

A voluntary Australian land management certification system

by Tony Gleeson

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Foreword

The adverse impacts of agriculture on the environment are well documented, in fact most have been known for many decades; and yet in spite of much heralded efforts to redress these impacts land condition continues to deteriorate in many situations.

We need to test new approaches.

This publication explores the implementation of a voluntary national land management certification system.

The project findings show that there is a broadly based support for the introduction of such a system and that representatives of a wide array of organisations agree on the basic design features of such a system.

The project was initiated in the context of RIRDC providing advice to the Parliamentary Secretary on the EMS Pathways program and related matters. It was supported from RIRDC Core Funds provided by the Australian Government.

This report, an addition to RIRDC's diverse range of over 1,200 research publications, forms part of our Resilient Agricultural Systems R&D program, which aims to focus on solutions that cross industry sectors.

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

- downloads at www.rirdc.gov.au/fullreports/index.html
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Peter O'Brien

Managing Director

Rural Industries Research and Development Corporation

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Thanks also for the inputs over many years of Liz Dalley - hers are the greatest - but also those of Alex and Cameo Dalley, Peter McInnes, John Kerin, Brian McGuirk, Bob Dun, Gordon Gregory, John Kennedy and my much missed friend, Geoff Jackson; and more recently from the ALMS Ltd Board, particularly Jock Douglas and Bruce Munday. These people gave me the space to think.

'I think it is important to be idle - people who keep themselves

busy all the time are generally not creative.

So I am not ashamed of being idle'

Mihaly Csikszentmihalyi

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Executive Summary

What the report is about

This report describes and extends discussions at a forum on the need for and the design of a voluntary Australian land management certification system. The forum was held on the 9th May 2006 in Canberra.

What we did

We provided a loosely structured forum to enable people committed to improving environmental outcomes to talk.

Into this forum we injected ideas from our experience in designing and testing a land management certification system, the Australian landcare management system (ALMS). Additionally we demonstrated the utility of using a web based planning and information management tool to assist in the development, maintenance and auditing of such systems and in the collation and dissemination of information arising from environment management systems.

After the forum we moulded ideas from the forum into steps for implementing a voluntary Australian land management certification system. These steps reflect our extensive practical land management and policy development experiences and our previous work on the nature of creativity, on institutional constraints on creativity, on how innovation occurs and on how people manage complexity in a variety of situations, including in land management.

The forum

The forum was convened by Australian Landcare Management System Ltd (ALMS Ltd) to further consider the implications of earlier work by ALMS Ltd and other organisations. Forum participants were asked to consider the implementation of a voluntary Australian land management certification system or systems.

The forum was opened by the Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry, Ms Sussan Ley MP, who was introduced by the Member for Maranoa, Mr Bruce Scott MP.

Forum participants included progressive landholders and representatives of environmental organisations, government agencies, universities and agribusiness. A list of forum participants is included in Appendix 1.

On the days before and after the forum, in Canberra and Sydney respectively, ALMS Ltd provided an open opportunity for interested individuals and organisations to attend seminars at which the proposal for the certification system was presented. About 60 people attended those seminars.

Context

Improving global environmental outcomes is now a prime focus for policy and practice development in the private, public and community sectors. Understandably the management of our environmental impacts in rural Australia is included within this broader context leading to massive increases in the volume of environmental regulation, the number and costs of support programs and to organisational experimentation, as in the establishment of catchment management authorities throughout Australia.

Notwithstanding these initiatives the continuing deterioration in the ecological condition of much of rural Australia necessitates that, as land managers, we continue to seek insightful ways to better manage our environmental impacts. This is why landholders established the not-for-profit company, Australian Landcare Management System Ltd (ALMS Ltd).

The thinking within the Board of ALMS Ltd is fairly straightforward, and it goes along these lines.

Land managers need to improve environmental outcomes by strengthening the positive environmental impacts and by reducing or abolishing the negative impacts of their activities.

ALMS Ltd is committed to assisting land managers meet this challenge by developing practical and effective management systems and tools and through enabling greater recognition for improved land management.

ALMS Ltd now has a management system and tools that work reasonably well. However there is a critical need for greater recognition for improved land management. This is why ALMS Ltd convened this forum on the implementation of a voluntary Australian land management certification system.

Implementation of a voluntary land management certification system is one of the keys to improving environmental management as it will unlock existing drivers and enable new drivers to emerge for improving land management. In this way it will strengthen the motivations and capabilities of land managers to improve environmental outcomes.

Previous work

Previous work by ALMS Ltd has resulted in:

- development of an externally audited Australian land management system (ALMS) based on the internationally accepted ISO 14001 set of environment management standards and on consideration of catchment level priorities and strategies and requirements in relation to biodiversity conservation
- development and testing of tools to facilitate the implementation of ALMS, including the web based software tool, *myEMS*, a specialised training process termed the "*ALMS Clinic*", and certification and compliance audit procedures
- implementation of ALMS by six groups of landholders in Queensland, Victoria and South Australia. ALMS Ltd will have about 65 landholders with Eucalyptus category certification, one of three ALMS membership categories, by the end of July 2006
- clearer understanding of the opportunities and constraints to developing alliances between organisations with charters to improve environmental outcomes
- knowledge that the lack of drivers for improved land management is a major constraint to landholders investing in systems to improve environmental outcomes, and
- understanding that many of the commercial and non-commercial drivers for improved land management will not operate effectively or quickly without a system to credibly recognise improved land management.

It is beyond the scope of this project to review all relevant past and continuing work. However whilst ALMS is unique in some design and operational aspects the positions reached on many issues by ALMS Ltd also are evident for instance from the Watermark Environmental Stewardship Project and the Gippsland and North East Catchment Management Authority EMS programs.

In fact there is much common ground.

We know that land managers who wish to improve environmental outcomes can implement a certifiable land management system. We know that many more would do it, and stay doing it, if the rewards were more tangible. We know that such rewards are far less likely to be realised if there is no credible system to recognise improved land management.

But what we do not know is whether we are able to manage the political, policy, organisational and financial constraints to implementing such a system; and that now is our challenge.

The forum

All invitees to the forum either participated or indicated that they would have had they been able. Organisations were represented at senior levels.

It was not possible to accommodate all groups currently involved in environment management system programs. However the managers of current environment management programs were invited and participated.

Forum participants contributed constructively, at times forcefully, and there was a strong indication that participants wished that action would follow the forum.

The conclusions of the forum are as follows:

Is there a need for recognition of improved land management?

Forum participants **concluded** that a credible voluntary Australian system for recognising improved land management should be implemented so as to enable existing drivers for improving land management to operate more effectively and to enable the development of additional drivers.

Upon what basis should improved land management be recognised?

Forum participants **concluded** that the basis for certification adopted by ALMS Ltd (ISO 14001 management process standards combined with requirements to take account of catchment priorities and strategies and to support biodiversity conservation) is appropriate with the qualification that more work needs to be done to refine ways of incorporating catchment and biodiversity considerations.

Should the recognition system be common across industries?

Forum participants other than representatives of the Department of Agriculture Fisheries and Forestry **concluded** that environmental certification system(s) should be implemented across industries and other land uses.

Should the recognition system be restricted to improved land management?

Forum participants other than representatives of the Department of Agriculture, Fisheries and Forestry concluded that a system or systems for recognising improved land management should be restricted to environmental management issues and not include other facets of property management. However forum participants also concluded that there should be further consideration of how best to link occupational health and safety management systems with environment management systems.

What is the plan for the implementation of a voluntary national system to certify improved land management?

Forum participants **concluded** a voluntary land management certification system is needed now and that an implementation plan should be developed that, amongst other things, identifies the roles of

catchment management authorities, industry organisations, research and development corporations and other public, private and community sector organisations and the extent and sources of funding.

The next steps

Forum participants from a broad spectrum of organisations and backgrounds agreed on the need to establish a voluntary Australian land management certification system. This needs to be seen as a significant initiative requiring support from a range of organisations and from landholders themselves. However it should be relatively easy to implement because it is timely, it is voluntary, we know we can do it and it would have significant commercial and public benefits and broad community and political appeal.

Continuous improvement is a key feature of environment management systems and it is a feature that should be applied to the design and implementation of a voluntary national land management certification system. Given that it is proposed that the certification system be voluntary forum participants saw no reason to delay its implementation. Participants agreed that it could be adapted to take into consideration any lessons that arise from experience in its early implementation.

Forum participants agreed that the system needs to be able to credibly improve environmental outcomes. This translates to the system being independently (third party) audited and, at least potentially, for it to lead to international recognition, this being one of several reasons to choose the requirement for ISO 14001 compliancy. Forum participants agreed that it should operate on a whole of farm basis and they agreed that its coverage should be restricted to certification of land management. They not only agreed on these issues but they also specified the reasons for their conclusions.

Given the forum conclusions as above it is **recommended** that the Australian landcare management system be accepted as the core module of a voluntary Australian land management certification system, with options being available to add to the core module by, for instance, industry organisations, catchment management authorities, other managers of environmental programs and the marketers of farm inputs and outputs.

The next step is to establish the capacity to deliver and enhance the system in consultation with the range of potential beneficiaries including land managers, catchment management authorities, marketers of farm inputs and outputs, industry organisations, research and development corporations and public sector agencies responsible for improving environmental outcomes. Whilst adoption of the certification system will require localised action it is **recommended** that a central unit be established to maintain and enhance the system.

The central unit would be responsible for the integrity and marketing of the certification system and for maintaining the tools necessary for its adoption. Furthermore it would be responsible for the sale of services, in particular information services, to all participants: to landholders, to catchment management authorities, to the marketers of farm inputs and outputs, to industry and community organisations, to research and development corporations and to public agencies responsible for improving land management. In turn each of these participant groups would have specified roles and particular requirements which will need to be negotiated.

The core module would require participating land managers to:

- develop an ISO 14001 compliant environment management system which takes account of catchment level priorities and strategies and provides support for biodiversity conservation
- to have an independent (third party) certification audit and subsequent compliance audits according to a schedule and procedure yet to be determined, and under conditions to be determined, and
- to exchange information with the central unit.

The roles and responsibilities of participating catchment management authorities, industry organisations, research and development corporations, local government, marketers of farm inputs and outputs and public sector agencies would need to be determined. However the important point is that implementing a national land management certification system requires leadership and funding at all spatial levels and across all sectors.

