

Integrated Catchment Management Planning for the Next Generation

Zeb Worth – Technical Lead Environmental Engineering



Introduction

- ICMP – the idealised version
- ICMP – in reality
- Barriers – why is the ideal so hard to achieve?
- Enablers – what can we do to change things?

What is ICMP?

“An approach which recognises the catchment or river basin as the appropriate organising unit for research on ecosystem processes for the purpose of managing natural resources in a context that includes social, economic and political considerations”

- *Bowden (1999)*

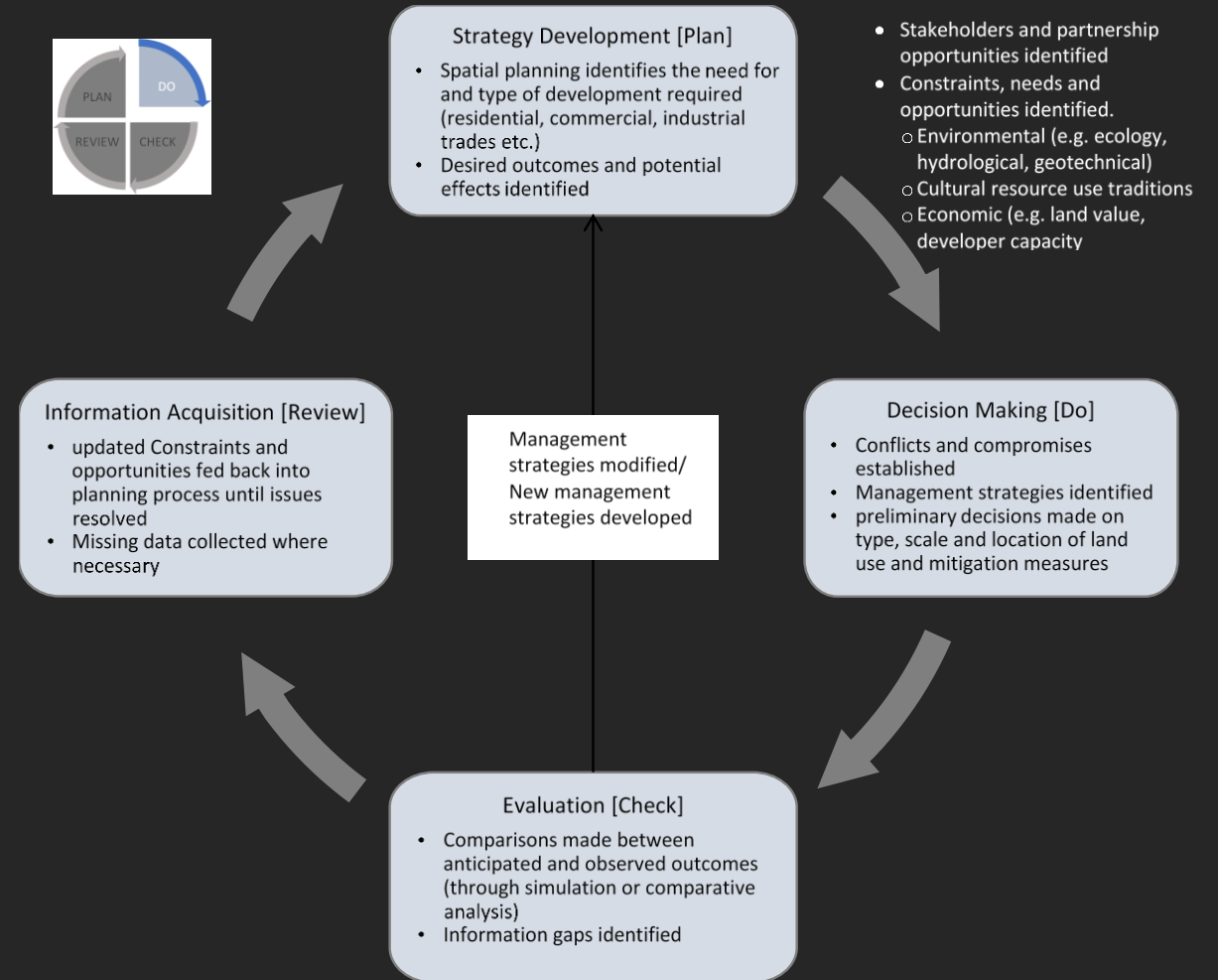
- ICMP ≠ CMP ≠ SWMP

Principles

- Systems based – interactions and interdependencies
- Integration – issues addressed collectively
- Partnerships – agreed common objectives
- Balance – sustainable outcomes

