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HOW TO ACHIEVE SUSTAINABLE FRESHWATER
USE IN VINEYARDS. MARLBOROUGH: A CASE
STUDY

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requirements for the degree of Master of Resource and
Environmental Planning at Massey University

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ABSTRACT

Much public attention has been given lately to the concept of sustainability, a notion which is increasingly viewed as a desirable goal of viticulture development and environmental management. The emergence of the sustainability concept has seen a concomitant rise in the interest of its measurement. It has been suggested that through the analysis of regulatory and non-regulatory methods, the attainment of how sustainable freshwater use in vineyards can be assessed.

Regulation has to date been the policy tool of choice in regards to environmental protection. While regulation is often necessary, non-regulatory approaches may, in some circumstances, serve as useful supplements to an effective regulatory regime.

There are a number of stages to achieving the aim of this research. The first is designed at galvanising New Zealand's will to stride out down the sustainability road through the development of the sustainable vineyard concept. Investigations into regulatory freshwater policies were undertaken to assess the relative efficacy of such methods in guiding vineyards in sustainable freshwater use. The research then explored the elements of freshwater use as they relate to non-regulatory methods for achieving sustainable environmental outcomes. Qualitative research was undertaken through the instigation of an email questionnaire and semi-structured interviews to provide an understanding of freshwater use in vineyards within Marlborough.

The research focuses on the discussion of the methodological considerations which are important in developing a working framework for assessing how vineyards achieve sustainable freshwater use. The ideal properties and characteristics of sustainability are identified and critically examined. An evaluation of the different types of regulatory and non-regulatory policies on freshwater management are considered. Both regulatory and non-regulatory methods were seen to be significant in developing an operational framework, as they are capable of representing the management of freshwater use and sustainability practices in vineyards.

It is observed that the policy goal of both regulatory and non-regulatory organisations in achieving sustainable freshwater outcomes generally cannot be attained to the full satisfaction of all the dimensions of sustainability. Rather, sustainable freshwater use could be considered as a 'road' and not a fixed destination. Along the way, trade-offs and balances have to be made. It is up to individual vineyard managers to weight the various alternatives, with the policy and decision makers providing information upon which rational choices can be based.

This research demonstrates the efficacy of regulatory and non-regulatory methods in guiding sustainable environmental outcomes. It appears that the 'ideals' of policies, as outlined in the literature and data collected, recommend an overall adaptive management approach if achieving sustainable freshwater use is the ultimate goal.

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ABBREVIATIONS

BIAC	Business and Industry Advisory Committee to the OECD
EEC	European Economic Community
EUREP-GAP	European produce retailers-good agricultural practice
IUCN	International Union for Conservation of Nature and Natural Resources
MDC	Marlborough District Council
MfE	Ministry for the Environment
MUIED	Massey University Institute for Executive Development
NGO	Non Government Organisation
NWASCA	National Water and Soil Conservation Authority
OECD	Organisation for Economic Co-operation and Development
RMA	Resource Management Act 1991
RPS	Regional Policy Statement
SCRCA	Soil Conservation and Rivers Control Act 1941
SFR	Sustainable Flow Regime
SWAG	Sustainable Winery Advisory Group
SWNZ	Sustainable Winegrowing New Zealand
WARMP	Wairau/Awatere Resource Management Plan
WCED	World Commission on Environment and Development
WCS	World Conservation Strategy
WINZ	New Zealand Winegrowers
WSCA	Water and Soil Conservation Act 1967