A central tenant of the operation of ALMS Ltd is that the information generated through the implementation of ALMS remains the property of the land manager. However for this asset to become a driver for improving land management the information has to be collated and retailed. This would be a key function of the central unit and for this and other reasons it is **recommended** that the land management certification system be owned and operated by a landholder established not-for-profit organisation similar to the existing ALMS Ltd.

Finally within its limited resources ALMS Ltd will continue to advocate the establishment of a voluntary Australian land management certification system and, to this end, it seeks partnerships with like minded organisations and individuals.

Introduction

Purpose

This is a report of a forum on the need for and nature of a voluntary Australian land management certification system.

The forum was convened by Australian Landcare Management System Ltd (ALMS Ltd)¹ to further consider the implications of environment management systems work conducted by ALMS Ltd over the past six years, and by other organisations.

On the days before the forum and after, in Canberra and Sydney respectively, ALMS Ltd provided an opportunity to attend seminars at which the proposal for the certification system was presented. About 60 people attended the seminars.

Forum participants were asked to discuss the nature of a voluntary Australian land management certification system (or systems) and what is required to implement such a system or systems.

Report structure

This report is comprised of an Executive Summary, three chapters (this introduction, forum deliberations and the next steps), references, additional publications and four appendices-a list of participants, an address by Ingrid Marshall, Group General Manager, Performance Services, Elders Australia Ltd, statistics on the industry mix on Australian farms and the ALMS Ltd glossary.

The ALMS Ltd glossary is provided to explain many of the terms used in this report.

Also available in electronic form are a presentation by Tony Gleeson on a voluntary Australian land management certification system and a presentation by Mick Keogh in part on the need to use environmental attributes to differentiate Australian farm products.

Previous work

Previous work by ALMS Ltd has resulted in:

- development of an externally audited Australian land management system (ALMS) based on the internationally accepted ISO 14001 set of environment management standards and on consideration of catchment level priorities and strategies and requirements in relation to biodiversity conservation (Gleeson 2006)
- development and testing of tools to facilitate the implementation of ALMS, including the web based software tool, *myEMS*, a specialised training process termed the "*ALMS Clinic*", and certification and compliance audit procedures (Gleeson 2006 b; Grosser 2006)
- implementation of ALMS by six groups of landholders in Queensland, Victoria and South Australia. By the end of July 2006 ALMS Ltd will have about 65 landholders with Eucalyptus category certification, one of three ALMS membership categories (Gleeson 2006 b)

¹ Australian Landcare Management System Ltd (ALMS Ltd) is a not-for-profit company established by landholders in 2003 to further develop and implement the Australian Landcare Management System (ALMS) as a way of improving natural resource management while providing recognition and reward for participating landholders. The Board of ALMS Ltd is comprised of landholders and specialists in environmental management.

- clearer understanding of the opportunities and constraints to develop alliances between organisations with charters to improve environmental outcomes (Gleeson, Grosser and Lewis 2006), and
- knowledge that the lack of drivers for improved land management is a major constraint on landholders investing in systems to improve environmental outcomes and that many of the commercial and non-commercial drivers for improved land management will not operate effectively or quickly without a system to credibly recognise improved land management (Gleeson, Heilbron, Hudson and Douglas 2006).

It is beyond the scope of this project to review all relevant past and continuing work. However whilst ALMS is unique in some design and operational aspects the positions reached by ALMS Ltd on many issues are not unique.

For instance, in common with ALMS Ltd, the Gippsland and North East Catchment Management Authority EMS programs have demonstrated that land managers can implement ISO 14001 compliant systems and the Gippsland work demonstrates that commercial drivers can evolve if there is credible certification of land management (see Gleeson, Heilbron, Hudson and Douglas 2006). The Watermark Environmental Stewardship Project (URS 2005) developed a system for environmental management applicable across regions and industries which, in common with ALMS, has a clear focus on improving environmental outcomes although differing from ALMS in some respects, particularly in relation to having a greater emphasis on setting and meeting environmental standards and in having a greater range of steps on the pathway to an independently audited system.

Previous work by Australia 21, also supported by RIRDC, promoted a system to certify the environmental credentials of agriculture in contrast to one that certifies improved land management (Rowland, Waller, Gorie and Douglas 2005). Additionally the Australia 21 work placed more emphasis than does ALMS Ltd on the need to develop and meet national and regional natural resource management indicators and standards (see Gleeson, Heilbron, Hudson and Douglas 2006 for a fuller discussion).

However rather than focusing on the differences between these approaches the important point is that we have clearly demonstrated that land managers who wish to improve environmental outcomes can implement a certifiable land management system. We also know that many more would do it, and stay doing it, if the rewards were more tangible; and that such rewards are far less likely if there is no credible system to recognise improved land management.

What we have yet to demonstrate however is that we are able to manage the political, policy, organisational and financial constraints to implementing such a system; and that now is our challenge.

Forum format

The format of the forum was flexible with discussion enabled as issues arose.

All but two participants who had other commitments were present for all sessions. Towards the end of the forum participants were provided with the opportunity to make a concluding statement. Abbreviated forms of all such statements are included in the body of the report.

Two formal presentations were delivered, the first on the proposal for a national land management certification system and its possible design features and the second on the procedures and tools used to develop ALMS action plans. The first of these presentations (by Gleeson) is included as an attached electronic file.

This report draws also on material presented at the seminars in Canberra on the day before the forum and in Sydney on the day after the forum. A presentation at the Sydney seminar by Mick Keogh, Director of the Australian Farm Institute is attached to this report as an electronic file and that by Ingrid Marshall, Group General Manager, Performance Services, Elders Ltd is at Appendix 2.

Forum participants had an opportunity to comment on a draft of this report and their comments have been incorporated in this final report. An offer by ALMS Ltd to list dissenting views that could not be incorporated in the final report was not adopted for there were no such views.

Forum participants

The forum was opened by the Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry, Ms Sussan Ley MP, who was introduced by the Member for Maranoa, Mr Bruce Scott MP.

Prominent landholders from South Australia, Victoria and Queensland with experience in implementing environment management systems (EMS) participated in the forum as did representatives of the Kondinin Farm Group, ALMS Ltd, Australian Conservation Foundation, WWF-Australia, Landcare Australia Ltd, Elders, Australia 21, Universities of Queensland and Western Sydney, Department of Agriculture ,Fisheries and Forestry, Department of Environment and Heritage, CSIRO, Rural Industries Research and Development Corporation, myEMS Pty Ltd, the Queensland Murray Darling Committee, the Namoi (NSW) and the North East and North Central (Victoria) catchment management authorities, Victorian Department of Primary Industry and of the consultant management teams for the National EMS Pilot Program and Pathways to EMS Program.

A list of forum participants is provided at Appendix 1.

Forum deliberations

Forum opening

After Tony Gleeson described the purpose of the forum, the Member for Maranoa, Mr Bruce Scott MP, confirmed his continuing support for the development of systems to improve land management. He then introduced the Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry, Ms Sussan Ley MP, who opened the forum.

The Parliamentary Secretary was interested in advice from the forum on how environmental management systems could be integrated with Landcare, and was keen to talk about the fragmentation problems identified previously by Tony Gleeson. She said that all of this work was underpinned by the Prime Minister's desire that we act now to put sustainable systems in place.

Ms Ley emphasised that farmers need to make a profit, and not to feel overloaded by demands on them. Incentives need to be developed from the ground up, and must be meaningful to farmers. Now was an important time to be considering next steps, following on the Pilots and Pathways EMS programs. Ms Ley indicated that she would look at what the forum produced. She commented that ALMS looked OK, noting the need to work through industry groups and farmer organisations.

Tony Gleeson then observed that most farmers operate two or more industries and hence an industry-by-industry approach is not well aligned with whole-of-farm environment management needs. Considerable duplication is inherent in industry-by-industry approaches and they do not cater for the environmental management needs of the 40 per cent of the Australian land mass not managed by farmers. Tony also cited ALMS Ltd research showing an industry-by-industry approach is not well suited to the needs of the marketers of farm inputs and outputs and he thought the same would apply for catchment management authorities. These are important factors as to why a national land management certification system needs to be across industries.

Jock Douglas pointed to the need to substantiate 'clean and green' claims for Australian product, and to develop a system for recognising improved land management.

In subsequent discussion Sussan Ley indicated the need to avoid duplication, a desire for action to be industry and farmer led, the need to identify reward issues and the need for action to be underpinned by government policy.

Is there a need for recognition of improved land management?

Participants with a great breadth of experience came to the forum having judged that there is a need to improve environmental outcomes in rural Australia and that claims about the green credentials of Australian farm practices need to be substantiated.

They endorsed the proposition put by ALMS Ltd that action to improve environmental outcomes is constrained by the lack of a generally applicable system that credibly recognises improved land management.

The ALMS Ltd proposition is based on experience with implementing the Australian land management system (ALMS) and on business development research with suppliers of farm inputs and marketers of farm outputs.

In brief, experience with implementing ALMS indicates that land managers would be more likely to sustain activities for improving environmental outcomes if such efforts and outcomes were more widely recognised.

Additionally ALMS Ltd research, supported by the DAFF/NHT EMS Pilot Program, has shown that inclusion of environmental attributes in the marketing of farm inputs and outputs is constrained by the lack of a credible system to recognise improved land management.

Notwithstanding the discussion about the nature and scope of a voluntary Australian land management certification system, no forum participant spoke against the need for such a system, and many spoke strongly in favour.

To recap, the reason why such a system is needed is to enable the various drivers for improving land management to be able to recognise improving land management and hence for participating land managers to receive recognition of their environmental credentials (Gleeson, Heilbron, Hudson and Douglas 2006).

Critical drivers for improving land management that would be enabled by a voluntary national land management certification system include:

- the differentiation of agricultural products as having been produced within certified land management systems
- preferential support from catchment management authorities, local government, farm input suppliers and publicly funded programs for land managers adopting such a system, in part because of a consequential increase in the effectiveness and efficiency of such support
- reduced legal risks for participating land managers
- improved access to natural resources, including through land leasing arrangements
- land managers benefiting from improved productivity of use of natural and other resources
- increased commitment to improving land management arising from land managers knowing that their efforts are being recognised externally the 'sign-on-the-gate' effect.

