

Rural adjustment and natural resources management

Occasional Paper No 7/97



Land and Water Resources Research and Development Corporation
Canberra 1997

Published by: Land and Water Resources Research and Development Corporation
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Publication data: 'Rural adjustment and natural resources management'
Richard Price (ed), Occasional Paper 7/97.

ISSN 1320-0992
ISBN 0 642 20645 7

Design by: Green Words, Canberra

February 1997



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Foreword



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Richard is the LWRRDC Program Manager responsible for developing and monitoring the Corporation's programs relating to sustainable land resource management, farming systems, catchment management and technology transfer. He was appointed to LWRRDC as an original staff member to assist in its establishment.

Previously, Richard has worked for the Commonwealth Department of Trade and the Department of Primary Industries and Energy, where he was involved in research policy. Between 1989–90 he was responsible for overseeing the corporatisation of rural research bodies, including the LWRRDC.

In a past life, Richard worked with the School of Pharmaceutical Sciences at the University of Nagasaki, and as a freelance journalist in Japan.

Richard has degrees in Japanese and Administration, a Masters in Public Policy, and is currently completing PhD studies in rural sociology at Charles Sturt University.

In reading through the Industry Commission's submission to the mid-term review of the Rural Adjustment Scheme (RAS), I was alarmed not to find a reference of any kind to natural resources management or to land and water degradation. Naturally, working for an organisation such as mine, I have a passion in dealing with such matters, and would like everybody else to as well; which can be a little unfair, if not downright hypocritical. However, in the case of the Industry Commission, it had also just recently completed a preliminary review of the extent and impact of land degradation, including its cost to primary producers. Perhaps it was just more of a surprise to me than anything else that the Commission had not made any connection between their work on rural adjustment and their work on land degradation.

But why should I be surprised? In its submission to the mid-term review of RAS, the Land and Water Resources R&D Corporation (LWRRDC) expressed concern that government policy to date, including that implemented through the RAS, has not adequately addressed the inextricable link between economic, social and environmental factors involved in natural resources management. Indeed, in nearly all reviews undertaken on behalf of LWRRDC on specific land and water degradation issues, economic and social factors have ranked highly, and, as in the case of soil acidification, sometimes almost exclusively, as the major influences on whether these issues are adequately addressed and resolved. Addressing the link requires a whole-of-government approach as yet undemonstrated in Australia.

It was from the same motivation which shaped LWRRDC's submission to the mid-term review of RAS that the Corporation set about organising a public forum, as part of ABARE's 1997 OUTLOOK Conference, on the issue of rural adjustment and natural resources management. This set of papers is based upon that forum. In the following, I have attempted to weave the thoughts of the various authors together with those expressed by LWRRDC in its review submission.

Rural adjustment and resource degradation

Most of us accept that rural adjustment is a naturally occurring process in agriculture under free market conditions; something which Ian Macfarlane and

Jason Alexandra and Shelagh Curmi briefly discuss in their papers. This adjustment process should, we are told, lead to greater efficiencies in agricultural production and, consequently, the increased profitability of the farming sector. It has been the contention of LWRRDC, however, that the structural adjustment process operates independently of society's, and indeed the agricultural sector's, aspirations for natural resources management.

There is at present scant empirical evidence to indicate what farming practices are widely adopted by farmers when under financial stress. The evidence that does exist suggests that farmers tend to increase cultivation by shorter rotations, overuse fertilisers and chemicals and overstock. These practices can lead to significant environmental degradation, both on-farm, leading to reduced production capacity and hence further economic hardship, and off-farm, leading to significant costs to society through loss of water quality, natural vegetation and biodiversity.

Where adjustment does take place, such as where the farming enterprise mix is drastically changed, this process does not necessarily avoid resource degradation. For example, a trend following the decline in wool profitability in the late 1980s, and which is particularly more noticeable recently following increases in grain profitability, has been an adjustment out of grazing and into cropping in many areas across temperate and mediterranean Australia. Irrespective of whether the land is suitable for long-term cropping, the greater proportion of land dedicated to crops is frequently subjected to farming practices which lead to nitrogen and other nutrient depletion. A common response to this is increased use of nitrogen fertiliser, a practice which can lead to soil acidification. Moreover, many enterprises moving into cropping have neither the skills nor equipment to implement conservation cropping practices so as to minimise water erosion (and subsequent nutrient run-off) and deep drainage (and subsequent recharge to rising groundwaters leading to soil salinity and waterlogging).

A study undertaken for LWRRDC by the University of New England also shows that many of the grazing enterprises in the temperate and mediterranean regions of southern Australia, from WA to NSW, remain non-viable because of their size. Where such enterprises operate in regions unsuitable for cropping, such as in the uplands throughout the Murray-Darling Basin, land use options are extremely limited and appropriate resource

management practices become economically prohibitive. These regions in particular are major contributors to downstream resource degradation. In such cases, government intervention is justified as the only means of addressing the problem. The issue of farm size and its implications for profitability is addressed, particularly in respect to the Murray–Darling Basin, in Clive Thomas' paper.

While there are many examples of structural adjustment, or lack of it, contributing to resource degradation, there are also examples of poor resource maintenance leading to structural adjustment. In the rangelands for example, adjustment in property size has resulted not simply from the need to run more animals to remain economically viable, but also from the loss of carrying-capacity due to periodic overstocking. Further discussion of these issues is pursued in Jason Alexandra and Shelagh Curmi's paper.

The causes of both economic and natural resources management stress frequently stem from the mismatch between land use, land suitability and land capability. This has largely arisen from imposing European land management practices on a very different resource base, and while the results of production driven R&D has enabled enormous improvements in the productivity of Australian agriculture, very few farming systems in Australia are yet to be proven sustainable in the longer term. The papers by Clive Thomas and Jason Alexandra and Shelagh Curmi address these issues in detail and advocate the need for a very different approach to land management in future which takes into consideration land use appropriate to land suitability.

Implications for rural adjustment schemes

Within some environments in Australia, environmental degradation can only be halted, or reversed, by significant changes in land use. Many of these changes are not likely to occur without government intervention to facilitate appropriate adjustment. This is partly because of the costs involved, but also because of the complex interrelationships between different stakeholders and the complexity of decision making processes within the context of natural resources management. Unfortunately the externality monster seems ever present.

Decision-making in agricultural enterprises requires consideration of a diverse and complex range of factors, including market and climatic risk, personal, family and business goals, financial and asset management, agronomic and animal husbandry options and lifestyle choices. The Property Management Planning program was established in recognition of this, and in recognition that whole-farm enterprise management skills are required in order to move the rural sector towards self-sufficiency and land use according to land suitability, at least at the property scale.

At catchment and regional scales, a similarly diverse and complex range of factors needs to be considered by communities, also for the purpose of moving the rural sector towards self-sufficiency and land use according to land suitability. However, at these scales, implementation of actions identified in planning processes must inevitably fall upon those operating at the property scale. In a natural resources management sense, this is highly problematic in that conflicts inevitably arise between those that represent either the cause or effect characteristic inherent in biophysical relationships which are out of balance. Issues of cost sharing and incentives are unavoidable (Jason Alexandra and Shelagh Curmi's paper), as are conflicts between community and individual aspirations for land use (Blair Wood's case study).

Many of the papers in this volume are concerned that, at present, the objectives of the RAS are predominantly based upon achieving improvements in productivity and competitiveness. In other words, the objectives cover one component, albeit an important component, of one scale. The objectives are relatively short-term, and could be self defeating in the longer term if not more closely linked with natural resources management goals or with industry goals to achieve cleaner, greener products. The objectives of the RAS also imply its basis upon the need to respond to rural hardship rather than to be proactive in driving rural adjustment in directions which will make rural communities more resilient to future operating pressures.

Building resilience requires a broader view than aiming to make individual farmers more self-sufficient. It requires a regional approach to adjustment. Most of the papers which follow discuss the need to amend the objectives of RAS to make it more proactive, and thereby less reactive. In particular, Kevin Goss' paper, and to a lesser extent

Jason Alexandra and Shelagh Curmi's paper, pursue the regional approach to providing rural adjustment assistance so as to avoid RAS mimicking a social security safety-net. There is some agreement in the papers that the sectorial approach to rural adjustment is no longer valid.

On the basis of the externality relationships within and between communities, LWRRDC supported, in its submission to the mid-term review of RAS, a regional approach to the delivery of complimentary incentive, regulatory and support schemes aimed at facilitating appropriate resource use according to resource suitability. Such an approach recognises the diverse nature of land use and rural adjustment issues experienced across regions. A whole-of-government approach, recognising rural adjustment as one form of intervention complementary to others, should be taken in the delivery of programs at regional levels. This approach should recognise that communities relate to three tiers of government, and that non-agricultural and natural resource oriented agencies within each of these tiers also have an impact on the rural sector's ability to manage its natural and economic resources.

Some initiatives have already been established, or are in the process of development, which attempt to deliver whole-of-government approaches to provide support to assist communities meet economic and natural resources management goals. These include the South-West Strategy (SW Qld), West-2000 (W NSW) and Southern Prospects (S coast WA) initiatives. Jason Alexandra and Shelagh Curmi's paper comments on some of these and other initiatives, while Kevin Goss' paper outlines future plans along these lines in the West.

Transferring rural adjustment from its traditional sectorial base has certain implications. Land use appropriate to land suitability may require that agricultural based activities cease in certain circumstances, in which case the objectives of RAS need to facilitate such change from a natural resources management perspective. The concept of rural adjustment as something going beyond the bounds of agriculture is addressed by Clive Thomas and Jason Alexandra and Shelagh Curmi. Blair Wood's case study on the rangelands also provides a reminder that rural Australia is much more than agricultural Australia, and that there is a great diversity among the aspirations for the future use of our resources.

And so back to the future

One aspect which receives scant attention in the forum papers is the very question: *Who is responsible for natural resources management anyway?* This is an important question, and one presenting juicy economic possibilities which Industry Commission types could no doubt reduce to simple impersonalised equations. The papers of Ian Macfarlane and Clive Thomas stress that farmers do care about the state of their resources, and that many are making large investments in both resources and courage, not to mention blood, sweat and tears. But where should they turn to for help when assistance is the only resort? Should it only be to government?

In LWRRDC's submission to the RAS review, the Corporation pointed to the need for a whole-of-industry approach, as well as a whole-of-government approach, to rural adjustment. Industry policy councils, marketing authorities and R&D corporations should be encouraged to support market investigations, research and extension programs which will lift the profitability of their industries through facilitating the appropriate adjustment of inefficient and unsustainable enterprises. The private benefits of the rural adjustment process need to be determined and communicated.

It is questions like those raised above, and in each of the papers following, which need to be debated. Many of the submissions received by the Review Committee responsible for the mid-term review of RAS were based on assumptions framed by the nature of rural adjustment as we have known it in the past. Rural adjustment does not have to mean merely a safety net to help the fallen or falling. But that does not mean that some form of rural adjustment assistance is not warranted. Future recipients of assistance may be very different to those in the past. Perhaps it may be some well-to-do farmers up a catchment who will be recipients as an incentive to change their practices so that those down a catchment do not need the safety net. Whatever the future, maintaining the natural resource base must be seen as integral to the long-term viability of rural Australia. On this point, all of the papers which make up this volume agree.



