



Environment
Institute of
Australia and
New Zealand



SPEAKER BIO'S & ABSTRACTS

Excellence in Environmental Practice: Raising the Standard

ONE DAY SYMPOSIUM 22 MARCH, 2013, AUCKLAND



RISK / ETHICS / WATER / IMPACT ASSESSMENT





Environment
Institute of
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EIANZ IS PROUD TO PRESENT

Excellence in Environmental Practice: Raising the Standard

ONE DAY SYMPOSIUM 22 MARCH, 2013, AUCKLAND

The day presents an opportunity to listen to informative and interactive presentations, learn, and share information while engaging with industry professionals.

Topics covered in the morning will be RISK and ETHICS.

The afternoon will see two streams running simultaneously with presentations on WATER and IMPACT ASSESSMENT.

Details of presenters, bio's and abstracts are detailed here, with finalised timetables to follow at a later date.

WHERE:

Beca House, 21 Pitt Street, Auckland 1010

FURTHER INFORMATION:

email newzealand@eianz.org

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CPD POINTS:

Attendance = 2 points per hour
Presenting = 10 points per hour

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Michael Chilcott

PRESIDENT OF EIANZ

Michael Chilcott is President of the Environment Institute of Australia and New Zealand, the professional association for environmental practitioners on both sides of the Tasman. He was a founding member of the Institute and has served on the organisation's Executive and Council for the past 4 years. He has been a member of the Institute's NSW Division Committee for 15 years, and is a former Division President.

Michael is also is Director of his own firm, Linchpin Environmental, and is a Senior Advisor (Environment to URS) as well as a member of the Advisory Board of the Mondo Group. He has more than 25 years' experience in Australia, Asia, Europe and Africa, representing environment and community outcomes on a wide range of natural resource management, transport and water/wastewater infrastructure, and land development projects.

Michael's tertiary training is in science, resource management, economics and business management. Prior to establishing Linchpin Environmental in

2010, Michael was a Director and Board member two other consulting firms specialising in providing advice on environmental assessment, approvals, and management.

Prior to career as an environmental consultant, Michael had a successful fourteen-year career with WWF-World Wide Fund for Nature, during which he was Assistant Director (Conservation) for WWF in Australia, and a Director of WWF's international HQ near Geneva, Switzerland.

Hon Amy Adams

MINISTER FOR THE ENVIRONMENT

Amy Adams was educated at Rangitoto College in Auckland, moved to Canterbury in 1988 and has been a proud Cantabrian ever since. Amy attended the University of Canterbury where she studied Law, graduating with first class honours in 1992. Before being elected as a Member of Parliament, Amy was a partner with Mortlock McCormack Law in Christchurch specialising in commercial and property law.

Amy is a previous member of the CDLS Property Law committee, New Zealand Law Society's Women's Consultative Group, Institute of Directors and was the chairperson of the Board of Trustees of her local school for the four years prior to her move to politics.

She was first elected to Parliament in 2008 and served her first term as Chairperson of both the Finance and Expenditure and Electoral Legislation select committees and also served as a member of the Justice and Electoral and Regulations Review Committees.

Amy was re-elected to Parliament in 2011 and is currently the Minister for the Environment, Minister for Communications and Information Technology, and Associate Minister for Canterbury Earthquake Recovery.

Deputy Mayor Penny Hulse

AUCKLAND COUNCIL

Penny Hulse is the Deputy Mayor of Auckland and brings over 18 years of local government experience to the role. Penny was first elected to the Waitakere Community Board in 1992, before becoming Chair in 1994. In 1995 she was elected onto the Waitakere City Council and in 2007 she became Deputy to Mayor Bob Harvey. In 2010 she was elected to the Waitakere Ward with an overwhelming majority and selected by Mayor Len Brown to be his Deputy.

Penny has been instrumental in building Waitakere. She cares passionately about Auckland and has strong links back to the community. Her current community involvement includes Patron of Waitakere Special Olympics, Trustee of the Swanson Railway Station Trust, Waitakere Anti-Violence Essential Services (WAVES), West Auckland Hospital Foundation Trust, Community Waitakere Trust, Chair of the Crime Prevention Reference Group and Direction of the Energy Efficiency Conservation Authority (EECA) Board.



