

Managing the impact of **Sea Level Rise** in **New Zealand**

Implementing adaptation strategies

**Conference Centre,
Auckland University of Technology (AUT)
Friday 8 April 2016**

Key topics include:

- What timeframes should we plan for?
- Future-proofing strategic asset development
- Measuring the threat to coastal land
- Protecting existing infrastructure
- Changes to coastal land designations – zoning land appropriately
- Insurance – assessing the value at risk
- Mapping vulnerable areas – which regions of New Zealand are most at risk?
- Disseminating accurate information
- Planning transport infrastructure
- Biodiversity: invasive threats to native species
- Implementing coastal hazard strategies
- Incentives and regulation in policy responses

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This high-level conference brings together international experts, as well as New Zealand's leading policy makers, scientists and key industry representatives, to showcase effective adaptation strategies to manage the impact of sea level rise in New Zealand.

- The sea has risen globally by 20cm on average over the last 100 years, but that increase has accelerated markedly in the last 20 years.
- There are 9000 homes across the country that lie less than 50cm above current spring high tide levels
- Extreme water levels are occurring increasingly more often: highest sea levels recorded in Wellington and Auckland occurred in 2013 and 2011 respectively
- Sea level rise increases erosion of sandy beaches and 'soft' cliffs
- Water tables rise as sea rises, with salt water intrusion into coastal aquifers
- Sea level rise is already impacting the value and marketability of coastal properties in many parts of the world

International Keynote Presentation:

Latest update on Antarctic and Greenland ice sheet thinning; How this impacts New Zealand

Professor Jonathan Bamber *University of Bristol, UK*

Global authority on satellite sensing data and accurate projections for sea level rise around the world.

Presentations from

- Local Government New Zealand
- National Institute of Water and Atmospheric Research (NIWA)
- Land Information New Zealand (LINZ)
- Insurance Council of New Zealand
- Property Council New Zealand
- Auckland Council
- Waikato Regional Council
- Hastings District Council
- Auckland University of Technology
- Antarctic Research Centre, Victoria University
- Gateway Antarctica, University of Canterbury
- NZ Society of Local Government Managers

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8.30am	Registration and Welcome Coffee
9.00am	Introduction from the Chair
9.10am	KEYNOTE: Latest update on Antarctic and Greenland ice sheet thinning Prof. Jonathan Bamber <i>University of Bristol, UK, President Elect, European GeoSciences Union</i> <ul style="list-style-type: none">• What are current global sea level rise projections?• Where the uncertainties lie• Western Pacific regional projections• How this impacts NZ
10.10am	Panel: Sea level rise and latest NZ-led research in Antarctica Bryan Storey <i>Director, Gateway Antarctica, University of Canterbury</i> <i>Vice President, Scientific Committee on Antarctic Research</i> Tim Naish <i>Director, Antarctic Research Centre, Victoria University of Wellington</i>
11.00am	Morning Coffee
11.15am	Highest astronomical tides; managing the increasing threat Graeme Blick <i>Chief Geodesist, Land Information New Zealand (LINZ)</i> <ul style="list-style-type: none">• So-called King Tides; what factors combine to produce them?• Tidal forces at play on NZ coastline; which areas are most vulnerable?• Key dates: when to expect the top 10 highest tides over the next 20 years• Tide gauges with GNSS receivers for accurate readings• Obtaining better elevation data at coastal locations
11.45am	Rising challenge for coastal communities and infrastructure Rob Bell <i>Programme Leader: Hazards & Risk, National Institute of Water and Atmospheric Research (NIWA)</i> <ul style="list-style-type: none">• The 100 year event becomes an annual event with modest sea level rise• What sea-level rise and timeframes should we use for planning?• Managing coastal-hazard risk; existing development and greenfields• Which areas of NZ are the most at risk? How can risk mapping be improved?• Adaptation pathways for coastal communities & infrastructure
12.30pm	Lunch
1.30pm	Sea Level Rise; roles and responsibilities of local government Blair Dickie <i>Principal Advisor Science and Strategy, Waikato Regional Council</i> <ul style="list-style-type: none">• Policy responses: incentives and regulation• Disseminating accurate information• Analysing particular challenges in specific areas• Case studies: Dunedin South, Hauraki Plains, Kapiti Coast, Christchurch
2.05pm	Sea level rise and adaptation risk investment Tim Grafton <i>Chief Executive, Insurance Council of New Zealand</i> <ul style="list-style-type: none">• Taking a long view• Assessing the value at risk and probabilities for each asset• What protection do we have for strategic assets?• Building the right infrastructure• Zoning land appropriately
2.35pm	Role of iwi in adaptation to sea level rise John Perrott <i>Mātauranga Scientist in Conservation Ecology, Auckland University of Technology</i> <ul style="list-style-type: none">• Managing the impact to natural resources• Integrating into national response• Invasive threats to taonga species• Avoiding loss of wahi tapu and fresh water sources
3.10pm	Afternoon Tea
3.25pm	Managing the impact of sea level rise in greater Auckland Lara Clarke <i>Planner, Unitary Plan, Auckland Council</i> <ul style="list-style-type: none">• Mapping of vulnerable areas• Planning around transportation infrastructure• Region wide adaptation strategy• Future proofing strategic asset development• Coastal land development
4.00pm	Urban planning for sea level rise; a commercial property perspective Matt Paterson <i>Government Relations Director, Property Council New Zealand</i> <ul style="list-style-type: none">• It needs to be done, so it should be done right• Optimising the planning process• What is a sensible approach?
4.30pm	Developing a national framework; taking a proactive approach Lawrence Yule <i>President, Local Government New Zealand, Mayor, Hastings District Council</i> <ul style="list-style-type: none">• From hazard mitigation to adaptation• Implementing coastal hazard strategies• Planning for impact of sea level rise in Hawkes Bay• Protecting existing infrastructure• Future changes to coastal land designations
5.00pm	Close of Conference