Chair of the Workshop



Pru Goward

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Pru Goward has been a journalist with the ABC for seventeen years. She is currently chief political reporter for the ABC's Radio National breakfast program. In 1994, she conducted the interviews for, and presented, a series of five ABC television documentaries on the history of the Liberal Party.

Pru has worked as a political reporter in Canberra since 1983, first with ABC radio's AM and PM programs, then as compere of a national weekly program, *Open to Question*, and later, in 1986, as the first woman political correspondent for the 7.30 Report. From 1987 until 1991, she compered her own morning program on ABC radio Canberra.

Prior to joining the ABC bureau in Canberra, Pru worked as a reporter on the ABC's *This Day Tonight* and *Nationwide*. She has also written extensively for newspapers and magazines on a freelance basis and has been a regular contributor to *Australian Business Monthly* magazine.

She is an honours graduate in economics from Adelaide University.

Rural adjustment and natural resources management

*A National Farmers'
Federation perspective*



Ian Macfarlane

*Chairman
Farm Business Management Committee
National Farmers' Federation*

Ian Macfarlane has been actively involved in farmer organisations since joining Rural Youth in 1974. Several years after joining the Queensland Graingrowers Association he was elected Vice-President, becoming its General President in 1991, a position he still holds. During his long association with rural organisations, Ian has held positions in such diverse groups as soil conservation committees, the Queensland Farmsafe Committee, the Queensland Rural Industry Workplace Health and Safety Committee, the Quarantine and Animal Health Committee of the National Farmers' Federation and the Queensland Government Rail Taskforce.

Ian has been Chairman of the National Farmers' Federation Farm Business Management Committee for several years and is the immediate past president of the Grains Council of Australia.

Farmers as business operators, and custodians of our natural resources, clearly have a responsibility to manage our natural resource base for its long-term sustainability. There is a direct relationship between business success and failure if we do not fulfil this responsibility. With an estimated \$1.5 billion per year lost in agricultural production through water and land degradation (Land and Water Resources Research and Development Corporation 1993), clearly any profits will be short-lived and asset values will be eroded if managers are irresponsible in their duties. Such a loss is a significant impediment to Australia's economic growth.

The widespread appreciation of this simple fact has only come about in the last couple of decades as the evidence has become obvious and research results have accumulated. Farmers are now fully aware that unsustainable development means lost production, lower yields, higher costs and, in some cases, an ecological time bomb that the next generation will inherit.

Landcare has been a wonderful opportunity for farmers to learn and actively participate in environmental regeneration and conservation work. We now have around 2,500 groups across Australia in which at least 30 per cent of farmers are involved. Why? Not because it makes them feel good. It is because farmers are in business for the long term and therefore profits and maintaining their asset base are paramount. It is estimated that approximately \$300 million is spent on landcare each year by the people involved in it, compared to the Commonwealth Government's 1995-96 budget allocation of \$110.4 million to the National Landcare Program.

The focus of this seminar is rural adjustment and natural resources management. Before addressing rural adjustment as a discrete policy area, we need to look at the trends in agriculture and their impact on farmers in the management of our natural resources.

The trends in agriculture, as outlined below, have been clearly identified by many of the experts, and farmers know them all too well from first-hand experience.

- The long-term decline in agricultural terms of trade as commodity prices have continued to fall and input costs have increased. Over the last 40 years the business margin fell by over 90 per cent (Brennan 1995). Since the mid-1980s the business

margin has been fairly steady but at low levels. It is not surprising that the capacity of farmers to weather seasonal and commodity price swings and invest in the future has deteriorated.

- Continued productivity growth and increasingly intensive production methods, subject to environmental constraints. The decline in terms of trade have been partially offset by the increased productivity growth at an average of 2.7 per cent over the last 17 years as a result of better production methods and new technologies (Knopke 1996).
- Greater diversity across industries as markets change, which is illustrated by changes in the rural labour market and increasing demand in the horticultural sectors and a decline in the cereal grains and livestock industries (Ferguson & Simpson 1995).
- Greater need and access to information, research information, new skills and technology.

Given these trends, rural adjustment in its broadest sense means ongoing change and adaptation in the farm sector in many ways. Unfortunately, in recent times, the term 'rural adjustment' has developed a negative connotation of farmers being forced out of the industry as farms become inefficient in their scale of operations. For farmers in the business for the long term, both economic and environmental pressures mean they must be constantly vigilant and make adjustments in their operations where necessary. Ongoing adjustment is a process as necessary for survival as it is for maintenance and further development of our resource base.

In order to survive and integrate natural resources management into the economic, social and farm business equation, a number of principles apply for all farm operations:

- sustainability involves sustained or enhanced productivity in the farm sector – in other words, financial resources and profitability are fundamental prerequisites to investment in ongoing sustainable farm practices and conservation work
- minimisation or avoidance of adverse impacts on the natural resource base and associated ecosystems through such measures as landcare activities, tree planting or natural regeneration and protection of water courses
- systems that are sufficiently flexible to manage risks associated with the vagaries of the climate

and markets – for example, cash reserves, fodder and water storage, off-farm income

- the quality of life and standards of living in rural communities should be optimised – this should flow naturally from rural communities which are viable over the longer term.

These principles provide a framework for sustainable agriculture and farmers can undertake a great deal of work within that framework in the operation of their businesses based on those principles.

However, farmers do not work in isolation. The paramount considerations fundamental to adapting farm business operations for long-term environmental and economic sustainability are as follows.

- Access to information from a wide range of reliable sources to make informed decisions. A modern telecommunications system has strong potential to provide the means to source vast amounts of information relatively easily and rapidly, such as market information, weather reports, research findings, suppliers' information, and the capacity for commercial transactions.
- Ongoing research into soil and land degradation, climate variability, cropping methods and cultivars, and chemical use, and the dissemination of research findings. Australia has an established strong rural research base that must continue to be fostered to build our knowledge.
- Investment in human capital through enhanced skills to analyse information and implement changes. This is a weakness among our farmers, who have traditionally learnt on the job. However, as profit margins and returns have narrowed, new skills, techniques and methods are vital to keep ahead of our competitors. Research recently published by the National Farmers' Federation indicates that training and the implementation of change are clearly linked to higher levels of profitability in farming (Kilpatrick 1996).
- The financial resources to seek information and implement changes. In terms of income, as individual farmers, we obviously have little control over international commodity prices and none over seasonal weather patterns. However, on the cost side, cost efficiency is essential both on-farm and off-farm. The farm sector has been a long-term and strong advocate in urging governments to increase the pace of micro-economic reform, industrial relations reform,

taxation reform and trade liberalisation to drive efficiency and reduce costs.

- A further, and often under-estimated, factor in rural adjustment and adaptation is a strong community network for people to share information, learn from each other and work in cooperation at a regional level to address environmental problems. The landcare movement is a prime example.

In terms of specific rural adjustment policy and the Rural Adjustment Scheme (RAS), which is under review at the moment, the National Farmers' Federation has recommended a number of changes to enhance the scheme (National Farmers' Federation 1996).

To begin, we looked at why such a scheme is necessary and appropriate: our overarching goal is to achieve a more profitable farm sector that is able to operate competitively in a sustainable manner on an international, national and regional basis. The role of government in this is to remove artificial barriers that interfere with industry adjustment and to provide an environment that is conducive to business enterprise. In this context, the aims of the RAS are validated where the government does not take a strong interventionist approach in forcing or preventing farm adjustment, but rather a supportive role that helps farmers make the best long-term decisions. Such support should provide an incentive to make changes and send a signal that the adjustment process can be proactive rather than reactive.

The objective of the RAS is, therefore, to assist in developing professional farm managers by fostering self-reliance and innovation to overcome the impediments to achieving better financial, technical and management performance in the farm sector.

In reviewing the current scheme it is evident that, if definitive judgements are to be made about the effectiveness of the RAS in achieving its objectives, a better management information system is needed to collect and analyse information to assess the medium and longer term costs and benefits. Nonetheless, from our experience, changes to the current scheme are needed to send a clearer message to farmers to encourage decisions that will enhance the long-term productivity and profitability in the sector.

In summary, the changes needed are:

- Firstly, greater priority needs to be placed on the skills development element of the RAS to lift farm

- productivity and self-reliance and to encourage sustainable professional farming. This should complement the property management planning programs, the programs developed by the Rural Training Council of Australia and the Rural Counselling Program.
- The farm productivity enhancement component of the RAS should continue to encourage farmers to improve their productivity and prospects of long-term viability through appropriate and enhanced use of resources, including their natural resource base.
 - Until conclusive evidence is found to the contrary, interest rate subsidies should continue as an incentive to enhance farm productivity. Farm productivity enhancement incentives should also be offered as grants for those farmers wishing to improve their prospects of long-term viability but wishing to avoid borrowing funds to do so.
 - For those farmers who are likely to be non-viable in the long term, it is clearly preferable to leave farming earlier, with better prospects, rather than later when their financial and emotional situation and natural resource base are eroded. To provide a stronger incentive for earlier exits, a package of measures is required, including the following.
 - The upper limit of the combination of re-establishment grant and equity threshold should be raised to approximately \$140,000. This can be done in either of two ways: lifting the asset threshold to \$95,000 with the added grant of \$45,000. Alternatively, the grant could be lifted as an increased incentive. The net effect should be an assistance package that is sufficient to encourage early adjustment and provide an acceptable standard of living and base for re-establishment post-farming.
 - Part of the re-establishment package needs to include rural counselling as an independent source of advice to guide people through the process and attempt to see rural adjustment in a more positive light.
 - Non-viable farmers are also likely to lack confidence in their skills to find other employment or need to upgrade their skills. Training for these farmers, including a skills audit and accreditation in recognition of prior learning, should be considered as part of the re-establishment package to offer further incentive and encouragement to adjust sooner rather than later.

- Social security provisions should be completely removed from the RAS and a more equitable social security system must be implemented to accommodate farm families in times of financial hardship.
- Exceptional Circumstance provisions must also be removed from the RAS and funded and administered through a separate vehicle by an individual State or States according to need, in consultation with the Commonwealth. The objectives and effectiveness of the RAS have been obscured in recent years as Exceptional Circumstance provisions have been given priority in drought-affected areas. While adequate provision for exceptional circumstances will continue to be a priority, having such provisions housed within the RAS sends a confusing message to the farm sector on the overarching objective of fostering self-reliance through improved productivity.

In conclusion, conserving our natural environment to rectify past mistakes and pass on productive assets to future generations is a community responsibility not confined only to farmers and private landholders. In managing and fulfilling this responsibility, rural adjustment is only one factor but it highlights the environmental, economic and social sustainability dimension of the community's responsibility. Schemes such as landcare, the RAS and property management planning represent a small investment by the community and individuals in fulfilling our long-term responsibilities.

