

# Low impact urban design and development (LIUDD)



## ICMP policy effectiveness monitoring to meet LGA and RMA requirements

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# What we'll talk about



- requirements to monitor / 2006 paper
- who monitors what – and how well?
- integrated monitoring:
  - under RMA + LGA
  - between agencies, especially region and city/district
  - choosing indicators: consider QBL and decoupling
- benefits, barriers, implications of better monitoring
- can we practise this on our ICMPs? – join the debate

# Why we'll talk about it



- we've talked about policy effectiveness monitoring and indicators before
- you've told us its complex, time-consuming, expensive and difficult to do
- so we've been thinking about how to map a way through the legislative thickets

We are not alone!

The power of measurement: Better? A surgeon's notes on performance. American surgeon Dr Atul Gawande

# Requirements to monitor



- Resource Management Act 1991
- Local Government Act 2002
- outcome monitoring + policy effectiveness evaluation are integral to the statutory processes in both Acts:
  - policies
  - plans
  - rules
  - alternative methods

# Who monitors what?



- city/district councils (TAs)
- council utilities
- regional councils (RCs)
- Ministry for the Environment
- effectiveness of policies, plans, rules, other methods
- consents and compliance
- state of the environment / 4 well-beings outcomes

# How well are we doing it?

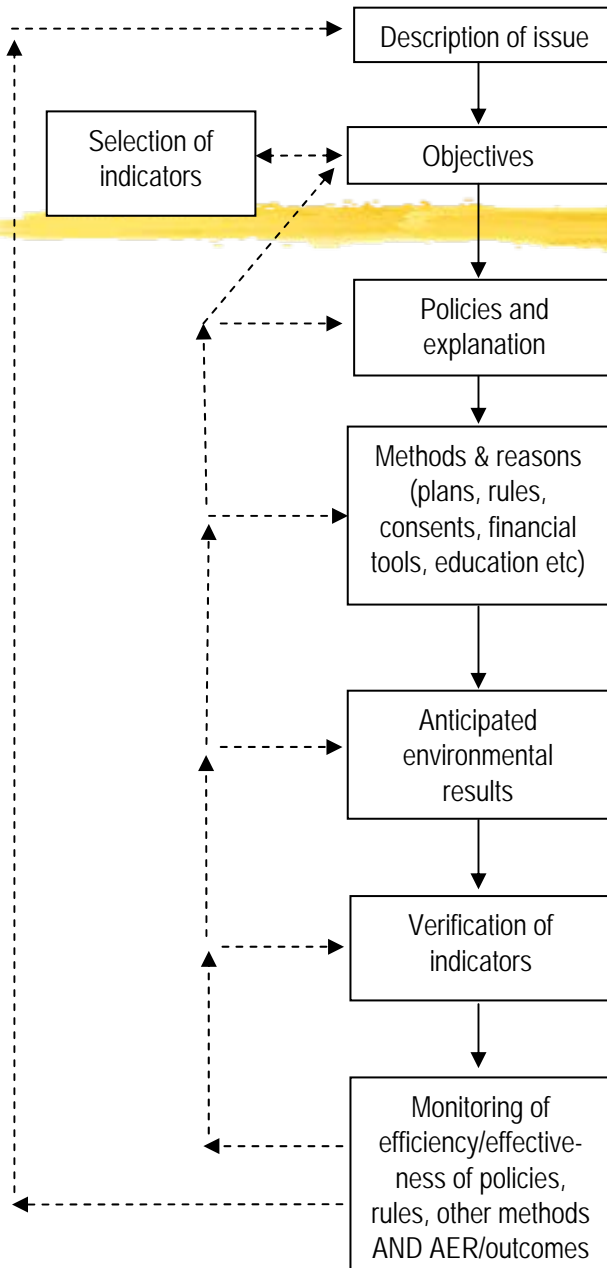


## PUCM findings

- monitoring data poorly linked to environmental outcomes in regional, district and asset plans and other strategies
- poor connections between critical elements in the cascade of planning tools for more sustainable development in New Zealand

