



# Science, Integration and Integrated Catchment Management

Roger Young, Andrew Fenemor, Chris Phillips, Les Basher,  
Paul Gillespie, Tim Davie, Will Allen, Garth Harmsworth,  
Margaret Kilvington, Rob Davies-Colley, Rob Smith, Steve Markham,  
Glen Lauder, Neil Deans, Barbara Stuart



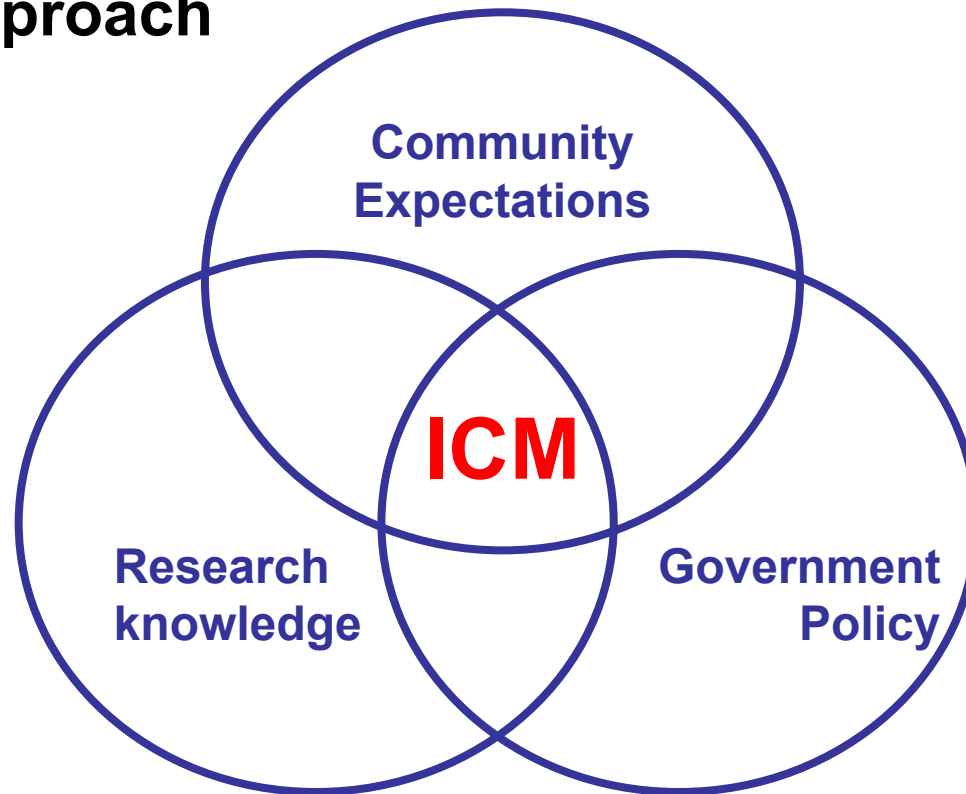
Global Learning NZ

# Integrated Catchment Management (ICM)

- Appropriate way to deal with complex resource management issues (*e.g.* PCE 2004)
- Particularly suited to land and water management – catchment a natural boundary
- Community-based and/or agency-led
- .....but what is ICM?