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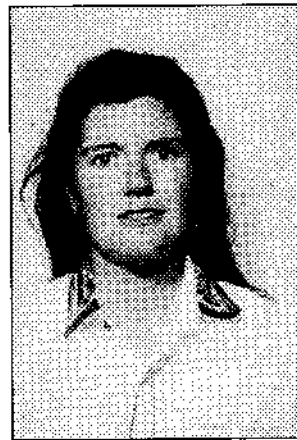
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Adjusting natural
resources management
to ecological realities:
Is there any role for a
Rural Adjustment
Scheme?

A conservation perspective



Jason Alexandra
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Until January 1997, Jason Alexandra was the Sustainable Landuse Coordinator to the ACF since 1991 and was responsible for directing and coordinating the ACF's activities in land and catchment management across all sections of government, industry, community groups and stakeholders.

Jason has also held the position of Director, Greening Australia Ltd, since 1991, and from 1992 to date has been Honorary President, as well as a founding member, of International Treecrops Institute Australia – a non-profit organisation dedicated to treecropping.

Jason has a long history in conservation, covering areas such as rural revegetation, industrial revegetation, urban landscaping, soil conservation and fertility management for trees, including direct seeding. Together with his wife, he manages a demonstration tree farm which is used regularly for field days and as an educational resource.

Jason became a Director of LWRRDC in July 1996.

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*Landcare Liaison Officer
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Shelagh Curmi is the ACF's Landcare Liaison Officer, dealing with conservation issues throughout Australia. This involves liaison with all sectors of the community and government, with current projects ranging from the sustainable use of rangelands to community environmental monitoring and developing a sustainable sugar industry.

Shelagh has also worked in north Queensland on issues such as coastal and estuary development and the conservation of endangered habitats. In the Western District of Victoria, where she now lives on a mixed farm, she is involved in grassland research and indigenous seed collection.

She has a Bachelor of Landscape Architecture and a Graduate Diploma of Land Rehabilitation.

Introduction

This paper is based on the submission of the Australian Conservation Foundation (ACF) to the recent Rural Adjustment Scheme (RAS) review. The examples used in this paper are based on the Darling catchment and, therefore, New South Wales and Queensland west of the Divide. This is because ACF has recently completed a National Landcare Program project which gave us the opportunity to focus on sustainability and transition to ecologically sustainable development in this region. The general observations are relevant to many areas in Australia, regardless of their specific regional location or the predominance of the pastoral industries.

We draw attention to the conclusions that for the RAS – or in fact any other program directed at accelerating rural transition or improving resource management – there is a need for:

- a defined regional and whole-of-government approach rather than a sectorial- or industry-specific focus
- a broad and inclusive interpretation of what processes operate in shaping regional economies, and how societal well-being is determined
- recognition of the interrelated nature of economic and ecological processes
- clear national policy goals and the willingness to use a selection of appropriate policy instruments to achieve those goals
- a rational and transparent approach to determining how to make investments in natural resources management
- scrutiny and vigilance in program delivery
- recognition of the potential for policies and programs to have unintended outcomes, and therefore a willingness to adapt those policies and programs to target them to maximising the beneficial relationships between the activities of the public sector and the private sector.

ACF recommends that programs such as the RAS be subjected to performance reviews against their stated goals, with proper evaluation and scrutiny. Placing these kinds of programs within their regional and national context and ensuring their relevance, transparency and accountability is critical to maintaining confidence from both the recipients (rural enterprises) and the funders (the taxpayers).

ACF recognises the need for government intervention in rural adjustments, but questions the best way in which this is delivered and welcomes opportunities for wider debate on the subject – for example, the recently announced Industry Commission Inquiry.

Attempting to protect the status quo in land use will not result in improved natural resources management. Overall, the Australian public is looking for government leadership and innovation towards resolving the interrelated ecological, economic and social issues facing rural Australia.

The Rural Adjustment Scheme and regional development

Government intervention in what would otherwise be market-driven rural adjustment must be based on clear policy objectives. Currently, the RAS is justified in terms of social welfare, natural resources management, and accelerating the development of enterprise efficiency. These should be disentangled in order to think clearly about the functions and effectiveness of government programs targeted to these outcomes.

Firstly, in terms of social welfare, there appears to be no justification why farmers deserve any more or any less welfare support than other self-employed people or industry sector. Farm families should be subjected to eligibility criteria similar to others. Social welfare support to farm families should be means tested and, for equity and efficiency, it should be delivered through the usual channels for delivery of social welfare. Reform of social welfare programs may be necessary so these can accommodate the needs of self-employed rural families.

Secondly, the relationship between farm income and natural resources management outcomes is not clear. It is a dubious proposition that high farm income relates to improved natural resources management

outcomes. To ensure natural resources management goals are met, grant or loan schemes should have contractual obligations. If natural resources management is to be a primary objective of the RAS, then it should almost certainly be combined, or operate in tandem, with those programs which have a strong natural resources management focus – landcare, total catchment management, and so on – and be used to provide innovative funding for these.

Thirdly, there are numerous State and Commonwealth programs targeted to encouraging enterprise efficiency – extension services, R&D provisions, property and enterprise planning initiatives – as well as the private sector providers. If Australian agriculture is to be truly market-driven and farm operations treated like businesses in other sectors, then there appears to be little justification for the RAS to be a vehicle for achieving enterprise efficiency. Enterprise expansion, investment opportunities and risk and debt planning should also primarily be the role of private sector lenders and advisers.

Governments clearly have roles in providing the social safety net, protecting the environment and other common goods and pursuing leading edge opportunities (R&D, innovation, and so on). However, using these criteria for the role of governments, it is hard to identify any justification for propping up the status quo in land use or rural enterprises – numerous other forces tend to do so! Nor does there appear to be any justification in government attempts to intervene in bringing about greater efficiency in rural enterprises, other than those which are normally driven by market adjustments.

It seems, therefore, that the RAS should be targeted to achieving public good outcomes – either social or in terms of natural resources management. The latter must be targeted to change across whole regions in order to have significant effect on a catchment or landscape scale. Therefore there must be some kind of vehicle for development and delivery of regional plans. Thus the RAS joins landcare, catchment management and regional development initiatives in requiring a regional focus.

At this regional scale, numerous questions require resolution in order to target RAS and other policy instruments, and accelerate reforms which generate natural resource outcomes. These include the following.

- What is the relationship between the RAS and the wider adjustment processes occurring in the regional and national economy?
- What are the cost and consequences of abandoning or preserving ‘agricultural and pastoral traditions’ in various regions?
- Why does so much government investment in agriculture go into those areas with the greatest problems rather than into those with the greatest opportunities?
- How do we reconcile the diverse and changing attitudes of the Australian community?
- What of the new political realities since the native title legislation?
- What about assisting other industries in the context of the decreasing relative importance of agriculture and pastoralism in the national economy?

The effectiveness of any natural resources management (or other ecologically sustainable development) strategies will depend on many factors. These include clear and coherent policy goals, cooperation between the States, Commonwealth and local government, concerted local action, and a willingness to use an appropriate mix of policy instruments. These efforts must recognise the dynamic nature of the relationships between public policy and private enterprise decisions.

It is important that efforts and resources are directed to developing cost-effective reform processes with sufficient capacity for ‘policy learning’ (Dovers 1996). Dovers outlines the need for a policy equivalent to adaptive management which uses best available knowledge to design policy reforms, and engages in monitoring the impacts and effectiveness of various policy options so they can be adapted, as required, based on the feedback received.

Within any region (not just those currently facing major problems) regional action plans are needed to achieve stated ecologically sustainable development policy outcomes. These regional plans must target the mix of policy instruments considered most appropriate to the circumstances in the particular region. For example, the mix of instruments used in the Murray Mallee or Cape York will be quite different to those appropriate to the Mid North or the Hills.

Furthermore, questions arise about the decision-making framework used by governments to choose which regions or resource management issues in which to invest public funds. It seems at the moment it is largely reactive or problem-driven and depends on a region or issue getting sufficient profile, rather than any rational or orderly process.

Establishing the basis for comparing the relative values of such investments across Australia and across the range of issues is a major challenge that governments must address. Numerous projects, separate programs and ad hoc policies are proving insufficient. It is necessary that we shift from 'lurching, episodic, myopic ad hocery' to processes and institutions with the capacity for learning in order to adapt to the sustainability challenges (Dovers 1996).

Recommendation 1

Government resource management agencies should attempt to develop a rational and transparent decision-making framework to assist in selecting regions and issues to invest public funds into. Such a framework should assist in comparing the relative merit of different investments in different regions, whilst ensuring that both market and non-market values are taken into account.

Accelerating change – targeting programs – picking the trends?

'Forecasting is difficult, particularly when it's about the future.' (Unknown)

To target programs like the RAS well, we must be able to identify the significant influences on the future. But who has the most accurate crystal ball? Accurate crystal balls are in great demand when it comes to government interference in adjustment processes. For example, a few years ago governments paid for vine pull schemes. Shiraz grapes and other vines were ripped out; now many thousand hectares are being replanted.

In this era of rapid change, all dynamic processes are subject to a large number of significant interrelated influences – environmental, economic and social. The physical and policy trends identified below are likely to have a substantial impact on natural resources management in Australia, yet to what

extent are they taken into account? While significant individually, we should attempt to consider their collective impact, not forgetting the synergistic and cumulative effects.

The effectiveness of the RAS, the National Landcare Program, Natural Heritage Trust (NHT) or any other national efforts to achieve more sustainable resource management will be affected by trends identified below, as well as those not yet foreseen. Some are global in nature, others local or regional, but nonetheless there must be a readiness to embrace rather than resist change. Significant trends that will affect the future management of natural resources in Australia include:

- 'free' trade, information transfers and the increasing globalisation of the world economy
- global population growth, resource scarcity, pollution consequences and wealth disparity
- increasing power of international treaties, transnational corporations and mobile capital
- a suite of changes resulting from greenhouse-induced climate change – greater severity of storms, more floods, higher average temperatures
- rapid expansion in the industrial capacity in Southeast Asian and third world countries
- specialisation and intensification of primary industries – the declining terms of trade for commodity producers, decline in the number of farmers and pastoralists and an increase in corporate production and vertical integration
- increasing economic significance of horticulture and plantation forestry – declining relative economic significance of extensive pastoralism
- decline in the health and integrity of most river systems and their catchments – declining water quality and the increasing intensity and severity of algal blooms
- increasing competition for water and conflict over water rights and environmental flows
- increasing demand for, and economic value of, irrigation water
- increasing consumer, trade and environmental concern about agricultural chemicals
- application of competition to public sector advisory and regulatory roles
- application of rational economics to industry support and development roles

- development of systematic approaches to cost sharing for on-ground works
- development of systematic approaches to natural resource investments and determining 'public goods' achieved.

The International Context – the United Nations Desertification Convention

As a result of an agreement at the Earth Summit at Rio, the United Nations (UN) has recently negotiated a Desertification Convention. Australia is a signatory to the convention. The rangelands are one area in which Australia can tangibly demonstrate its commitment to ecologically sustainable development through implementing strategies which accelerate the transition to sustainable management. Effective prevention of further degradation is critical, as restoration is not generally regarded as economical.

