



Catchments Otago **‘Water, Biodiversity, People’**

Catchments Otago Symposium

&

‘Riverscapes’ Book Launch

Monday 9th April, 2018

St Margaret’s College, University of Otago, Dunedin

8.45am start - 5.30pm

The University of Otago Research Theme ***Catchments Otago***, a multi-disciplinary theme exploring approaches for sharing natural resources that consider environmental, social and economic outcomes.

Supported by



www.catchmentsotago.org

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#southernwaters

Waiata - Te Aroha

Te aroha
Te whakapono
Me te rangimarie
Tatou tatou e

(repeat)

Love
Faith
Peace
For us all

Symposium Programme

Master of Ceremonies Mara Wolkenhauer

8:45	Karakia & Mihi	
	Hata Temo	Kaitohutohu Māori / Māori Advisor
	Waiata - all to join	
	Welcome	
	Chancellor Royden Somerville	University of Otago Chancellor
Water and Society		
9:00	Hon. David Parker	Minister for the Environment
Restoring our freshwater and waterways		
9:30	Society Panel Discussion	
10:00	'Riverscapes' Book Launch	
	Brian Turner	Poet
	Sam Mahon	Artist
10:30	Morning Tea Break	
Water, Society and Biodiversity		
11:00	Cr Gretchen Robertson	Deputy Chairperson, Otago Regional Council Councillor
Harnessing the Biodiversity Groundswell		
11:15	Pat Garden	Chairperson, Otago Conservation Board
Building a sense of guardianship for biodiversity values on private land		
11:30	Ali Meade	Biodiversity Programme Leader, Environment Southland
The catchment jigsaw: fitting the pieces together to support water quality and biodiversity		
11:45	Dr Gail T Tipa	Tipa and Associates
Collaboration - empowering or disempowering		
12:00	Biodiversity Panel Discussion	
12:30	Lunch Break	

Water and Health		
13:30	Mark Bryan	Managing Director VetSouth
Animal health, water health, people health		
13:45	Dr Olga Pantos	Senior Scientist, Institute of Environmental Science and Research
Microplastics in New Zealand's ecosystems: the levels, the impacts and the potential solutions		
14:00	Prof Michael Baker	University of Otago School of Public Health
Public health consequences of declining freshwater quality in NZ		
14:15	Prof Jack Heinemann	University of Canterbury School of Biological Sciences
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14:30	Health Panel Discussion	
15:00	Afternoon Tea break	
Water and Movement		
15:30	Dr Christian Zammit	NIWA Manager Hydrological Processes and Water Resources
Hydrological models to support policy planning and water resource management		
16:00	Jean-Luc Payan	Manager Natural Hazards, Otago Regional Council
ORC flood management in the Taieri and Clutha catchments		
16:30	Movement Panel Discussion	
17:00	Emerging Priorities - Catchments Otago Co-Directors	
Professors Gerry Closs, Kath Dickinson, Phil Seddon		
17:30	Symposium ends	

Hon David Parker

**Attorney-General, Minister for the Environment, Minister for Economic Development,
Minister for Trade and Export Growth, Associate Minister of Finance**

Restoring our freshwater and waterways

As Minister for the Environment, Hon David Parker will be speaking about the new Government's determination to restore the country's waterways and freshwater ecosystems to a healthy and swimmable state. He wants to see water quality materially improving within five years.

David is a long-time advocate for our waterways, and is passionate about cleaning them up. He believes that the most important river to all of us is the one closest to our homes and communities; and that you should be able to put your head under during summer without getting crook. Coming from Otago, David is very familiar with its rivers and lakes.

David wants to take people with him in cleaning up our waterways. He has been engaging with stakeholders up and down the country, including regional councils, the rural sector, the Land and Water Forum, environmental NGOs and freshwater scientists.

While there are urban water issues, David considers that the greater challenge in many regions is rural rivers. He is working with stakeholders on key issues, including nutrient load allocation, how landowners in a catchment can best share responsibility for reducing nutrient discharges within environmental limits, how to manage sediment, and what can be done to prevent further damage to our estuaries.

Water, Society and Biodiversity

Cr Gretchen Robertson - Deputy Chairperson, Otago Regional Council Councillor

Harnessing the Biodiversity Groundswell

With 13 ecological regions, 39 ecological districts (17 unique to Otago) and at least 65 active organisations, biodiversity in Otago is big and buzzing. But are we bumbling? Are there ways we could be more effective? What can the Otago Regional Council do to help?