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Speakers

INTERNATIONAL KEYNOTE:



Prof. Jonathan Bamber

University of Bristol, UK, President Elect, European GeoSciences Union

Jonathan Bamber is professor of physical geography and director of the Bristol Glaciology Centre. In 2013 he was the leader of the NASA Goddard Space Flight Center team that discovered the mega-canyon beneath the Greenland Ice Sheet. His main areas of interest are in applications of satellite and airborne remote sensing data in the polar regions. He has published over 130 peer-reviewed articles on these topics focusing mainly on Greenland and Antarctica.



Bryan Storey

**Director, Gateway Antarctica, University of Canterbury
Vice President, Scientific Committee on Antarctic Research**

Professor Bryan Storey is Director of Gateway Antarctica, the Centre for Antarctic Studies at the University of Canterbury, New Zealand, as well as Vice President of SCAR, the Scientific Committee for Antarctic Research. Professor Storey is a Fellow of the Geological Society of London and he was awarded the Polar Medal by Queen Elizabeth in 1987. He has 24 years experience as a geologist and programme leader at the British Antarctic Survey.



Tim Naish

**Director, Antarctic Research Centre,
Victoria University of Wellington**

Professor Tim Naish is the first New Zealand recipient of the Martha T. Muse Prize for Science and Policy in Antarctica, awarded by the Scientific Committee for Antarctic Research. He is a paleoclimatologist focused on reconstructing past ice sheet and global sea-level changes relevant to future projections. He has participated in numerous expeditions to Antarctica and helped found ANDRILL, the international Antarctic Geological Drilling Programme. He was a lead author on the Intergovernmental Panel of Climate Change's 5th Assessment Report.



Graeme Blick

Chief Geodesist, Land Information New Zealand (LINZ)

Graeme Blick is Chief Geodesist for the National Geodetic Office, Land Information New Zealand (LINZ), New Zealand's National Survey and Mapping agency. He works on and manages the development and implementation of the geodetic system in New Zealand, including management of its semi-dynamic datum. He has worked for the then New Zealand Geological Survey (now GNS Science) in their Earth Deformation Section using geodetic techniques to measure, monitor and study crustal deformation across New Zealand.



Rob Bell

Programme Leader: Hazards & Risk, National Institute of Water and Atmospheric Research (NIWA)

Rob is the Programme Leader for NIWA's Climate & Hazards Centre, coordinating research and consulting activities on frequency/magnitude of weather-related and tsunami hazards and quantifying risk (through the RiskScape project with GNS). He has published papers on sea-level rise and variability, tides and coastal hazards (including tsunami). His latest project was quantifying the national coastal risk exposure in a NIWA report for the Parliamentary Commissioner for the Environment released in November.