Dr. Grant Hewison

SPECIAL COUNSEL, KENSINGTON SWAN

Grant Hewison is Special Counsel in the local government, environment and resources team at Kensington Swan. Grant acts for local authorities and private clients on a variety of local government and resource management matters. Prior to joining Kensington Swan, Grant worked as a Senior Manager in strategic, economic development and environmental roles at both Auckland and Manukau City Councils. Grant's PhD is in Law on Local Government. Grant is also a musician, playing guitar and harmonica in a "weekend rock band".

ABSTRACT:

ENVIRONMENTAL RISK MANAGEMENT: THE PRECAUTIONARY PRINCIPLE

Risk and uncertainty are pervasive in environmental regulatory and policy decision-making. In situations where there is a high degree of uncertainty and the possibility of irreversibility, the precautionary principle has been developed as a means of avoiding danger to human health and the environment. While there has been a rapid growth in the adoption of the precautionary principle in international agreements and the laws of many countries, including New Zealand, it remains controversial. It can be open to wide interpretation and poses a number of concerns, including the potential for significant costs. This paper briefly examines the precautionary principle and considers it in the context of a more generic risk management framework.

Dr. Steve Vaughan

**DIRECTOR INSIDEOUTWORKS & EXECUTIVE DIRECTOR,
NEW ZEALAND SOCIETY FOR RISK MANAGEMENT**

Steve Vaughan is the part time Executive Director for the New Zealand Society for Risk Management and a Director of InsideOutWorks, a consultancy specialising in insight, foresight and relationship management.

He has PhD in chemical engineering and his career includes extensive experience in research and development, the management of environmental issues (from local to multinational inter-government negotiations) and the development application of risk management techniques including future risks.

He has managed a number of large government projects requiring complex risk judgements, characterised by both limited information and widely differing risk perceptions. These include the reform of the management of Hazardous Substances and New Organisms Act and the Government's response to Royal Commission on Genetic Modification.

His recent work has included areas as diverse as the siting of explosives facilities, the development of irrigation schemes, the design and construction of urban wastewater systems, and the development and operation of geothermal power plants.

ABSTRACT:

RISK MANAGEMENT – THE ESSENTIAL DISCIPLINE FOR ENVIRONMENTAL PROFESSIONALS

Environmental management is inherently uncertain and the discipline of risk management provides the tools needed to deal with these uncertainties.

This presentation will give a brief introduction to current best practice in risk management and how this applies to managing risks in relation to the environment. The presentation will focus on the risk management process and on the principles which underlie good practice in risk management.

The presentation will also cover key concepts such as; risk as a positive as well as a negative, the importance of properly defining the context for risk management, and the critical importance of communication and consultation.

Dianne Buchan

DIRECTOR, CORYDON CONSULTANTS LIMITED

Dianne has worked as a consultant in social impact assessment with a particular focus on environmental and Resource Management Act matters for more than 20 years. She has been involved in a wide range of large scale infrastructure projects including the Clyde and Mokohinui hydro projects, the Marsden Point Oil Refinery, Project Aqua and the Central Plains irrigation schemes and most recently, the Escarpment Mine proposal on the Denniston Plateau at Buller. She has also undertaken studies of the social impacts of marine farms, motorways, large-scale subdivisions and airports as well as environmental restoration initiatives at both a landscape and project scale.

Dianne has been a member of EIANZ since 2007. She is a Certified Environmental Practitioner and last year became the first Certified practitioner in New Zealand to gain certification in the practice of impact assessment. She is also the New Zealand representative on the EIANZ Council. Dianne believes strongly in the importance of professional certification to foster professionalism and accountability among environmental practitioners.

ABSTRACT:

CERTIFICATION AND PEER REVIEW: VALUABLE TOOLS TO SUPPORT ETHICAL ENVIRONMENTAL PRACTICE

For sound decision-making and sustainable environmental management, high-quality research and informed, unbiased advice is essential. Decision-makers depend on sound, unbiased advice for making decisions that minimise or avoid adverse effects on our natural and built environment and on our communities.

Professional certification together with the practice of peer review are two measures that can be taken to support sound, ethical practice. Certification needs to be based on proven competence and effective peer review needs to be undertaken by practitioners qualified to undertake the task in hand. This paper will outline the main requirements of the EIANZ Code of Ethics, and the Environmental Practitioner Certification programme and suggest how to maximise the value of peer reviews.