From a commercial perspective Ingrid Marshall (Elders Australia Ltd) spoke forcefully in favour of a voluntary Australian land management certification system, saying that a single national certification system would be fantastic and that it could enhance the Elders' brand.

Its benefits were that it would be standardised and dynamic, was a simple solution, was readily marketable, able to be integrated with other systems and lent itself to collaboration and partnerships.

Ingrid confirmed ALMS Ltd research indicating that a multiplicity of systems would not be taken up in the commercial world.

At the seminar in Sydney the day following the forum, Ingrid Marshall said that the Elders' call to action is:

"One certified, recognised and auditable land management system that is viable for farmers/producers, is dynamic and effective and delivers environmental outcomes."

"Greater focus on data, information and knowledge management. Capture, analysis and sharing of information is a must! This will inform future behaviours, guidelines and standards, R & D, change in practice and delivery of environmental outcomes".

"Very importantly – accountability. How do we manage risk and liability? Who is accountable, how do we manage risk when we are learning about new systems, practices and behaviours and how do we not hinder progress, business opportunities and the change that is desired when we are predisposed to being risk averse".

Andrew Rouse (World Wide Fund for Nature) supported a national approach, and pointed out that ALMS was already national.

Corey Watts (Australian Conservation Foundation) agreed on the need for someone to work to bring it all together.

Representatives of catchment management authorities at the forum extended these conclusions by observing that such recognition is also important to the effective and efficient execution of their natural resource management charters.

At the ALMS Ltd seminar in Sydney the day following the workshop Mick Keogh, Director of the Australian Farm Institute, made a powerful case indicating that the future competitive position of Australian agriculture would increasingly be founded on product differentiation and that incorporating environmental attributes in the marketing of these products presented considerable competitive opportunities for Australia.

The forum **concluded** that a credible Australian voluntary system for recognising improved land management should be implemented so as to enable existing drivers and promote additional drivers for improving land management.

Upon what basis should improved land management be recognised?

Forum participants considered what would be the best basis for recognising improved land management, the options being:

- recognition of achievement of prescribed environmental outcomes
- recognition of implementation of best management practices
- recognition of adoption of good environmental management processes, or
- a combination of two or more of these options.

Inherent in these considerations is the question of who should determine the standards to be adopted, irrespective of whether they are of an outcome, practice and or process nature.

While some workshop participants demurred pending further consideration, there was general acceptance of the proposition put by ALMS Ltd that the ISO 14001 set of management processes, together with other features in ALMS, provided a good balance of the options listed above.

The approach adopted in ALMS is that certification audits require landholders to have complied with the ISO 14001 set of environment management processes, to provide support for biodiversity conservation and to take into account catchment level priorities and strategies in developing their ALMS action plans. Subsequent compliance audits require evidence of implementation of those

action plans. However, ALMS does not require actual ISO 14001 certification except for the third of three membership categories.

ALMS is similar to the Environmental Stewardship System developed from the Watermark Environmental Stewardship Project (URS 2005) in that both systems enable industry and regional specific requirements to be incorporated in specific implementations.

It is worth here recounting the rationale underpinning the ALMS approach. The general position is stated in the Guide to ALMS (Gleeson 2006), *viz*:

"Above all our most acute need was to devise a system that would be attractive to landholders, that would take account of their capabilities and aspirations, that would enable creativity and sustained commitment and at the same time would meet the legitimate community requirement to have measurable improvement in environmental performance".

It was for these reasons that ALMS Ltd choose an approach that combines management process standards with the need to take into account catchment level priorities and strategies and to provide support for biodiversity conservation; and which can deliver both national and international recognition.

The ISO 14001 set of management process standards was chosen as the foundation for ALMS for many reasons.

First, it requires the development and monitoring of action plans that meet environmental priorities determined by the land manager and which are aligned to the capabilities of the land manager. This process ensures that the people primarily responsible for improving land management, land managers, have ownership of the resultant action plans and hence they are more likely than otherwise to provide the sustained commitment necessary for their implementation.

Second, the ISO 14001 process whereby land managers identify the aspects of their activities having the greatest impact on the environment ensures, as least as it is applied by ALMS Ltd, that their resultant action plans address the causes of major environmental impacts, both positive and negative.

Third, the ISO 14001 standards require the land manager to meet legislative requirements. Through this mechanism there is a strong link between the aspirations of the land manager and land management requirements as determined more broadly by society.

Fourth, there is a well developed audit process for EMSs based on the ISO 14001 standards (Grosser 2006). It requires documented evidence as to the effectiveness of the action plans.

Fifth, as the ISO 14001 standards can be applied to all businesses affecting environmental outcomes, use of these standards can be applied upstream and downstream along the product chain, from the point of providing inputs to the land manager right through to consumption of food, fibre and other products.

Sixth, because the ISO 14001 standards are recognised internationally they provide a basis for the local, national and international recognition of improving land management.

Reflecting a view held widely in industry organisations a forum participant observed that the ISO 14001 approach imposed a high hurdle for landholders.

For a whole variety of reasons adoption of ISO 14001 based systems, or for that matter any other system, will not be attractive for some landholders. The ALMS Ltd experience however is that

landholders who wish to improve environmental outcomes do not find the ISO 14001 set of standards to be particularly daunting so long as they are provided with the best available tools and training processes.

In any event given the positive features of the ISO 14001 set of standards a degree of difficulty in their application for some landholders is an insufficient reason not to use those standards. The vast majority of landholders manage complex systems.

The reality is that most agricultural industry-by-industry approaches to date have rejected, rather than trialled, the adoption of ISO 14001. Furthermore, with few exceptions, those that have used them have not accessed the best available tools. The ALMS experience is that with tools that lower the implementation costs for farmers to adopt the system (e.g., *myEMS* and *ALMS Clinic*), farmers do not find it too challenging to work within the ISO 14001 requirements.

ALMS Ltd did not accept environmental outcome standards as the foundation for ALMS because it is hard to specify those standards across farms and landscapes and because it would not necessarily lead to continuous improvement in environmental outcomes. Additionally, ALMS recognised that setting environmental goals, indicators and targets without taking account of individual property circumstances and requirements will not lead to sustained commitment from landholders.

ALMS Ltd did not accept best management practice (BMP) approaches as a foundation for ALMS because of the pressure to certify current practices rather than to adopt adaptive and innovative management approaches. Nevertheless, ALMS Ltd believes that the knowledge embedded in BMP should play an informative role in any chosen system.

The forum **concluded** that the basis for certification adopted by ALMS Ltd in designing ALMS (ISO 14001 management process standards combined with requirements to take account of catchment priorities and strategies and to support biodiversity conservation) was appropriate with the qualification that more work needs to be done to refine ways of incorporating catchment and biodiversity considerations.

Should the recognition system be common across industries?

The issue here is whether environment management system(s) should be applied separately to each industry (or aggregations of industries), to one or more industries on a State-by-State basis, or whether the system(s) should relate across Australia to all the land managed as an entity by the land manager, whether that be for one or more agricultural industries or other purposes.

The issue is **not** whether industry-specific and other land use considerations should be taken into account in developing and implementing environment management systems and a land certification system(s), for that is taken as a given. In fact it is not possible to develop an environment management system without taking land use (industry) specific factors into account when applying either the ISO 14001 set of management process standards or any other set of process, environment outcome or environment practice standards.

The web based soft ware tool used extensively by ALMS Ltd, *myEMS*, uses both generic prompt data, i.e. applying to the whole property, and industry specific prompt data to help land managers develop and implement whole-of-property ALMS action plans.

myEMS requires landholders to nominate their industries. Once they have done this, they are presented only with information relevant to their nominated industries, e.g. activities and aspects. Some of the information in myEMS applies to all industries. For example, many legal requirements apply irrespective of the particular industry or industries being operated.

The issue also is **not** whether organisations with charters that relate to less than all industries should or should not be involved in implementing environment management and land management certification systems. Clearly such organisations have environmental capabilities and membership arrangements which could and should be applied to the adoption of all measures to improve environmental outcomes.

The Parliamentary Secretary, Sussan Ley, when opening the forum, noted that current policy is to support industry-driven adoption of EMS and representatives of the Department of Agriculture, Fisheries and Forestry echoed this throughout the forum. In subsequent discussion Ms Ley noted the need to avoid duplication and for action to be both industry (industry organisation) and farmer led.

In itself a policy for the adoption of EMS to be driven by industry organisations does not mandate that EMS needs to be adopted on an industry-by-industry basis. EMS could be applied across all industries, yet be landholder driven, as is demonstrated by ALMS.

Generally, however, this is not what has happened, apparently for two related reasons.

First, support for trialling and implementing EMS through the current *Pathways to EMS Program* is provided to industry organisations with industry or State related charters whereas other landholder driven organisations, such as ALMS Ltd, were deemed by the Department of Agriculture, Fisheries and Forestry to be ineligible to apply for funding under that program. After the forum the National Farmers Federation was quoted as supporting environment management systems or property management systems driven by individual industries (*The Land* newspaper, 18 May 2006). Whether industry or State based, these organisations have not adopted a national, all-of-(agricultural) industry approach. Second, and reflecting the first point, most organisations promoting EMS have charters that relate either to a specific industry or aggregation of industries or to industries on a State-by-State basis.

Initially, landholders developing ALMS were encouraged by established agricultural organisations and funding arrangements to adopt an industry-by-industry approach. Pragmatically this was an attractive proposition given the financial capabilities of these organisations. However, ALMS Ltd did not do this for six reasons.

First, the multiple industry nature of most farm businesses means that such an approach would be less likely to lead to effective environmental management, either on a whole-of-farm or whole-of-catchment basis than would an approach that applies across all forms of land use.

Gleeson, Grosser and Lewis (2006) reported on an ABS analysis of the mix of industries on farms commissioned by ALMS Ltd. This analysis, using data from the 2001 Agricultural Census, was founded on the Australian and New Zealand Standard Industrial Classification (ANZSIC) where agricultural industries are the distinct business operations that are run by a landholder, e.g. beef production.

