2003) and acting Chairman (2002 and 2003) of ICOLD Committee on Dam Safety. For work on risk analysis of dams, named one of the hundred most influential engineers by Engineers Australia in 2006. |
| Latest Organisation | New South Wales Dams Safety Committee |
| Position with Organisation | Chairman (1997 to 2009) |
| Years with Organisation | 22 (1987 to 2009) |
| Languages | English |
| Countries of Work Experience | Australia, Canada and New Zealand |
| Specialised Competence | Dam engineering, dam safety regulation and risk assessment. |

Key Experience

Extensive experience in the investigation, design, construction and maintenance of roads, bridges, water supply systems and service reservoirs. All told, thirty five years continuous involvement with dams, in both design and safety evaluation. Of this time, there was twenty two years continuous experience on investigation, design and technical oversight during construction of dams, as well as associated work on weirs, tunnels and appurtenant structures. With some overlap there has also been over twenty three years experience in the safety regulation of dams, along with extensive work in independent project review and risk assessment for dams.

Details of Experience**1997 to 2010 (following retirement from full time employment)**

Chairman of New South Wales Dam Safety Committee from June 1997 to March 2009 and then a member of the Committee to June 2009. Regulation of the safety of some 330 dams

of all types. Also regulation of mining that could affect dams or their reservoirs. Interface with the Minister administering the *Dams Safety Act 1978*. Personally undertook the development of regulatory safety policies.

- Member in 2010 of the Advisory Board on Safety Policy Decisions and the Role of Uncertain Scientific Information which advised BC Hydro on Seismic Hazard Policy Considerations. My role was to provide advice on the tolerability of public safety risks.
- Member from 2007 to 2010 of the Independent Dam Safety Advisory Panel advising Ontario Power Generation, Canada on its dam safety management program. Chair of the Panel for 2010. Fellow Panel members have been Mr Urban Norstedt (Sweden), Dr Kaare Höeg (Norway), Mr Michel Poupart (France), Mr Mike Prince (United Kingdom), Dr Ed Watt (Canada), Dr Andrew Hughes (United Kingdom), Mr Tom Veary (Canada).
- Invited presenter to the Workshop on Tolerable Risk held in Alexandria, Virginia, USA on 18 and 19 March 2008. The workshop was jointly convened by the US Army Corps of Engineers, the US Bureau of Reclamation and the US Federal Energy Regulatory Commission.
- Member from 1997 to 2003 of both the first and second Advisory Boards for safety improvements to Seven Mile Dam, owned by BC Hydro and located in British Columbia, Canada. Fellow board members were Emeritus Professor Robert Whitman of Massachusetts Institute of Technology, Dr Anile Chopra of University of California, Berkeley, and Dr Evert Hoek, consultant, Vancouver (first board), and Mr Don Coulson and Mr Jim Gordon, both consultants of Montreal (second board). Safety improvement works included installation of what were the world's largest capacity post-tensioned anchors at the time.
- Member of ICOLD Committee on Dam Safety 1998 to 2003, Acting Chairman in 2002 and 2003, lead author of ICOLD bulletin *Risk Assessment in Dam Safety Management – A Reconnaissance of Benefits, Methods and Current Applications*.
- Convenor of ANCOLD working group on risk assessment (since 1995) and the principal author of the ANCOLD *Guidelines on Risk Assessment 2003*.
- Member of working group which produced the ANCOLD *Guidelines for Design of Dams for Earthquake*, 1998.
- Member of working group which produced the ANCOLD *Guidelines on Environmental Management of Dams*, 2001.
- Review of the deformation behaviour of Mangrove Creek Dam, an 80m high concrete faced rockfill dam.
- Internal project reviewer for the proposed Lee River Dam, South Island of New Zealand. The dam is planned as a 52m high concrete faced rockfill dam and will provide water for irrigation and urban needs.
- Independent peer reviewer to NSW Public Works for the risk assessment of Gin Gin and Balranald Weirs.
- Independent peer reviewer to State Water for the risk assessment and design of an auxiliary fuse plug spillway for Copeton Dam.
- Independent peer reviewer to State Water for the Risk Assessment of Keepit Dam safety improvements.
- Independent peer reviewer to Southern Rural Water for the Risk Assessment of Blue Rock Dam.
- Independent peer reviewer to SunWater for the Comprehensive Risk Assessment of Leslie Dam.

