

# The role of the Australian Landcare Management System (ALMS) in natural resource management (NRM)<sup>1</sup>

## *Overview*

The purpose of this paper is to describe the role that the Australian Landcare Management System (ALMS) could play in natural resource management in Australia and what would be required to enable that to happen.

ALMS is designed to build on existing strengths for improving natural resource management in rural Australia and to assist overcome weaknesses.

The strengths for improving natural resource management include a widespread community based landcare ethos, natural, financial, information and knowledge resources and a large cadre of committed natural resource management support professionals.

There is a need however to strengthen the institutional arrangements governing natural resource management. In particular there is a need to enable existing and to create new drivers for improving land management. There is a need for policies and processes that enable greater creativity and diversity. There is a need to decrease transaction costs in the use of public funds and there is a need to improve monitoring, evaluation and accountability.

Many of these institutional weaknesses would be addressed in part or fully by:

- Credible recognition of improving land management in ways that effectively and efficiently align the various drivers for improving land management.
- An improved partnering of prescribing generic goals, targets and strategies with an increased involvement of land managers in determining and achieving property specific catchment-linked environmental goals, targets and strategies.
- Adoption of broadly-based and on-going land management certification systems at the property and ideally sub-catchment level as platforms for shorter term and/or more narrowly focused programs, for example those supporting eco-service, stewardship and carbon sequestration outcomes through market based or other mechanisms.

ALMS is an externally audited, whole-of-farm, catchment-linked and nationally applicable environmental management system that complies with internationally accepted management standards.

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ALMS uses an efficient web-based software tool to assist landholders, catchment management authorities and industry organisations develop, implement and audit the management system.

When used as a stand-alone tool ALMS integrates all the issues relevant to the development and implementation of a catchment-linked property-based environment management system.

ALMS is also an excellent platform for the effective and efficient delivery of other NRM, eco-labelling, stewardship, quality control and OH&S programs and for assisting organisations with information management and reporting.

The development and field testing of ALMS was supported by landcare groups in southern Queensland, FarmBis Australia, the NHT EMS National Pilot Program and substantial voluntary and private company inputs. Although similarly structured to other industry organisations the ALMS Group was deemed not to be an industry group for the purpose of the EMS Pathways Program.

ALMS currently is supported by Elders, voluntary inputs from a not-for-profit organisation established by landholders (the ALMS Group) and modest inputs from several catchment management authorities and three industry organisations.

AMS needs to be positioned and supported as a basic infrastructure asset servicing regional and industry groups across Australia if it is to realise its full potential to contribute to improving environmental outcomes.

## ***Introduction***

*'The pictures we have of rural Australia are agricultural centric, are based on questionable analyses, and are reinforced by our institutional cultures, structures, and processes. We blindfold ourselves with these mindscapes and we stumble down familiar pathways searching for solutions from amongst the institutions that are part of the problem'<sup>2</sup>.*

The newness and simplicity of ALMS and its struggle to compete in an established milieu of organisations and programs camouflage why it was created, its innovativeness and its conceptual strengths.

ALMS was born out of a realisation that many of the institutional arrangements for rural Australia, in both the private and public sectors, are based on a narrowly constructed set of beliefs, values and attitudes that now are not widely shared across the broader community<sup>3</sup>.

More specifically ALMS was born out of a recognition by a small group of landholders led by Jock Douglas AO that:

- The increasing reliance on regulatory instruments to govern natural resource management reflects a failure of existing agricultural organisations to respond to changing community and landholders expectations
- Landholders need to not just attest to their environmental credentials but to have them credibly verified
- Increasing productivity through increasing the volume of output will not alone be sufficient to sustain agricultural profitability
- Landholders themselves need to take the initiative and establish new ways and new organisations to support innovation.

In other words whilst there are economic and technical dimensions to natural resource management in rural Australia the central challenge is how we use design and use our institutions to manage our affairs.

Institutions include the traditions and the norms and practices of groups, the organisations formed by government, industries and communities and their policies and programs, laws, regulations, codes of practice and the operation of markets.

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<sup>2</sup> Gleeson T. (2001) Landscapes and mindscapes-making space for creative thinking. Paper delivered at Centre for Rural and Regional Innovation, University of Queensland. July 2001. [www.alms.org.au](http://www.alms.org.au)

<sup>3</sup> Gleeson T, Turner C and Drinan J (eds) (2006) Australian Values-Rural Policies: Symposium 2000 proceedings. [www.alms.org.au](http://www.alms.org.au)

Institutions influence group and individual behaviour at various levels and they enable individuals to act in the public good. It is the institutional framework that enables governance, the exercise of political power to manage our affairs.