Ericksen et al, 2003

<http://www.waikato.ac.nz/igci/pucm/>



The logical rigour is there in the RMA –  
it's just not rigorously applied

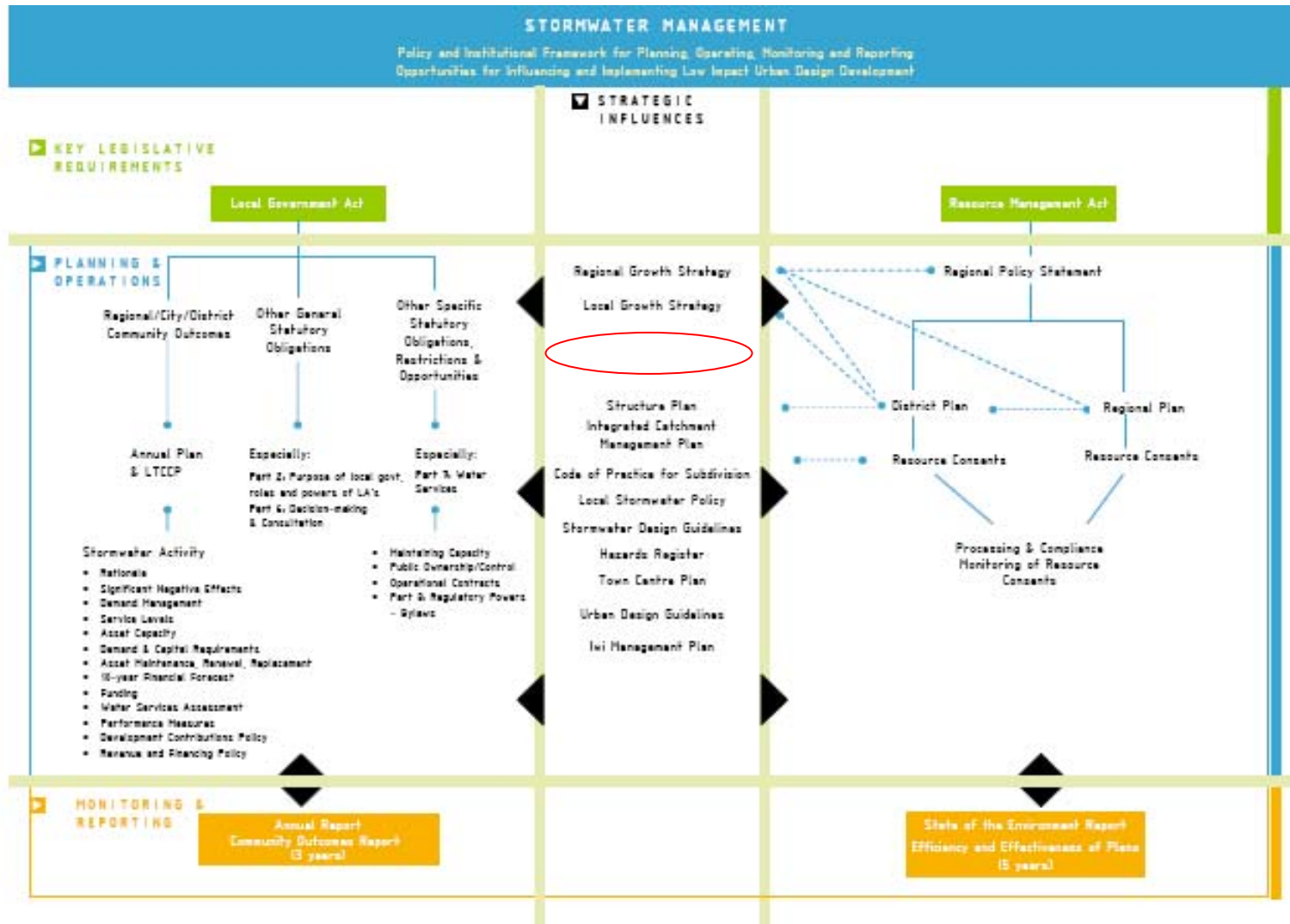
# Applying more logical rigour to ICMs