- Independent peer reviewer to GHD Pty Ltd for the study into the failure consequences for Wellington Dam, owned by the Water Corporation of Western Australia.
- Advisor to ActewAGL on the implications of the proposed new Cotter Dam for the safety of the three Cotter River dams.
- Internal reviewer to the NSW Department of Commerce (now NSW Public Works) for the design of Tillegra Dam, a 75m high concrete faced rockfill dam to be constructed in the NSW Hunter Valley and to be owned by Hunter Water Corporation. The major review work to date has been on the risk assessment for the river diversion scheme for the dam, including the estimation of public safety consequences of a failure.
- Independent Reviewer of both Phases 1 and 2 of the risk assessment undertaken into the effects of longwall mining on the Upper Canal and Aqueducts forming a key part of the Sydney water supply infrastructure. Member of the Technical Review Panel monitoring the effects of the mining.
- Presenter on dam safety and risk assessment for a refresher training course for personnel of the Water Corporation, Western Australia in 2008.
- Member of the Review Panel for the portfolio risk assessment of the dams owned by SunWater, Queensland. Fellow Panel members were Emeritus Professor Robin Fell and Mr Graeme Bell.
- Reviewer of the draft Dam Safety Management Plan concept for regulation of dam safety in Ontario Province, Canada. The work was undertaken for Ontario Power Generation on behalf of the Ontario Ministry of Natural Resources.
- Member of the Foundation Committee responsible for the approval of the foundations for Shannon Creek Dam constructed as part of the Clarence Valley and Coffs Harbour Regional Water Supply for Clarence Valley Council. The Stage 1 dam is a 48m high zoned earthfill structure.
- Advisor to Marsden Jacob Associates, Economists, in their advice to the Economic Regulation Authority of Western Australia on the dam safety aspects of the Harvey Water Pricing Inquiry.
- Member of a team of two providing independent advice to Harvey Water, Western Australia, on the justification of safety improvements undertaken at Waroona Dam.
- Internal reviewer for the Department of Commerce team investigating the safety improvement of Corin and Bendora Dams for ActewAGL, Canberra.
- Advisor to SunWater, Queensland on specialist risk assessment aspects of their review of the Queensland Government guidance on improvement of dam flood capacity.
- Member of Surveillance Review Group for safety improvements to Hume Dam and invited participant in Hume Dam failure modes and risk assessment workshops in April 2000, November 2003, March 2007 and April 2007.
- Member of Review Panel advising on risk assessment of the safety of Rosslynne Dam, owned by Southern Rural Water, Victoria.
- Member of Review Panel advising on risk assessment of the safety of Pykes Creek Dam, owned by Southern Rural Water, Victoria.
- Member of Review Panel advising on risk assessment of the safety of Glenmaggie Dam, owned by Southern Rural Water, Victoria.
- Member of Review Panel advising on risk assessment of the safety for extended drawdown of Prospect Dam, owned by Sydney Catchment Authority, New South Wales.

