



Audited Self-Management – A More Effective Approach to Improve Compliance

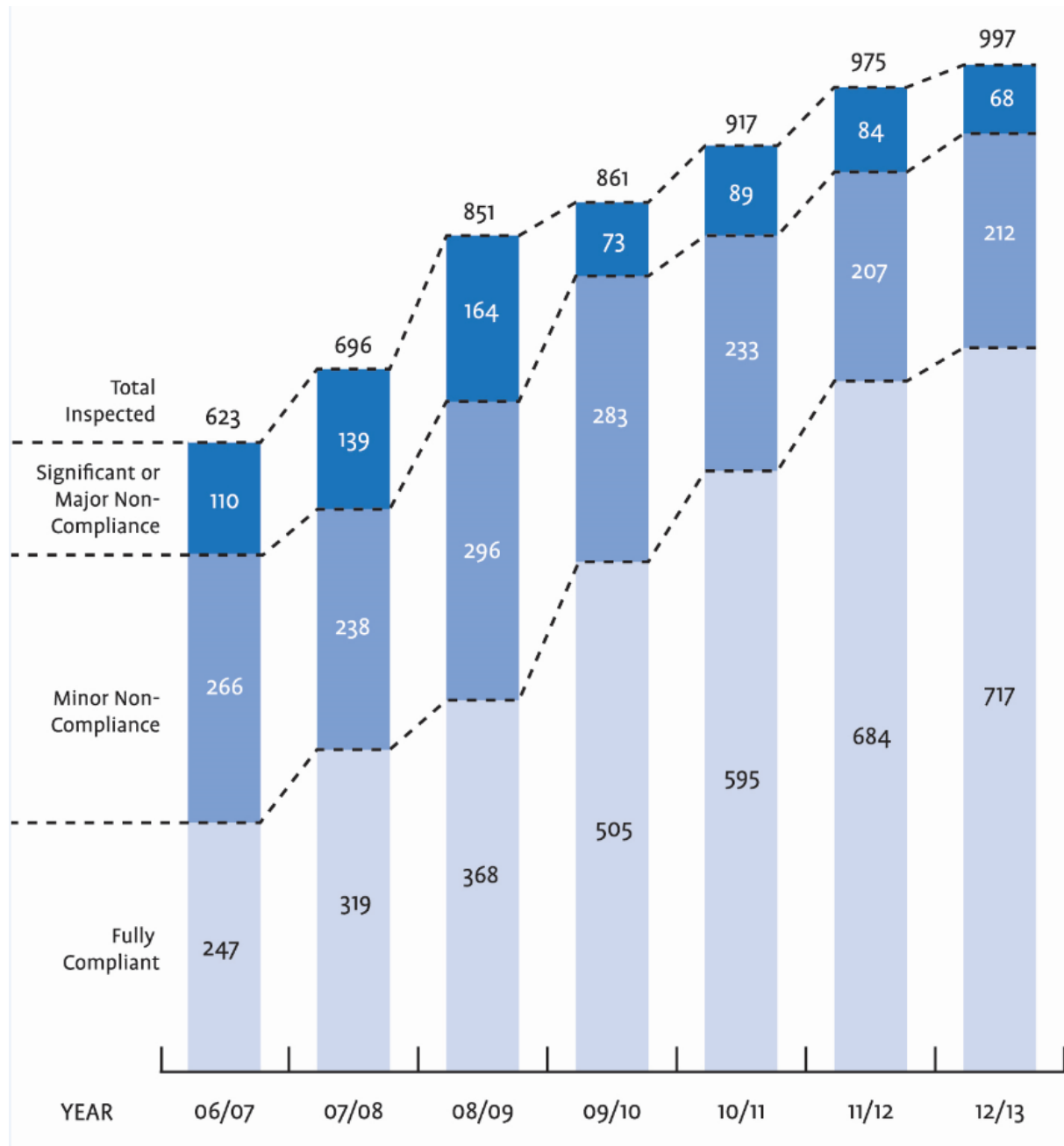
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PROBLEMS WITH COMPLIANCE AND ENFORCEMENT

A key component of environmental management is achieving compliance with conditions associated with consents and licences. The traditional approach has been for regulators to define conditions and inspect to assess compliance. However, compliance with conditions is less than 100% - even with regular inspection. Figure 1 shows the example of dairy farm compliance in Canterbury where every dairy farm was inspected every year.¹ While there is some reduction in non-compliance, there is still considerable occurrences of major and minor non-compliance. Enforcement actions against non-compliance have been limited. Conditions provide no incentive for improved performance. There is also appreciable resentment of regulatory inspections and punitive enforcement. The nature of inspection and enforcement leads to an adversarial relationship between regulators and consent holders.