The analysis showed that, in 2001, 62 per cent of farms producing 72 per cent of agricultural production by value operated two or more agricultural industries. The importance of the multi-industry nature of Australian farms is further highlighted by the data that show that only 10 per cent of Australian cotton is produced on the 10 per cent of farms with only cotton, with the corresponding figures for sheep (wool and meat) being 3 and 11 per cent. To amplify the point, the proportions of properties with for example cotton or sheep (wool and meat) industries that would have an approach that related to that industry alone would be only 10 and 11 per cent respectively (see Appendix 3).

Data held for ALMS Ltd in *myEMS* (Gleeson 2006 b) support the ALMS Ltd analysis and extend it to show that even within the relatively small geographic areas covered by groups of ALMS

landholders the industries operated by landholders vary greatly. Even excluding industries operated by only one landholder, 43, 25 and 10 ALMS landholders in Victoria, Queensland and South Australia respectively operated five, eight and five different industries.

One way of looking at the question of whether consistency in environmental management (process) systems across industries is essential would be to envisage having totally different processes for determining taxation liabilities between different yet interacting industries within the farm business (now there's a thought!).

The second reason why ALMS Ltd did not adopt an industry-by-industry approach is that the difficulties in supporting and auditing environmental management systems are inherently greater with such an approach.

Third, agribusiness corporations have a strong preference for a system to certify land management across industries, i.e. one that they can use in the marketing of all farm inputs and outputs (Gleeson, Heilbron, Hudson and Douglas 2006). To have different land management certification systems based on individual output or input products seems, at best, to be unwieldy.

Fourth, ALMS Ltd judged that we needed a system or systems that would not impede land use change, a requirement that would probably not be met through an industry-by-industry approach.

Fifth, environmental management systems applied strictly on an agricultural industry basis would not deal with the environmental issues experienced in the 40 per cent of Australia not used for agricultural production.

Lastly, ALMS Ltd wished to harness as many as possible of the drivers of improved land management, not just those that apply on an agricultural industry basis. The farm activities of many landholders are not driven solely by agricultural production considerations with the diversity of aspirations, capabilities and activities highlighted by the fact that at least 50 per cent of farm households rely on non-agricultural income for more than 60 per cent of net farm household income (Gleeson, Turner and Douglas 2002).

All these points have been made time and time again yet we continue to hear the question, including at the forum, as to whether 'an industry-by-industry approach might be better than applying the ISO 14001 approach'. Additionally comment is made that we should not presume a 'one size fits all'.

So putting aside for the moment the very many reasons as to why one would adopt a whole of farm across industry approach it needs to be understood that ISO 14001 per se does not dictate that the approach be industry-by-industry or across industry. Put simply the ISO 14001 set of standards enables all the generic and industry specific considerations, irrespective of how many industries there are, to be dealt with in one system.

Forum participants other than representatives of the Department of Agriculture Fisheries and Forestry **concluded** that environmental certification system(s) should be implemented across industries and other land uses. The Watermark Environmental Stewardship Project came to the same conclusion, as reflected in the Environmental Stewardship System (URS 2005).

Should the recognition system be restricted to improved land management?

The possibility of the scope of the certification system extending beyond environmental management was addressed only briefly at the forum, presumably because the context of the discussion was clearly not so expansive as to include all facets of property management. However, because of its topicality the issue warrants some discussion.

Property management systems are those that encompass all facets of the management of the property², including those pertaining to the aspirations and well being of the property management team or farm household.

ALMS Ltd recognises the interdependence of all facets of the well being of the farm management team/farm household and the management of the farm business, including environmental management. However, it has also taken the position that ALMS, and any related Australian land management certification system, should deal only with environmental issues. This position contrasts sharply with that understood to be encompassed within the operations of Ministerial Councils' Working Party on Property Management Systems (PMS). ALMS Ltd is unaware of the public policy rationale for that position.

ALMS Ltd has taken the position to limit the scope of ALMS to environment management mainly to avoid bundling together issues which are the sole responsibility of the land manager/farm household, such as the profitability of the business and quality assurance, with those issues for which the public has a legitimate concern, such as the management of the environment. Furthermore, it is hard to envisage how a system could be designed that would enable external auditing for certification of a total business/farm household management system.

Forum participants were divided as to whether environment management systems should include occupational health and safety requirements.

Those supporting inclusion observed that many requirements are common across environment and occupational health and safety management systems so including them in one system would help avoid duplication. They also pointed to the idea that people are part of the environment and those aspects of farm activities that affect people should be considered as being an environmental impact.

Those against inclusion believed that broadening the scope of environmental management systems would add unnecessary complexity to the adoption of systems whose prime concern is to improve environmental outcomes. They observed that while there were common grounds there were many aspects of occupational health and safety requirements that have little to do with environmental management defined by ALMS Ltd as the management of the potential and realised impacts of people on the environment with the purpose of attaining ecologically sustainable development.

While this issue was not resolved at the forum, it is likely that all forum participants would endorse the need for relevant data to be easily transferred between environment management systems and occupational health and safety management systems.

Forum participants other than representatives of the Department of Agriculture, Fisheries and Forestry **concluded** that a system or systems for recognising improved land management should be restricted to environmental management issues and not include other facets of property management. Forum participants also **concluded** however that there should be further consideration of how best to link occupational health and safety management systems with environment management systems.

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² Property here is used to refer to the land entity managed by the land manager for agricultural or other purposes.

What is the plan for the implementation of a voluntary national system to certify improved land management?

Tony Gleeson distributed a paper identifying the main tasks to be in relation to marketing and communication, training, product development, information management, member services and corporate support. However there was insufficient time at the forum for a full discussion on implementation.

Participants raised the following points about implementing the land management certification system:

- need to agree on the goal now and develop the details later
- the process needs speeding up
- build on the now proven record of ALMS
- there needs to be more emphasis on certification
- there is a need for dialogue with other groups and an emphasis on market place recognition
- catchment management authorities are a logical home for such a system and there should be a
 priority on involving selected 'friendly' catchments, recognising that each catchment has
 distinctive needs
- need to assume that a substantial budget will be needed, and
- need to find cost effective means to deliver the system as many small funding arrangements are very inefficient.

Andrew Rouse (World Wide Fund for Nature) asked whether others, such as industry groups, could be involved in a certification scheme through their systems being cross-accredited.

Unfortunately this point was not debated and it requires further consideration.

Certainly in situations where more than one system produces the same outcomes with the same credibility it would seem sensible enough for land managers having any of those systems to have their land management system certified. At the same time, however, one would need to be assured that such a multiplicity of systems did not detract from the training, implementation and auditing efficiencies inherent in having only one system that deals with the diversity of environmental considerations as they might apply across Australia. A first step to resolve this issue is to identify deficiencies in any proposed system that would be best overcome through having a multiplicity of systems.

A related proposition that has been raised in different places is the idea that a national system should be constructed from an amalgam of the different systems now being trialled. ALMS Ltd would be reluctant to go down this 'camel' path believing the system or systems should be designed for purpose.

Corey Watts (Australian Conservation Foundation) identified the need for someone to work with industry and farmer groups and catchment management authorities.

Brian Scarsbrick (Landcare Australia) advised that there is a huge amount of on-ground information being gathered through landcare activities, and that therefore there is mutual benefit in arrangements with catchment management authorities. So far catchment targets have been set often based on very little information. Landcare Australia was now looking at delivering sponsorship by regions.

The question was raised of whether it would be sufficient to have the agreed approach adopted as a formal standard, which anyone could then apply.

Genevieve Carruthers and Nelson Quinn observed that this would be unnecessary, because of the high transaction costs and because ALMS is already backed by powerful formal standards, the ISO 14001 standards.

Forum participants **concluded** a voluntary Australian land management certification system is needed now and that an implementation plan should be developed that, amongst other things, identifies the roles of catchment management authorities, industry organisations, research and development corporations and other public, private and community sector organisations and the extent and sources of funding.

Final comments from forum participants

The forum facilitator, Cathii Moore, invited final comments. These comments are grouped according to the background of the participant recognising, however, that many participants were many hats.

Agribusiness

Ingrid Marshall: A high level pitch involving major corporations in addition to Elders is needed, to develop a partnership between them and landholders to help secure the urgently needed reform in land management nationally.

Bill Ryan: If buyers say they won't buy without certification, progress will be rapid.

Catchment management authorities

James Hutchinson-Smith: A voluntary process will help catchment management authorities, so all for it.

Geoff Park: All the catchment management authorities are different, and more work is needed to prove the link between systems and environmental improvement.

Chris Reid: The system is right now, so go ahead immediately rather than wait to get everyone on board.

EMS trainers

Michael Grosser: The system needs to build on what has been developed, not start again.

Darren Marshall: We have already learnt that ALMS works. Links with industry are needed, but landholders are already involved with industry work.

Environmental organisations

Andrew Rouse: There is a need to demonstrate and brand environmental credentials. It may be useful to develop associations with catchment management authorities, show that the certification system can add value to their efforts, and that the system leads to environmental improvements.

Corey Watts: Will promote it, but need to understand the process better.

Landholders

Jeff Campbell: There is a need to run with it, as it works much better than an industry approach.

Geoff Coulson: Keen to proceed with the catchment management authority.

Joe Keynes: There is a real need for the certification system, but there are tensions in catchment management authorities on adopting such an approach, eg, as illustrated by the viticulture EMS trial.

Tom Nicholas: Momentum is being lost: get on with it.

Policy development

Amanda Brigdale: This is a baseline system for land management; industry requirements can be added.

Rod Carr: The forum has increased my understanding of the proposal. The Government is interested in overcoming blockages, but the Minister is aware that other stakeholders don't want a single national system and are actively lobbying for other approaches. There is a lot of fear out there, and industry groups may not understand what is being proposed.

Research agency /program management

George Wilson: Alliances need to be discussed with R&D corporations and DAFF; this would help sort out budgets and related practical requirements.

Researchers/consultants

Janelle Allison: What is stopping getting on with it now?

Selwyn Heilbron: The current blockage is the absence of a single national certification system; the Elders' support is welcome. Ideally the ground rules will be set centrally to avoid duplication, time wasting and delays in getting certification-backed products to consumers quickly.

Allan House: Surprised that progress has not been faster. The system needs to be grounded in good science with information getting to landholders.