Blair Dickie

**Principal Advisor Science and Strategy,
Waikato Regional Council**

Blair Dickie is Principal Advisor Science and Strategy, at the Waikato Regional Council. He is a member of Society of Local Government Managers - Sector Futures Working Party and in 2011 participated in a US State Department funded joint climate change exchange between SOLGM and ICMA. He is a member of the New Zealand Resource Management Law Association and a past President of the Association.



Tim Grafton

Chief Executive, Insurance Council of New Zealand

Tim Grafton was appointed Chief Executive of the Insurance Council of New Zealand in November 2012. Over the past 30 years has had extensive experience in the media, government, public relations and market research sectors. He has been a senior adviser to former Prime Minister Rt Hon Dame Jenny Shipley, the current Minister of Finance, Hon Bill English, and former Finance Minister the Rt Hon Sir William Birch.



John Perrott

**Mātauranga Scientist in Conservation Ecology,
Auckland University of Technology**

John is a lecturer with 20 years experience in ecology and conservation biology. He has research and publication experience in birds, mammals, plants, invertebrates, reptiles, and wildlife disease. Recent research includes investigations into environmental tolerances and size distributions of invasive land snail populations, designing and facilitating insect and small mammal tracking, and monitoring system experiments for biosecurity and conservation applications.



Lara Clarke

Planner, Unitary Plan, Auckland Council

Larissa (Lara) Clarke works as a Policy Planner in Auckland Council's Unitary Plan team. For Auckland Council Lara has led climate change and natural hazards works streams responding to submissions and engaging in the Auckland Unitary Plan Independent Hearing process. Lara is involved in inputting to Council's internal strategies in relation to coastal hazards, climate change adaptation and resilience this involves consulting with operational, research and strategic departments and Council Controlled Organisations and development partners.



Matt Paterson

**Government Relations Director,
Property Council New Zealand**

Matt Paterson is the commercial property sector's voice into Government. Matt has a range of policy and political experience across Government, having managed emissions trading policy at the Ministry for the Environment, been Private Secretary to the Minister for Climate Change Issues, and eleven years as a diplomat representing New Zealand policies overseas.



Lawrence Yule

**President, Local Government New Zealand, Mayor,
Hastings District Council**

Lawrence is the President of Local Government New Zealand. Previously, he represented the Provincial Sector on the National Council. He has been Mayor of Hastings District since 2001 where he also won the honour of being Hastings District's youngest-ever Mayor. He continues to be at the forefront of not only district, but regional initiatives.

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'Continued sea level rise is not something that might happen – it is already happening, will accelerate, and will continue for the indefinite future. Unlike earthquakes and volcanic eruptions, it is foreseeable.'

Parliamentary Commissioner for the Environment, Nov 2015

WhoShouldAttend

- Local and central government policy makers
- Town planners
- Civil engineers
- Iwi representatives
- Architects
- Local government representatives
- Utility providers
- Infrastructure providers
- Scientists
- Environmental planners
- Insurance providers
- RMA specialists
- Lawyers
- Property developers
- Conservation management consultants
- NGOs
- Finance sector
- Ports and shipping companies
- Construction companies

HOW TO REGISTER

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BOOKING OPTIONS

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31 March 2016

REGISTER AFTER 5PM
31 March 2016

CONFERENCE TICKET

\$445 + GST per person

\$495 + GST per person

PREFERENTIAL RATE FOR MEMBERS OF:

The Royal Society of NZ, SOLGM, Local Government NZ, Insurance Council, Property Council, NZ Planning Institute, Resource Management Law Assn of NZ, Institution of Professional Engineers NZ and educational institutions.

\$395 + GST per person

\$455 + GST per person

HOW TO PAY

DIRECT CREDIT: Email us your registration details including Name, Title, Organisation, Address and Telephone. Once we receive your registration, we will forward an invoice with direct credit payment details (credit cards not accepted).
The Antarctic Report is published by Camino GST No. 113-274-599

WHAT HAPPENS IF I HAVE TO CANCEL?

- Send a substitute delegate in your place
- Confirm your cancellation in writing (letter or email) at least ten working days prior to the event and receive a Full Refund. Regrettably, no refunds can be made for cancellations received after this date.

AGENDA UPDATES: The Antarctic Report reserves the right to make any amendments deemed to be in the best interest of the conference. Agenda is correct at time of printing, please check online for any updates.