¹ Burns M (2013) Canterbury Region Dairy Report 2012-2013 Season. Environment Canterbury, Christchurch

Figure 1: Results of Initial Compliance Inspections of Dairy Farm Consents in Canterbury



PROBLEMS WITH THE CUMULATIVE EFFECTS OF DIFFUSE SOURCES

With land use intensification in Canterbury, there has been an additional challenge managing diffuse discharges to surface and ground water.² This requires a high standard of land use management practices that are difficult to define as compliance conditions. Furthermore, the environmental outcomes being sought relate to water quality in downstream rivers and lakes. This involves management of cumulative effects of multiple properties in upstream catchments in circumstances where it is difficult to determine the contribution of individual sources.

PROBLEMS WITH SELF-REGULATION

The concern about the water quality degradation associated with dairy farms led the dairy industry to introduce a voluntary initiative to reduce water quality impacts – the Dairy and Clean Streams Accord.³ This resulted in some on-farm improvements. However, the targets set in the Accord were not met and there was over-reporting of achievements. Furthermore, water quality continued to deteriorate.⁴

The outcome is consistent with Gunningham's analysis of Responsible Care – an international programme of the chemical industry. Gunningham identified three problems with self-regulation: (1) an assurance problem – an industry concern that competitors would not comply, (2) a collective action problem – the industry council was unwilling to impose sanctions on non-compliance, and (3) a credibility obstacle – there was a lack of public acceptance of the approach.⁵

AUDITED SELF-MANAGEMENT AS AN ALTERNATIVE MEANS OF COMPLIANCE

The alternative concept of audited self-management (ASM) was originally developed in Western Australia with the introduction of monitored and best practice licences. The environmental performance requirements were set by the regulator (to address the assurance problem) but industry could determine how to meet the requirements. Industry was required to have an environmental management system (EMS) with independent certification. Industry was required to undertake measurements to demonstrate environmental performance requirements had been met with the measurements audited by an independent auditor (to provide a basis for addressing the collective action problem). The results of the measurements were to be publicly reported (to address the public credibility obstacle).⁶

² Environment Canterbury (2012) Annual Groundwater Quality Survey 2012. Environment Canterbury, Christchurch; and
Stevenson M, Wilks T, Hayward S (2010) An overview of the state and trends in water quality of Canterbury's rivers and streams, Environment Canterbury, Christchurch

³ Fonterra Co-operative Groups, Regional Councils, Ministry for the Environment, Ministry for Agriculture and Forestry (2003) Dairying and Clean Streams Accord.

⁴ Deans N, Hackwell K (2008) Dairying and Declining Water Quality: Why has the "Dairying and Clean Streams Accord" not delivered cleaner streams? Fish & Game and Forest & Bird, Wellington

⁵ Gunningham N (1995) Environment, Self-Regulation, and the Chemical Industry: Assessing Responsible Care. *Law & Policy* 17:57-109

⁶ Jenkins BR (1996) Best Practice Environmental Regulation - The Western Australian Approach. Paper presented at the Environmental Management Beyond 2000, Griffith University, Brisbane, 5-6 December 1996

APPLICATION OF ASM TO WATER QUALITY MANAGEMENT IN CANTERBURY

In the application of ASM to diffuse source management in Canterbury, the main operational elements are having farmers adopt good management practice, setting nutrient contaminant limits with respect to rivers and lakes, linking these river and lake limits to catchment nutrient loads, and, allocating the catchment loads among existing users while trying to create headroom for new users. The primary governance element is the establishment of farmer collectives based on irrigation districts or tributary catchments. Collectives need an approved Environmental Management System (EMS) that defines water quality outcomes for the collective consistent with regional plan requirements. The EMS also requires an inventory of nutrient loss rates, identification of the nutrient risks and how those risks will be managed including a statement of best nutrient management practices. The EMS also defines the contractual arrangements with members including a Farm Environmental Plan (FEP) consistent with the EMS, and, how the FEPs will be audited and compliance achieved. The FEP must address irrigation management, soils management, nutrient management, effluent management as well as wetland and riparian management. The compliance approach includes an audit process of assessing performance against FEP management actions and outcomes at the individual property level. The EMS sets out the record keeping requirements, how audit results will be fed back to members and shared with the wider community, and how issues of deficient performance are to be managed.⁷