While the area occupied by pastoralism is vast, and the industry significant to some regional economies, Australia is sufficiently wealthy to be able to invest in the transition to sustainable management. The critical questions are how best to do so. As a nation we have a choice: either we invest in sustainable management, or in ongoing incremental and episodic degradation, with the resultant biological and productivity decline. The polarisation of the choice is stark – the old deserts of the Northern Hemisphere or the diversity, elegance, productivity and beauty of our rich vegetated rangelands. This is the fundamental choice about what is best for all future generations – a choice between enshrining short-term private interests against the long-term public interests of the Australian and world community. The choices must be balanced – in favour of the majority and the future, while managing the transition in the short term (Harris 1988; ACF 1991).

Merely having the policies or strategies is not sufficient – ongoing commitments to the goals are required. The effectiveness of national plans of action to combat desertification do not have a good track record – there have been few outstanding successes. A UN review concluded that national action plans to tackle desertification have typically been a failure throughout the world, despite major domestic and UN investment since 1972 (UNEP 1990).

The national rangelands strategy

The Draft National Strategy for Rangeland Management (ARMCANZ & ANZECC 1996) clearly articulates the goal of sustainable rangelands management. However, it must not only charter national intentions, but focus on effective delivery of changes to physical conditions.

While the term 'rangelands' is used to describe the majority of the continent, this singular terminology belies the diversity of Australia's rangelands regions. Given that an overriding national strategy is now almost in place, there is a need for the development of processes which lead to effective regional management strategies.

As already stated, ACF recommends the development of regional action plans which aim to achieve stated ecologically sustainable development policy outcomes by using the mix of policy instruments considered the most appropriate to the circumstances in the particular region.

It is useful to consider the range of policy instruments available and attempt to determine their usefulness in achieving targets. The following categories of policy instruments are adapted from the Draft National Strategy for Rangeland Management.

1. Policies which alter market conditions – use of these changes the price of certain actions or resources and thus produces an incentive for conservation or use of alternatives. Examples include pricing of natural resources, taxes or levies on certain materials, rates and charges, adoption of user pays principles, or creation of markets for pollution or resource use rights.
2. Policies which act directly to change the accepted way of doing things – use of legislation or regulations to prohibit certain activities, introduction of quotas to limit the amount of resources used, zoning in planning schemes restricting land uses, and so on.
3. Policies which support adoption of change through improved knowledge and understanding – support for R&D, education and the advancement of knowledge, and policies which support adoption of best practice within an industry sector, and so on.
4. Policies which enable direct intervention in markets – these include government ownership and operation of production and management

systems such as state-owned plantations, municipal operation of recycling schemes or wastewater treatment plants.

Within any region there is a need for coherent and transparent agreements outlining targets, timetables and priority actions, and monitoring to provide a system for assessing the effectiveness of policies and related strategies.

This is where many challenges lie:

- What is the best mix of reforms to generate real change for specific regions?
- Which are the appropriate and most effective policy instruments and program reforms?
- What kind of monitoring and evaluation of effectiveness are required?
- What is the best balance of legislative and voluntary policy instruments, and so on?
- How should regional economic interests be balanced with national and global concerns?

Recommendation 2

ACF supports the development and refinement of regional strategies and action plans targeted to implementing stated ecologically sustainable development policy goals. These regional action plans should recommend an appropriate mix of policy instruments to match the circumstances of the particular region. The regional plans must be subjected to scrutiny in order to ensure that they will be effective and are consistent with nationally agreed policy goals. Progress towards achieving these goals should be regularly monitored, evaluated and the programs modified as required.

Consensus on resource management will not always be reached and conflicts over priorities and management goals will be inevitable. In these cases, governments are obliged to intervene and be arbiters on behalf of the national well-being. This intervention occurs against a backdrop of changing economic conditions, social values and knowledge. For example, there are many equity, social justice and infrastructure provision issues in relation to the widely dispersed populations. Whilst some believe that preserving the 'mystique' and traditions of pastoralism is important, others see this as perpetuating exploitation built on the violent dispossession of the indigenous occupants. Resolution of such contrary interpretations of history cannot be achieved via consensus or attempts to protect the

status quo. It should therefore be placed into perspective in terms of redressing colonial injustice, the history of the squatters, the pastoral Acts and closer settlement and the native title decision, along with rates of change and loss of other traditions, multiculturalism, sustainability and environmental values in contemporary Australia (ACF 1, 2 & 3 1991–92).

Recommendation 3

ACF recommends support for resolution of land use conflicts and the development of land use regimes which reflects contemporary societal goals – eg., balancing biodiversity, indigenous rights, economic productivity and cultural heritage values.

Review of property build up and the Rural Adjustment Scheme

Government policies and programs, including the RAS, currently support property build up (aggregation) through subsidies in order to increase property sizes. This has in the past been supported by ACF and many other organisations. However, we now believe that it should be subjected to a critical evaluation, particularly in the context of the NHT and the proposals to significantly increase Commonwealth expenditure on natural resources management. Other options for use of public money to improve land management should be examined. A least cost planning approach should be adopted. (Least cost planning is a concept which can be usefully borrowed from the energy sector. It attempts to establish how policy goals can be achieved at the least cost, that is, in the most effective way.)

The RAS, or indeed any subsidy, has the potential to distort the market values of properties and may, in effect, be counter-productive to market-driven adjustment processes. If RAS funds distort land values, then they may prevent land prices from accurately reflecting productivity values within the market. Therefore, due consideration should be given to whether the provision of RAS funds within a region distorts the market values of land, and whether there are any other priorities for the expenditure of public money in the region; for example, acquisition of properties to add to the conservation estate, provision of funds for infrastructure refurbishment, such as capping and piping programs. The provision of interest rate

subsidies to those who buy out neighbours may simply be a subsidy that benefits banks and underpins real estate prices.

Recommendation 4

ACF recommends that, notwithstanding the findings of the RAS review, the adequacy and effectiveness of RAS should be fully examined in the Industry Commission Inquiry into sustainable land use. The rationale and implementation practices of the Rural Adjustment Scheme should be critically evaluated to determine whether RAS has been accurately targeted to achieving efficiency in agricultural enterprises, social welfare and/or natural resources management goals. Particular attention should be devoted to the use of RAS funds for sponsoring of property build up, and alternatives considered.

In particular, the question of whether RAS funds distort land values in those regions where property build up is funded needs to be examined. Further questions which require examination include:

- *what other options exist for use of public money to improve natural resources management?*
- *how can stricter performance indicators and cross compliance criteria be introduced to contractual arrangements to ensure public funds are used in the manner intended?*
- *what is the potential for using a range of other mechanisms to achieve stated policy goals?*

Pastoral land management in the Darling catchment – a case study

Land and vegetation degradation and high rates of species extinction, economic decline in the livestock industries and associated social distress are well documented, and indicate the need for substantive changes. Accordingly, there is now unprecedented national and international agreement on the urgency of the need to achieve sustainable rangelands management.

Environmental, economic and social health in the rangelands are interrelated and interdependent (Queensland Department of Lands 1993). Adoption

of integrated solutions and policy reforms are required to ensure better protection and management of the greater part (by area) of the Darling catchment's terrestrial environment. Reversing the trends of continued degradation must be recognised as an urgent priority. (For the purposes of this paper, all lands used for extensive pastoralism are considered, whether or not they are within the Australian Bureau of Agricultural and Resource Economics (ABARE) definition of 'rangelands', as most of the issues discussed apply to the extensive 'pastoral' industries within the Darling catchment).

While numerous opportunities exist for improving resource management in the pastoral lands of the Darling catchment, actually achieving significant change poses numerous challenges. The declining terms of trade of the pastoral industries limit the capacity of individual enterprises to invest. There are increasing calls for government assistance in adjustment of the industries based on extensive use of rangelands. However, there are many questions about the best way for governments to intervene in what should be predominantly market-driven adjustment processes. The desirability and effectiveness of current efforts to accelerate adjustment deserve to be scrutinised.

The south-west Queensland initiative and the WEST 2000 initiative in western New South Wales draw on commitments from local communities, local government, and State and Commonwealth governments to work towards accelerating sustainable management and enterprise viability. While various inquiries have identified the need for change for almost a century, these two regional initiatives draw on commitments from all tiers of government and the community. The community-government partnership approach characterises Australia's land management programs in the 1990s. These two regional initiatives have been frequently cited as leading edge examples of the regional approach to implementing sustainable land use and rural adjustment. These claims should not be taken at face value and, given that substantial public investments have been made and that considerably more have been proposed, it is important that the effectiveness of the investments is quantified.

ABARE, the Bureau of Resource Sciences and the Australian Geological Survey Organisation have attempted to develop performance indicators to see whether it is possible to determine if the Commonwealth investments in the region achieve

their stated policy goals (Bill Watson ABARE, pers. comm.). Attempts are also being made to develop regional information systems which can integrate existing natural systems data and help to implement the programs. CSIRO is coordinating several regional land use studies aimed at determining ways of planning land use and resolving land use conflicts (Nick Abel, pers. comm.).

Detailed regional case studies of the Rural Adjustment Scheme

There is need for a detailed RAS case study which identifies recent use of RAS funds and places this within the context of the scale of change needed. South-west Queensland and the Western Division of New South Wales may be an ideal area for such a case study, because considerable economic and financial information has already been collected to support recent strategy development processes.

Based on the assumption that 8,000 to 10,000 DSE is a viable enterprise size, and using the stocking rate estimates provided by the Western Lands Commission, New South Wales Department of Land and Water Conservation, ACF estimates that there are approximately twice the number of pastoral enterprises in the Western Division of New South Wales as could be considered optimum. Therefore, a massive structural adjustment process is required.

Detailed analysis of the influence and effectiveness of RAS funding for property build up within the Western Division over the last 5 to 10 years would be valuable. A brief case study into the economic effectiveness of the use of RAS funds within the New South Wales Western Division should be commissioned. Similar case studies should be undertaken in several regions and they should include consideration of other options for the expenditure of public funds aimed at achieving viable enterprises and sustainable landscape management.

Recommendation 5

Detailed case studies on the effectiveness of the RAS within specific regions are required. At a minimum these should:

1. *accurately document the use of RAS funds over the last 10 years, including the percentage used for drought assistance and for property build up, and specify the number of*

enterprises and the number of hectares that have changed hands under the scheme and at what cost

2. *use a multiplier factor to determine what the full cost of achieving viable enterprises in SW Qld and western NSW would be assuming no change in RAS criteria, funding or application rates*
3. *identify to what extent the use of RAS funds results in more viable enterprises, improved natural resources management and reduced degradation*
4. *examine the potential for RAS funds to have distorted the market values of rural properties in those areas where RAS funds are used and, to this extent, operate as a force countering market-based adjustment processes*
5. *examine whether market forces are adequate to bring about the adjustment required to achieve efficient scales of operation in agricultural enterprises and, where efficient scales are not operating, determine how well 'part time' or 'subsistence' farmers are managing.*

Accurate assessments of regional economics

The outcomes of two recent studies described briefly below have large implications for how structural adjustment and regional development processes are conceived and implemented.

