

Management of diffuse discharges from rural land – the Otago story

Fraser McRae

Planning is about changing behaviour

Planning is about changing people's behaviour through the imposition of community norms using incentives for them to change how they undertake forest planting, tending and harvesting activities. This includes rules, advice, education and financial assistance.

People resist change for some very simple reasons so there are few levers for government, councils and others to use. At the start, people are either unwilling or unable to change their actions. First, an unwillingness to change arises from not caring about or knowing about the bad effects of current activities – rules and positive information address these matters. Second, being unable to change arises from system complexity and affordability – advice and cost sharing address these factors. Collectively, rules only deal with some of the reasons for continued poor practice while other reasons can be addressed without rules – nowadays there is more regulation and less assistance.

Within the Resource Management Act 1991 there are two conflicting worldviews (cultural-ethical and rational-scientific) and these set the context for planning. While the rational-scientific view, following our head, sets limits and standards to define problems and address negative effects, the cultural-ethical view, following our heart, uses values described using reference to our senses – touch, look, feel and smell. We need to understand the nature of problems before we can agree on a solution.

The Otago approach

The Otago Regional Council (ORC) approach to managing the effects of land use on water quality follows a simple model – one based on sports. For every game there are rules and strategies, but these do not set the score. This approach raises the question – why should rules with the purpose of controlling land use achieve good water quality outcomes? Using this approach the ORC used its regulatory regime to address the quality of discharges, including diffuse discharges, leaving land and entering surface water bodies.

Construction behind approach

Taking an effects-based approach to the regulation of water quality has the benefits of:

- Minimising the individual and community costs of water management

- Promoting personal responsibility for causing and correcting poor water quality leaving a site
- Creating opportunity for innovation in site management to address the discharge of poor water quality
- Recognising and retaining property rights related to a site
- Reducing regulation.

In combination this approach and benefits encourage land managers to proactively address potential concerns before they become major issues. Planning needs to focus on matters having the greatest positive effects.

Regulatory regime

Regulatory regimes vary from compliance promotion through to enforcement-focused, meaning doing the right thing for the right reason and not doing the minimum to avoid enforcement. Also, the compliance approach carries a high degree of trust between the council and the community as it heavily relies on permitted activities with conditions rather than consents. In Otago a permitted activity-based regime is supported by consenting for both the short and long term, and ultimately the prohibition of gross behaviour effects.

Regulatory objective

The Otago regulatory regime seeks to:

- Maintain good water quality
- Improve degraded water quality
- Encourage private ownership of solutions to discharging poor water quality.

Regulatory provisions

Within the Otago water plan, good water quality is described in Schedule 15 using qualitative characteristics such as clarity, colour, smell and appearance – all culturally derived descriptors meaning we can assess them in the field using our senses of touch, look, feel and smell. (Note that sediment is referred to elsewhere in the plan.) Based on these characteristics, Schedule 15 also sets in-stream quantitative limits for contaminants – nitrogen, phosphorus and *E. coli*. Problems and

solutions are derived from our hearts but they are underpinned by our heads.

Schedule 16, referred to in the discharge rules, provides compliance concentration thresholds for permitted activity discharges. Permitted sediment discharge is managed through the absence of any visible plume. This planning approach encourages people to do the right thing and enables them to find solutions that suit the activity on their site.

The rules we need to know

Forestry activities are permitted if discharge to water and to land is likely to enter water, but only if contaminant concentrations comply with threshold values, no visual plume occurs, and crossings do not cause damming, erosion or obstruct fish passage.

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Maximising ocean freight supply chain collaboration

David Ross and Andrew Chatfield

Improved freight supply chain

New Zealand’s forestry industry, the number three primary export earner behind dairy and meat, is set to benefit from a more sustainable, secure and efficient ocean freight supply chain. International market conditions play a key role in determining the prosperity of our forestry and processed timber industry and one way to protect exporters against market fluctuations is building a sustainable supply chain.

New Zealand exporters compete with other major international companies from other nations who ship their cargo more cost-effectively into key markets such as Asia and the Middle East. It is critical that we find innovative solutions to build scale into the supply chain to ensure our exporters remain competitive on the global stage.

Table 1. NZ’s ocean freight challenge

	Million TEU
Global main trade flows	
Asia – North America	24
Europe – North America	6
Asia – Europe	22
NZ main trade flows Westbound	
NZ – Rest of world (Middle East, Europe and Africa)	0.4
NZ – Asia (North and South East Asia)	0.8
NZ – Australia	0.4
NZ secondary trade flows Eastbound	
NZ – Americas	0.2

Data source: Kotahi estimates based on FIGS and industry analysis