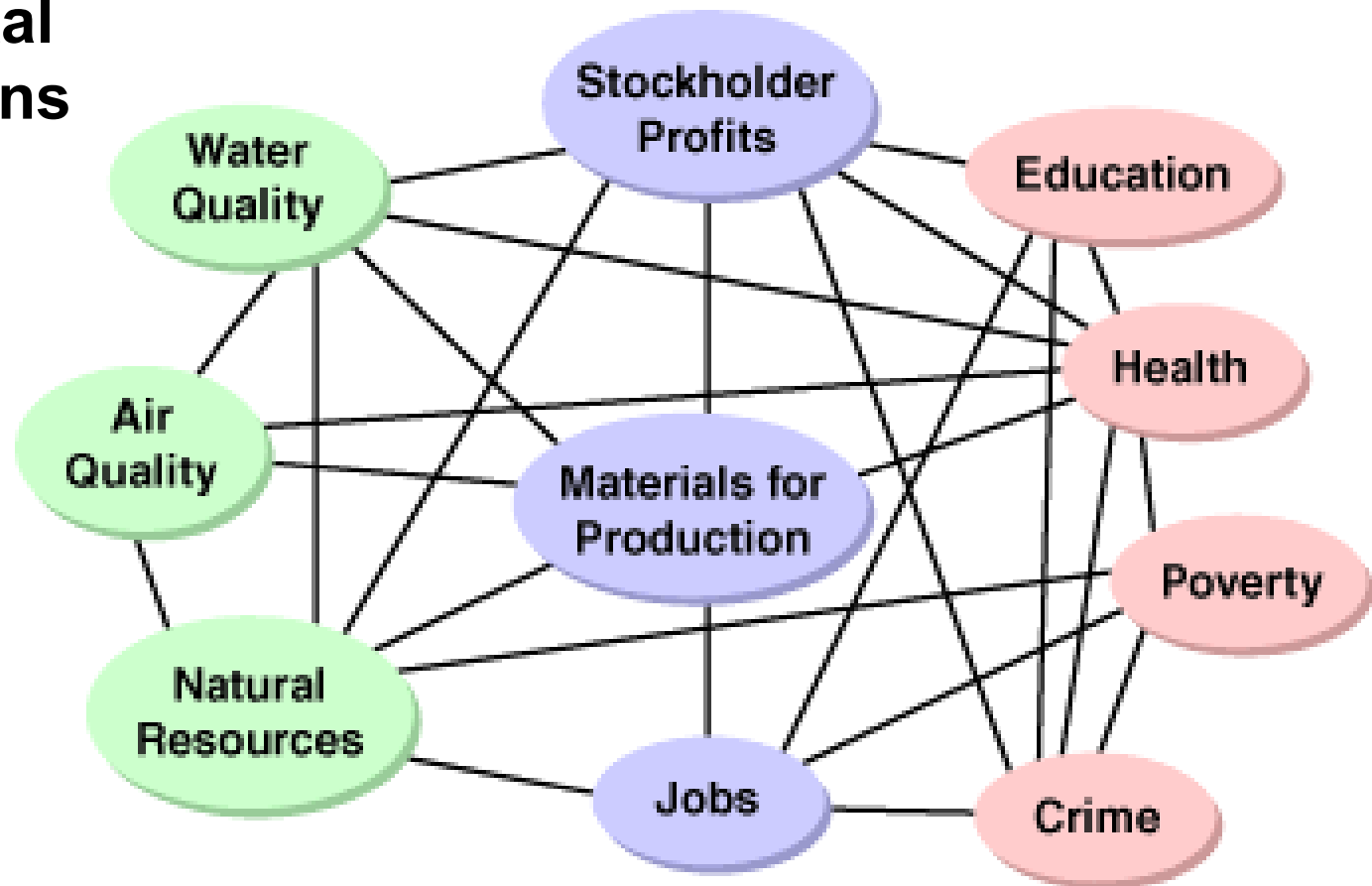
# Integrated Catchment Management

...a partnership approach