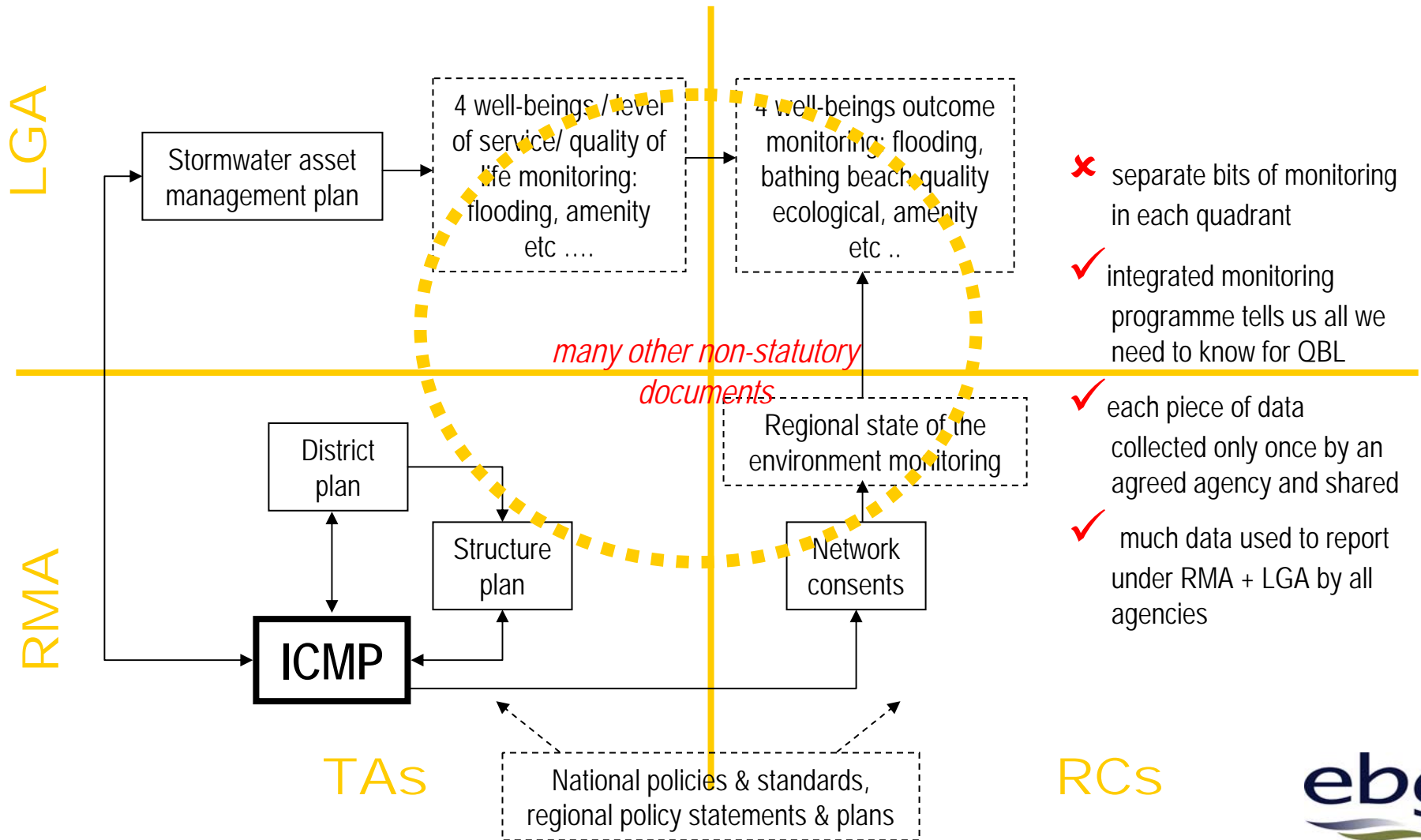
will help:

- monitor anticipated environmental outcomes
- measure policy effectiveness: how well objectives address identified issues
- be in line with local and international best practice