- Member of Review Panel advising on risk assessment and design of safety improvements for Wingecarribee Dam, owned by Sydney Catchment Authority, New South Wales.
- Reviewer advising on risk assessment of the safety of Fred Haigh Dam, owned by Sunwater, and located near Bundaberg, Queensland.
- Member of Panel advising on safety improvements to Wivenhoe Dam, owned by South East Water, Queensland.
- Reviewer advising on the portfolio risk assessment of the safety of the 18 large dams owned by State Water, New South Wales.
- Member of Review Panel advising on design of the new Shannon Creek Dam, owned by Clarence Valley and Coffs Harbour Regional Water Supply, New South Wales.
- Advisor to Marsden Jacob and Associates on risk assessment aspects of a review of dam safety improvements for the South West Irrigation Dams, Western Australia;
- Presenter on dam safety and risk assessment for a training course for senior managers of the Water Corporation, Western Australia in 2002.
- Reviewer of proposals for the safety improvement of Grahamstown Dam owned by Hunter Water Corporation.
- Reviewer of the design for the new Cowarra Dam owned by Hastings Municipal Council, New South Wales.
- Member of Review Panel advising on risk assessment of the safety of dams owned by the North East Region Water Authority, Victoria.
- Provider of training in risk assessment for Chinese dams engineers under arrangements with Gutteridge Haskins and Davey Pty Ltd, Sydney.
- Author of a working paper prepared for the Dam Safety Interest Group of CEA Technologies, Canada, on considerations in estimation of the probability of failure of dams. This work contributed to the book *Risk and Uncertainty in Dam Safety* by Desmond N D Hartford and Gregory B Baecher, Thomas Telford, 2004.
- Member of the Analysis Team, working for Maunsell McIntyre Pty Ltd on the risk assessment of Paluma and Ross River Dams, then owned by the Townsville and Thuringowa Councils, Queensland.
- Member of Review Panel for the safety evaluation of the three Cascade Dams near Katoomba, NSW.
- Team member for safety surveillance inspections on a number of dams.

1992 to 1997 (the then Department of Public Works and Services)

Assistant Principal Engineer, Dams and Civil Section.

Deputy Chairman, NSW Dams Safety Committee.

- Member of ANCOLD working group which produced the first edition of *ANCOLD Guidelines on Risk Assessment 1994*.
- Member of Surveillance Team over-sighting the performance of the recently constructed Thompsons Creek Dam, a 54m high earth core rockfill dam near Lithgow, NSW.
- Member of Review Panel advising on safety improvements to Prospect Dam, then owned by Sydney Water, New South Wales.
- Investigations and concept design for the safety improvement of Sooley Dam, a 15m high concrete gravity dam near Goulburn, NSW.

- Investigation of potential dam sites for the Clarence Valley and Coffs Harbour Regional Water Supply.
- Investigation of Prospect Canal leakage and repairs.
- Reviewer for detailed design and documentation of Fattorini Dam (now Steuart McIntyre Dam), a new 30m high zoned earthfill dam near Kempsey, NSW.
- Major risk analysis study to estimate the failure probabilities of Hume Dam, for 82 combinations of dam elements and failure modes.
- Study involving safety review, dam-break consequences, remedial options and risk assessment for Beetaloo Dam, a 37m high curved concrete gravity dam in South Australia.
- Direction and review of risk assessment study for Malpas Dam, a 31m high earth core rockfill dam near Armidale, NSW.
- Design and contract documentation for Loyalty Road flood detention basin, a 28m high roller compacted concrete dam in North Rocks, Sydney.
- Investigation studies for a proposed dam at Kangaroo Creek, near Coffs Harbour, NSW.
- Investigation studies, design and contract documentation for the safety upgrading and augmentation of Chifley Dam, a 27m high (raised to 32m in this project) earth core rockfill dam near Bathurst, NSW.
- Investigation, design and contract documentation for the safety upgrading of Rydal Dam near Lithgow, NSW.
- Investigation and concept design for a new large capacity outlet tunnel for Mardi Dam near Wyong, NSW.
- A number of small investigation and design projects for weirs or works ancillary to dams.
- Co-author of ICOLD Bulletin No. 89, *Reinforced Rockfill and Reinforced Fill for Dams – State of the Art*.
- Preparation of Operations and Maintenance manuals for 7 dams and Dam Safety Emergency Plans for 2 dams.

1987 to 1992 (the then NSW Department of Public Works)

Senior Dam Design Engineer.

- Design and contract documentation for a gated weir on the Macquarie River at Bathurst.
- Investigation and design for a proposed water transfer canal some 20km long downstream of Wingecarribee Dam near Mittagong, NSW.
- Investigation of the capacity of the North Bondi stormwater drainage system and concept design of options to increase capacity.
- Investigation of the capacity of several stormwater drainage systems in Sydney suburbs.
- Design and contract documentation for roadworks and materials supply for the raising of Pindari Dam near Ashford, NSW.
- Design, contract documentation and construction oversight for the safety upgrading of Captains Flat Dam, involving the post-tensioning of a 16m high concrete gravity dam.
- Design, contract documentation and construction oversight for the safety improvement of Dungowan Dam near Tamworth, NSW; involving raising of the existing 28m earthfill dam

by 5m and provision of two new spillways to increase flood capacity from 460m³/s to 4,000 m³/s.