- In the Kimberleys, The Australian National University Northern Australian Unit Study (1993) identified the 'Aboriginal industry' as the biggest industry, followed by policing and imprisonment.
- The Cape York Peninsula Land Use Study identified that traditional hunting and gathering generated community benefits comparable to the total dollar value generated by the grazing industry.

Despite the ABARE assessment of the rangelands economy (Draft National Rangeland Strategy) and these other assessments of the economy of isolated regions, most people believe that 'rural industries' are essentially about production of commodities such as sheep and cattle.

The implications of the above-mentioned studies are that the design of the various regional initiatives must include the wider social dimensions of regional economies and not be simply driven by the resource-based industries. To fully embrace this concept means developing an inclusive definition of what constitutes the regional community, and the community of interest in the management of the rangelands.

The sectorial nature of government departments (that is, addressing one sector or policy community) is a major stumbling block to developing a genuine whole-of-government approach. For example, if we assume that the trend of increasing Aboriginal ownership of pastoral leases continues, then this raises numerous important questions:

- Should governments actively intervene to accelerate this process?
- Are efforts to support property build up countering this eventuality?
- Are Aboriginal people involved in the current consultation processes steering initiatives like West 2000 or the south-west Queensland strategy?
- What are the appropriate actions to support Aboriginal management?
- How should a potential decline in livestock outputs be compared against potential benefits to Aboriginal communities?

A better understanding of how regional economies operate is a necessary starting point for helping to make rational decisions about appropriate government intervention in resource management and community and regional development.

Firstly, an ability to measure total social well-being may be more appropriate than narrowly defined 'financial' measures of economic activity.

Secondly, the capacity to set priorities for government investments within a region needs to be taken on a whole of landscape and whole of economy approach – in short, an integrated approach which requires governments and communities to explicitly state their preferred priorities and policy directions. Furthermore, if funding is made available, the terms (such as cost sharing) and the criteria should be explicit and the processes transparent so that all suitable communities have a right to bid for funds. Funding should not be limited to specific 'pet project' regions.

Recommendation 6

Attempts at measuring regional economies should focus on measures of community well-being rather than simpler measures of throughput or output, as the latter do not necessarily equate to measures of community (or national) benefit. Development of indicators of community well-being need to be included in any such attempts.

Regional plans or agreements need an integrated approach in which governments and communities explicitly state their preferred priorities and policy directions. A whole of landscape, a whole of regional economy and a whole-of-government approach is required in order to set priorities for government and community investments within a region.

Funding programs which are available for such regional agreements need to ensure that the terms and criteria are explicit and the funding processes are transparent, so that all suitable communities have a right to bid for funds. Funding should not be limited to specific 'pet project' regions.

Economic diversification

Barry Jones' (1982) analysis in *Sleepers Wake* demonstrates the vulnerability of narrowly based regional economies and the relative strength of those with diversity of production and services. The latter have the greatest capacity to adjust to new challenges and to provide employment opportunities.

Work done by ABARE to determine the relative size of various sectors operating in the 'rangelands' indicated that pastoralism, while the most extensive user of the rangelands in terms of area, was not the largest industry in terms of dollars. Both mining and tourism exceeded pastoral industries (ARMCANZ & ANZECC 1996) and it seems they both have much greater potential for expansion.

In addition to accurate assessments of current processes at work in the economies located within the Darling catchment, there should be greater attempts to identify opportunities for and impediments to economic diversification. In many ways it may be better use of public funds to stimulate diversification, rather than to support the status quo in pastoral areas. These efforts to stimulate diversification should include (but not be limited to)

service industries, manufacturing, greater intensity of agricultural and horticultural crops (for example, development of table grape production at St George), tourism, parks, mining, wildlife and feral animal harvesting and Aboriginal homelands.

Recommendation 7

ACF recommends that there should be greater attempts to identify and support opportunities for economic diversification, as this may be better use of public funds than support for the status quo in pastoral areas.

Support for socio-political and socio-economic research

Socio-political and economic research could further help to direct and inform the reform process in pastoral areas. Targeted R&D could assist in resolving many important issues.

The Land and Water Resources Research and Development Corporation (LWRRDC) sponsored a workshop in December 1993 to 'identify and rank actions necessary to achieve sustainable use and management of Australia's rangelands with an emphasis on R&D' (Moreton & Price 1994).

Whilst many technical issues are specific to individual regions, many policy issues have wide relevance, affecting many regions. Holmes (LWRRDC 1994) has argued that in the past 'the research effort was too narrowly focused' and that most/many of the problems are socio-political, not biophysical or technical. On the basis of this premise, he emphatically states that the resolution of these problems is largely in the realm of policy rather than in the technical arena, and that therefore there should be a greater focus on the socio-political aspects of resource management. Yet the majority of research funded is biophysical and technical, and it is hard to get funding for the research which is required to inform the policy decisions. If the experience of forest conflict is anything to go by, most attempts at resolving forest disputes have been dealt with very poorly. There is a clear need to make values and assumptions about values transparent in attempting to make decisions about resource management policy (Grey 1996).

The economic values framework that Grey developed (1996) would be a useful starting point for attempts to further develop comprehensive frameworks for

assessing the complex range of societal values which operate as both causative and reactive factors in landscapes. Attempts should be made to apply this approach to a variety of other resource rich natural systems for which there are emerging conflicts of values – for example, specific coastal systems, catchments, wetlands or rivers systems – and from these attempt to determine whether this a useful approach. Some systematic approach to determining values is required. Political ad hocery suits no interests.

Recommendation 8

ACF recommends that greater attention and resourcing is given to socio-political aspects of natural resources management, and that research funding is made available accordingly.

Recommendation 9

ACF recommends that the values framework developed by Grey (1996) would be a useful starting point for attempts at further development of a comprehensive framework for assessing the range of complex landscape values. A series of pilots should be attempted and, if these prove successful, the methods developed should be applied to a variety of other resource rich natural systems – for example, coastal systems, rangelands, catchments, wetlands, river systems.

Opportunities for improved land management through tenure reform

As most pastoral land is leasehold, there are distinct opportunities for reforming the systems of administration of pastoral leases so that clear signals re sustainability are sent to pastoralists.

Accurate examination of the respective systems of pastoral tenure/administration is required to identify means of improving land management. Ledger (LWRRDC 1994) reviewed existing rangelands legislation and attempted to identify what gaps or weaknesses exist, and the opportunities for improvement. Ledger argues that the continuation of the leasehold tenure system is central to the capacity of governments to direct rangelands management towards sustainability. (See Ledger (Moreton & Price 1994) for a fuller discussion on the issues in relation to freeholding of pastoral leases.)

Freeholding versus leaseholds

Pastoralists continue to advocate further freeholding of crown leases despite the conclusions of various public examinations and inquiries which argue firmly in favour of freehold. Security of renewal of leases could be based on meeting specified lease conditions regarding management of the public assets. As a general principle, private profit should not result from cashing in public assets through over-exploitation and resultant degradation.

Discussion on sharing cost for natural resources management should be divided between those resources which are predominantly private property, like freehold land, and those which are common property, like rangelands, water, forests and fisheries. The former require self-interest to motivate the protection or maintenance of assets and thus to be the driving force in determining who benefits and who pays. Common property resources require a different approach which recognises the wider community as the owner of the resources.

In recent times, many economists, pastoralists, irrigators and market-obsessed 'capitalist think-tanks' have argued that sustainable management of common property would be achieved by creating private property rights to these resources. However, the status of much freehold land does not provide convincing evidence to support the theory.

Recommendation 10

Governments now have an obligation to ensure that their pastoral Acts send a clear message about sustainable management of pastoral lands. To this end ACF recommends:

1. *against any further freeholding of pastoral properties held under leasehold*
2. *that rating systems for pastoral leases should be reformed so that annual charges are adjusted according to the previous season's stocking rates*
3. *that renewal and continuing rights to use of leasehold lands should be based on meeting specified lease contract conditions regarding management of the public assets, and*
4. *that rate rebates/discounts should be made available for executing priority public good actions, such as fencing riparian strips and refuge areas or adoption of other identified nature conservation measures, etc.*

Multiple use reserves – an alternative to stationary pastoralism

Robson (1993) proposes the creation of multiple use reserves which incorporate opportunistic grazing as one of the economically feasible options for the woody weed country of western New South Wales. He suggests that one useful option for overcoming the suite of social and environmental problems afflicting rangelands management is to abandon the notion of stationary pastoralism – which is a root cause of the current (and historic) rates of degradation.

In a brief but insightful paper, Robson (1993) suggests that rehabilitation of 'shrubbled up' (woody weed) country is neither economically nor biologically feasible. The economics of continued pastoralism on the shrubbled up country studied by Robson are dubious – the costs of woody weed control using blade ploughing or herbicides are far in excess of returns from increased grazing. As an alternative to attempting to control woody weeds and maintain the status quo in land use (pastoral lease), Robson proposes:

- that we have no choice other than accepting woody weeds over large areas
- a shift from stationary pastoralism, with its expectations of permanent family income, to episodic grazing when conditions suit
- the creation of network of multi-use reserves based on new approaches to rangelands management.

In order to initiate the fundamental changes required to match land use to land capability, Robson recommends purchase of properties when they come up for sale and the creation of multi-use reserves. He suggests that the principal obstacle is the European attachment to exclusive land ownership. However, the benefits would include breaking the 'cycle of enterprise failure' and the savings made from discontinuing expenditure on the RAS, the National Landcare Program, and other State and Commonwealth programs targeting rangelands.

Without any doubt, such an approach would require major commitments on the part of governments and major changes in thinking about tenure and land use. The proposal deserves further serious consideration.

Recommendation 11

That in many rangelands areas the option of changing the tenure from grazing lease to multi-use reserve should be given serious consideration, and that, as part of the process, government investigate the levels of public funds being expended in the regions and whether purchase of lease or other measure are the most effective inventions using public funds.

Systematic land use planning including development of a reserve system

Recognition of the interrelated nature of the ecology and economics of rangelands is a starting point for the integration of production and conservation goals. Without appropriately conservative management, the vegetation and land resources of the rangelands rapidly lose their capacity for primary production.

While integration of these goals is vital throughout the rangelands to secure greater economic, social and ecological resilience, this integration must not confuse management goals for the entire rangelands. Acceptance of the desirability of integrating production and conservation goals must not be used to avoid or 'muddy' commitments to clearly defined (nature) conservation goals.

In some locations, dedication of land to the reserve system is necessary to meet the goal of biodiversity conservation. In the reserved lands, biodiversity conservation must be the overriding management objective. Achievement of this objective can be supported by critical biological and economic analysis as described by Howard and Young (1996).

A strategy to protect high conservation value lands on leasehold land would be to identify areas of significance and protect these under lease conditions either perpetually or until purchased as an addition to the conservation estate. The establishment of 'private' and voluntary conservation reserves using covenanting and other legally binding measures should be investigated, as should the use of other policy instruments such as incentives, and education and awareness campaigns.

