



Motueka Integrated Catchment Management Programme AGM 7-9 November 2006, Nelson

Theme: How is research helping with the BIG resource management questions?

The 2006 ICM Annual Meeting is the annual opportunity for researchers and project partners to share progress with each other, and understand the big picture for the Motueka catchment and for transferability of our research.

In line with our resource management theme, we focus this year on the big questions around river gravel management, catchment impacts on Tasman Bay, and reviewing how ICM research is progressing on the big issues in the Motueka, all of which exist in other NZ catchments.

Please see the general description below and the specific agenda, which is attached, and mark your calendar accordingly.

‡Numbers have had to be limited for all these events, so please contact us if you're keen to be involved.

Tuesday 7 November

RIVER GRAVEL TECHNICAL WORKSHOP (At TDC Richmond. By invitation for ICM researchers, wider TDC, aggregate industry, iwi and others interested - please contact Rob Smith at TDC or Andrew Fenemor at Landcare Research if interested)

A technical workshop at TDC to enhance understanding of river gravel and river channel dynamics.

Wednesday 8 November

LAND-MARINE INTERACTIONS: TASMAN BAY ICM RESEARCH (By invitation to ICM programme participants, marine sector groups, iwi and others interested, subject to numbers - please contact Paul Gillespie at Cawthron if interested)

Boat trip to the Motueka River plume, Cawthron's monitoring buoy and TDC Aquaculture Management Areas including discussion about the scallop fishery and mussel spat catching.

Thursday 9 November

ICM SCIENCE REVIEW DAY: How are we doing on the BIG ICM research issues?
(ICM programme participants and invited stakeholders, at TDC Richmond)

Facilitated discussion of research progress and further opportunities around the 4 original 'big picture' issues that started this ICM research:

Building Human Capital and Opportunities for Community Participation
Allocation of Scarce Water Resources among Competing Land Uses
Managing Land Uses in Harmony with Freshwater Resources
Managing Land and Freshwater Resources to Protect Marine Values

All Project Leaders and available project participants should plan to attend the Wednesday-Thursday sessions; anyone working in areas affecting or affected by river gravel issues should also attend the Tuesday workshop.

For further information on this meeting, contact one of the following:

Andrew Fenemor, Programme Leader (FenemorA@landcareresearch.co.nz)
Roger Young, Objective 2 Leader (roger.young@cawthron.org.nz)
Chris Phillips, Objective 3 Leader (PhillipsC@landcareresearch.co.nz)
Tim Davie, Objective 4 Leader (DavieT@landcareresearch.co.nz)
Rob Smith, TDC partner rep (rob.smith@tdc.govt.nz)

Check this web page (<http://icm.landcareresearch.co.nz>) for the latest information about the meeting and about the Motueka ICM programme.

Annual General Meeting - Motueka ICM Programme
Tuesday 7 November 2006



RIVER GRAVEL TECHNICAL WORKSHOP (At TDC Richmond. By invitation for ICM researchers, wider TDC, aggregate industry, iwi and others interested - please contact Rob Smith at TDC or Andrew Fenemor at Landcare Research if interested but not listed below)

A technical workshop at TDC linking science with management. Its aim is to enhance understanding of river gravel and river channel dynamics.

Sediment-related research in the ICM research programme includes a review of 40 years of river cross-section records in the Motueka catchment, mapping of sediment sources and determining sediment fluxes down the river, assessing sediment impacts on aquatic life, and a collaborative learning group on sediment issues.

This workshop is an opportunity to link that developing science knowledge more directly with the management issues and those involved in river gravel management. These include TDC staff, scientists involved in the Motueka Integrated Catchment Management research programme, and other key stakeholders such as Fish & Game Council staff, the aggregate industry and catchment community representatives.

It will be an opportunity to learn more of some of the management issues around gravel removal and channel changes, and to see the depth of information and management tools that are available.