ACTIONS NEEDED TO IMPLEMENT AUDITED SELF-MANAGEMENT

This paper advocates an alternative to the traditional approach of the regulator setting conditions and undertaking inspections for compliance. Audited self-management puts the onus on the consent holder to define the practices (e.g. in their farm environmental plan in the Canterbury example) to meet the environmental outcomes defined by the regional strategy. It encourages innovation rather than just compliance with regulator-determined requirements. It gives consent holders greater ownership of the environmental management approach because they have been involved in its development (rather than being imposed by the regulator). This flexibility has been welcomed by farmers and led to some novel changes in land use practice.

It is not self-regulation. The safeguards in the system include the requirement to indicate how the management practices will achieve the environmental outcome which is independently audited, the monitoring of the implementation of the management practices, the monitoring of the environmental outcomes which is independently audited, and the public reporting of the monitoring. The added complexity of diffuse source management for downstream water quality requires a collective responsibility of farmers in the catchment.

For central government, there is a need to consider legislative change. In the Canterbury example, most of the components are external to the Resource Management Act. Consideration needs to be given to how collective responsibility of individual consent holders is given statutory backing.

For regional government, ASM has led to collaboration with industry to define good management practice to provide guidance to individual farmers of possible methods to

⁷ Jenkins BR (in press) Water Management in New Zealand's Canterbury Region: A Sustainability Framework, Springer, Dordrecht.

adopt. It also requires setting up a certification scheme for practitioners. Regional plans have had to be revised to incorporate ASM.

For consent holders, it requires a greater responsibility for incorporating environmental management into their land use practices while providing greater flexibility in how outcomes can be achieved. It also requires them to monitor the environmental outcomes and get direct feedback on their environmental performance (rather than just intermittent inspections by the regulator). For industry, it has required defining what is good environmental management practice.

For farmer collectives, there is a whole new way of working with collective responsibility for environmental outcomes and establishing contractual arrangements with collective members. It also requires them to consider how to manage deficient performance of their members.

For NGOs, it provides public reporting of consent holder performance.

For environmental professionals, it creates new roles in developing environmental management systems for consent holders or farmer collectives, developing environmental management plans, monitoring of environmental outcomes, and, auditing EMSs, FEMPs and monitoring.

For EIANZ, it creates the opportunity for certification of environmental professionals for EMS preparation, FEP preparation, monitoring and auditing.

AUDITED SELF-MANAGEMENT

A MORE EFFECTIVE WAY FOR ACHIEVING COMPLIANCE

EIANZ Annual Conference 2017, Wellington

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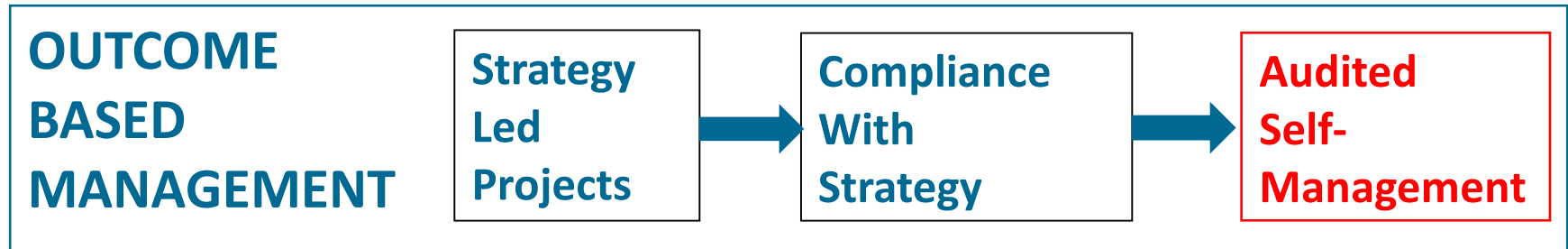
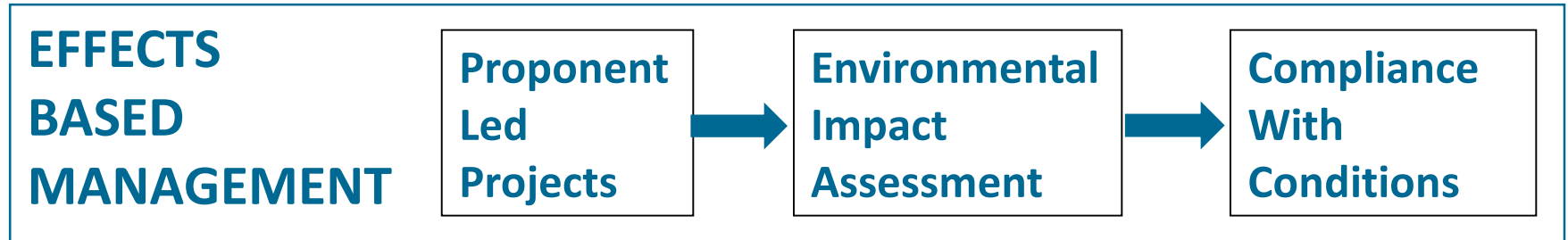