Recommendation 12

ACF recommends that the responsible land management and conservation agency attempt to identify and develop strategies to protect high conservation value lands currently held under lease and to then identify opportunities for protecting areas of significance by addition to the reserve system, through amendments to the lease conditions and through voluntary measures.

Multi-use regional reserves are an important option but should not be used as a substitute for creating a comprehensive and representative reserve system. While multiple use reserves provide a flexibility, there is suspicion about the capacity of management agencies to meet conservation objectives unless these are clearly specified and enforced.

Recommendation 13

ACF recommends that the creation of multiple use reserves is a management option worthy of consideration but these should not be used as a substitute for creating a comprehensive and representative reserve system.

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Rural adjustment and natural resources management

A rural community perspective



Clive Thomas

*Chairman, Murray–Darling Basin Ministerial
Council's Community Advisory Committee*

Clive Thomas is a wool and grain producer from Forbes in Central Western New South Wales. As a lifelong resident of the Lachlan River Region, he has, over the past 40 years, participated in public affairs and community activities involving the wearing of many different 'hats'. These include community welfare, the Council of Orange Agricultural College, a 10-year career in local government, the inaugural years of the Total Catchment Management Program in New South Wales, the Council of New South Wales Greening Australia and the National Landcare Advisory Committee.

He recently served as Project Coordinator for a National Landcare Program funded, interstate, native perennial grasses investigations and education project centred on community environment monitoring, as well as leading a Grassy Ecosystems Reference Group for the New South Wales Vegetation Forum.

He was appointed Chairman of the Murray–Darling Basin Ministerial Council's Community Advisory Committee in 1996.

In 1994 he was awarded the national McKell Medal for 'outstanding contribution to soil and land conservation in Australia'.

When the topic 'Rural Adjustment' first appeared on the Community Advisory Committee's agenda in November 1993, we began our dialogue with government by asking the question: 'Why are we discussing rural adjustment anyway?' This was not a blasé question. The committee is composed of active working age farmers and graziers within the age bracket that confronts their most important mid-career challenges: repayment of property purchase/development loans and meeting the all important need for maximising educational opportunities for their offspring. These were earnest, subjective discussions.

We started by questioning whether the topic of rural adjustment had a place on our agenda. It is easy for committees of compatible people to squander their precious meeting-time hours by straying into what I used to call during my local government years 'the busybody maze'. This happens when organisations lose the compass of core business and fail to acknowledge that there may already be an adequate number of assemblies with more appropriate terms of reference, more competent and better informed than they to deliberate on a given issue. In this instance, the obvious deliberators were thought to be the agricultural bodies and their peak organisation, the National Farmers' Federation.

Community Advisory Committee members agreed that it was appropriate to explore the link between ecological and economic sustainability and whether positive outcomes for ecological sustainability will be ensured by the present process. Some catchment representatives had experience of the apparently capricious activities of the Rural Adjustment Scheme (RAS) in their regions and were anxious to see this powerful tool used to greater effect in promoting ecologically sustainable land use.

The Community Advisory Committee understood rural adjustment as a process which would progressively diminish the number of farmers deriving their livelihood from the land and water resources of a given region, or alter the way in which farmers used the land and water resources of a given region by:

- (a) supplementing or replacing income from farm sources with off-farm earnings
- (b) changing to a less resource-degrading land use system, or

- (c) reducing negative impacts on land and water resources through enlarging the area from which each family unit derives its livelihood.

The committee accepted that the process of change would continue until a new equilibrium was reached and that, personal and painful though this may be, it was preferable to the alternative – the emergence of a permanent rural underclass in Australia. The Community Advisory Committee acknowledged the evidence that farmers whose land use systems were economically non-sustainable were also likely to have ecologically non-sustainable farms. The expenditure of scarce public funds could not be justified if used to prolong the inevitable, or to exacerbate additional environmental damage.

This conviction is articulated in the Community Advisory Committee's 1996 submission to the mid-term review of the RAS. The submission recommended that the guidelines for the RAS be amended 'to focus on landholders who need assistance to be viable, and not those who are non-viable. The RAS should not assist landholders to remain on properties which are non-viable, particularly when continued activities would ultimately result in greater land degradation. For properties which are determined to be non-viable, RAS should assist the landholders to exit the property'.

The sole justification for propping up non-viable farm enterprises would be the presence of market failure – when new owners could not be found and continued occupancy was considered desirable. Catchment representatives from regions experiencing rapid structural change reported that market failure was not occurring.

We decided to look at the outcomes of structural change – how certain we might be that the process of change to the rural culture in which we lived would eventually benefit the long-term health of the land, water and environmental resources of the Murray–Darling Basin. In short, whether the long-term gain would justify the short-term pain. We reviewed each of the three categories listed above and drew from the wealth of local experience of the committee's catchment representatives to compile a score-sheet.

This exercise demonstrated the most useful attribute of the Community Advisory Committee. Its catchment representatives are involved in multiple

layers of natural resources management activity: on-farm as active working managers, in local community landcare groups, at regional level catchment management, the State level through State Assessment Panels and, of course, the interstate level of the Community Advisory Committee. This brings currency and relevance to committee discussions.

(a) Supplementing or replacing income from farm sources with off-farm earnings

The Murray–Darling Basin is a profoundly diverse region. Generalisations are risky, but it is safe to say that the most pronounced structural change over the last decade has been the year-by-year decline in the percentage of families deriving their *entire* income from the land unit on which they reside. The data gathered through numerous recent surveys illustrate how far and how fast structural change has advanced.

Several sources suggest that, within those parts of the Murray–Darling Basin where daily commuting is practicable, an adult member of the household travels to an off-farm task involving more than 30 hours work per week from half the land units. A wide-ranging study entitled ‘Coping With Change’ undertaken by Charles Sturt University (Wagga Wagga) recently added a new term to the language of natural resources management – ‘pluriactivity’. I get a daily reminder of the advance of this change. I have been a town-living farmer for 30 years. When I began commuting to our family property, I was part of a procession of farm workers’ vehicles heading out from the dormitory town each morning. Nowadays the traffic is all going the other way, taking farm-living people to jobs in the town.

Surveys also indicate that more than half the farm-living community under 50 years of age earns more than \$5,000 a year – that is, \$100 a week – in off-farm employment (separate from return on investments). Much of this takes the form of within-the-district contract work with farm machinery or additional peak season labour.

Bundled into this category is another group, similarly growing each year. These are second-career farmers who have invested their superannuation, cashed-up business or suburban real estate into farming land, as well as local tradespeople and salary earners who have

been attracted to this ‘pluriactivity’ lifestyle now that depressed land prices have lowered the entry fee.

This category and category (b) below are now custodians of a sizeable proportion of the most ecologically fragile land of the Murray–Darling Basin and thereby, as a class, have inherited some profound environmental responsibilities. Rural Australia has recently acquired some very fine environmental managers in this way, managers who are innovative, eager to participate in community landcare and willing to invest in natural resources management works.

There are some negatives too. Lack of available time for some and advancing years in others may limit their ability to make the ‘hard yards’ of ecologically sustainable land management – weed and noxious animal control.

Gaining the attention of time-constrained part-time farmers requires special education programs targeted to holiday and weekend audiences. We do not have these. Most landcare activities are still oriented toward the schedules of full-time farmers.

(b) Changing to a less resource-degrading land use system

As I travel around the catchments in the Murray–Darling Basin, I am told some exciting stories about people achieving farm profitability through heroic change to land use. I use the word ‘heroic’ because letting go of traditional land use patterns with their security, the psychological comfort of the known and their familiar seasonal rhythms takes exceptional courage. (The United States fiction writer Annie Proulx describes it well in her novel *Postcards*.)

I know a family who planted a row of olive trees as an ambitious hobby and now earn more from them than their lucerne farm. Another is selling total vegetation packages of native grass, forbs, shrub and tree seeds to part-time farmers for the rehabilitation of peri-urban land. There are broad-scale examples as well. Some cotton growers who were formerly broadacre pastoralists fall into this category too. Those who have adopted intensive land use over the small irrigable part of their properties may compensate for the additional demands on human resources by de-escalating grazing pressure over the remainder.

Changed land use patterns *may* rest an overworked farm, but beneficial retirement of land is an active, not a passive, exercise. If energies are progressively concentrated on the profit-making enterprise, management of time-demanding issues (serrated tussock in the Murray–Darling Basin Uplands comes to mind) usually shrinks in the order of priority.

The Community Advisory Committee's submission to the RAS mid-term review emphasised the importance of utilising the RAS 'to facilitate the change from inappropriate land use/management practices to matching land use with land capability (suitability) and current best practice management of resources where there is a strong indication that short-term assistance will lead to long-term economic viability and self-reliance'.

Here's where we need to remind ourselves of the extraordinary range of attitudes to ecologically sustainable resource use in rural Australia. I frequently get this response from non-landcare farmers: 'Make us rich and we'll be good managers of the environment'; paraphrased as 'for each farmer, ecologically sustainable land management has to wait for the day when that farm unit yields consistent profits'.

If we make a realistic ecological assessment of the land resource of the Murray–Darling Basin, we inevitably conclude that for many, the day will never dawn; that in many instances its richness was but a fleeting moment in the history of a very old continent. Examples? The super-sub-sheep grazing systems of the 1950s and 1960s which relied on a conjunction of subsidised pasture fertilisers and high wool prices; or the 1960s mining of nutrients and soil structure in wheat-lands whose natural fertility and resilience is now exhausted so that productivity now requires massive nutrient replacement combined with sympathetic soil management and expensive weed control.

The alternative to awaiting ecologically sustainable land use as the climax event of a universal rural Renaissance is relentless change through rural adjustment until land use and land suitability reach equilibrium.

(c) Reducing negative impacts on land and water resources through enlarging the area from which each family unit derives its livelihood

On first assessment, the farm build up component of the present rural adjustment process should be self-evidently desirable. It should reduce the negative impact a farm family makes on soil resources by increasing their territory at the expense of a neighbour.

The advice received from Community Advisory Committee members has been consistent from across the Murray–Darling Basin. Farm build up is not a simple answer. Ecological sustainability *may* be enhanced through farm build up *or* land and water degradation may be exacerbated.

Here is a brief summary of their advice.

- Some very successful cases were cited where long-time residents, who had successfully managed their own fragile lands with discretion, availed themselves of an opportunity to buy run-down neighbouring farms which then benefited from their management skills. Not always.
- The purchasers may buy with the best of sympathetic intentions but because of seasonal conditions or market deterioration find themselves caught in the same debt trap as their predecessors and obliged, for survival's sake, to continue the same cycle of overuse and spiralling ecological damage.
- Economies of scale apply with farm build up but there are limits to how thinly the human resources can be spread. The first obvious sign of overcommitted human resources is neglect – neglect of infrastructure is not on our agenda, but failure to manage noxious weeds and feral/noxious animals contributes to the negative impacts of land use.
- Farm build up is not always a next-door purchase. Often the additional land acquired may not be next door but tens or hundreds of kilometres away. Distance from base reduces the efficiency of the human resources to a point where only essential, income earning management tasks are accomplished.