The draft programme for the day (likely to run 9.30 a.m. to 4.30 p.m.) is on the following page. It will include discussion of management issues, how the science informs those issues and what other information is needed to manage gravel extraction in a sustainable manner.

TECHNICAL WORKSHOP ON GRAVEL AND RIVER CHANNEL DYNAMICS

Opening and context 9.30 a.m.

1. The context - integrated catchment management - research and the real world.
2. Intention of the day - coming to understand the "gravel system" better.
3. Introductions from all participants - the range of perspectives
 - a. Science
 - b. Resource management (TDC, Fish and Game etc)
 - c. Business
 - d. Iwi
 - e. Community
4. Surfacing what are "my key questions" from participants.

Sessions will include opportunities for "making sense" and asking questions

Rivers of the Motueka catchment from a scientific perspective (10 minute presentations)

1. Opener: Les Basher (Landcare) - gravel-related research within the ICM programme.
2. Sediment sources, especially gravel - Murray Hicks (NIWA)
3. Advances in understanding bed level trends and gravel volumes (analysis of cross sections, long term trends, limitations of cross sections, alternative approaches to cross sections) - Les Basher (Landcare)
4. Ecological impacts of gravel extraction - Roger Young (Cawthron)
5. What's happening elsewhere in the country with managing gravel extraction (summary of the Envirolink jobs for TDC and NCC) - Les Basher
6. Other methods of measurement - Murray Hicks

Exploring community, business and management implications (10 minute presentations)

1. Opener: Management policy framework (Existing practice and TRMP developments) - Mary Anne Baker - A very brief overview.
2. Council monitoring and investigations - Eric Verstappen
3. River management, the global consent - Philip Drummond
4. Resource consent administration and compliance, and practical management issues (including the identification of locations and volumes of gravel to be extracted) - Colin Michie
5. An aggregate industry view (Bruce Taylor, maybe Willis Patton & Andrew Murphy also)

Synthesis

1. How do we use all of this to better manage gravel extraction - facilitated discussion
2. Is there work that could be undertaken with the ICM research programme to get past information bottlenecks - facilitated discussion.

Close 4.30pm

Draft invitation list Tuesday 7 November:

TDC staff (10-12) & councillors (6-8): To be decided by TDC

Aggregate industry:

Bruce Taylor - Chairman of the Contractors Federation, Fulton Hogan

Willis Patton - Works Infrastructure

Andrew Murphy - Oldfields

Science staff:

Les Basher - Landcare Research

Murray Hicks - NIWA

Roger Young - Cawthron

Andrew Fenemor - Landcare Research

Tim Davie - Landcare Research

Garth Harmsworth - Landcare Research

Chris Phillips - Landcare Research

Brenda Rosser - Landcare Research

John Dymond - Landcare Research

Community:

Lloyd Faulkner - Upper Motueka Rivercare Group, Tapawera

Neil Deans - Fish & Game Council

Mick Park - Iwi

Facilitators for the workshop:

Glen Lauder - Common Ground

Margaret Kilvington - Landcare Research

Will Allen - Landcare Research

Annual General Meeting - Motueka ICM Programme
Wednesday, 8 November 2006



LAND-MARINE INTERACTIONS: TASMAN BAY ICM RESEARCH (By invitation to ICM programme participants, marine sector groups, iwi and others interested, subject to numbers - please contact Paul Gillespie at Cawthron if interested and not specifically listed below, and RSVP your attendance if listed below)

Boat trip to the Motueka River plume, Cawthron's monitoring buoy and TDC Aquaculture Management Areas including discussion about the scallop fishery and mussel spat catching.

ICM research for the Motueka catchment extends into Tasman Bay where we are investigating the impacts of catchment land use and the related discharge of freshwater, sediment, nutrients and pathogens to the coast via the Motueka River plume.