At one level ALMS is a set of mundane decision processes but further along the institutional spectrum it is an innovation based on a different mindscape—a mindscape typified by an understanding that, as landholders, we need to lessen our impact on the environment and prove that we are doing so, by an understanding that organisations, policies and processes need to make room for creativity and by a recognition that the insight necessary for creativity has its genesis in intrinsic motivation, the motivation that comes from the pleasure of doing rather than from the rewards that follow.

*‘We need to unshackle ourselves from the chains of the past. We need to give birth to new institutions to re-represent rural Australia. Tinkering at the edges of a failed policy framework is more likely to prolong suffering than meet the realistic aspirations that Australians generally have for rural Australia.’<sup>2</sup>*

### ***What is the Australian Landcare Management System (ALMS)?***

ALMS is a voluntary environmental management system (EMS) designed specifically for Australian land managers and their support agencies.

The purpose of ALMS is to assist land managers improve environmental outcomes in ways that enable their achievements and those of their support organisations to be recognised.

ALMS is comprised of interdependent management and monitoring processes that lead to improved environmental and productivity outcomes. It complies with internationally accepted management standards (ISO14001).

ALMS is nationally applicable across all land uses and it is most frequently applied on a whole-of-farm (across industries), catchment-linked basis. AMS can be used also as a planning and implementation tool on a sub-catchment or a catchment basis with its real potential as an empowering and integrative tool being exhibited when used to concurrently develop property specific and sub-catchment plans.

ALMS uses a custom designed web-based software, myEMS which dramatically simplifies the development, recording and auditing of the management system. myEMS strengthens the inherent capacity of the ISO14001 system to deal equally with generic and industry specific activities and their environmental impacts. Additionally myEMS can be used by NRM agencies for information management and reporting purposes.

ALMS is designed primarily to assist a land manager develop and implement a land management system that is customised for their specific needs. ALMS also requires land managers to provide continuous support for biodiversity conservation and to have their management plan and its implementation externally audited.

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<sup>2</sup> Gleeson T. (2001)

ALMS is a positive feedback mechanism delivering recognition for improved environmental outcomes and hence enhanced motivation for on-going environmental improvement. Additionally ALMS, especially when combined with the use of myEMS, is an excellent platform for other NRM programs (such as MBIs, eco-service, stewardship, carbon sequestration, issue based grants), for other farm based systems including occupational health and safety<sup>4</sup> and for sources of information such as is embedded in best management practice, animal welfare and eco-labelling codes of practice.

### ***What ALMS does not do***

ALMS does not prescribe practices. Hence ALMS is **not** a Best Management Practices (BMP) or an Environmental Management Best Practices (EMBP) system.

ALMS does not attempt to lump all the aspects of land management and farming together irrespective of the balance of public and private benefits and of the need for external certification. Hence ALMS it is **not** a Property Management System (PMS) and nor is it Property Management Planning (PMP).

ALMS members are required to implement a continuous improvement system. Hence ALMS is **not** just a ‘pathway’ to EMS that might or might not lead to a continuous improvement system.

Although the ALMS approach is different to BMP, EMBP, PMS, PMP and ‘pathway’ approaches the information and knowledge embedded in these other approaches can be incorporated into the myEMS software and be considered by ALMS landholders when they are developing and implementing their ALMS Plans.

### ***What are the key tenets underpinning the need for and design of ALMS?***

*‘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’<sup>5</sup>*

**Recognition:** *To motivate landholders to improve environmental outcomes we need a positive feedback loop between effort and reward. However we are missing the essential link which is an on-going and widely applicable land management certification system.*

On-going improvement in natural resource management by landholders is constrained by an apparent lack of benefit relative to that achievable from alternative investments.

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<sup>4</sup> Gleeson T and Reid C (2007) Integrating land based systems-five easy steps. Paper delivered at the EMS conference Hobart, Tasmania [www.alms.org](http://www.alms.org)

<sup>5</sup> Gleeson T (2006) Guide to Australian Landcare Management System , ALMS Group [www.alms.org](http://www.alms.org)

Whilst there are various special awards, short-term funding programs for specific issues and outcomes and environmentally-linked productivity gains there is no widely applied system that recognises continuous improvement in natural resource management.

To be effective and efficient recognition systems for improving natural resource management should embrace as many as possible of the existing and potential sources of rewards, for both land managers and NRM organisations.

From a land manager perspective rewards may flow from enhanced self-esteem, from increased productivity, from better risk management, from increased access to natural and financial resources and from markets for land-based products and services, including food and fibre products, eco-services, stewardship payments, carbon sequestration rewards etc.