# Statutory context: RMA and LGA



# Integrated RMA/LGA inter-agency monitoring

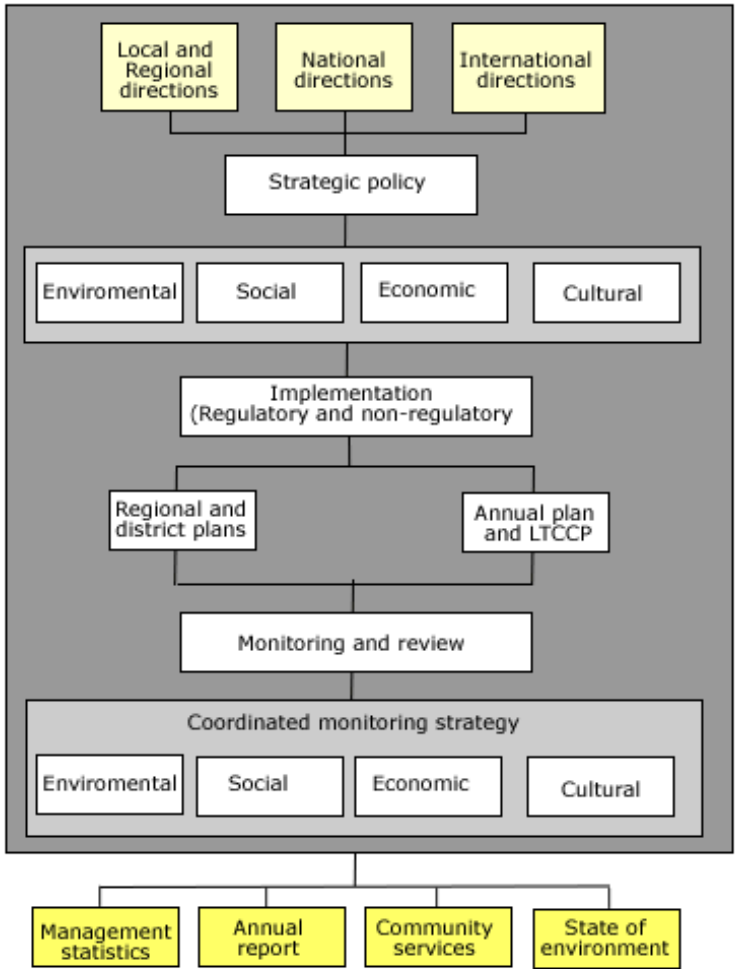


# Integrated RMA/LGA inter-agency monitoring



- the bad news:
  - it's complex and takes time to set up
- the good news:
  - there is heaps of help available (references in paper)
  - some people have been doing it for a while
  - the LIUDD research programme is happy to facilitate an LIUDD- and ICMP-related discussion