# Integrated Catchment Management

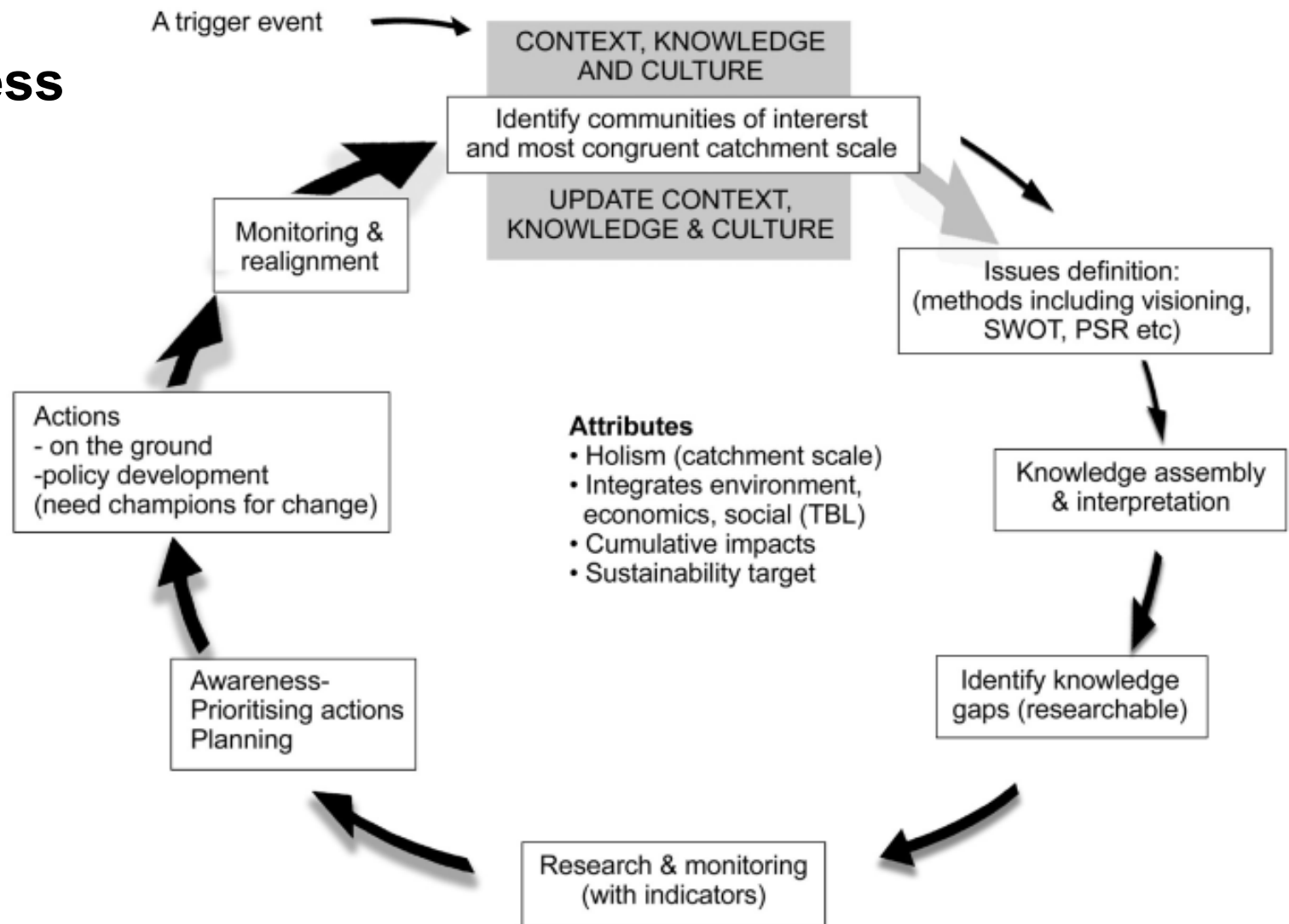
... social, economic and environmental considerations