Matthew Casey

QC, THE LITIGATION GROUP

Matt is a lawyer in Auckland, with a particular interest in environmental and public law. He has over 25 years experience in most areas of legal practice. He was senior litigation partner in a leading New Zealand law firm before going out as a barrister in 2002, taking silk in 2007. He has been involved with several charitable and environmental organisations, as well as chairing a school board of trustees and a medical ethics committee.



Ian Spellerberg

**PROFESSOR OF NATURE CONSERVATION,
LINCOLN UNIVERSITY & EIANZ HONORARY FELLOW**

Ian Spellerberg is Professor of Nature Conservation at Lincoln University. He was previously Director of Environmental Sciences at the University of Southampton. While in England and as Secretary to the Ecological Affairs Committee of the British Ecological Society he contributed to discussions that led to the establishment of the Institute for Ecology and Environmental Management. In New Zealand he played an integral and continuing role in establishing the New Zealand Chapter of the EIANZ. He was a member of the inaugural committee that established the Certified Environmental Practitioner (CEnvP). He has been on the editorial team of the Australasian Journal of Environmental Management since 2007 and was made an Honorary Fellow of the EIANZ in 2010.

ABSTRACT:

HOW CAN STANDARDS OF ENVIRONMENTAL PRACTICE BE RAISED AND MAINTAINED?

In New Zealand, prior to 2003, there was no professional institute to cater for the mentoring, professional development and standards of practice for many areas of environmental practice. There was no personal certification programme for many environmental practitioners.

The last ten years has seen two significant developments in New Zealand for the environment, for the environment profession and for environmental practitioners. One has been the establishment of the New Zealand Chapter of the EIANZ and the other has been the launch of the Certified Environmental Practitioner (CEnvP) programme.

The question 'does the standard of environmental practice in New Zealand need to be raised?' could rightly prompt a lot of discussion. Even if the answer is no, it would be unthinkable not to try and improve on current standards of practice and ethics. Raising the standard is a process. The opportunity starts with students applying to join a professional institute and adherence to codes of practice. Mentoring and engagement with practitioners is essential for raising standards and therefore education and professional development must continue after graduation.

After ten years we need to ask "Why shouldn't all environmental practitioners be required to be a member of a professional institute and also aspire to certification?" If this were the case, trust and respect for the environment profession would improve, standards of practice would improve and most importantly the environment would benefit.

Craig Redmond

**REGIONAL ENVIRONMENTAL SPECIALIST,
NEW ZEALAND TRANSPORT AGENCY**

Since completing a Bachelor of Environmental Management and a Masters of Applied Science from Lincoln University Craig has been with the New Zealand Transport Agency (NZTA) within Highways for over six years. Craig began in land use planning, followed by a secondment to Perth and Kinross Council in Scotland where he worked on climate change adaptation, and on his return in mid-2008 he joined the environmental team at NZTA. He is currently based in Christchurch providing environmental management support to the capital works and network area engineers. His national areas of expertise are environmental management systems, consent compliance, stormwater, and erosion and sediment control. Craig is also currently the New Zealand Chapter Co- President for the EIANZ.

ABSTRACT:

THE FORGOTTEN REGULATIONS: WHAT CAN WE DO FOR FISH PASSAGE?

In New Zealand, the environmental focus is often centred upon the requirements of the Resource Management Act (RMA) (1991). This focus is for good reason, as when the RMA was first introduced it repealed 78 statutes and regulations, and amended numerous others to provide a single piece of legislation for the management of land, water soil and air throughout New Zealand.

In regards to fish passage, Section 7 of the RMA even provides for the protection of the habitat of trout and salmon. However, the RMA is not the be all and end all, for fish passage. New Zealand has the Freshwater Fisheries Regulations (1983) and Part 6 provides provisions for fish passage. This means any identified structures built post 1 January 1984 requires fish passage unless an exemption is provided by the Director General of Conservation. Unfortunately these regulations have not had the attention they deserve, the challenge we now face is how to meet these regulations.

Alastair Bisley

CHAIR, LAND AND WATER FORUM

Alastair Bisley is the Chair of the Land and Water Forum, a collaborative governance process which the Government has mandated to propose a reform of water management in New Zealand.

Alastair has had a long career in the New Zealand Public Service. He was Secretary of Transport from 1998-2004. From 1967 - 1998, he was a member of the Ministry of Foreign Affairs and Trade, where in 1994 he became a Deputy Secretary and New Zealand's Principal Trade Negotiator. He was seconded to the Prime Minister's Advisory Group (1978-9) and the Department of Trade and Industry (1976-7).

