



An Australian Government Initiative



Market-based tools for environmental management

Proceedings of the 6th annual AARES national symposium 2003

**A report for the RIRDC/Land & Water Australia/FWPRDC/MDBC
Joint Venture Agroforestry Program**

Edited by Stuart Whitten, Marc Carter
and Gary Stoneham

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Foreword

The potential of market-based instruments is increasingly being considered in the debate about the appropriateness of alternative options for management of natural resources and the environment. More particularly, there is a growing interest in creating market-like mechanisms to manage environmental outputs at the lowest economic cost. With this focus comes a need to build capacity in communities, government and research organisations as to how, when and where these tools should be applied.

To meet this need, the Australian Agricultural and Resource Economics Society, with the generous support of sponsors, organised a two-day symposium focusing on market-based instruments that was held 2-3 September 2003 at CSIRO Discovery Centre in Canberra. Contributors included individual members of the Society, invited speakers and authors of poster papers. Each of these contributors gave a great deal of their time to prepare and present a series of papers of the highest quality which have been captured in this edited volume of proceedings from the symposium. Where papers were not available, or the level of interest merited additional information, the editors have sourced additional papers together with more complete papers from the winners of poster paper prizes at the symposium.

I would like to commend and thank the AARES organising committee (and editors of this volume). The committee was chaired by Dr Stuart Whitten (CSIRO Sustainable Ecosystems), and comprised Mr Marc Carter (Environmental Economics Unit, Australian Government Department of Environment and Heritage) and Mr Gary Stoneham (Victorian Department of Primary Industries). The conference organiser was All Occasions Management. Together they have done an excellent job in constructing an outstanding program that has resulted in the high quality papers published herein.

These proceedings were funded by the Joint Venture Agroforestry Program (JVAP), which is supported by three R&D Corporations - Rural Industries Research and Development Corporation (RIRDC), Land & Water Australia, and Forest and Wood Products Research and Development Corporation (FWPRDC), together with the Murray Darling Basin Commission (MDBC). These agencies are funded principally by the Australian Government.

This volume, a new addition to RIRDC's diverse range of over 1000 research publications, forms part of our Agroforestry and Farm Forestry R&D program, which aims to integrate sustainable and productive agroforestry within Australian farming systems.

Most of our publications are available for viewing, downloading or purchasing online through our website:

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Simon Hearn

Managing Director

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Market-based tools for environmental management : The 6th annual AARES national symposium, September 2003

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Acknowledgements

On behalf of the Australian Agricultural and Resource Economics Society, the Symposium Organising Committee; Stuart Whitten (CSIRO Sustainable Ecosystems) Marc Carter (Environmental Economics Unit, Dept. of Environment and Heritage) Gary Stoneham (Victorian Dept of Primary Industries); wish to thank the Symposium sponsors; listed on page *iv*; the assistance of: Professor Jeff Bennett, Colin Mues, Cathryn Geiger, Heather McGilvray, Martin van Bueren, Wendy Proctor, Dave Shelton and Mandy Yialeloglou; and all participants and speakers at the symposium.

Abbreviations

BMP	Best Management Practices
CO ₂	Carbon dioxide
COAG	Council of Australian Governments
CRP	Conservation Reserve Program
DIPNR	Department of Infrastructure, Planning and Natural Resources
EBI	Environmental Benefits Index
EPA	Environmental Protection Agency
FI	Flexible Incentives
HRSTS	The Hunter River Salinity Trading Scheme
LMT	Land Management Tender
LPCIS	Liverpool Plains Catchment Investment Strategy
LPLMC	Liverpool Plains Land Management Committee
MBI	Market-based instruments
MRET	Federal Mandatory Renewable Energy Target
NAPSWQ	National Action Plan for Salinity and Water Quality
NEM	National Electricity Market
NGAC	NSW Greenhouse Abatement Certificates
NHT	Natural Heritage trust
NRE	Natural Resources and Environment (Victorian Department of)
OC	Opportunity Cost
OECD	Organisation for Economic Co-operation and Development
P-NP	Point, non-point
PPA	Power Purchase Agreement
PRC	Pollution reduction credits
REC	Renewable Energy Certificate
RECLAIM	Regional Clean Air Incentive Market
SO ₂	Sulphur dioxide
WTP	Willingness-To-Pay

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