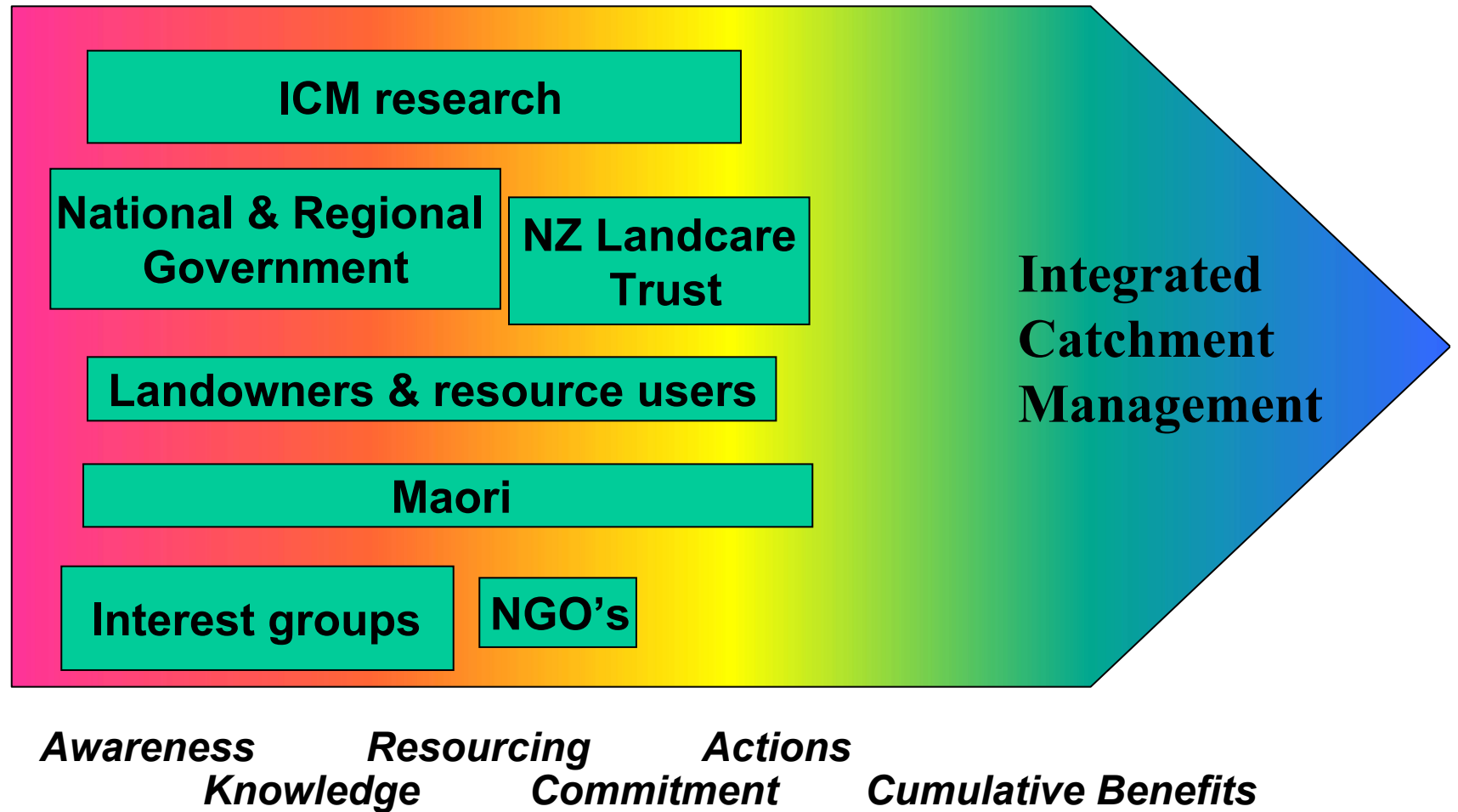
From: <http://www.sustainablemeasures.com/>