From an NRM organisational perspective rewards include those from increased motivation and capacity of land managers to improve NRM, from improved information exchange between the organisation and the land managers and from operational efficiencies resulting from economies of scale and of association.

**Differentiation:** *To be internationally competitive Australian agriculture needs to participate more fully in higher priced differentiated markets. Our strong natural resource base and our organisational and human strengths point to a high potential for differentiation on environmental grounds. However we are missing the essential link which is an on-going and widely applicable land management certification system.*

In spite of massive increases in Australian agricultural production, particularly over the past five decades, the real gross value of agricultural production has hardly altered and aggregate net farm income continues to decline.

Although short to medium term price projections for most agricultural products are favourable, producing and selling more of the same will not be sufficient to redress the continuing decline in aggregate real net farm profitability.

Australian agriculture, the principal form of land use, increasingly needs to differentiate its products if it is to be internationally competitive. In part this could be done on environmental grounds if producers had access to and adopted a credible land management certification scheme. Where appropriate such a scheme could be the foundation for a product based eco-label. However particularly in the food sector positioning strategies of corporations may rely for some time on broadly based preferential relationships with well reputed suppliers hence negating the need to eco-label individual farm products.

**Integration:** *The public sector uses relatively short term and small amounts of money distributed by many different organisations, directed to many different issues through many different instruments to influence how landholders manage land. However landholders are by far the greater investor group and they operate through more broadly focused and longer-term activities affecting land condition, both positively and negatively. We need a good fit between these public and private investments, a*

*common platform. However we are missing the essential link which is an on-going and widely applicable land management certification system.*

The impact of public investment in NRM is constrained by the lack of integrating mechanisms and common platforms across organisations (especially CMAs), across time, across space and across NRM issues.

The impact of the lack of integrating mechanisms is accentuated by the multiplicity of NRM related organisations, by a disconnect between long-term goals and short-term funding and by the lack of ownership at the individual land manager level of goals and targets that require their involvement.

There is no shortage of short term, narrowly based and isolated so called ‘pilot’ ‘capacity building’ and ‘pathways’ projects that leave little or no permanent footprint. Transaction costs can be extraordinary high relative to the on-ground investment. Accountability processes are laborious and of doubtful effectiveness. Important goals and targets are imposed but they rarely reflect the needs and capabilities of individual land managers.

***Innovation:*** *Incremental improvements in existing systems of land management will not be sufficient to deliver the quantum leaps in improving land management that we will need over coming decades. As compared with incremental improvements in existing systems the development of new systems requires considerable insight for the goals are not so clearly defined. Insight is heavily dependent on intrinsic motivation and is constrained by frequent external monitoring. These considerations point to the need for long term strategic monitoring and recognition systems to track improvements in environmental outcomes such as would be obtained through an on-going and widely applicable land management certification system.*

The nature of innovation products is closely aligned to the nature of the innovation system with more controlled systems such as operate in rural research and development corporations leading to incremental innovations. However improving land management in rural Australia requires not only incremental improvement in existing land management practices within existing systems (Alpha) but also modification to existing systems (Beta) and new systems (Gamma). Hence it is important to use enabling instruments rather than instruments that constrain insight and creativity through excessive prescription whether it is through regulation or incentive measures that basically mandate ‘best’ management practices naively deemed to be universally applicable.

### ***Who designed and finances ALMS?***

ALMS was developed by landholders and specialists in system design, ecology, agricultural production, land management, human motivation and creativity, public policy, global agribusiness, software development and information management. It is unique in Australia. ALMS is operated by a not-for-profit landholder owned and driven organisation, the ALMS Group.

ALMS is supported currently by Elders, by voluntary inputs from the ALMS Group, by participating landholders and by modest inputs from several catchment management authorities, from Private Forestry Southern Queensland, from Australian Wool Innovation Ltd and from myEMS Pty Ltd.

### ***Why should landholders develop and implement an ALMS Plan?***

Landholders develop and implement an ALMS Plan to:

- Improve environmental outcomes
- Improve farm productivity, asset value and risk management.
- Gain recognition including enhanced self-esteem and local community, regional and international recognition.
- Gain access/maintain access to financial (commercial and NRM program) and natural resources.
- Enable product differentiation based on environmental attributes.
- Improve communication between all the people involved in the farm business
- Improve capability, learning, access to information and social interaction.

### ***Why should catchment management authorities support adoption of ALMS by land holders and use it as a CMA tool?***

Catchment management authorities and NRM Boards should support adoption of ALMS by landholders because it leads to better on-farm and landscape environmental outcomes.