Cate Turner: Moving forward is the next step, noting that there is a lot to be done, e.g. grooming networks and linking with industry and catchment management authorities.

ALMS Ltd

Genevieve Carruthers: The proposed system already caters for different industry needs. Industry groups need to start getting information from different sources, to help overcome resistance to change and whatever their motivation has been so far.

Bruce Munday: At the moment landholders are audited on management plans; condition changes will come later. The need now is to act, not just say it's a good idea.

Australia 21

During the Round Up session Australia 21 Chair, Professor Bob Douglas arrived. He described Australia 21 as a non-profit company generating networks of researchers and thinkers to inject fresh

ideas into how we can address major challenges, including how we can maintain productive and resilient ecosystems. He referred to the Australia 21 Roundtable exercise that led to a report going to Ministerial Councils supporting the need for a national certification approach to farm management³. He said Australia 21's role in this endeavour was now over, and groups such those at the forum needed to take up the ideas.

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³ Note the call by Australia 21 for a farm management certification system in contrast to the conclusion from the forum that the certification should apply only to land management.

The next steps

Introduction

The forum provided an opportunity for an experienced and diverse group of participants to focus on an issue of importance to improving land management, that is how to increase the motivation of land managers to improve environmental outcomes. Most if not all participants in the forum were energised by the discussion.

For some time ALMS Ltd has been proposing a transparent and structured process whereby the issues could be canvassed and proposals considered on their intrinsic merit rather than on the political strength of their proponents. However the time for such a process has passed and it is important that the momentum gained from the forum and elsewhere is not lost, for the reasons outlined below.

It is an important institutional innovation

Forum participants from a broad spectrum of organisations and backgrounds agreed on the need to establish a voluntary Australian land management certification system. This needs to be accepted as a proposal for a significant institutional initiative. It is a reform that will influence and enable individuals to act in the public good. It will have far reaching impacts on attitudes and practices and, importantly, on environmental outcomes. It would be an *enabler* for the adoption of sustainable land management.

Institutional innovations present particular difficulties largely because they challenge the attitudes, practices and positions of existing organisations and individuals (see Gleeson and Piper 2000). Having been involved since the mid 1970s in several such changes, my judgement is that this proposal should be relatively easy to implement so long as the right processes are identified and implemented. However it is unlikely to be successful if it is left to chance. It requires enabling leadership from government, industry and community sectors.

But it should not be difficult to implement

Establishing a voluntary Australian land management certification system should not be difficult for the very simple reasons that it is timely, it is voluntary, we know we can do it, and it will have significant commercial and public benefits and broad community and political appeal.

Let us take each of these in turn.

It is timely in relation to program implementation and development

Sixteen EMS pilot projects are about to be completed in the National EMS Pilot Program at a cost to the program of about \$15 million, and a guessimated total cost of at least twice that amount.

For each of these projects (and others) detailed submissions were prepared. Each approved project has submitted, or should have, about 30 monthly reports, some quarterly reports, many milestone reports, four survey reports and mid-term and final reports; I estimate a total of about 800 reports.

Additionally, there have been four national EMS Conferences over the past eight years and, over the past three years, an annual national EMS Forum. A national Ministerial EMS Advisory Committee has operated in various forms for about four years with no transparent outcomes. An estimated 500 landholders have been involved in the program and there is now no clear direction or support for them or for their support staff.

Projects within the National EMS Pathways Program are underway at substantial cost. Those seeking to procrastinate will use the currency of that program as a reason to delay. Such a position is unsustainable for unless action is taken now then all involved in the Pathways program will suffer the same hiatus as is being experienced now at the end of the EMS Pilot program.

Policy and program developments are occurring in the context of the Natural Heritage Trust and National Action Plan programs. A Working Party on Property Management Systems (PMS), established under the auspices of Ministerial Councils, is operating without an open consultative process.

Catchment management authorities (and equivalent) are at varying stages of maturity but it is widely acknowledged that many of them lack strategic tools to help them execute their responsibilities.

There is growing interest and support for the introduction of ecoservice payments. The introduction of a voluntary Australian land management certification system would produce many of the benefits of such payments, arguably with less ecological fragmentation and lower transaction costs, and in any event it would be a highly complementary initiative.

It is timely in relation to having generated broadly based support

Work within this project, the DAFF/NHT ALMS Ltd project on *Capturing market and other benefits* from improved land management (Gleeson, Heilbron, Hudson and Douglas 2006) and related work has created a broad support base for introducing a voluntary Australian land management certification system. ALMS Ltd acknowledges, however, that this support base does not include many of the established agricultural organisations, presumably because of their industry-by-industry and/or regional perspectives.

It is hard to know with certainty the reasons why established agricultural organisations are reluctant to support a voluntary Australian across industry approach to land management certification. ALMS Ltd has no knowledge of these reasons ever having been coherently presented so there is a need to surmise.

The fragmented approach has been heightened by the structure of the EMS support programs. This fragmentation was induced to create diversity in approach. However, it has also created obstacles to integration given that the charters of supported organisations are almost universally limited by either industry or by geography, or both.

The proposition that the adoption of EMS and of a voluntary Australian land management certification system needs to be 'industry driven' appears to reflect a lack of appreciation of the balance between public and private benefits that are likely to result from their adoption.

Clearly, a voluntary land management certification system needs to be attractive to landholders. A key determinant of such attractiveness will be the strength and nature of the commercial and other recognition afforded to participating landholders. Hence there is a need to lead by ensuring benefits accrue to participants rather than the system being 'driven' by either the industry or other organisations. The latter approach has not worked well for many quality assurance programs and it will not work well with a certification system for land management.

Lastly, one might surmise that attempts from the outset to drive EMS through organisations with members varying greatly in their commitment to improving environmental outcomes inevitably leads to the design of systems that might not be robust enough to credibly deliver improved environmental outcomes.

Notwithstanding these observations as to why established agricultural organisations are seemingly reluctant to support a voluntary Australian across-industry approach to land management certification, ALMS Ltd acknowledges the need for improved and more communication. Support for this endeavour will be needed if a national comprehensive voluntary system or systems of land management certification is to be implemented.

It is timely in that it is never too early to do the sensible thing

There is widespread support, including amongst landholders, to improve environmental outcomes.

Landholders generally agree that a perceived and real lack of benefit is a major constraint to improving environmental outcomes.

Research has shown that commercial drivers for improving land management would be better able to operate should a land management certification system be introduced.

Representatives of catchment management authorities represented at the forum supported the introduction of a land management certification system.

Voluntary - so why not support those who want to do it?

No one is suggesting that the system should be compulsory.

The ALMS Ltd experience is that if land management improvement is recognised then many landholders will adopt systems that could lead to certification of land management.

Hence it seems that the only possible reasons for lack of support from the public and/or industry sectors would be a lack of commitment to improving environmental outcomes and/or that there is a better way to do it. If there is a better way to do it then it ought to be defined and communicated.

Comment was made at the forum that the environmental impacts of EMS are not yet clear. There is some validity in this claim as there would be if it was applied to most if not all experimental programs with similar objectives. Furthermore to date there has been limited adoption of externally audited EMS processes that meet requirements similar to those required by ALMS.

The data in the final report on the ALMS Pilot Project (Gleeson 2006 b) clearly show that land managers adopting ALMS develop ALMS action plans that address aspects of activities having significant environmental impacts and that the commitment of land managers to execute these action plans would be strengthened by heightened recognition of the status of their environmental intents and achievements.

Given these and other data and the motivational benefits of developing and implementing EMS it is time to recognise improved land management through adoption of a land management certification system. Again if EMS is not to be one of the ways forward than it is time for a better way to be defined and communicated.

We know we can do it

When given the opportunity, the vast majority of landholders have shown that they are able to implement ALMS, the basis for the proposed land management certification system, in ways that will lead to improved environmental outcomes and increase the effectiveness and efficiency of complementary policies and programs.

Broad community and political appeal and significant commercial and public benefits

A voluntary land management certification system would have broad community and political appeal and it would contribute to achieving common ground on what are now often divisive natural resource management issues. Furthermore, the research to date indicates that the system would have significant commercial and public benefits.

So long as we get the foundations right

Experimentation to date with environmental management systems in agriculture and land management has been anchored principally with regional public sector organisations (the EMS National Pilot Program), with primary industry organisations (the Pathways to EMS program) or both (Watermark Environmental Stewardship Project [MDBC] and EMSNPP). Seemingly now the intent is for the effort to be directed to the catchment management authorities. In fact this approach received considerable support at the ALMS Ltd forum. It is an intent that requires considerable reflection.

Simply placing the future of a national land management certification system in the hands of fifty to sixty catchment management authorities is a recipe for disaster for several reasons.

First, there is the issue of capability. Most catchment management authorities in the main are struggling under the weight of needing to achieve long term fundamental change yet they are provided with short term funding, primarily to achieve targets for which most land managers have had little input.

Second, there is the issue of coordination and operational efficiency.

The multiplicity of authorities, which are at varying stages of development and capability, will severely limit their capacity to implement a national system with both public and commercial dimensions way beyond their individual geographic charters.

Third, the catchment management authorities as individual entities are ill suited to efficiently deal with significant players in the global agribusiness industry; conversely those global agribusiness entities are ill suited to deal with a multiplicity of local catchment management authorities.

Fourth, one of the essentially attractive feature of environment management systems, at least those that follow the ISO 14001 set of process standards, is that they are a potent tool to identify and deal with the environmental impacts of aspects of activities of individual land managers. However, the imperative of catchment management authorities is to identify and meet catchment level targets.

While spatial considerations beyond individual properties need to be taken into account in developing environment management systems, as they are in ALMS, they should not dominate property level considerations to the point of reducing the relevance of action plans to the individual landholder. Otherwise there will be a significant detrimental impact on the relevance of the action plans to the land manager, and hence on their motivation.

A strength of the catchment management authority system is the capacity of each authority to tailor its priorities and activities to local needs and social dynamics. An ALMS (or similar) land management certification system sits well with this, because it would be based on self-determination by landholders This arrangement would only work, however, if the authorities have available to them a workable system developed and supported by a small central organisation.

For these reasons ALMS Ltd concludes that the responsibility for designing and implementing a voluntary national land management certification system should not rest with individual catchment management authorities.