# Integrated interagency monitoring framework

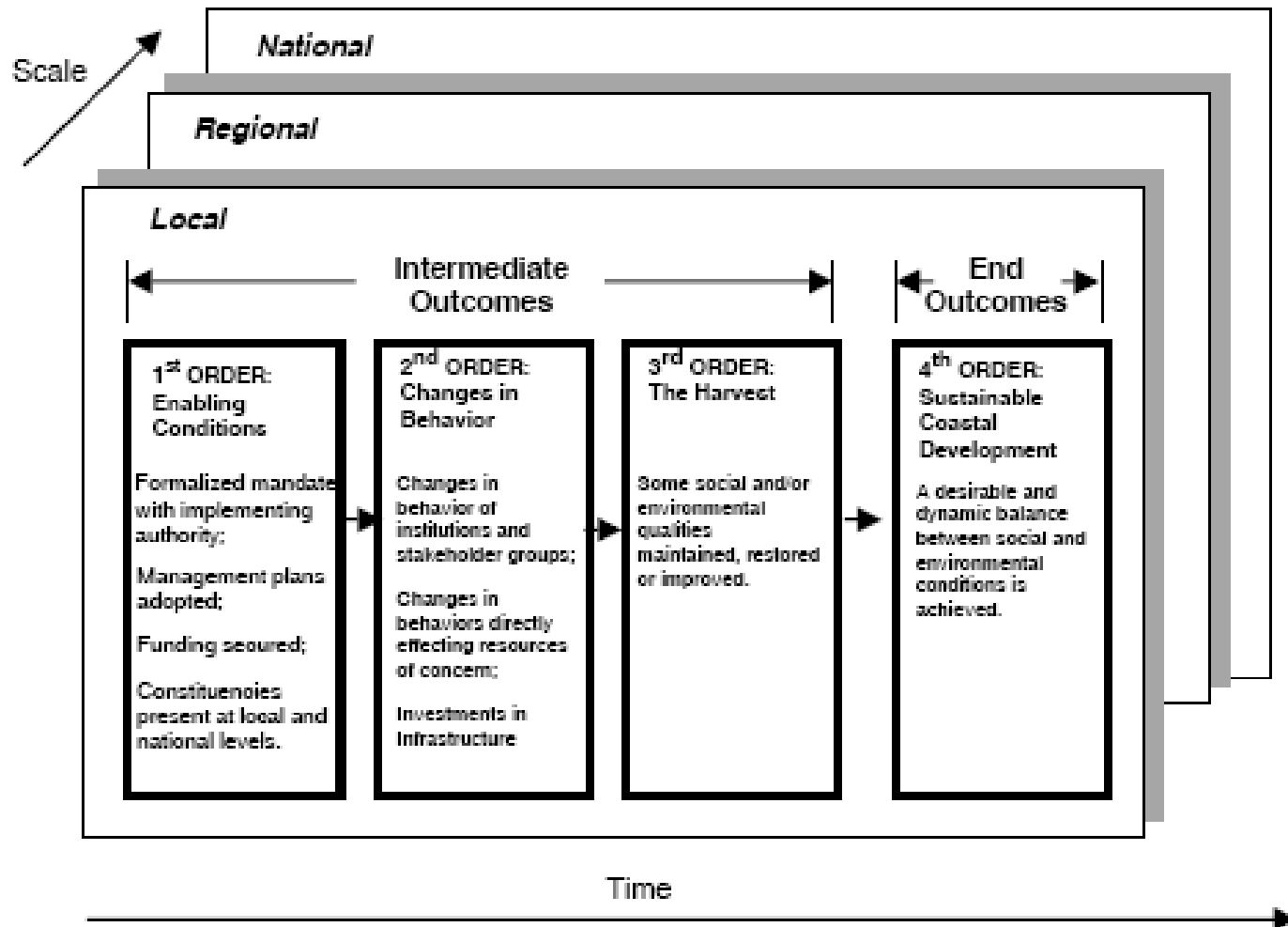


# Integrated interagency monitoring process



- set up project team (internal and external)
- identify strategic objectives and outcomes
- collate catchment information and identify issues
- identify SMARTER operational objectives and tasks
- develop indicators
- design monitoring programme
- check plan logic and quality
- implement plan actions and monitoring programme

# Choosing indicators to measure orders of progress



# First Order outcomes



- the institutional and societal conditions needed for a plan to succeed in carrying out a sustained plan of action to influence the course of events in an ecosystem
- requirements for transition to implementation:
  - unambiguous *goals* to measure programme efforts and progress
  - a core *constituency* of well informed private and government stakeholders actively support the programme
  - government *commitment* to the policies in form of delegated authorities and financial resources for long-term implementation
  - sufficient *capacity* in the institutions responsible to implement the agreed plan of action

# Second Order outcomes



- evidence of successful plan implementation, including:
  - evidence of new forms of collaborative action among institutions
  - behavioural changes by resource users
  - changes in patterns of investment

# Third Order outcomes



- achievement of identified goals – the rewards for sustained behavioural change in the targeted institutions and groups:
- third order outcomes fall into two categories of ecosystem management goals:
  - people: greater equity and diversified livelihoods
  - ecosystems: sustained or restored qualities and functioning of the bio-physical environment