ICM marine research includes assessing effects of the river plume (including low flow and flood conditions) on river delta and offshore habitats. Particular attention is paid to relationships that may affect the sustainability of shellfish resources and potential development of Aquaculture Management Areas (AMAs). This has included research on nickel and chromium flushed from the upper catchment Red Hills. Modelling of Tasman Bay circulation and ecosystem productivity for aquaculture is also being carried out.

This field trip is an opportunity to share the science knowledge emerging from this research and discuss catchment management implications with shellfish resource managers, TDC coastal policy-makers, Government departments and other interested groups.

Tentative schedule:

- 08:00 Cougar Cruises boat leaves Port Nelson

- 0845 Stop at Motueka River mouth/delta and proceed slowly along a transect seaward through the plume to discuss the spatial extent of effects to water column and seabed habitats

- 0930 Stop at ICM monitoring buoy site to discuss long term data collection facility and have morning tea

- 1015 Discuss scallop and oyster enhancement programmes

- 1100 Travel through central aquaculture management area noting boundaries

- 1130 Stop at mussel spat catching site to discuss procedures and possible plume effects
- 1200 Travel to Abel Tasman Park for lunch and time for questions & answers
- 14:30 Return to Nelson (arrival approximately 1545)
- 6.30pm Dinner with Community Reference Group members (Saltwater Café - formerly Olivias - 6.30pm). [RSVP to Rosemary CallaghanR@landcareresearch.co.nz](mailto:CallaghanR@landcareresearch.co.nz) by 3 Nov.

Rough weather Contingency - swap Days 2 & 3

Invitation list (37): (Capacity = 40 but 30-35 would be better)

Andrew Baxter
Andrew Fenemor
Anthony Cole
Barbara Stuart
Bob Nicolle
Carmel Howley
Chris Cornelisen
Chris Phillips
Daniel Lees
Eric Verstappen
Garth Harmsworth
Geoff Rowling
Gillian Wratt
Glen Lauder
John Dymond
John Hannah
Kim Clark
Les Basher
Lisa Langer
Margaret Kilvington
Mark Gibbs
Mick Park
Mike Stewart
Neil Deans
Neil Jackson
Paul Barter
Paul Gillespie
Peter Ballance
Richard Kempthorne
Rob Davies-Colley
Rob Smith
Roger Young
Russell Mincher
Steve Markham
Tim Davie
Will Allen

Annual General Meeting - Motueka ICM Programme
Thursday 9 November 2006



**ICM SCIENCE REVIEW DAY: How are we doing on the BIG ICM research issues?
TDC Council Chambers, Richmond, Thursday 9 November 2006**

Facilitated discussion of research progress and further opportunities around the 4 original 'big picture' issues that generated this ICM research.

Proposed structure of each of the 4 sessions

Highlighted discussion leaders - coordinate a single overview presentation of research components and progress (eg. key objectives and findings) of ~20 minutes, including some commentary from TDC person on resource management context. Avoid filling the session with reports from all those working in this area. You can choose how to tackle this.

Project researchers & partners (TDC, NZLCT etc) - please provide up to 4 Powerpoint slides to your discussion leader to compile into an overview that they or you can speak to on the day

Remainder of each session will be whiteboard discussion around these sorts of questions, including recording of action items:

- How does this research link with other ICM or external research around this question?
- Are there research gaps that we should tackle in next 3 years?
- Are there resource management issues or opportunities we're missing?
- What's transferable to other catchments?
- How best to achieve uptake of results?

Facilitator: Glen Lauder

0830-0900 ICM Programme Context

Andrew Fenemor

0900-1015 BIG Issue #1

Building Human Capital and Opportunities for Community Participation

Resource Management Context: Recognising and developing social learning and robust knowledge systems among all relevant groups - including governments, scientists, iwi, landowners, sector and community - for progressing Integrated Catchment Management at both policy and on-the-ground action levels.