Parallel considerations apply to industry based organisations and to the multiplicity of public and private sector organisations supporting improved environmental outcomes.

So what should we do?

The way to implement a voluntary Australian land management certification system requires further consideration. However, it is not 'rocket science' and the critical thing is to get on with it. This requires leadership and funding.

Forum participants agreed that the system needs to be able to credibly improve environmental outcomes. This translates to the system being independently (third party) audited and, at least potentially, for it to lead to international recognition, this being one of several reasons to choose the requirement for ISO 14001 compliancy. Forum participants agreed that it should operate on a whole of farm basis and they agreed that its coverage should be restricted to certification of land management. They not only agreed on these issues but they specified the reasons for their conclusions.

Given these conclusions it is **recommended** that the Australian landcare management system be used as the core module of a voluntary Australian land management certification system, with options being available to add to the core module by, for instance, industry organisations, catchment management authorities, other managers of environmental programs and the marketers of farm inputs and outputs.

The next step would be to establish the capacity to deliver and enhance the system in consultation with the range of potential beneficiaries including land managers, catchment management authorities, local government, marketers of farm inputs and outputs, industry organisations, research and development corporations and public sector agencies responsible for improving environmental outcomes. Whilst adoption of the certification system will require localised action it is **recommended** that a central unit be established to maintain and enhance the land management certification system.

The central unit would be responsible for the integrity and marketing of the certification system and for maintaining the tools necessary for its adoption. Furthermore it would be responsible for the sale of services, in particular and subject to confidentiality provisions information services to all participants: to landholders, to catchment management authorities, to the marketers of farm inputs and outputs, to industry and community organisations, to local government, to research and development corporations and to public agencies responsible for improving land management. In turn each of these participant groups would have specified roles and particular requirements which will need to be negotiated.

The core module would require participating land managers to:

- develop an ISO 14001 compliant environment management system which takes account of catchment level priorities and strategies and provides support for biodiversity conservation
- to have an independent (third party) certification audit and subsequent compliance audits according to a schedule and procedure yet to be determined, and
- under conditions to be determined to exchange information with the central unit.

The roles and responsibilities of participating catchment management authorities, industry organisations, research and development corporations, local government, marketers of farm inputs and outputs and public sector agencies would need to be determined. However the important point is that implementing a voluntary Australian land management certification system requires leadership and funding at all spatial levels and across all sectors.

A central tenant of the operation of ALMS Ltd is that the information generated through the implementation of ALMS remains the property of the land manager. However for this asset to become a driver for improving land management the information has to be collated and retailed. This would be a key function of the central unit and for this and other reasons it is **recommended** that the land management certification system be owned and operated by a landholder established not-for-profit organisation similar to the existing ALMS Ltd.

And finally

Continuous improvement is a key feature of environment management systems and it is a feature that should be applied to the design and implementation of a voluntary Australian land management certification system. Given that the proposed system it is a voluntary system there is no reason to delay action to implement it. It can be adapted to take into consideration any lessons that arise from experience in its early implementation.

It is difficult to express it better than has already been done, as follows:

Janelle Allison: What is stopping getting on with it now?

Amanda Brigdale: This is a baseline system for land management; industry requirements can be added.

Jeff Campbell: There is a need to run with it, as it works much better than an industry approach.

Genevieve Carruthers: The proposed system already caters for different industry needs. Industry groups need to start getting information from different sources, to help overcome resistance to change, whatever their motivation has been so far.

Michael Grosser: The system needs to build on what has been developed, not start again.

Selwyn Heilbron: The current blockage is the absence of a single national certification system. Ideally the ground rules will be set centrally to avoid duplication, time wasting and delays in getting certification-backed products to consumers quickly.

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Ingrid Marshall: A high level pitch involving major corporations in addition to Elders is needed, to develop a partnership between them and landholders to help secure the urgently needed reform in land management nationally.

Bruce Munday: At the moment landholders are audited on management plans; land condition changes will come later. The need now is to act, not just say it's a good idea.

Tom Nicholas: Momentum is being lost: get on with it.

Chris Reid: The system is right now, so go ahead immediately rather than wait to get everyone on board.

Andrew Rouse: There is a need to demonstrate and brand environmental credentials. It may be useful to develop associations with catchment management authorities, show that the certification system can add value to their efforts, and that the system leads to environmental improvement

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Appendix 1. Forum participants

Dr Jane Aiken, Hawkesbury Water Recycling Scheme, University of Western Sydney and representative of the Blue Mountains World Heritage Institute

Assoc. Prof. Janelle Alison, Director, Centre for Regional and Rural Innovation, University of Queensland

Dr Martin Andrew, Director of both the EMS National Pilot Program management team, and the Watermark Environmental Stewardship Project; Senior Principal Consultant, URS, Adelaide

Dr Martin Andrew, Manager of national EMS pilot program, URS, Adelaide

Ms Amanda Brigdale, Assistant Director, Natural Resources Policy & Coordination Land, Water & Coasts Division, Department of the Environment and Heritage, Canberra

Mr Jeff Campbell, Landholder and Board Member of Queensland Murray Darling Basin Committee

Mr Rod Carr, Department of Agriculture, Fisheries and Forestry, Canberra

Ms Genevieve Carruthers, Environmental Specialist, NSW Department of Primary Industries and ALMS Board member

Mr Geoff Coulson, Landholder, ALMS Member, North East CMA, Victoria

Prof. Bob Douglas, AO, Chair, Australia 21, Canberra

Mr Jock Douglas, AO, landholder and Chairman of ALMS Ltd

Mr Tony Gleeson, Landholder and Executive Director, ALMS Ltd.

Mr Michael Grosser, CEO, myEMS Pty Ltd, Brisbane

Dr Alan House, Principal Scientist, CSIRO Sustainable Ecosystems, Brisbane

Dr Selwyn Heilbron, ALMS Researcher & Principal, SG Heilbron Pty Ltd., Melbourne

Mr James Hutchinson-Smith, Catchment Coordinator, Namoi Catchment Management Authority

Mr Bob Hudson, ALMS Researcher and Principal, Bob Hudson Consulting Pty Ltd., Quirindi, NSW.

Mr Joe Keynes, ALMS Member, Member of the SA Murray Darling Basin Natural Resources Management Board

Mr Darren Marshall, EMS Group Leader, Queensland Murray Darling Committee

Ms Ingrid Marshall, Group General Manager, Performance Services, Elders Australia Ltd

Ms Judy McKinon, Department of Agriculture, Fisheries and Forestry, Canberra

Ms Cathi Moore, workshop facilitator, Canberra

Mr Jim Moran, EMS Specialist, Victorian Department of Primary Industry

Dr Bruce Munday, Landholder, Chair of the Eastern Mt Lofty Ranges and Murray Plains NRM Group, Chair of a steering committee responsible for implementing an ALMS Pilot Program

Mr Tom Nicholas, Landholder, ALMS Member and Chair of the Belyando-Suttor NRM Implementation Group, Clermont, Queensland

Mr Geoff Park, Knowledge Broker, Biodiversity, North Central CMA, Victoria

Mr Geoff Penton, Manager of planning and implementation for the Queensland Murray Darling Committee, ALMS Board member

Mr Nelson Quinn, Landholder, President of the NSW Olive Council, past Chair of the Murrumbidgee Landcare Association and ALMS Ltd Board member.

Mr Matthew Reddy, Business Development Manager, Landcare Australia, Melbourne

Mr Chris Reid, Program Leader including EMS, North East CMA, Victoria

Dr Lesley Rogers, Department of Agriculture, Fisheries and Forestry, Canberra

Mr Andrew Rouse, WWF, Program Manager-Resource Conservation

Ms Phillipa Rowland, Australia 21 Fellow, Bega, NSW

Dr Bill Ryan, CEO, Kondinin Group, Perth

Mr Brian Scarsbrick, CEO Landcare Australia Ltd., Sydney

Dr Jan Paul van Moort, Manager, EMS Pathways Program, Hassall & Associates, Sydney

Mr Corey Watts, Acting Manager, Land and Water Programmes, Australian Conservation Foundation, Melbourne.

Mr George Wilson, Research Co-ordinator, Rural Industries Research & Development Corporation,

Apologies

Mr Andrew Campbell, Managing Director, L&WA (nominee to attend)

Mr Drew English, Australian Conservation Volunteers and ALMS Ltd Board member

Dr David Freudenberger, Principal Scientist, CSIRO Sustainable Ecosystems, Canberra

Mr Mick Keogh, Director, Australian Farm Institute, Sydney

Ms Kirsten Martin, Blackwood Basin Group, WA

Mr Ian McClelland, Landholder, Chairman Birchip Group, ALMS Board Member

Ms Jenny O'Sullivan, Leader of Gipps Beef, Victoria

Mr Bruce Turner, Chair, Property Management Systems Working Group

Ms Pam Usher, CEO, Greening Australia –Qld, Brisbane

Appendix 2. Presentation by Ingrid Marshall, Elders Ltd

A commercial response to land management certification - at the launch of the report 'Capturing market and other benefits from improved land management'. Ingrid Marshall, Group GM Performance Services, Elders Ltd. Sydney and Canberra May 2006.

I wish to begin by acknowledging the work done by Australian Landcare Management System Ltd, a not-for-profit company established by landholders to improve environmental management in ways that provide recognition to participating land managers. Elders is delighted to have been given this opportunity to respond to the report from a commercial perspective.

As Group GM Performance Services, reporting to Greg Hunt, Managing Director of Elders Limited I'm responsible for the corporate services functions both domestically and internationally. Elders has a 3-step approach to business

- 1. strengthen the network and our focus on clients (or producers)
- 2. build and manage supply chains that can deliver to specification
- 3. secure long term partnerships with retailers and wholesalers

They say that the only constant is change and that has never been more relevant for us than it is today and we need to maintain a business model which secures competitive advantage and delivers profit.

One way to achieve this is through sound policy and strategy and a commitment to doing it right-being values driven. Housed within my portfolio is our Corporate Social Responsibility strategy or CSR strategy which is what I have based my response upon today.

For us, CSR is about our voluntary commitment to, creation of and implementation of business practices that promote accountability for the company's impact on the local and global community in which we operate in a social, environmental and economic context.