- Design and construction oversight of Boomerang Creek tunnel, an 11km long 3m diameter pressure tunnel from Mangrove Creek Dam to Wyong River, along with intake and outlet structures.
- Design, contract documentation and construction oversight of safety improvements for Mardi Dam, a 26m high earthfill dam near Wyong, NSW. The homogeneous embankment was showing undesirable seepage, whilst the alluvial foundations were subject to liquefaction and piping. Intercepting filters and a weighting berm were provided, along with screened wells to lower foundation pressures.
- Detailed site and geotechnical studies for two dam sites, Bobo Dam and Slarkes Road Dam, potentially for water supply to Coffs Harbour but later abandoned due to community objections.
- Investigation, design, contract documentation and construction oversight of a terminal storage dam for Braidwood and a sewerage effluent dam at Dora Creek (both in the order of 100ML capacity).
- A number of small investigation and design projects for weirs or works ancillary to dams.

1978 to 1987 (the then Public Works Department, NSW)

Section Leader, Dams Section, Water Supply and Sewerage Branch.

- Investigation studies for Boomerang Creek tunnel, involving route selection, geotechnical studies, design concept options.
- Site selection and geotechnical studies for a proposed new dam to serve Coonabarabran, NSW.
- Identification and evaluation of some 24 dam sites for a new storage dam for the Coffs Harbour water supply.
- Site investigations, design, contract documentation construction oversight for six terminal storage dams (each about 100ML capacity) at Ivanhoe (three dams), Murrurundi, Walcha and Rushforth Road (near Grafton) in NSW.
- Investigation of piping failure and design of remedial works for Thurgoona Reservoir, a terminal storage dam of about 100ML capacity near Albury, NSW.
- Safety review of Mardi Dam and investigation of safety improvement options.
- Safety review, design of interim safety improvements and option evaluation for increasing the flood capacity of Dungowan Dam, including oversight of environmental assessment program and evidence before the Commission of Inquiry.
- Design, contract documentation and construction oversight of safety improvement by post-tensioning of Kentucky Creek Dam, a 12m high concrete gravity dam near Uralla, NSW.
- Investigation and concept design of new dam options to increase the reliability of the Glen Innes, NSW water supply, including appearance as an expert witness in several court actions brought by opponents of the favoured option.
- Investigation and design of improvements to the channel of the Karangi Dam spillway, near Coffs Harbour, NSW, to reduce damage during flood events.
- Investigation of new dam options, site selection, geotechnical and other studies, concept design, detailed design, contract documentation and construction oversight for Molong Dam, a 16m high concrete gravity dam near Orange, NSW.

- Investigation of new dam options, site selection, geotechnical and other studies and concept design for dams to serve the Milton-Ulladulla area on the South Coast of NSW.
- Investigation of new dam options, site selection, geotechnical and other studies, concept design, detailed design, contract documentation and construction oversight for Yellow Pinch Dam, a 40m high earth core rockfill dam near Merimbula, NSW.
- Investigation of new dam options, site selection, geotechnical and other studies, concept design, detailed design, contract documentation and construction oversight for Deep Creek Dam, a 32m zoned earthfill dam near Batemans Bay, NSW.
- Investigation of new dam options, site selection, geotechnical and other studies, concept design, detailed design, contract documentation and construction oversight for Bamarang Dam, a 26m high zoned earthfill dam near Nowra, NSW.
- Investigation of new dam options, site selection, geotechnical and other studies, concept design, detailed design, contract documentation and construction oversight for Clarrie Hall Dam, a 40m high concrete faced rockfill dam near Murwillumbah, NSW.
- Detailed design and contract documentation of the major changes during construction, as well as construction technical oversight, for Mangrove Creek Dam, an innovative 80m high concrete faced rockfill dam near Gosford, NSW.
- Aspects of detailed design and contract documentation, as well as construction oversight for Karangi Dam, a 28m high zoned earthfill dam near Coffs Harbour, NSW.
- Aspects of detailed design and contract documentation, as well as construction oversight for Port Macquarie Dam, a 20m high earthfill dam.
- Aspects of detailed design and contract documentation, as well as construction oversight for Pejar Dam, a 26m high composite earth core rockfill and earthfill dam near Goulburn, NSW.
- Aspects of detailed design and contract documentation, as well as construction oversight for Ben Boyd Dam, a 30m high zoned earthfill dam near Eden, NSW.
- A number of small investigation and design projects for weirs or works ancillary to dams.
- Team leader of the Pipelines and Hydraulic Structures design group, undertaking design and contract documentation of large diameter transmission pipelines and of reinforced concrete, pre-stressed concrete and steel service reservoirs.
- Foundation member of the NSW Inter-departmental Committee on Total Catchment Management.