During his diplomatic career, he was posted in London, Brussels, Sydney, (Consul-General from 1982-86) and Geneva, where he was Ambassador to the World Trade Organisation and Permanent Representative to the United Nations Office in Geneva (1991-94).

ABSTRACT:

THE EXCELLENT PRACTICE OF COLLABORATION

Is collaboration an excellent practice? And does it lead to excellent outcomes? Alastair Bisley will discuss collaboration as practiced by the Land and Water Forum in recommending a reform of land and water management to the government. What are the essential characteristics of the Forum's practice? Why did it work? How did it produce results?

He will also talk about the reform that the Forum recommended. What are its key recommendations? Having asked the collaborators to reach a consensus, what will the government do with it? Will the Forum's practice lead to an excellent result? And can the trust and confidence that it engendered among its members (and more widely around the country) be sustained?

Roger Bannister

TEAM LEADER WATER MANAGEMENT, AUCKLAND COUNCIL

Roger has been involved in water management from a local authority perspective for twelve years. Roles have included; water quality and quantity allocation, research into availability, policy development and monitoring and reporting on compliance and water use. A major tenet in this time has been working with stakeholders including industry group discussions and training programmes to generate dialogue and share learnings in the area of environmental management.

ABSTRACT:

CO-OPERATION, CONSULTATION AND COLLABORATION – THE NEW WATER POLICY IN A NEW CITY



David Greig

PRINCIPAL ENVIRONMENTAL SPECIALIST (AUCKLAND/NORTHLAND), NEW ZEALAND TRANSPORT AGENCY

David Greig trained in zoology and geology through the University of Auckland, far too many years ago! Since the early 1980's he has provided technical support across most aspects of earth and water science with a smattering of ecology while in regulatory, consulting and asset management roles. Now with the NZTA, David sees environmental science from a different perspective accepting the need for environmental change and assisting in finding solutions that have as many benefits as can be found. When not behind a computer he loves salt water on his body, up his nose and under a sailing hull.

ABSTRACT:

NATIONAL POLICY STATEMENT FOR FRESHWATER, THE UNITARY PLAN AND THE NZTA

Discharge controls within the upcoming proposed Auckland Unitary Plan (UP) will need to set and address water quality objectives as one method of achieving the National Policy Statement (NPS) for Freshwater. Both the Auckland and Waikato councils also need to work and plan to ensure the NPS links with management of the Hauraki Gulf.

NZTA funds, builds and manages a roading stormwater network discharging to local freshwater systems and also the marine environment and within the current economic climate needs to invest wisely in environmental solutions (asset and maintenance). Currently, without a regional overview of where further effort should lie, there will be over or under investment as water quality outcomes (e.g. level, locations) linked to environmental quality have not been set.

Transport agencies are committed to support the Auckland Plan and work as One Network for the region's growth and development, while meeting social and environmental responsibilities. An open discussion of these issues is needed by all parties to ensure investment on stormwater asset is targeted correctly and timed to delivery all outcomes.

UP provisions must then allow for transition to a time when sufficient knowledge exists for clear environmental quality targeted to ensure wise investment.

Clare Barton

PRINCIPAL PLANNER, HORIZONS DISTRICT COUNCIL

Clare Barton has 24 years' experience in planning and resource management. In that time Clare has worked for:

- Porirua City Council pre-RMA days.
- The Ministry for the Environment in the heady days of the enactment of the Resource Management Act in 1991.
- Works Consultancy (now Opus) in both Wellington and Palmerston North.
- Her own planning and landscape architecture consultancy for over 13 years.
- Horizons Regional Council in both consents and policy and over the last year or so, has led the response to appeals to the Environment Court and now the High Court on the Proposed One Plan.

ABSTRACT:

THE SQUEEZE ON WATER – HORIZONS REGIONAL COUNCIL'S POLICY RESPONSE

Will Horizons practice in relation to water quality and quantity, achieve better environmental outcomes when the squeeze is on for the water resource? What are Horizons policy responses that aim to achieve better environmental outcomes for water? How have these policy responses been received by the community, industry and central government?