- Particularly in areas distant from service towns, reduced land prices as a consequence of the buyers' market created by the volume of non-voluntary sales have allowed entry into rural land for first-time landowners with barely sufficient capital to gain possession. Frequently these enterprises fail a second time but not before some spectacular environmental damage has been inflicted by inexperience, lack of local know-how and corners cut through shortage of operating capital.

The Community Advisory Committee has explored ways to maximise gains to the environment through rural adjustment. There are two sure ways to maximise gains for ecologically sustainable land use through rural adjustment. Both are controversial. By examining them we may be able to develop acceptable compromises.

The first is by using public funds to aggregate areas of land into set-aside areas to form new conservation reserves. This is a topic that can be guaranteed to polarise farmers and conservationists but these are debates we have to have.

A rigorous assessment of land suitability would identify much fragile land which has been used in excess of its meagre capability for many decades. Some of this land in Murray–Darling Basin Upland areas exports salt, nutrients and turbidity into the river systems with downstream consequences, the annual cost of which will eventually exceed the value of up-catchment produce.

It is the management of existing set-aside areas that worries farmers. The budgets of conservation reserve managers do not seem to reflect the scale of their noxious weed and animal control obligations. Other land managers within their catchments pay the price. Local government authorities too are concerned. Unless conservation reserves attract an eco-tourism industry, their presence within a region further erodes the revenue base of adjacent service towns.

The second certain way to ensure that structural change yields gains for ecologically sustainable land use is regulation. Regulated land use is the deeply held fear of rural adjustment in the farming community.

The kinds of controls and regulations that farmers are talking about within the areas undergoing widespread structural change include compulsory

bore-capping, stocking limits, destocking at the onset of drought (when does a dry spell end and drought begin?), limits to irrigation, and retirement of land from irrigation or cropping etc. where those practices are found to accelerate land degradation. Each of these concerns is essentially a perceived threat to self-interest – to capital value and income earning potential.

Whenever I discuss rural adjustment with groups of farmers, their expressed anxiety is: If rural adjustment provides a plausible opportunity to intrude land use regulations on parcels of land where taxpayers funds have been invested in assisting former occupants to make their exit from the land and if regulation proves a successful means of ensuring ecological sustainability, will regulation spread to the wider land using community?

I am not certain whether the Community Advisory Committee actually invented the 'pink slip' concept. When you sell a used motor car in New South Wales it has to undergo a 'pink slip' inspection of the condition of the systems important to the safety of the vehicle. The same concept, capitalising on the widespread adoption of whole-farm planning, could be applied to farming and grazing land at change of ownership.

Essentially it proposes a land condition – land suitability/capability survey at the time of ownership change. The concept is now without flaws. For example, it directly opposes the ancient tradition of 'caveat emptor'; but its merits are worthy of consideration.

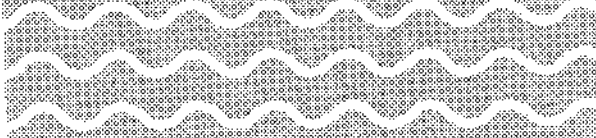
Many first-time land managers are unaware of the suitability/capability of the land when they take possession; few can assess the true condition of a parcel of land in the cursory inspection that precedes a purchase. I served on a feed-lot task force at one time and can verify the rudimentary nature of the understanding gathered by potential buyers of even multi-million dollar properties.

In recent years there have been several rounds of discussion between government and the banking sector with the aim of gaining banking industry endorsement for purchaser participation in a whole-farm planning exercise as a precondition for borrowing. There is an opportunity here to integrate whole-farm planning and a land condition/capability study at the time of ownership exchange to expose all

prospective purchasers to some real information. Whether the prospective purchaser took notice would not be assured – but at a minimum, the survey *would* draw attention to those elements susceptible to degradation as well as to nature conservation values, land use history, and perhaps a scale of resource suitability from fragile to robust.

Local government is the ideal agency for this purpose because its officers have access to local information networks and the capability to draw the requisite data together without generating too much farmer/government authority anxiety. This would serve a doubly useful purpose by reintroducing local government authorities to their oft-neglected role of stewards of land resources within their domain.

I will conclude by recommending an action we can initiate without debate. Let's reassess the clients for natural resources management information and devise community education programs to fit the needs of (1) the urban-earners/rural-dwellers; (2) farmer buyers who have acquired land a long way from familiar home territory; whose farm management knowledge has been acquired amongst a different set of geophysical conditions; and (3) former urban-dwellers turned second-career farmers. All of these people will play a vital role in the ecologically sustainable management of rural Australia in the twenty-first century.



Rural adjustment and natural resources management

A regional perspective



Kevin Goss

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Kevin Goss manages the Sustainable Rural Development Program, which delivers catchment management, rangeland management, property management planning, rural adjustment, land conservation and rural community development programs. He is also the Commissioner of Soil and Land Conservation responsible for regulatory actions to prevent land degradation and for the appointment and operational support of Land Conservation Districts.

Kevin played a key role in the preparation of the State's recently published Salinity Action Plan and has been associated with the agency's sustainable agriculture and land management programs since 1989.

He trained as an agricultural scientist and also holds a masters degree in communication.

Introduction

The case for regional application of Rural Adjustment Scheme (RAS) funds to natural resources management stems from the proposition that fundamental land use changes are required if dryland agriculture in Western Australia is to be sustainable economically, environmentally and socially in the long term.

On current predictions, there will be a severe constraint on the natural resource base available to agriculture; up to 30% will be salt-affected in the next 30 to 200 years under current farming systems. In a report prepared for the Prime Minister's Science and Engineering Council in 1994, a similar prediction was given for land and water degradation throughout Australia.

Transforming dryland agriculture will require a vast improvement in total water use across the landscape, better control of water on a catchment scale, and prevention of further groundwater rise. A Western Australian salinity plan released last year sets a target of three million hectares out of 18 million cleared for agriculture to be re-established to deep-rooted perennial species. Such plantings will range from commercial farm forestry to perennial grazing plants such as tagasaste and lucerne, to land conservation and natural diversity revegetation.

However, such a land use change will not be achieved by current productivity growth, technological change and rural adjustment alone.

South Coast region

The South Coast region of Western Australia serves as a useful example of the limitations of current practices in controlling salinity, and what might be done to address sustainability.

A distinctive feature is its recent history of clearing and development, with major land releases from 1961, the last occurring in 1982. The costs are still being felt, including low initial capitalisation, social isolation, some soil types not suitable for agriculture, escalating land and water degradation and low returns in the early phase of development. Two main commodities are wool and beef, which have suffered low and declining prices in recent years.

Almost one million hectares (24%) of South Coast cleared land is likely to become salt-affected under current farming systems; water-tables are rising at 30–50 cm per year, with some catchments internally drained. Should salinity reach this fullest extent, then it will also seriously degrade public resources such as water supplies, riparian vegetation, wetlands, roads and towns.

The region also suffers highly variable seasonal conditions, particularly at the start of the winter growing period, with a severe impact on stock water supplies, crop establishment, pasture growth and livestock production in recent years. Wind erosion is an ever-present danger.

Yet South Coast agriculture has performed well compared to other farming regions across Australia. Crop productivity has improved and wheat yields in particular have grown above the national average. Farmers have been very quick to adopt land conserving technologies, such as minimal disturbance crop machinery and minimum tillage.

Farm sales have been frequent, with little evidence that farmers are trapped for long periods on non-viable farms. In higher rainfall areas, small farms dependent on livestock income are selling to farm forestry and plantation investors. Rural adjustment has been assisted significantly by the RAS, with 25% of industry exit assistance and 41% of exceptional circumstances assistance going into this region, which has 20% of the State's agricultural land. Funding appears to have been mainly responsive to market and seasonal conditions at the time, therefore assisting farmers to cope rather than changing long-term goals.

The farming community has been particularly dynamic in the face of these adversities, with strong grower associations and landcare groups in the region.

Yet the indications are that improvement in productivity, landcare practices, rural adjustment and business skills by themselves are not enough to ensure the land use changes necessary to profitably address the key natural resources management issues. What can be done on a regional scale?

The South Coast Regional Initiative

A regional strategy for the South Coast was finalised in 1996 following an unprecedented level of collaboration between the community on the South Coast and government agencies in the last 18 months. Resulting in a regional initiative under the Rural Partnership Program, it takes full advantage of the region's attributes – a longer growing season, diversification opportunities, significant farm forestry potential, some large natural areas and water supplies in good condition, and natural attractions for visitors and residents. It proposed an integrated approach to natural resources management, farm profitability and diversification, and rural community development. In fact, the two highest priority issues raised by the community were to:

- increase farm profitability, diversity and management skills
- address salinity and related management issues on a catchment basis.

The response is a three-tiered plan of action under a regional strategy:

- delivering land use change options through catchment groups
- serving decision needs for farm businesses, and
- assisting with critical works to transform land management.

Most farmers are in small, well-defined catchments and many have active groups which have invested in catchment and physical farm planning over recent years. They urgently require economic and water use assessments for each land use option, with site-specific technical advice and catalytic funding to address water management problems.

While many farmers may have farm plans, few have implemented them. A major reason for not doing so has been a lack of confidence in the proposed solutions, a lack of follow-up professional support and insufficient funds. It is assumed that improved business and management skills of farmers are necessary to make better decisions.

One area of critical works is surface water control. The region experiences widespread waterlogging which limits farm productivity and water use. However, earthworks need to be on a catchment scale, and face the impediments of poor financial positions for some farmers, some farms by their

location requiring major works, farms differing in their capture of the benefits, and lack of the professional skills needed.

While the RAS is highly geared to improving the business performance of individual farms, the key to land use change is catchment level planning, evaluation of options for profitability and water use, and their accurate placement with outside professional and financial assistance as required.

The Western Australian Salinity Action Plan

In November 1996 the Western Australian Government released its Salinity Action Plan. Acknowledging that salt-affected land could increase to 30% of land area if land uses did not radically change, the plan sets a target of re-establishing three million hectares to deep-rooted perennial species over 30 years. The full range of commercial, land conservation and natural diversity plantings are nominated. Commercial farm forestry options include expansion of proven enterprises like short rotation eucalypts for pulp production, continued industry development for oil eucalypts in low rainfall environments, and assessment and demonstration of maritime pine agro-forestry for the medium rainfall zone. Forage options include extensive plantings of lucerne in longer growing season environments, tagasaste on deeper sandy soils, and saltland agronomy. Land conservation plantings include shelter-belts, alley farming, and rehabilitation of degraded areas. Natural diversity plantings will generally augment remnant vegetation, conservation reserves and riparian vegetation in establishing bush corridors and larger wildlife refuges. Importantly, as part of the land use change process, some land categories characterised by low productivity and low water use will be recommended for 'retirement' to native vegetation.

The plan specifies four other salinity control measures:

- continued advances in crop water use, and a new emphasis on improving pasture productivity
- additional investment in surface water drainage
- deep drainage where it is acceptable environmentally and justified economically
- protection and management of remnant vegetation.

All salinity control strategies will be assessed on economic and natural resources management criteria: their potential to reduce financial damage (in the case of public assets) or provide farm profits, and their potential to boost total water use or reduce net accessions to groundwater. A 'water use calculator' will be used alongside 'return on investment' calculations.