# Integrated Catchment Management

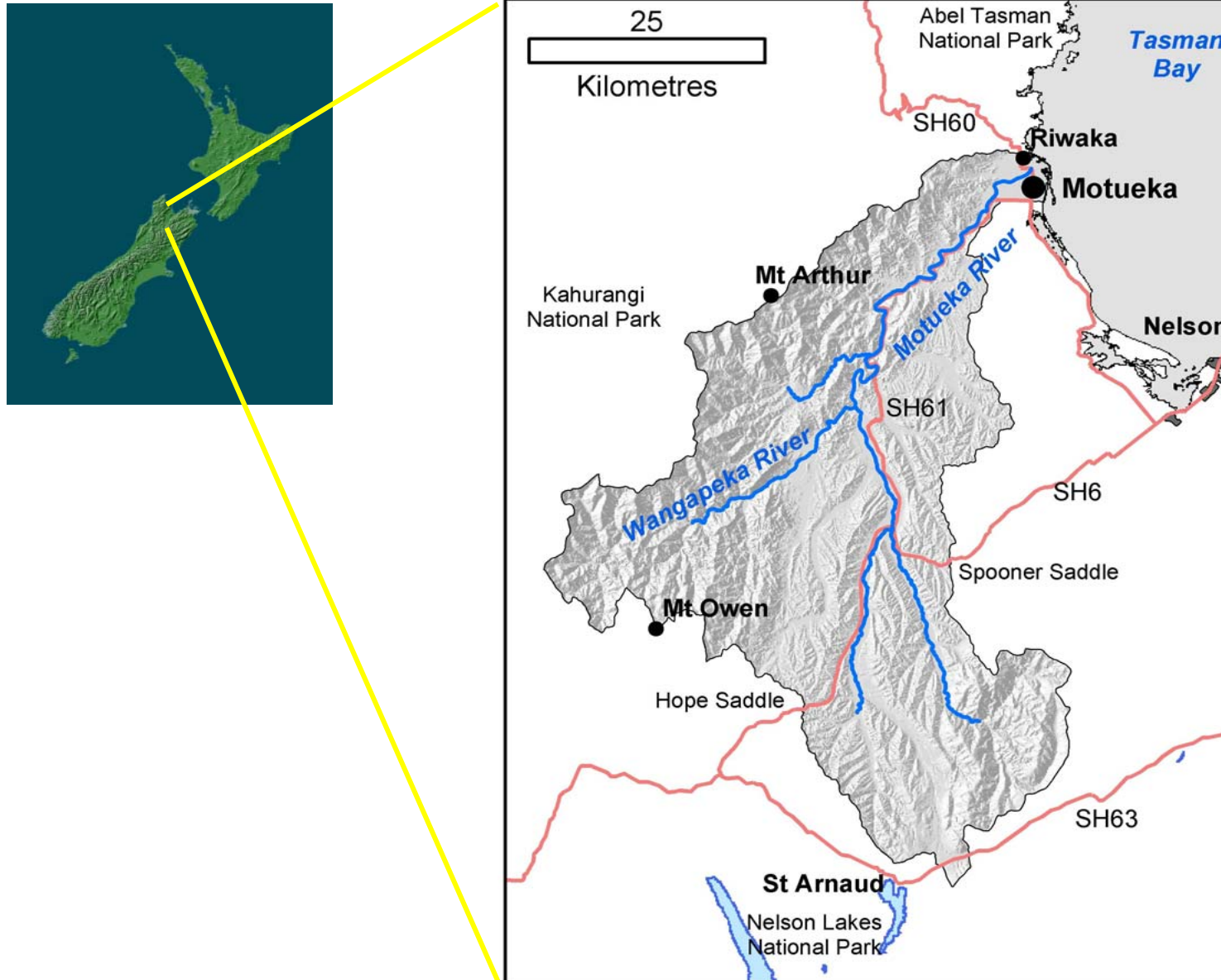
...a process



# Different Players in ICM



# Motueka catchment



# Motueka Issues

- 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
- Building human capital and opportunities for community participation

# The role of scientists in ICM

- Provide information to enable informed debate
  - Stock crossing study
  - Water Conservation Order
- Independent element in the debate
  - Gravel management
- Catalyst for bringing together diverse groups
  - Sediment learning group

# Integration

- At least three perspectives....
  - Science, resource management and community
  - Integration among disciplines
  - Spatial integration – link activities in one area with consequences elsewhere

.....But integration doesn't come easy

“Are we integrated yet?”

# Spatial Integration

- Mountains to the sea
- When is a catchment too big?
  - Difficult to facilitate action on the ground at a large scale
  - Most community-based projects are at a subcatchment level (10-20 farms)
- Depends on issues involved
- Zoom-in, Zoom-out approach
  - Zoom-in for farm/paddock/riparian BMP's
  - Zoom-out when considering effects and benefits
  - Sherry subcatchment

# Initiatives we've used to improve integration

- Website (<http://icm.landcareresearch.co.nz/>)
- CD-ROM
- Annual General Meetings
- Community reference group
- Working closely with iwi
- Travelling River
- Learning groups – Watershed talk
- Online discussion group

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## Main menu

### Integrated Catchment Management

People of the land

Our project

Economic well-being

Our catchment

Governance

Author

References

Acknowledgements

How to use this CD?

Land & river management

Coastal management

Recreation & tourism

Water availability

Healthy waterways

Sediment

Wetlands & Riparian

Biodiversity

Linkages

Catchment futures

Quit

Our catchment



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# Working with iwi

- Collaborative learning guidelines for communities including iwi groups
- Develop Iwi Information Systems for environmental management
- Assessment of iwi environmental monitoring approaches:
  - Cultural health indicators



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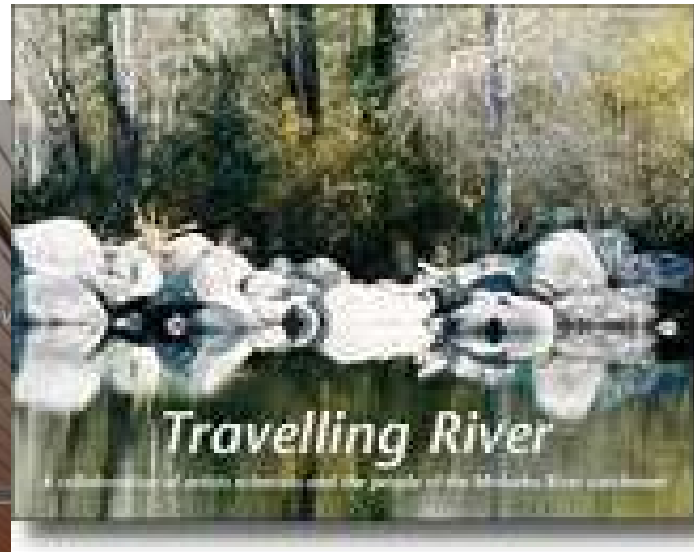
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## ***Travelling River***