The policy approaches for both water quantity and quality that will be covered in the presentation include:

- The Manawatu River Leaders Accord. The aim of the Accord is to improve the Manawatu River, the mauri (life force) of the Manawatu River Catchment, such that it sustains fish species and is suitable for contact recreation, whilst balancing this with the social, cultural and economic activities of the catchment.
- The allocation framework for water quantity within the Proposed One Plan. This framework has largely gone unchallenged through the Environment Court process.
- A common catchment expiry date is set in the Plan with mechanisms proposed to bring catchments back within allocation limits where they are fully or over allocated.
- Establishing water quality targets specific to each water management sub-zone.
- The nutrient management rules and how they deal with effects on water quality

Simon Hunt

**ASSOCIATE, BUSINESS DEVELOPMENT LEADER, OIL & GAS,
GOLDER ASSOCIATES (NZ) LIMITED**

Simon has 25+ years of practical “hands-on” contaminated land experience, principally gained in the United Kingdom, New Zealand, Australia, and Asia. He works nationally / internationally providing strategic and technical advice on the management and redevelopment of contaminated land. He has worked as a client, consultant and contractor.

Simon has been involved in the development of a number of the Ministry for the Environment contaminated land guidelines, has written contaminated land policy for Regional Council’s and was recently a member of Policy Development Committee for the National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil to Protect Human Health. He is a Chartered Geologist, a registered Resource Management Commissioner and routinely undertakes expert witness work.

ABSTRACT:

CHANGING LANDSCAPE OF THE NEW ZEALAND CONTAMINATED LAND INDUSTRY

Contaminated land management is a relatively “new” discipline / science, having evolved in the last 40 years. In this time, changes in the approach to the assessment, management and regulation of contaminated sites have been significant, particularly in the last 20 years. As the contaminated land business has grown, so too have the commercial / financial stakes associated with managing liabilities associated with these sites – whether you are a site owner / occupier, a practitioner supplying professional services or a contractor actively engaged in remediation.

The New Zealand contaminated land industry has slowly matured in this time. The recent introduction of the National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil to Protect Human Health has focused the spot light on this industry and created a timely step change. However – additional policy and guidance work is needed to assist practitioners who manage the range of contaminated sites in New Zealand. This paper explores some of the issues surrounding the changing nature of the New Zealand contaminated industry and discusses how this is likely to grow and change, through tightening regulation and guidance, changes in approaches to site management, the possible introduction of a practitioner accreditation system, and a potentially increasing litigious environment.

Dr. Lisa Hack

**SENIOR ENVIRONMENTAL SCIENTIST,
ECOLOGY AND MARINE, GHD CONSULTANTS**

Lisa is an environmental scientist with specialist skills in ecotoxicology. She is based in the GHD Auckland office having spent a number of years working for GHD in Perth. There she was involved with the oil and gas, and mining industries undertaking a variety of environmental and ecotoxicological assessments.

Lisa has worked on a range of terrestrial and aquatic projects in the Middle East, Australia and New Zealand. She has focused on the assessment and management of impacts of various construction and land use activities on sensitive receiving environments. She has also undertaken numerous ecotoxicological assessments including effluent discharge and effects of desalination plants on the receiving environment.

ABSTRACT:

THINKING OUTSIDE THE ENVIRONMENTAL BOX

An opportunity exists to push the boundaries of current environmental assessments by introducing new and innovative ways of identifying and quantifying impacts.

The change in the global economy has caused a change in the way we must all face our day to day business, particularly in the environmental fields. We can no longer depend on standard environmental assessment techniques so must push the boundaries and encourage development of complimentary but pioneering methodologies. Challenging the way we do business and encouraging new developments may inevitably motivate greater environmental stewardship and ownership of the natural environment.

Thinking outside the environmental box will be one small step towards trying to achieve this.



Rebekah Pokura Ward

PARTNER: WORK GROUP MANAGER, OPUS ENVIRONMENTAL

Rebekah is a Partner and Planning/Environmental Work Group Manager at Opus. She holds a MSc(Hons) in Environmental Science and an LLB from the University of Auckland. Rebekah is passionate about impact assessment and with nearly 20 years' experience she has had key roles in preparing Assessment of Environmental Effects and Social Impact Assessments for a number of major infrastructure projects throughout NZ.

Alex Jepsen

SENIOR PLANNER, OPUS ENVIRONMENTAL

Alex is a Senior Planner and Project Manager at Opus. Her expertise is in statutory planning, law, impact assessment and consultation. Alex has a Bachelor of Planning and Masters of Legal Studies (Environmental) from the University of Auckland.