This context also includes the overall health of Elders in its ability to provide shareholder value, customer and staff satisfaction and maximise profit. CSR is part of our business strategy and it is how we do business.

We would all agree that our environment is under threat, unfortunately in some regions it's a case of too little, too late. Establishing more effective institutional arrangements is an imperative however linking private, public and community sectors has always been a challenge and the issue of environmentally sustainable practices balanced against commercial realities will continue to confront and test the leadership within our society.

At a high level, at Elders,

• we believe we have a role to play in leading and supporting environmental stewardship both nationally and internationally.

- we believe we can do this at national policy level, local producer level and through our own company policy and the way we do business.
- we believe we can champion sustainable environmental management practices across farm inputs, outputs, supply chain and marketing initiatives.

We are excited to see that the report launched today highlights benefits and importantly challenges associated with a certified and recognised land management system.

We would like to see this conversation translate further into action and outcomes.

We want to see dialogue and debate continue at a commonwealth level with stakeholders, industry, business and community leaders and also at a local level where it all happens.

So, what are our commercial objectives and how do they relate to the report today on capturing market and other benefits from improved and certified land management practices.

Elder's commitment to environmental sustainability is driven through the triple bottom line framework of Environmental, Social and Economic Performance, all captured under the umbrella of Corporate Social Responsibility.

Our environmental objectives are as follows:

- 1. to support the development of a certified and recognized, national Environmental Management System that ensures a simple, effective system for Elders (and our clients) to work within that doesn't distract us from core business
- 2. to support and promote environmental sustainability
- 3. to support and promote the success and viability of farmers, producers and their communities
- 4. to identify opportunities in the value chain that enhance the worth and value of environmentally sustainable practices by differentiating Elders and farmers who engage in such programmes
- 5. to support and promote the systems that support, enhance and promote land management systems this could be technological systems, business-to-business systems or marketing etc
- 6. to enhance Elders brand and commitment to corporate social responsibility

Companies are being held more and more accountable for the health and wellbeing of the communities and regions in which they conduct business so any programs that Elders supports must align with the community needs, our business objectives, corporate values and enhance our reputation.

Our approach is and will continue to be, strategic, planned and focused which will deliver for Elders;

- value enhancement
- differentiation and competitive edge
- recognition
- organisational cultural growth and development

- improved staff morale and loyalty
- enhancement of, and development of, new networks
- strengthen supply chain partnerships and domestic and international marketing opportunities
- greater customer/producer loyalty and satisfaction
- business development opportunities

All these benefits can be derived from supporting and driving environmentally focused CSR initiatives. This is not an easy ask though and as I stated before, from a commercial perspective we have to maintain a planned and disciplined approach which has a significant impact on the operations of Elders hence the desire for a simple land management system.

For example, internal questions for Elders to consider are:

- What is the governance structure, how do we measure, report and document policy? What does the business operating model look like?
- How do we introduce a customer management framework?
- What are the environmental performance indicators relevant to Elders?
- How do we influence program performance and national policy, certification and continuous improvement?
- Evaluation what does it mean for our brand, the customer and supply chain experience?
- Are our products and services relevant and adequate?
- Are we providing enough incentives?
- Where are the business development opportunities and how are they captured within the programs?

These are questions that need to be supported by planning, policy, resources, training and a healthy dose of corporate leadership, commitment and tenacity.

I should also mention that I haven't touched on our corporate commitment to being 'green and clean' and our desire to reduce energy and resource consumption and improve recycling. That is for another time.

As you can see the whole issue of sustainability for businesses can be quite overwhelming and all consuming if its not managed and prioritised appropriately.

The report launched today, highlights that land managers benefit from improved environmental management – benefits such as improved productivity, risk reduction and improved asset value, greater product demand, holistic land management practices and recognition and certification.

The report also states that these benefits are realised through strong partnerships between land managers, suppliers of farm inputs, consumers and purchasers of farm outputs, the retailers and wholesalers.

So considering all that has been discussed over the past two days and considering what is in the report, what is the role of business in developing sustainable land management practice when Elders would want to see:

- Differentiation for brand Elders and the products we market in a cluttered and highly competitive market
- Dare I say it, but greater collaboration and less competition between networks and industry groups and agencies
- Greater adoption of technology for communication purposes, supply chain management, production innovation and knowledge management
- Commitment to innovation and experimentation
- Commitment to the development of business and management skills of industry groups and agencies

The Elders call to action is:

- 1. one certified, recognised and auditable land management system that is viable for farmers/producers, is dynamic and effective and delivers environmental outcomes
- 2. greater focus on data, information and knowledge management. Capture, analysis and sharing of information is a must! This will inform future behaviours, guidelines and standards, R & D, change in practice and delivery of environmental outcomes.
- 3. very importantly accountability. How do we manage risk and liability? Who is accountable, how do we manage risk when we are learning about new systems, practices and behaviours and how do we not hinder progress, business opportunities and the change that is desired when we are predisposed to being risk averse.

In closing, I thought Tony Gleeson summarised it so well in the Guide to Australian Landcare Management System. Page 5 talks about motivations and to quote from the Guide it states,

"Above all, our most acute need was to devise a system that would be attractive to landholders, that would take account of their capabilities and aspirations that would enable creativity and sustained commitment and at the same time would meet the legitimate community requirements to have measurable improvement in environmental performance".

From a commercial perspective, no company is better positioned, nor has a more powerful and credible brand than Elders, in supporting, marketing and leveraging the development of certified and auditable land management systems. It just makes sound business sense.

The ecology of commerce is very important to us and as you can see, Elders is here for the long term.

Thank you.

Appendix 3. Industry mix on Australian farms for the year ending 30 June 2001

Industry	Proportion (%) of producers in that group with only 1 industry (e.g. beef), with 2 industries or with more than 2 industries			Proportion (%) of estimated value of agricultural operations attributed to producers in that group with only 1 industry (e.g. beef), with 2 industries or with more than 2 industries		
	1 Industry	2 Industries	> 2 Industries	1 Industry	2 Industries	> 2 Industries
All Industries	39	34	27	29	30	41
Beef	26	41	33	11	37	52
Dairy	38	40	22	39	37	24
Sheep (wool and meat)	11	35	54	3	23	74
Poultry	43	33	24	55	25	20
Pigs	6	18	76	10	16	74
Other Livestock	6	48	46	2	36	62
Cereal Crops	5	29	66	3	21	76
Oilseed Crops (excluding cotton)	0	7	93	0	4	96
Other Crops (excluding cotton & sugar cane)	1	11	88	0	7	93
Cotton	10	29	61	10	26	64
Sugar	68	21	11	52	28	20
Vegetables	32	35	33	33	30	37
Fruit (including grapes, apples, pears & stone fruit)	59	25	16	52	25	23
Nurseries (including cut flowers and turf)	62	23	15	56	25	19

Appendix 4. ALMS Ltd Glossary

Accreditation

Accreditation is the formal recognition of competence that an authoritative body gives to another body or person to empower them to perform specified tasks such as third-party auditing against given standards for the purposes of certification. Accreditation assures the public that an auditing body is able to carry out its duties independently, competently and consistently. The purpose of accreditation is to provide confidence in certification.

Auditing

Auditing is the systematic examination of an entity, such as an organisation, system or site, to determine whether, and to what extent, it conforms to specified standards.

A **first party audit** is a self-audit or an internal audit. It is an audit carried out by staff within a firm, or other organisation. Periodic self-audit is a mandatory feature of ISO 14001, regardless of whether second party auditing or third party auditing and certification are sought. First party auditing is undertaken by all ALMS members but a first party audit is not a sufficient audit for any ALMS membership category.

A **second party audit** is an external audit of a firm, or other organisation, carried out by customers or buyers. For example, a second-party audit of an entity may be carried out either by that entity's clients, or buyers, or financiers. Clients may wish to second-party audit a firm to be assured that goods and services comply against specified standards. Where an EMS is implemented along supply chains, suppliers use second-party audits as a means to provide assurance to their customers and to manage risk. The ALM Eucalyptus audit is an example of a second party audit.

A **third party audit** is an external audit carried out by an independent organisation (the third party) on another organisation. Third party audits may be carried out by regulators, financiers, or by accredited certification bodies. The ALM Banskia and Grevillea audits are examples of third party audits.

Best management practice

Best management practice (BMP) guidelines provide information to producers on 'production-oriented' issues such as the management of pesticides, water, soil, waste and energy. BMP guidelines are extremely useful inputs for use in the development of ALMS environmental management systems.

Biodiversity

Biodiversity is the variety of all forms of life, including the different plants, animals and microorganisms, the genes they contain, and the ecosystems they form. It is usually considered at three levels: genetic diversity, species diversity, and ecosystem diversity.

Certification

Certification is the successful result of the procedure whereby an accredited third party gives written assurance that they have methodically assessed the extent of compliance with a clearly identified set of process standards, performance standards and/or product standards and have adequate confidence that the processes and practices conform with the standard(s) in question. To provide third party

certification of compliance against a standard, the certification body must be competent. In other words, it must possess relevant specialist competencies including:

understanding the standards to which an organisation is being certified, and understanding pertinent NRM and environmental protection issues

demonstrating technical knowledge of the activities undertaken by the organisation being certified

demonstrating knowledge of NRM and environmental legislation with which the organisation being certified must comply

management system assessment skills.

Ecosystem services

Ecosystem services are those services flowing to society from the environment including:

material inputs such as fuels, minerals, soil nutrients and water, most commonly referred to as natural resources

life support services in terms of air and water quality

amenity services (both use and non-use) related to recreation and leisure activities

waste disposal services for the by-products of economic activity.

Environmental labelling

Environmental labelling is making relevant environmental information available to the appropriate consumers.

There are three labelling possibilities in the ISO 14000 series of standards known as Type I, II and III labelling:

ISO 14024 or Type I labelling is based on established environmental criteria, available for public scrutiny, for different product categories. It is used to identify and promote products deemed to exhibit environmental leadership.

ISO 14021 or Type II labelling is described in an interim standard. Its rationale is to improve the quality and validity of green claims like ozone friendly, GMO free, 60% phosphate free and dolphin friendly.

ISO 14025 or Type III labelling indicates environmental performance against a range of environmental indicators.