*... a collaboration of artists, scientists and the people of the Motueka River catchment*



# Travelling River Art-Science Collaboration



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Tiaki Matauranga Online Groups : threaded - Microsoft Internet Explorer

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Back Forward Stop Home Search Favorites Refresh Print W Address [http://tiakimatauranga.onlinegroups.co.nz/groups/confluens/messages/view\\_threads](http://tiakimatauranga.onlinegroups.co.nz/groups/confluens/messages/view_threads)

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**Headwaters**

**Knowledge Social Tributum**

**Land Water Marine Tributum**

**Model Ideas Tributum**

threaded

**Confluens Topics**

[Start a new Topic](#) | [Summary of posts](#)

Numbers **1** to **20** of the most recent topics are shown. **111** topics have taken place in total. 20 shown.

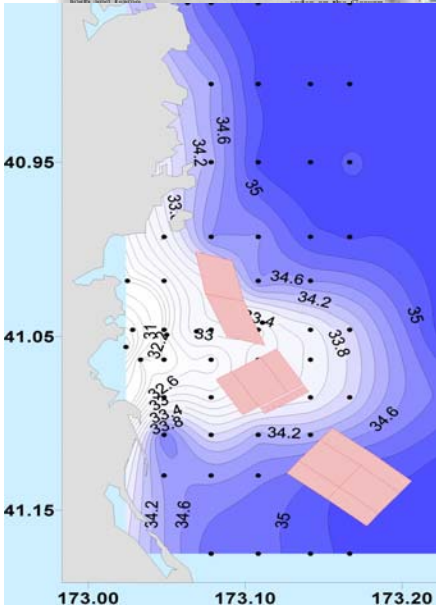
Date of Last Post	Topic	Posts
14 Nov 2006 21:30	<a href="#">AGM 06 - How was it for you?</a>	2
06 Nov 2006 11:28	<a href="#">ICM AGM 7-9 November 2006</a>	6
03 Nov 2006 17:25	<a href="#">Faecal bacteria, floods, stock access and on-farm actions</a>	3
20 Oct 2006 16:32	<a href="#">Freshwater Habitat Modelling</a>	6
13 Oct 2006 15:36	<a href="#">Introductions</a>	2
12 Oct 2006 04:15	<a href="#">ICM Update</a>	18
11 Sep 2006 18:12	<a href="#">A new initiative in Confluens</a>	24
11 Sep 2006 13:10	<a href="#">Knowledge management and delivery</a>	3
11 Sep 2006	<a href="#">The discussion "document" on Knowledge management &amp; delivery was posted on Friday pm- happy</a>	1

Start Internet

Start Inbox - Microsoft Outlook FWSci06RogerY.ppt Engaging People in ICM ... Tiaki Matauranga Onli... 17:40

# Summary

- ICM – a good approach to deal with complex resource management issues
- ICM can be seen in a variety of contexts
- Science and scientists have an important role
- Integration is vital, but a challenge
- It's all about building trust & building relationships
- People, People and People



## Water order praised

The original application for the order was made in 1900 by the Nelson Acclimatisation Society, now known as Nelson Marlborough SNA and Game.

However, he expects that the order could have happened with or without the Chinese.



While farmers are frequently criticised for the effects of dairying on the environment, positive developments are often ignored. **Simon Towle** reports on work along the Sherry River in Tasman District, where farmers have joined forces with scientists and the district council.

**D**airy farmers have traditionally looked down both on local councils and Fish and Game New Zealand for contaminating the country's natural waterways. However, compelling science has now persuaded farmers in Tasman District to invest considerable effort and money to clean up the Sherry River in a case that could prove a model example for the rest of the country.

Even long time dirty-dairying campaigners Bryce Johnson, director of Fish and Game, enthusiastically describes the project as "a good reason to be proud of the environment."



new information in December 2001, "the Sherry farmers undertook to take action. In a short period of time, the crossing on Fanti and Liza White's property where the experiment was carried out has now been bridged. In addition, another farmer, Rod G?? is using a bridge instead of taking through the river."

He says two other bridges are in the stages and substantial effort is being made to keep stock out of the river.

Tasman District Council estimates