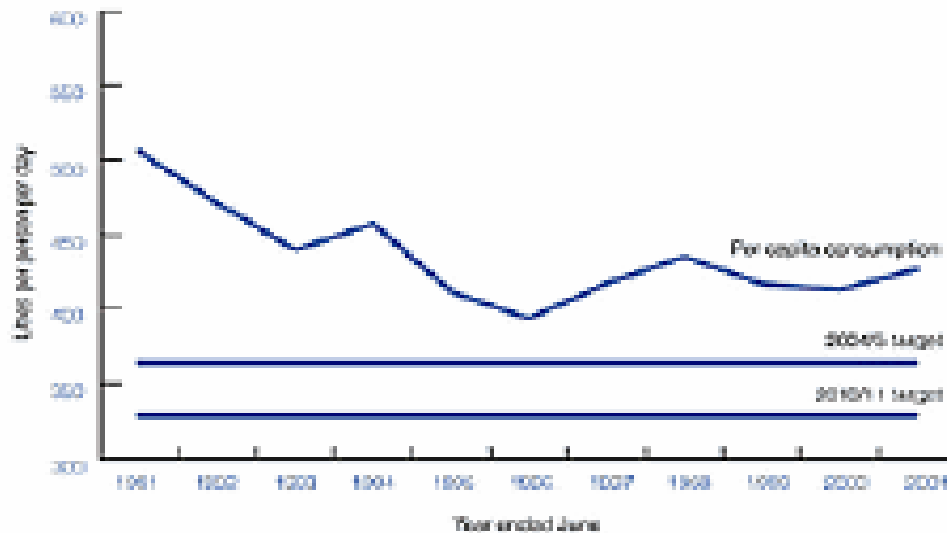
# Fourth Order outcomes



- dynamic equilibrium between people and the environment
- critiques third order outcomes to see if the state achieved is sufficient to sustain a healthy, just and equitable human society that is sustaining the qualities of the ecosystem of which it is a part
- can be used to help develop a vision

# Decoupling indicators

Daily water demand per person (12-month rolling average, litres per day), June 1990 to June 2001



Note: Figures since the 1995 census have been extensively revised, based on recent lower population estimates for the Sydney region prepared by the Department of Urban Affairs and Planning

Sydney Water

# Decoupling indicators

- decoupling: breaking the link between “environmental bads” and “economic goods”
- decoupling indicators measure changes over time between:

$$\frac{\text{environmental pressure/response variable}}{\text{driving force economic/population/other variable}}$$

- could they show if LIUDD and other measures in an ICMP were generating the anticipated environmental and other results?
- what examples could we think of for stormwater?

# Decoupling indicators



- ratio of impervious surface to length of natural stream
- ratio of piped to natural stormwater drainage density (green vs grey stormwater infrastructure)
- roading density v stream drainage density
- distributed services (energy, stormwater, water supply, wastewater) as a proportion of total reticulated services
- percent of assets greened as part of renewal (eg streams daylighted instead of aging stormwater pipes being replaced)
- connectedness of areas of native vegetation as well as/in proportion to areal extent
- volume vs area of bulk earthworks; and
- ratio of pre- to post- development stream channel width

# Decoupling indicators

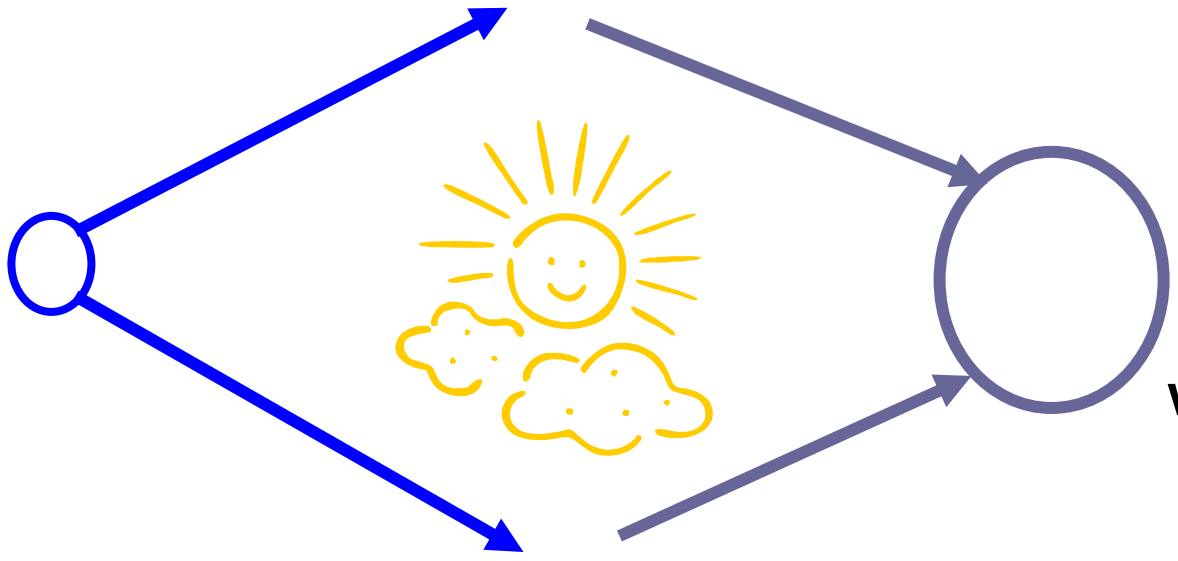


- some of the indicators already being collected by some agencies could be combined to produce useful decoupling indicators:
  - e.g. length of riparian planting vs length of piped streams
- they could also form the basis for broader quality of life or social/cultural wellbeing indicators