Pat Garden - Chairperson, Otago Conservation Board

Building a sense of guardianship for biodiversity values on private land

Many of the threatened freshwater biodiversity values in Otago, exist within privately held properties. A number of mechanisms are in place to protect these values including compliance with territorial authority plans, the RMA and voluntary covenants making a real contribution. These though, will not on their own be sufficient to stem the slide into extinction of some species. Building a sense of ownership or responsibility for these values within the daily management of land resources will be critical to the on-going protection and enhancement of biodiversity, in terms of both fauna and flora across NZ.

Water, Society and Biodiversity

Ali Meade - Biodiversity Programme Leader, Environment Southland

The catchment jigsaw: fitting the pieces together to support water quality and biodiversity

Our environment is a complex with a multitude of links and interactions, changing or removing anyone thing can have a wide reaching effect. However our management actions and policy decisions often focus on the individual pieces and cause un-intended consequences. How can we get better at working with the whole jigsaw?

Dr Gail T. Tipa - Tipa and Associates

Collaboration - empowering or disempowering

Across New Zealand the number of collaborative forums that Whanau are asked to participate in is increasing. With limited human resources how do whanau decide which ones to join and which should be avoided. Can Whanau actually avoid to engage? Will collaboration diminish or negate the Treaty obligations?

Water and Health

Mark Bryan - Managing Director VetSouth

Animal health, water health, people health

Water is everywhere, but when is it OK to drink? A very quick look at the risks, unknowns, and known unknowns that link the health of our animals, our water and our people.

Dr Olga Pantos - Senior Scientist, Institute of Environmental Science and Research

Microplastics in New Zealand's ecosystems: the levels, the impacts and the potential solutions

International research demonstrates microplastics are pervasive in the environment. This problem has been likened to climate change due to its global scale and the magnitude of potential risks it poses to ecosystem health and resilience, human health, and biosecurity. Its impacts and potential solutions therefore involve multiple industry sectors and stakeholders. To address this 'wicked problem' it is important to bring together multiple research disciplines, as well as the stakeholders involved.

Water and Health

Prof Michael Baker - University of Otago School of Public Health

Public health consequences of declining freshwater quality in NZ

This presentation will summarise the vital importance of clean, safe freshwater for public health. It will describe some of the microbial and chemical hazards found in contaminated freshwater, the impact of intensified dairying, and the importance of waterborne outbreaks, such as Havelock North. It will also discuss how we respond to these health threats.

Prof Jack Heinemann - University of Canterbury School of Biological Sciences



You are given the choice to swim in two different rivers. The first has a relatively high count of potential pathogens creating a reasonable risk of infection (say a 5% risk of infection). The second has a much lower count of potential pathogens and a correspondingly low, say 0.5%, risk of infection. However, the frequency of antibiotic resistance is <0.1% in the first river, and 30% in the second. Which river would you choose? Now what is your response if the risk changes from the chance of an untreatable infection to the probability of being forced to swim in the second river? This is increasingly the case for many living along waterways in post-earthquake Christchurch and perhaps throughout New Zealand as the climate changes.

This talk will describe our recent descriptions of resistance levels in two Canterbury rivers, the urban Avon/Ōtākaro and the rural Silver Stream. What do these levels of antibiotic resistance mean? Where is the resistance coming from?

Water and Movement

Dr Christian Zammit - NIWA Manager Hydrological Processes and Water Resources

Hydrological models to support policy planning and water resource management

The talk will be focus on the development of New Zealand National Hydrological Model and associated observation network to support policy planning and water resource management across spatial and temporal scales. In the talk, I will discuss the development and limitation of such tool as well as providing an example of its use in the context of climate change over the Clutha catchment.

Jean-Luc Payan - Manager Natural Hazards, Otago Regional Council

ORC flood management in the Taieri and Clutha catchments

The ORC flood monitoring network in the Taieri and Clutha catchments will be presented. The Lower Taieri and Lower Clutha flood protection schemes will also be presented. Historical events such as the July 2017 will be used to illustrate how the schemes performed and how the monitoring system in place helped responding to those events.

Attendees registered by March 28th, 2018

*denotes symposium speaker

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