Additionally ALMS is a well designed system-whole-of-farm, based on internationally recognised standards, catchment linked, focus on biodiversity, voluntary, applies across Australia- and efficient system using myEMS software, Australian EMS Manual and Workbook, ALMS Training Clinics, ALMS Review and Renew Workshops, good auditing processes. Of particular significance is that ALMS identifies and addresses the causes of the major environmental impacts-it addresses causes, not symptoms.

Catchment management authorities and NRM Boards could use ALMS to:

- Help meet environmental targets in a credible and documented way.
- Improve the effectiveness, efficiency and accountability of NRM programs generally through providing a robust yet flexible and on-going management platform.
- Improve information management and reporting.
- Enable landholders to get recognition and rewards from improving environmental outcomes hence creating a positive feed-back loop: more improvement, more recognition, more improvement etc and because.

### ***What constrains adoption of ALMS?***

The adoption of ALMS is gaining momentum but its adoption and improvement are constrained by:

- A shortage of human and financial resources limiting marketing, servicing clients and system upgrades
- Funding of industry and regional specific environment management system programs
- Failure to implement the national framework for environmental management systems
- Perceptions that the development, implementation and trailing of environmental management systems do not require research and development.

### ***Commonly asked questions***

#### ***How should landholders and CMAs choose between the different property management, best practice management and environment management systems?***

There is considerable confusion about what different systems offer and under what circumstances they should be supported. However the confusion is all of our own making<sup>6</sup> and the choice about what system to use can be made confidently by asking a few simple questions and arriving at a pragmatic solution.

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<sup>6</sup>It is a difficulty that has arisen simply because the Australian government has failed to implement a 2002 Natural Resource Management Ministerial Council endorsed national framework for environmental management systems or to establish a transparent process whereby it could be modified.

Various EMS titled programs have been established to support the implementation of this framework but in reality, under pressure from established industry organisations, an ‘anything goes’ approach has been applied to funding proposals through these programs.

The EMS policy framework has been further eroded by the establishment of a Ministerial Council Working Party on Property Management Systems (PMS) in response to representations from the Queensland Farmer’s Federation to have their Farm Management System (FRM) adopted nationally.

These developments have rendered the programs largely ineffectual as judged against the principles outlined in the national framework. For instance one of the six principles is that the EMS system should be:

*‘Consistent with existing internationally recognised systems (such as the ISO 14000 series) and be capable of independent audit’*

Although the data required for an evaluation of the programs against the framework are not available the cost per landholder having a system meeting even this one criterion is enormous, probably in the vicinity of \$50,000 per landholder without accounting for State government and landholder costs.

- Will the management system lead to the desired outcome, for instance on-going improvement in environmental outcomes?
  - Irrespective of whether it is a BMP, EMBP, PMP, PMS or EMS approach there is no benefit from having a plan if it is not implemented and continually reviewed.
- Is on-going independent recognition required or likely to be required and if so by whom?
  - If public support is provided then an independent check that the outcome is being achieved should be required. However there are many reasons for such a check even in the absence of public support, including for the purpose of enhancing self-esteem, for community and market place recognition, for accessing resources, for risk management reasons etc.
  - It is important that the system and its verification meets the needs of as many different avenues as is possible or at least provides a platform to enable such recognition, for instance from CMAs, from industry organisations, from the market places for food and fibre products, from carbon traders, from administrators of NRM programs including eco-service and stewardship programs.
- Is the totality of the approach amenable to independent verification and if not is it sensible to intertwine the components in one system?
  - Invariably it is preferable to not intertwine management systems that need to be open to external scrutiny with those that should remain confidential to the landholder
- Can the system be integrated with other management requirements?
  - Where ever possible it is critical to enable integration of systems requiring external audit, for instance systems for environmental management, for occupational health and safety, for food safety, for product quality control and there are several reasons why the foundation system should be a whole-of-farm environmental management system<sup>4</sup>
- Is the system effective and efficient?
  - Is it well designed and are there tools and standards available.

Property management planning (PMP) and property management systems (PMS) are broadly based systems that encompass most if not all of the issues required to be managed by land holders. Essentially these are broad capacity building systems.

PMP and PMS are not necessarily designed to deliver independently verifiable public good outcomes in an on-going way. They are not based on internationally recognised standards and hence they cannot effectively align the drivers for improving NRM. In

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<sup>4</sup> Gleeson T and Reid C (2007) Integrating land based systems-five easy steps. Paper delivered at the EMS conference Hobart, Tasmania [www.alms.org](http://www.alms.org)

fact they do not have the design features required to justify a high level of public investment.

Best management practice (BMP) and environmental best management practice (EMBP) systems are reliant on the proposition that broadly applicable judgements can be made external to the business about what is the best practice to adopt. Some organisations survey land managers to indicate the extent to which they apply BMP with the purpose of presenting industry wide profiles of the practices adopted by industry participants.