# Developing indicators

- much work done here
- referenced in paper
  - identifying indicators that link to objectives
  - developing integrated interagency monitoring programmes
  - using quality of life/QBL indicators





**Starting off with a brainstorm – blue sky visions**

**Ending up ahead – better but workable- to start again**

***BUT –***

we can't afford to monitor everything!

***OR –***

but if we only include in the plan things we can monitor, our plans would only be 10% the size!

***AND –***

must build monitoring in from the **START** of planning

**How to filter the indicators:**

- use the RMA process to link to strategic objectives
  - identify operational objectives linked to issues
- come up with a doable list of monitoring indicators
  - save the interesting ones for the next round
  - think about decoupling indicators



# Has it been done?



- research shows it can be applied to low impact design projects
- helped identify causal linkages between policy and monitoring data
- three categories of programme monitoring and evaluation data:
  - output: what managers do to promote LIUDD;
  - uptake: what regulatory, business, community audiences do in response
  - outcome: environmental, social, cultural and economic changes
- results helped to:
  - apply LIUDD principles to the design phase
  - develop QBL indicators
  - assess programme effectiveness
  - facilitate replication/ comparison of data from similar studies

# A rule of thumb



5-10% of your programme time or budget  
is a good investment  
in monitoring its effectiveness.



# Benefits of good monitoring



- better public participation in resource management
- better policies, better formulation of policies and rules, and clearer targets
- better understanding of the environment leads to more:
  - focused rules and standards
  - targeted consent conditions
  - efficient consent processing
- clearer accountability
- better policy and plan effectiveness

# Benefits of good monitoring



- avoiding duplication or omissions in data collection
- sharing of more accessible good quality data and knowledge
- cost-effectively meeting monitoring requirements under LGA + RMA
- better links between compliance, state of the environment and policy effectiveness monitoring
- more consistent and complementary approaches by agencies to common issues
- capacity-building
- better environmental outcomes
- eventually – to reduced costs

# Barriers to integrated inter-agency monitoring

- political pressure + unrealistic deadlines = rushed plan preparation
- hard to sell to councillors and/or senior managers
- lack of guidance and support from central government agencies
- inadequate integration and communication between councils
- inadequate transfer of information and/or disjunct between regional and territorial councils
- misplaced concern about putting too much information in plans/trying to keep them thin

# Barriers to integrated inter-agency monitoring



- lack of capacity (knowledge, skills, time, resources) to assess information
- council restructuring, especially splitting plan policy from implementation, disrupting the processes of plan preparation, implementation and monitoring
- little accountability of councils for poor plan preparation or monitoring of the state of the environment and plan effectiveness
- the implications for technology and information management systems, including monitoring equipment, databases, GIS, decision support systems and data presentation software

# Implications for councils preparing ICMs

Possible need to:

- form a team that links to other parts of council and other relevant agencies (especially regional councils)
- prepare tender briefs that:
  - spell out the requirement for integrated inter-agency plan preparation, implementation and monitoring
  - give adequate guidance for consultants preparing tenders
- involve other professionals in the preparation of ICMs, especially those familiar with the wide range of internal and external statutory instruments under the relevant Acts
- work closely and collaboratively with consultants preparing ICMs so the 8 ingredients of a good plan are present

# Implications for councils preparing ICMs



- be prepared to apply more stringent tests to each stage of the process, especially framing catchment management objectives and selecting indicators of success
- take a community development approach to identifying issues and solutions, as well as monitoring QBL outcomes and plan effectiveness – going wider than stormwater
- identify resourcing and capacity needs and solutions and be prepared to justify these to senior managers and elected representatives in order to do the job properly

# Questions. . .



- how does or could this work in your organisation?
- would you be interested in attending a working group on this?

# Thanks to . . .



- Landcare Research and the University of Auckland for funding my thinking in this area and supporting an ongoing dialogue via the website