ABSTRACT:

INTEGRATED RESOURCE MANAGEMENT AND IMPACT ASSESSMENT: A CASE-STUDY FOR BETTER ENVIRONMENTAL OUTCOMES – VAN DAMME'S LAGOON, AUCKLAND

AMETI is a major transportation project in Auckland's eastern suburbs. A section of the route is located in the Panmure area which is rich in Maori and European heritage and has high geological and ecological values. Part of the AMETI project impacts the Van Damme's lagoon Recreation Reserve which formerly contained a 19th century tannery site. More recently it has become overgrown with invasive plant species and pollution from industrial and road run-off.

Recognising the potential of this site to provide offset mitigation due to adverse environmental effects from the project, an integrated and collaborative approach was undertaken by a team of engineers, environmental specialists, Iwi, and the community to develop solutions for the treatment of stormwater entering the lagoon, and to restore ecological habitats, enhance landscape and amenity, and recognise Maori cultural values.

This presentation explores the Van Damme's Lagoon enhancement works as a real example of pushing the boundaries in environment practice. It extends beyond the traditional concept of mitigating merely to minimise adverse effects. Rather it represents an integrative and collaborative approach to the design and overall environmental enhancement. The result is a positive solution which delivers improved water quality and positive ecological, cultural and community outcomes.

Dr. Judith Roper Lindsay

INDEPENDENT

Judith is an independent ecological consultant based in North Canterbury. For more than 25 years she has worked with project developers and planners, and local and central government to ensure that development and policy take ecological science and values into consideration. Most of her work has been in the South Island and has included projects in a wide range of terrestrial and aquatic habitats and areas from the mountains to coast.

She is a past President of the New Zealand Ecological Society and New Zealand Chapter of EIANZ; a Certified Environmental Practitioner and is active in the Christchurch / Canterbury branch of the Institute.

ABSTRACT:

ECOLOGICAL IMPACT ASSESSMENT GUIDELINES FOR NEW ZEALAND

Ecological Impact Assessment is an important part of Environmental Impact Assessment (EIA). However, there is room for improvement in many aspects of its practice by New Zealand ecologists. In the absence of any formal guidance for ecologists, in 2010, the Ecology Special Interest Section of EIANZ drafted a set of guidelines based on well-established UK best practice.

Now a small group of ecologists are working to finalise these with particular reference to New Zealand's environment and legislation. The Guidelines will address matters such as clarity of scientific data collection and presentation; inconsistency between ecologists and projects (especially working in different habitats or environments); concerns about scientific rigour and interpretation of results; expressing expert opinion; enabling good decision-making by local and national organisations; providing certainty for policy makers or developers about processes being undertaken. They will pull together diverse approaches and methodologies and apply international approaches to EIA.

The Guidelines will also address ethics and the practical difficulties of carrying out EIA within the constraints of commercial project budgets and timelines.

The presentation will outline some of the issues around best practice in ecological impact assessment and the preparation of the Guidelines.

Ian Boothroyd

GOLDER ASSOCIATES (NZ) LIMITED

Ian has over 25 years' experience in environmental management, monitoring, policy development and assessment, auditing and research in the New Zealand freshwater and terrestrial environment. Ian has extensive knowledge of environmental practice in New Zealand and has carried out extensive ecological surveys and provided resource management advice to national, regional and local governments, State Owned Enterprises, private business and community groups. Ian is co-author of several national standard sampling protocols for the freshwater environment. Ian is regularly called upon to provide independent expert testimony at resource consent hearings, Environment Court and Board of Inquiry; and is also an accredited and experienced environmental commissioner. Ian is currently the Team Leader of ecological services (freshwater, terrestrial, biodiversity and marine) at Golder Associates (NZ) Limited.

ABSTRACT:

WET OR DRY? THE CHANGING PRACTICE OF IMPACT ASSESSMENT, MITIGATION AND OFFSETS IN FRESHWATER ENVIRONMENTS.

New Zealand is well endowed with freshwater resources and few developments occur without some potential impact on one or more of our streams, rivers, lakes, wetlands or springs. Recent evidence and media interest has highlighted that many of these freshwater resources are already in decline or facing serious threats from a number of pressures. This presentation will focus on how freshwater environments are assessed for potential and actual impacts from developments and the changing pressures being applied, highlighting some of the gaps in the practice of impact assessment and mitigation, issues with the emerging use of compensation and offset mechanisms for freshwater environments and the divergence that occurs at the highest levels of decision-making.



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