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 ICMPs 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

Source: Paula Hunter, MWH. Prepared for the LIUDD programme.
Integrated RMA/LGA inter-agency monitoring

- Stormwater asset management plan
- District plan
- Structure plan
- National policies & standards, regional policy statements & plans
- Regional state of the environment monitoring
- Network consents
- 4 well-beings/level of service/ quality of life monitoring: flooding, amenity etc ...
- 4 well-beings outcome monitoring: flooding, bathing beach quality ecological, amenity etc ..

- many other non-statutory documents

- separate bits of monitoring in each quadrant
- integrated monitoring programme tells us all we need to know for QBL
- each piece of data collected only once by an agreed agency and shared
- much data used to report under RMA + LGA by all agencies
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

- **1st ORDER:** Enabling Conditions
  - Formalized mandate with implementing authority;
  - Management plans adopted;
  - Funding secured;
  - Constituencies present at local and national levels.

- **2nd ORDER:** Changes in Behavior
  - Changes in behavior of institutions and stakeholder groups;
  - Changes in behaviors directly affecting resources of concern;
  - Investments in Infrastructure

- **3rd ORDER:** The Harvest
  - Some social and environmental qualities maintained, restored or improved.

- **4th ORDER:** Sustainable Coastal Development
  - A desirable and dynamic balance between social and environmental conditions is achieved.

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Scale

Time
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

Note: Figures since the 1996 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:

  \[
  \begin{align*}
  \text{environmental pressure/response variable} \\
  \text{driving force economic/population/other variable}
  \end{align*}
  \]

- 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 vs 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

_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

_BUT_ –
we can’t afford to monitor everything!

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

Ending up ahead - better but workable - to start again
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

Mark Bishop, 2006
A rule of thumb

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

Paine, 1999
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 ICMPs

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 ICMPs, especially those familiar with the wide range of internal and external statutory instruments under the relevant Acts
• work closely and collaboratively with consultants preparing ICMPs so the 8 ingredients of a good plan are present
Implications for councils preparing ICMPs

- 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 . . .

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