Environment management systems (EMS) are systematic processes used by an organisation to continuously improve its impact on the environment. Whilst a wide array of considerations contributes to the development and implementation of EMS the standard processes and the environmental outputs can be externally verified at the individual farm or business level.

Key features to consider when evaluating the applicability of an EMS in an NRM policy and program context are whether or not it applies across industries with most farms having two or more industries, whether or not it is linked to landscape wide outcomes and whether or not it is externally audited and can lead to both national and international recognition.

***Why have we developed industry-by-industry approaches to environmental management?***

There are several reasons why this has happened but none of them is defensible.

The principal reason why we have an industry-by-industry approach is that the Australian government made funds available on an industry-by-industry basis under the mantra of improvement in environmental management needing to be ‘industry lead’. The majority of these approaches will cease once the industry linked funding ceases as there is no rationale for having fundamentally different approaches for different industries.

Various commentators have derided across industry approaches as being the imposition of a ‘one-size-fits-all’ approach. The reality is however that a well designed environmental management system can accommodate generic, industry, location and business specific factors equally well. In fact, especially where different industries have overlapping impacts, it is well nigh impossible to implement different environmental management systems for each industry.

There are several very compelling reasons why it is advisable to implement a common environmental management system across industries.

The first and most important reason is that all else being equal it will be more effective. It is more effective in that it enables the industry off-site and environmental interactions across industries, time and space to be dealt with more effectively.

Only 60% of the Australian land mass is used for agriculture so any system of land management that is industry-by-industry will not apply to nearly forty percent of Australia.

Over 60% of farms have two or more industries producing over 70% of agricultural production by value<sup>7</sup>. Hence industry-by-industry approaches substantially add to the complexity and cost of improving and auditing environmental management. Furthermore it locks in existing forms of land use and makes catchment or landscape approaches more difficult.

Most farm suppliers and marketers, processors and wholesalers of farm products as well as NRM organisations deal across several agricultural products and/or services<sup>8</sup>.

***Why should public funds be used to support environmental management systems?***

The determination as to whether or not to support environmental management systems, as for any other policy instrument, should be based primarily on the nature of the output, not the nature of the instrument itself.

If the expectation is that the production of the output will be less than desirable in the absence of public funding then there may be a case for public funding so long as it is cost effective and does not crowd out other desirable interventions.

The view that EMS as compared with other NRM systems should be entirely privately funded is wrong.

***Only a small number of land managers are developing and implementing environmental management systems so how will they have a cost effective impact?***

The introduction of environmental management systems is an innovation. Innovations by their nature are not adopted by all participants from the outset. In fact it is desirable to proceed slowly but steadily so that any difficulties are sorted without major costs.

There have been major deficiencies in the implementation of the national EMS framework leading to confusion and slow adoption. Many industry organisations have ambushed the drive to develop EMS in line with the agreed framework.

Whether it be EMS or BMP or PMP the drivers for improving NRM are weak and cannot be strengthened unless we have a land management recognition system such as is provided by ALMS. So it is a chicken and egg story-adoption will be slow pending the rewards that flow from the recognition flowing from adoption.

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<sup>7</sup> Gleeson T., Lewis L. and Grosser M. Alliances to assist implementation of EMS (2006) [www.alms.org](http://www.alms.org)

<sup>8</sup> Gleeson T, Heilbron S, Hudson B and Douglas J (2006) Capturing market and other benefits from improved land management [www.alms.org](http://www.alms.org)

***Why seek ISO14001 compliance?***

The first reason is that the system is effective in that it addresses the causes of environmental impacts rather than the impacts themselves.

Second it is internationally recognised and can be applied across industries and jurisdictions and along the product chain.

Third, as it exists, there is less time and money needing to be dedicated to its development and marketing.

***Why should ALMS be supported by public and industry funds?***

In its own right ALMS leads to improved environmental outcomes which invariably are mixes of public and private goods. Hence it should be supported by a mix of public, industry wide and landholder funding.

Additionally several design features of ALMS, specifically its use of web-based software leading to efficient development and auditing of management plans and its whole-of-property catchment-linked features, mean that ALMS is a very effective platform for the delivery of time and/or issue constrained NRM programs.

ALMS is a platform for the delivery of market based incentives, for the development of eco-labelling of farm products and services and, potentially, ALMS is a platform for certification for carbon accounting. ALMS is an excellent platform for certified delivery of particular outputs, for instance in relation to catchment goals, industry best practices, stewardship payments and eco- and other labelling requirements.

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