Process

- Outcome based
- Early identification of constraints and opportunities
- Integration
- Monitoring and feedback
- Collaborative, adaptive and iterative



Scale and boundaries

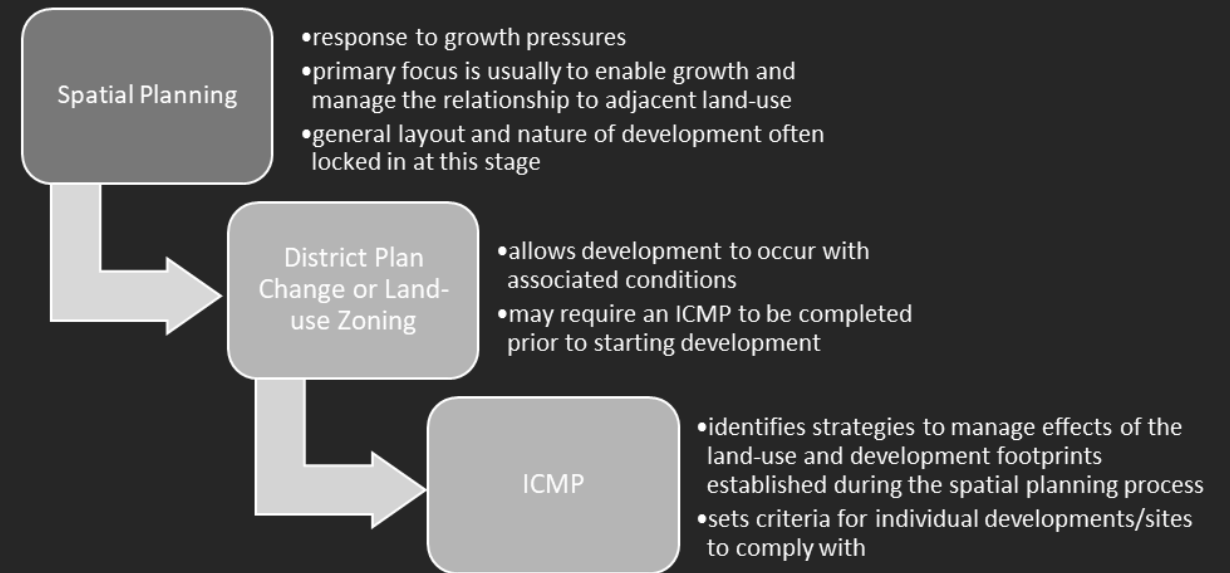
- Multi-scalar
- Spatial and temporal considerations
- Catchment specific within wider context
- Top down meets bottom up

	Macro level	Meso level	Micro level
Natural system and resources	Part of a geographical zone such as a river basin or different ecological zones	Regional or local ecological resource system	Areas with relatively uniform ecological conditions
Mapping scale	>1:500,000	1:100,000–1:500,000	1:10,000 - 1:1,000
Mapping unit	Connected rivers, aquifer, estuarine and coastal systems ('harbour catchments')	River and coastal catchments, Aquifers	Subcatchments; specific estuary, wetland or ecological assets
Level of decision-making	National level/Inter-regional	Regional level	Local level and individual
Lead organisation examples (NZ Context)	Central Government	Regional Councils	Territorial Authorities and/or private sector
Relevant Documents (NZ Context)	National Environmental Standards National Policy Statements	Regional Policy Statements River Management Plans Integrated Catchment Management Plans	Catchment Management Plans SW Management Plans Structure Plans
Mechanisms (NZ Context)	Resource Management Act	Regional Plans	Resource Consents District Plans

Adapted from Peeney & Gustafson (2010)

Current issues

- Linear approach with limited/no feedback mechanisms
- Silos – limited interaction between disciplines
- Often happens late in the process
- Narrow focus ignores wider context



Barriers

- Misconceptions – ICMP is not just about managing stormwater
- Terminology – many ICMPs are not ICMPs
- Pace of growth and development
- Lack of clear direction and support to implement ICMP
- Limited institutional capacity
- Reliability and availability of data
- Knowledge management

How can we can do better

- Elevate ICMP status – provide clear mandate and support
- Agree on key principles, framework and methodology
- Monitor against objectives
- Improve collation, curation, management and sharing of data

The challenge

- This is a BIG challenge but too important for the too-hard basket
- Structural change takes time but modifying your own approach does not
- Collaborate / think / talk / adapt

Acknowledgements

All those who have attempted to generate momentum towards improved integrated catchment management.

Discussion

Now it is your turn