PRESENTATION

- Problems with compliance and enforcement as a component of effects-based management
- Problems with management of diffuse sources from land use intensification in Canterbury
- Problems with industry self-regulation as a means of compliance
- Audited self-management as an alternative means of achieving compliance through outcome-based management
- Application of ASM to water quality management in Canterbury
- Actions needed to implement ASM

EFFECTS BASED AND OUTCOME BASED MANAGEMENT

PROBLEM: Effects-based management is not delivering environmental outcomes



SOLUTION: Output-based management which needs a different approach

PROBLEMS WITH COMPLIANCE AND ENFORCEMENT

- Compliance with conditions less than 100%
- Enforcement actions against non-compliance have been limited
- Conditions provide no incentive for improved performance
- Resentment of regulatory inspections and punitive enforcement
- Adversarial nature of inspection and enforcement

SPECIAL PROBLEM OF CUMULATIVE EFFECTS OF DIFFUSE POLLUTION

- Multiple sources over large area
- Difficult to attribute contribution of individual sources

HIGH PROFILE EXAMPLES OF COMPLIANCE PROBLEMS

- Compliance monitoring in Murray-Darling Basin
 - evidence of significant non-compliance
 - no enforcement action
 - ABC exposé led to Director resignation and review calling for stricter enforcement
- Compliance monitoring of vegetation clearance in NSW
 - farmer prosecuted for illegal clearing
 - farmer shot compliance officer inspecting further illegal clearing
 - farmer convicted of murder
 - NSW legislation changed to farmer self-assessment of clearing

LAND USE INTENSIFICATION IN CANTERBURY

- Five-fold increase in irrigated area for dairy conversions
- Cumulative effects of land use intensification on water quality

Poor consent compliance for dairy farms

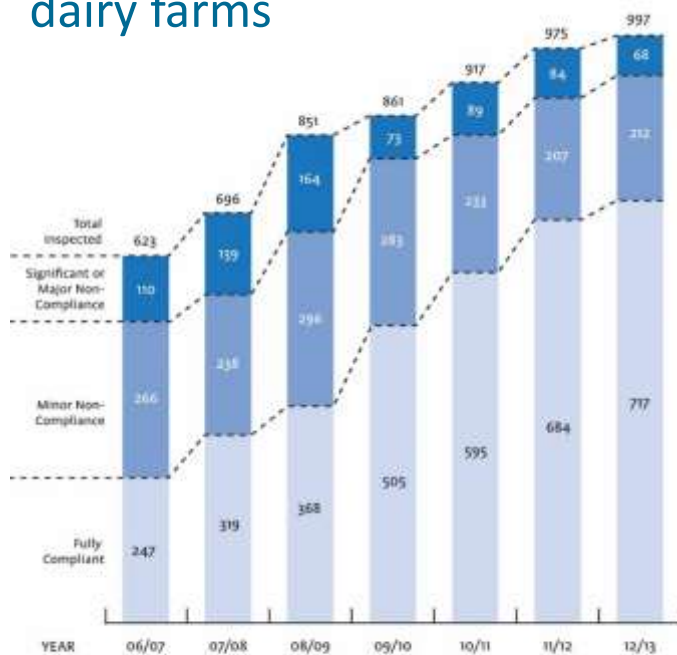
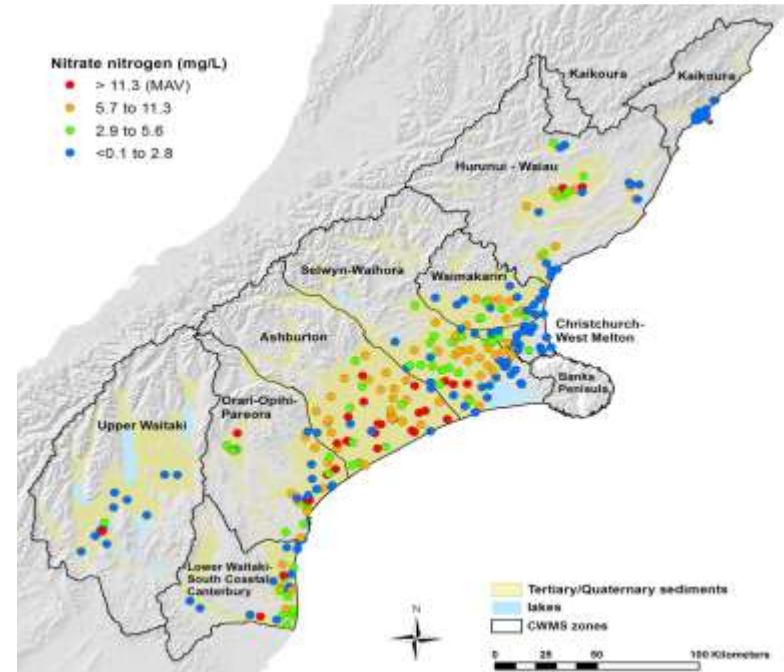