1976 to 1978 (the then Public Works Department, NSW)

Supervising Engineer in charge of a Water Supply Investigation Section, responsible for investigating water needs and for developing concept designs for water supply sources, intakes, pump stations, transmission lines, terminal storages, service reservoirs and reticulation to meet the water supply needs of country towns in New South Wales. The work included design and construction oversight related to the early phases of the construction of Ben Boyd, Pejar, Karangi and Port Macquarie Dams.

1959 to 1975 (Forestry Commission and the then Public Works Department, NSW)

Investigation, design, construction and maintenance of roads, investigations for and construction supervision of bridges, construction supervision of a major harbour deepening project, economic evaluation studies for road and bridge projects, investigation and design of roadworks, paved areas, stormwater drainage and retaining walls at public institutions, such as hospitals.

Technical Publications

McDonald, L A and Murphy, D J, 1978, *Implications of Dispersive Soil Properties in the Construction and Operation of Ben Boyd Dam*, Meeting of Australian Water and Wastewater Association, Sydney, 11 April.

McDonald, L A, *Design and Construction of Pejar Dam*, 1980, Regional Conference of Australian Water and Wastewater Association, Goulburn, March.

McDonald, L A, *The Role of Dual Supplies in Meeting Demands for Good Quality Water*, 1980, Joint Seminar of Australia Water Resources Foundation and Australian Water and Wastewater Association, Sydney, 5 November.

McDonald, L A and Bliss, P J, 1981, *The Economics of Dual Water Supplies for Small Communities*, 9th Federal Convention of the Australian Water and Wastewater Association, Perth, Australia, April.

Mackenzie, P R and McDonald, L A, 1981, *Use of Soft Rock in Mangrove Creek Dam*, ANCOLD (Australian National Committee on Large Dams) Bulletin No. 59, May.

McDonald, L A, Stone, P C and Ingles, O G, 1981, *Practical Treatments for Dams in Dispersive Soils*, International Conference on Soil Mechanics and Foundation Engineering, 10, Stockholm, Sweden, June.

McDonald, L A, 1982, *Discussion on Compressibility of Rockfill of Mangrove and Foz do Areia Creek Dams*, Contribution, 14th Congress of the International Commission on Large Dams, Rio de Janeiro, Brazil, May, Vol. 5, pp. 556-570.

McDonald, L A, 1985, *Small Dam Walls*, Annual General Conference of Local Government Engineers Association, Sydney, 25 to 29 March.

Mackenzie, P R and McDonald, L A, 1985, *Mangrove Creek Dam: Use of Soft Rock for Rockfill*, ASCE Specialty Symposium Concrete Face Rockfill Dams – Design, Construction and Performance, Detroit, Michigan, USA, 21 October.

McDonald, L A and Gilbertson, P R, 1986, *Environmental Impact Statements for Dams – Community Involvement*, ANCOLD Bulletin No. 73, April.

Taylor, J N and McDonald, L A, 1988, *Issues Arising from Revised Spillway Design Floods for Dams*, ANCOLD Workshop on Spillway Design Floods, Canberra, 4 February 1988, ANCOLD Bulletin No. 79, April.

Hiser, W and McDonald, L A, 1988, *Dam Safety*, Water Resources Seminar, Local Government Engineers Association, Sydney, 25 November.

McDonald, L A, 1993, *Return Period for Essential Facilities*, Seminar on Earthquake Engineering and Disaster Reduction, Australian Earthquake Engineering Society, University of Melbourne, 25 October.