Eco-labelling is labelling specifically denoting life-cycle assessment (LCA) information. There appears to be an emerging consensus among international bodies such as the OECD, the WTO and UNCTAD¹ that environmental labels provide any type of environmental information, whereas eco-labels are a specific type of environmental label awarded on the basis of LCA.

Environmental management

Environmental management (natural resource management) is the management of the potential and realised impacts of people on the environment with the purpose of attaining ecologically sustainable development; that is, using, conserving and enhancing the community's resources so that ecological processes, upon which life depends, are maintained and the total quality of life now and in the future can be increased.

Environmental management system

An environmental management system (EMS) is a systematic process used by an organisation to improve its impact on the environment whereby an organisation: defines its environmental policy and makes a commitment to work towards specified environmental goals; establishes a plan to work towards its environmental goals; implements the plan by, where necessary, assigning responsibilities, allocating resources and acquiring new skills; checks progress through systematic measurement and evaluation; and reviews its progress and acts to correct problems.

EMSs have been developed over the last decade by individual firms, trade associations and standards organisations and irrespective of their origins all EMSs conform to the EMS definition given above. EMSs are designed to achieve continual environmental improvement.

EMSs are designed as process standards enabling the integration of relevant product and performance guidelines and standards, including those specified in best management practices and codes of practice, where they exist.

(The) International Organisation for Standardisation (ISO)

The International Organisation for Standardisation (ISO) is a non-governmental organisation established in 1947. Its mission is to promote the development of standardisation and related activities across the world with a view to facilitating the international exchange of goods and services, and to developing cooperation in intellectual, scientific, technological and economic activities. ISO is a worldwide federation of national standards bodies and its work results in international agreements which are published as International Standards.

ISO 14000 series of standards for environmental management

The ISO 14000 series is a non-legislated set of standards and guideline reference documents. Specifically, the series includes:

standards for environmental management systems (ISO 14001 and ISO 14004)

environmental labelling (ISO 14020 series)

environmental auditing (ISO 14010 series)

life cycle assessment (ISO 14040)

standards for environmental performance evaluation (ISO 14030 series)

a draft standard under development (ISO 14060), which intends to provide guidelines for developing standards to reduce environmental effects and to achieve the intended performance of a product or service.

ISO 14001

The ISO 14001 standard provides the EMS specification of the International Organisation for Standards is a Development, the WTO is the World Trade Organisation, and UNCTAD is the United Nations Conference on Trade and Development. The International Standards Organisation (ISO), and ISO 14004 provides guidelines on the EMS component parts, how it is implemented, and discusses principal issues involved.

The key aspects of ISO14001 are that it:

is voluntary

is flexible and non prescriptive

can use and integrate existing environmental programs and systems

pushes continual improvement

encourages cost saving by integrating environmental requirements into the overall company systems (design, manufacture etc.)

can provide a substantial market advantage.

The ISO 14001 standard specifies requirements for establishing:

an environmental policy

determining environmental aspects and impacts of products/activities/services

planning environmental objectives and measurable targets

implementation and operation of programs to meet objectives and targets

checking and corrective action

management review.

The ISO 14004 guidelines, clearly state that requirements of the ISO 14001 process standard include compliance with prevailing environmental legislation and regulations, as well as with "other requirements to which the organisation subscribes, that are applicable to the environmental aspects of its activities, products or services".

The ISO 14004 guidelines elaborate that these 'other requirements' may include industry codes of practice, agreements with public authorities and nonregulatory guidelines (for example, such as those contained in BMPs), as well as international environmental guiding principles.

A primary component of the ISO 14001 standard is the "Environmental Policy" which must be defined by an organisation's top management. This environmental policy must include a commitment to compliance with environmental laws and company policies, continual improvement and prevention of pollution. A system is then created (or if already existing, documented) that ensures that the environmental policy is carried out by the organisation. This involves planning, implementation and operations, checking and corrective action, and management review.

The environmental management system document is the central document that describes the interaction of the core elements of the system, and provides a third-party auditor with the key information necessary to understand the environmental management systems. Certain environmental program elements, including the policy, plans, objectives, etc., must be documented (written down).

As with ISO 9001, one of the keys to a successful (achieving environmental and financial goals) ISO 14001 EMS is having documented procedures that are implemented and maintained in such a way that achievement of environmental goals appropriate to the type and scale of our activities is promoted inherently, and without a bureaucracy or additional expense. Consistent with the principles of ISO 14001, the Environmental Policy and Environmental Aspects/impacts analysis, including legal and other requirements, shape the program by influencing the selection of specific measurable environmental goals, objectives, and targets.

Specific programs and/or projects must then be developed to achieve these environmental goals, objectives, and targets (in ISO 14001 terms, this would be referred to as "Implementation and Operation"). The checking and corrective action elements of the system help ensure continuous improvement by addressing root causes on non-conformances. The ongoing management review of the EMS and its elements helps to ensure continuing suitability, adequacy, and effectiveness of the program.

Planning, or setting of environmental objectives and targets, is critical to success. The goals must be reasonable and achievable, and based on practical considerations, not arbitrarily chosen. Procedures must be established for ongoing review of the products, activities and services. Based on these environmental aspects and impacts, environmental goals and objectives must be established that are consistent with the Environmental Policy. Programs must then be set in place to implement these activities. The EMS must include appropriate monitoring and review to ensure effective functioning of the EMS and to identify and implement corrective measures in a timely manner. Internal audits of the

EMS must be conducted routinely to ensure that non-conformances to the system are identified and addressed. Designated management must conduct an ongoing review process that ensures top management involvement in the assessment of the EMS, and as necessary, addressing the need for changes.

Joint Accreditation System of Australia and New Zealand (JAS-ANZ)

JAS-ANZ accredits inspection bodies, bodies that certify management systems or auditor training courses or personnel and bodies that license products. JAS-ANZ also provides accreditation programmes for regulators and industry specific schemes using criteria modelled on international standards and guidelines.

JAS-ANZ accredits third party certification bodies as competent to carry out independent audits of management systems and to issue certificates of compliance. Accredited bodies may issue certificates for a quality management system (ISO 9001:2000), an environmental management system (ISO 14001) or other management systems with specified criteria.

Accreditation of the body issuing the certificate provides companies with assurance that their management systems have been audited in line with international practice and that their ISO 9001:2000 or ISO 14001 certificates will be recognised by their customers.

Life cycle assessment (LCA)

A systematic set of procedures for compiling and examining the inputs and outputs of materials and energy and the associated environmental impacts directly attributable to the functioning of a product

or service system throughout its life cycle, from the acquisition of raw materials through final disposal.

Life cycle assessment is a form of materials accounting, or 'cradle to grave' analysis. Materials accounting methodologies are relatively new tools for analysing how materials are used in production, either in the end product or during the production process. LCA is done so that a complete picture of the environmental impacts throughout the lifetime of products and services can be developed. This provides significantly more useful information than does evaluating the impact from the manufacturing process alone; it also provides a systematic way to evaluate the costs and benefits associated with product or service changes at various points in their life cycle.

Markets

Mass markets are either bulk commodity or processed products, or mainstream consumer products made from those commodities/products. Niche markets constitute a distinct and minor segment of the market with attributes which limit substitution between products in the niche and mass marketed products – generally equivalent to 5 to 10% of the mass market.

Products

Commodities are uniform products sold in large volumes that are purchased entirely or predominantly on the basis of price. It should be noted, however, that increasingly market analysts believe that a process of 'de-commoditisation' is taking place, with products hitherto considered as being commodities being purchased on the basis of non-price factors. Evidence for this includes the ever-increasing number of grades or specifications on which commodities are being purchased, and the ranking of suppliers based on their success in meeting such specifications.

Differentiated products are those which are purchased on the basis of factors other than price alone or not predominantly on price – that is, their purchase is based on factors such as the image they convey of the purchaser, the safety or quality of the product.

Quality assurance

Quality assurance (QA) programs ensure that products consistently meet customer requirements. They are systems designed to ensure the quality of the end product (as defined by the customers), and are usually developed and adopted by industries or individuals. They may be compatible with and/or certified to the ISO 9000 series.

Standards

Standards are accepted specifications or codes of practice that define materials, methods, processes and practices that, when effectively implemented, ensure that consistent and acceptable levels of quality, performance, safety and reliability are achieved.

Standards Australia notes that standards are "voluntary compliance documents that only become mandatory if called up through legislation or contractual obligation".

There are different types of standards depending on the desired objectives and intended outcomes. The differences between the three types of standards – process, production and environmental performance standards – are described below.

Process standards are organisation-oriented standards and specify procedures to be followed for the purposes of environmental management. Examples of process standards are the ISO 14001 and ISO 14004 standards. These standards detail the processes that a firm, or other organisation, may choose to follow for the purposes of managing environmental impacts. The ISO 14001 standard provides the EMS specification, and the ISO 14004 standard provides guidelines on the EMS's component parts, how it is implemented, and discusses principal issues involved.

Product standards are production-oriented standards which define specific features associated with a marketed product. These features can be either identified in the final product or in the way it was produced. Product standards for agricultural and rural industry products, which include environmental management elements, may make specifications regarding pesticide use, the use of other agro chemicals, and various permitted animal and crop husbandry practices.

Environmental performance standards are standards which specify a level of environmental performance to be met. The standards may relate to both the environmental internalities and the externalities that stem from the production process.

Environmental performance standards for application at an enterprise level may be designed with 'higher level', or 'bigger scale', performance targets in mind. Classical examples include issues associated with impacts of agricultural practices on surface and groundwater quality and on the air. For example, industry bodies may set industry level environmental performance targets that then need to be translated into enterprise-level performance standards. Or, a catchment management authority may set catchment scale environmental performance targets, which then need to be translated into enterprise-level performance standards.

With the exception of formal regulations under Acts such as state level Environment Protection Acts where intensive agricultural and rural industries such as pig, beef, poultry and aquaculture enterprises are subject to end-of-pipe type regulations with respect to their waste and water management practices, there is a paucity of environmental and NRM performance standards in most agricultural industries. However, in the case of the forestry and wood products industries two forestry certification schemes do specify performance standards viz. The Forest Stewardship Council (FSC) scheme and the Finnish Forest Certification Scheme (FFCS).