Fig. 8.1 Results of initial Compliance inspections of Dairy Farm Consents in Canterbury from 2006/7 to 2012/13 [Source: Environment Canterbury, 2013]

Water quality deterioration



PROBLEMS WITH SELF-REGULATION

- Dairy and Clean Streams Accord
 - voluntary initiative of dairy industry to reduce water quality impacts
 - improvements on farm and support by industry
 - targets not met and over-reporting of achievements
 - water quality continued to deteriorate
- Gunningham review of Responsible Care
 - international programme of chemical industry for self-regulation
 - assurance problem: industry concern that competitors won't comply
 - collective action problem: industry council unwilling to impose sanctions
 - credibility obstacle: lack of public acceptance of approach

CONCEPT OF AUDITED SELF-MANAGEMENT

- Environmental outcomes set by regulator
- Industry able to determine how to meet requirements
- Requires environmental management system with independent certification
- Requires environmental measurement and audit by independent auditor
- Requires public reporting of performance

APPLICATION OF ASM AT CATCHMENT SCALE

- Reliance on property scale controls insufficient
- Need for catchment scale integration
- Measurement of diffuse sources difficult: estimation by modelling land use practices
- Prescribing management practices difficult: matrix of good management defined
- Use of collaborative multi-stakeholder process to define environmental outcomes for rivers and lakes
- Use of farmer collectives for tributary catchment or irrigation scheme management

OPERATIONAL ELEMENTS OF ASM FOR NUTRIENT MANAGEMENT

- **Farmers adopt good management practice**
- **Setting nutrient contaminant limits for rivers and lakes**
- **Linking river and lake catchment limits to catchment nutrient limits**
- **Allocating catchment loads among existing users and creating headroom for new users**
- **Farmer collectives based on irrigation districts or tributary catchments**
- **Collective EMS defines water quality outcomes and how risks will be managed**
- **Members develop EMPs consistent with EMS and how compliance will be achieved**
- **Audit of actions taken and outcomes achieved**
- **Audit results to members, regulator and public**
- **Management of inadequate performance**

ACTIONS NEEDED TO IMPLEMENT ASM

Legislator	Revise legislation to allow ASM as alternative to consent conditions
Regulator	Collaborate with industry to define good management practice Provide guidance to consent holders of possible management improvements Certification scheme for auditors Regional plans to prescribe ASM as alternative to consent conditions
Consent Holders	Responsible for incorporating environmental outcomes into management practice Responsible for monitoring environmental performance
Industry	Collaborate with regulator to define good management practice Prepare guidance documents for good management practice

ACTIONS NEEDED TO IMPLEMENT ASM

Consent Holder Collective	Collective responsibility for environmental outcomes through EMS Contractual arrangements with consent holders for environmental outcomes Manage poor performance of individual consent holders
Public/NGOs	Access to public reporting of consent holder performance
Environmental Professionals	Develop EMSs for consent holder collectives Develop environmental management plans for consent holders Monitor environmental outcomes Auditing of EMSs, EMPs and monitoring
EIANZ	Certification of practitioners for EMS, EMP, monitoring, auditing