Will Allen, Chris Phillips, Steve Markham (TDC)

Knowledge management and delivery: Toolbook, website etc - Chris
Iwi capacity building and collaboration in ICM - Garth
Institutional learning - Glen
Collaborative learning; CL group on fine sediment - Will
Science responsiveness to the community; CRG - Margaret
Responsibility and Care - Maggie
IDEAS modelling framework – John
Catchment Futures modelling – Anthony
Documenting ICM as a process - Andrew
Sherry River catchment group - Barbara

1030-1130 BIG Issue #2

Allocation of Scarce Water Resources among Competing Land Uses

Resource Management Context: Managing water allocation for instream and out-of-stream uses through the Motueka Water Conservation Order, water allocation rules in the Tasman Resource Management Plan (Part V), and the Government's Water Programme of Action.

Tim Davie, Andrew Fenemor, Joseph Thomas (TDC)

Groundwater modelling and surface water connections – Tim
Flexibility and Security in Water Allocation - Andrew
Water resource allocation and economics - Andrew
Freshwater habitat modelling, water allocation from small streams and fish migration - Roger

1130-1400 (incl lunch 1230-1315) BIG Issue #3

Managing Land Uses in Harmony with Freshwater Resources

Resource Management Context: Understanding and managing the factors that caused the decline then recovery of trout populations in the Motueka River, and declining water quality in parts of the catchment, including the impacts of sediment and benefits of riparian management.

Roger Young, Les Basher, Trevor James (TDC)

Water quality; foodchain of Motueka River - Roger
Links between cultural and scientific indicators of river health – Roger
Faecal bacteria, floods, stock access and on-farm actions – Rob D-C
Landuse effects on hydrology and nutrient loads - Tim
Native riparian plants and riparian classification – Chris
Riparian restoration and classification – Lisa or Nick
Gravel transport, management and impacts - Les
Sediment sources, yields, characterization, impacts and modelling - Les

1400-1500 BIG Issue #4

Managing Land and Freshwater Resources to Protect Marine Values

Resource Management Context: Understanding and managing catchment impacts on Tasman Bay, and ecosystem processes within the Bay for supporting coastal and fisheries management, and allocating coastal space for aquaculture through the Tasman Resource Management Plan (Part III).

Paul Gillespie, Mark Gibbs, Rob Smith (TDC)

Catchment effects on Tasman Bay and aquaculture potential – Paul
Continuous data collection buoy in Tasman Bay - Paul

1530-1600 Synthesis

Glen Lauder, Andrew Fenemor

Here are a few of the big research questions (others can be found on the 2003 technical report 'The Motueka and Riwaka Catchments'):

Building Human Capital and Opportunities for Community Participation

How do people acquire and use scientific knowledge to make personal decisions about difficult resource management issues? What tools and approaches can we use to promote effective interaction between scientists, resource managers, and the community? What can we learn from iwi about the environment? What factors affect the uptake of science in resource management decision-making? How can we tell if we are making a difference? What are preferred development pathways to ensure continued sustainable management at catchment scale?

Allocation of Scarce Water Resources among Competing Land Uses

How do individual, local land uses affect the availability of ground and surface water over the entire catchment? Have these effects differed over time? What is the most defensible way to plan for the allocation of water resources among alternative uses in the event of shortages?

Managing Land Uses in Harmony with Freshwater Resources

How is sediment mobilised to reach rivers, and what impacts does it have? What are the values of near- and in-stream habitats and how are these values affected by land and river management decisions? Why has the trout population declined? Will native fish be able to survive in the river? What are the benefits of riparian management?

Managing Land and Freshwater Resources to Protect Marine Values

What are the risks to marine farming from activities on land? How do rivers modify the transport of sediment and pollutants from land to sea? What are the factors that increase or decrease the production and values of fish and shellfish?

Day #3 Attendees: ICM programme participants (those from Day #2 except those with a specific marine focus) and interested stakeholders.

ICM project leaders and TDC participants should expect to attend.

Carmel Howley (FRST) will attend, and a representative from MfE for the Government's Water Programme of Action has also been invited.