Wellington, N B and McDonald, L A, 1994, *The ANCOLD Risk Assessment Guidelines*, ANCOLD Conference on Dams, Hobart, Tasmania, 29 November.

McDonald, L A, Vesik, M and Macoun, T W, 1994, *Dungowan Dam: A Case Study in Flood Security Upgrading*, Q68 R49, 18th Congress of the International Commission on Large Dams, Durban, South Africa, September.

McDonald, L A, 1994, *Flood Warning Systems for Dams*, Invited contribution, 18th Congress of the International Commission on Large Dams, Durban, South Africa, September.

Macoun, T W and McDonald, L A, 1994, *Development of Guidelines on the Environmental Planning and Assessment of Dams*, ANCOLD Bulletin No. 98.

McDonald, L A, 1995, *ANCOLD Risk Assessment Guidelines*, Joint ANCOLD/The Munro Centre for Civil and Environmental Engineering Seminar on Acceptable Risks for Extreme Events in the Planning and Design of Major Infrastructure, Sydney, 26 and 27 April 1994, published as *Acceptable Risks for Major Infrastructure*, Eds. P Heinrichs and R Fell, A A Balkema.

- McDonald, L A, 1997, *Status of Risk Assessment for Dams in Australia*, International Workshop on Risk-based Dam Safety Evaluations, Trondheim, Norway, June.
- McDonald, L A and Wan, C F, 1999, *Risk Assessment for Hume Dam – Lessons from Estimating the Chance of Failure*, ANCOLD Bulletin No. 112, August.
- Gan, J T and McDonald, L A, 1999, *Mardi Dam – A Case Study of a Dam on Permeable Foundations*, International Symposium on Dam Foundations: Problems and Solutions, Antalya, Turkey, 23 September.
- McDonald, L A, Cooper, B and Wan, C-F, 2000, *Some Lessons from Use of Risk Assessment to Aid Dam Safety Evaluation*, 20th Congress of the International Commission on Large Dams, Beijing, China, September.
- McDonald, L A, 2000, *Tolerable Life Safety Risks for Dams*, Invited Contribution, 20th Congress of the International Commission on Large Dams, Beijing, China, September.
- McDonald, L A, 2003, *The New ANCOLD Guidelines on Risk Assessment*, ANCOLD Workshop on Risk Assessment, Launceston, Tasmania, 24 October.
- McDonald, L A, 2003, *General Report – On-going Management of Dams*, ANCOLD Conference, Hobart, Tasmania, 28 October.
- Marsden, J S, Jacob, P H, Davidson, R A and McDonald, L A, 2005, *Dam Safety Risk and Cost Sharing: Review of the Dam Safety Program for Western Australia's South-West Irrigation Dams*, ANCOLD Conference on Dams, Fremantle, 20-22 November.
- Marsden, J S, Jacob, P H, Nathan, R and McDonald, L A, 2005, *Risk Management – Public Policy versus Corporate Liability*, ANCOLD Conference on Dams, Fremantle, 20-22 November.
- McDonald, L A, 2006, *Instrumentation and Monitoring of Large Dams: A Dam Safety Regulator's View*, ANCOLD Conference on Dams 2006, Instrumentation and Survey Seminar, 22 November
- Hill, P., McDonald, L. and Payne, E., 2007, *Incremental Consequences of Dam Failure and the ANCOLD Hazard Classification System*, NZSOLD/ANCOLD Conference on Dams Technical Sessions, IPENZ Proceedings of Technical Groups, Vol. 33, Issues 1 and 2 (LD), ISSN 0111-9532, Queenstown, New Zealand, 19-20 November.
- Marsden, J, McDonald, L, Bowles, D, Davidson, R and Nathan, R, 2007, *Dam Safety, Economic Regulation and Society's Need to Prioritise Health and Safety Expenditures*, NZSOLD/ANCOLD Workshop Promoting and Ensuring the Culture of Dam Safety, IPENZ Proceedings of Technical Groups, Vol. 33, Issues 1 and 2 (LD), ISSN 0111-9532, Queenstown, New Zealand, 21 November.