A more rigorous approach to catchment management will be adopted, built around formalised partnerships with government which will provide or coordinate technical services. Focus catchments are being selected on a priority basis within regional strategies. Typically, they are small sub-catchments of 8 to 30 farm families, which have proven to be the best scale for combined action. Agriculture Western Australia has formed multi-disciplinary catchment support teams to work intensively with focus catchment groups, and these will be augmented by skills from natural resources management agencies and private consultants as they evolve. Groups voluntarily enter a 'services-for-implementation' agreement for two to three years. Over time and group rotation, it is planned to cover the whole agricultural area. Special priority will be given to 'recovery catchments' where nature conservation values, water resources or public infrastructure of particularly high value are threatened. Here there will be a higher level of government intervention, servicing and funding.

Taking a lead from the cost sharing principles arising from a study for the Murray-Darling Basin Commission, an investment framework will apply to the services agreement for focus catchments. For works of high public benefit, the expected ratio of government and farmer financing is 1:1, with the current Remnant Vegetation Protection Scheme as a precedent. For control works which provide 'in the catchment' and private benefits, a government : farmer ratio of about 1:4 is proposed. This would apply to revegetation for land conservation purposes, for instance, and to surface water control works. Where there is the need for new enterprises to improve sustainability through diversification (that is, private benefits), then the government will invest strategically in industry development, for instance, a medium and low rainfall farm forestry.

In the context of regional application of the RAS, the Western Australian Salinity Action Plan sets up a formal commitment to technical and economic services, and to implementation within a shared investment framework.

Changing directions of the Rural Adjustment Scheme

The 1996 Rural Finance Summit endorsed the shift in emphasis of the RAS to directly assisting the business skills development and business planning of farmers. The moves in this direction in Western Australia were acknowledged as a model to be followed nationally. Such emphasis is quite consistent with the recommendation of the Prime Minister's Land Management Task Force (1995) and the objectives of the National Property Management Planning initiative.

A shift in productivity enhancement assistance has been taking place over some years. In fact, the subsidised loans portfolio of the State's Rural Adjustment and Finance Corporation has been transferred to a Western Australian bank and reduced substantially in this time. The industry exit and exceptional circumstances products under the RAS still remain in force.

With significant changes in 1995 and adaptations since, the corporation offers four basic forms of assistance focusing on enhancing farmer prospects of sustained long-term profitability through the promotion of farm business planning as a management tool:

- professional advice – the farm business assessment grant
- implementation – the farm business plan implementation grant
- business skills development – training grants to farmers and group trainers
- diagnostics.

The farm business assessment grant subsidises the cost of professional services in an initial business appraisal before the preparation of a farm business plan. For those farm families with an existing agricultural consultant, the subsidy is \$2,000 over one year. To encourage others who do not currently employ an agricultural consultant, a grant of \$3,000 is available under similar conditions. During this initial appraisal period there is a thorough assessment of the performance capabilities and options for the farm business. There is extensive documentation to guide this activity, which results in a farm business plan.

An implementation grant of up to \$30,000 over three years is available to help farmers implement

these business plans. The usual eligibility requirements, in particular debt : income ratio, apply.

For some time farming grants of up to 50% of course fees have been available to farm families to attend approved courses which meet the criterion of skills enhancement for long-term sustainability. In a recent change, a Group Training Scheme is available, providing up to 50% of the cost of organising training events and engaging training providers. The grant is made directly to the group as a way of encouraging group training, improving administration of training support, and expanding access by farm managers and employers.

With the comprehensive approach to direct assistance to business planning, plan implementation and skills enhancement, Western Australia is now in a unique position to integrate the RAS with the National Landcare Program assisted Property Management Planning initiative, which is targeted at regional coordination, group facilitation and professional support in this same area.

However, under the Commonwealth/State RAS agreements, the criteria stipulate that these support provisions be delivered to individual businesses by way of concessional interest rate loans or interest subsidies within eligibility guidelines. This is a constraint on a more strategic approach to improving business performance on an industry or regional basis.

The Regional RAS Package

On the basis of a regional strategy addressing farm profitability and salinity on the South Coast, a salinity action plan setting the basis for land use change through focus catchments and formalised agreements, and a RAS with a clear focus on business planning, implementation and skills training for long-term sustainability, there are the elements for an integrated regional package to address long-term sustainability.

The assistance package is:

- at the farm level – professional advice, implementation and training support – coordinated and promoted regionally
- at the catchment level – professional advice, implementation and training support – but the new step here is the application of implementation

assistance to critical works on the basis of 'catchment merit', cost-shared with individual farmers, and underpinned by a 'services-for-implementation' agreement

- at the regional level – diagnostics – measurement and monitoring of economic indicators of sustainability, and assessment of the profitability or return on investment for key salinity control and land use change options.

For the catchment component of the package, the subsidy per farm per year is quite modest:

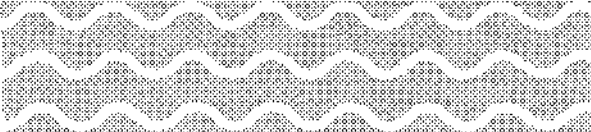
- \$2,000 in the first year and then \$1,000 per year for professional advice
- \$3,000 per year, under cost sharing, for implementing critical works
- \$500 per year for skills training.

The projected expenditure against the RAS is:

	1996–97	1997–98	1998–99
South Coast	\$0.41 million	\$0.75 million	\$1.09 million
State	\$2.75 million	\$3.625 million	\$4.75 million

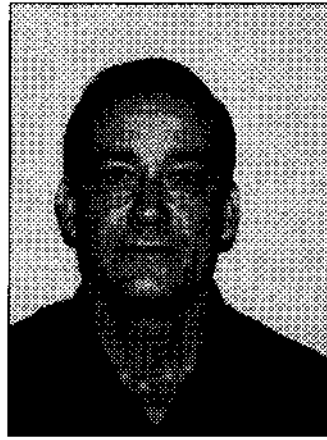
Over and above the continued adaptation of the RAS to improving business performance for long-term sustainability, this 'regional package' requires several policy changes:

- removal of the requirement that support must be in the form of concessional loans
- acceptance that a form of assistance can go to critical works for catchment outcomes
- regional coordination and promotion of RAS delivery, integrated with the Property Management Planning initiative.



The development of a Draft National Strategy for Rangeland Management

A case study



Blair Wood

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Blair Wood has extensive experience in land resource data analysis, land resource mapping and assessment, natural resources management and land use planning, and program and project management. He has also worked in inter-agency and inter-governmental coordination and negotiation to achieve national land conservation and resource management objectives. He has taught soil science at tertiary level.

Blair has a Bachelor of Agricultural Science and a Graduate Diploma in Public Sector Executive Management and has published extensively on tropical land resource planning and management.

Blair is a member of the working group responsible for developing the Draft National Strategy for Rangeland Management.

Introduction

A national approach to rangeland management in Australia was initially proposed at a meeting of arid land administrators in 1992. Subsequently, the South Australian Government forwarded a recommendation to the two ministerial councils with responsibility for land resource management in the rangelands: the Agriculture and Resource Management Council of Australia and New Zealand, and the Australian and New Zealand Environment and Conservation Council.

These councils supported the development of a national approach to issues associated with land management in the rangelands and therefore established a working group with specific terms of reference and membership to draft a National Strategy for Rangeland Management and Action Plan. The process has been clearly driven by the government, but the working group included representatives of three major non-government stakeholders: the National Farmers' Federation, the Arid Land Coalition, and the Aboriginal and Torres Strait Islander Commission. These stakeholders have been specifically funded to allow consultation with their respective memberships and the documentation of submissions.

The process adopted by the working group has been the:

- development and release of a rangelands issues paper (February 1994)
- collation of responses to the issues paper (182 submissions)
- facilitation of a series of 30 workshops around the nation (June to August 1994)
- collation and identification of priority issues
- development of draft objectives and strategic actions document
- seeking of limited comment to the draft – relevant council standing committees and representative organisations
- production of a Draft National Strategy for Rangeland Management (released for public comment July 1996)
- collation of comment (214 submissions), currently under way.

The process was framed around the realisation by many stakeholders that current resource management

and use could not continue as is. Adjustment, and the management of this adjustment, will be central to the sustainable future use of rangelands.

A 'business as usual' approach was challenged in terms of achieving new sustainable production systems and uses of rangelands. The proposed approach requires a more integrated and holistic framework which addresses social, economic and natural resource issues.

What are the rangelands?

For the purposes of developing the strategy, rangelands were defined as 'land that receives too little rain, or it rains too spasmodically, to support the intensive growing of crops or intensive grazing of livestock' and identified within Australia as being the arid and semi-arid areas and some high rainfall areas north of the tropic of Capricorn.

Issues identified through the workshop/consultative process

Generic issues raised at the various workshops, subjects considered within each issue, and priorities, on the basis of frequency raised, are presented in Table 1. The scope of subjects was wide, reflecting the great diversity of land use, land ownership and regional nature of the workshop venues. Whilst it is recognised that caution is required in determining priorities from the frequency of comment or from numbers who attended (there will be uninformed comment, and various 'voting blocks'), there has been a significant response to the consultative process, resulting in 30 regional workshops, 10,000 copies of the draft distributed, and 214 submissions to date.

At the workshops, government representatives, pastoralists, researchers, extension officers, Aboriginal people, environmentalists and other stakeholders all articulated a view in support of various levels of change and adjustment. While the extent of change spread across many issues there was a focus by these groups on issues such as property rights, security of tenure, and local community involvement in decision-making. The implications of these in terms of adjustment provide starting points for a national strategy.

Table 1 – Issues raised at workshops

Pest management

- feral animals
- weeds
- native animals

Ecological sustainability

- definition
- ability to achieve
- holistic integration of social, economic and ecological factors

Land tenure

- security
- loss of control and title
- uniformity between States and users (public and private)

Local community involvement in decision-making

- input from shareholders/landholders
- communication/cooperative approach

Economic viability (pastoral)

- finances
- pastoral unit size/productivity
- economic pressures

Education/communication/awareness

- increase profile
- public awareness (especially urban communities)
- increase landholder skill base (training)

Government involvement

- desirability of national policies
- roles and responsibilities of all levels of government
- general reduction of government involvement
- international treaties
- regional land use planning versus centralisation

Aboriginal issues

- coexistence with other rangeland users
- recognition of traditional knowledge
- encourage Aboriginal input
- management of Aboriginal land
- needs and aspirations

Government policy and legislation

- policy framework
- taxation
- incentives
- consistent approach across all States

Biodiversity

Rangeland information

- research
- monitoring
- extension

Landcare/property management plan

Social issues

- employment
- social adjustment/viable communities
- equity/intergenerational equity
- future for families/lifestyle

Multiple use of rangelands (diversification)

Representative reserve systems

Water supplies/groundwater

Land

- degradation/soil erosion
- plant cover/pastures

Access

- recreational use
- tourism – control/education

Recognition of role of pastoralists

- land managers
- economic contribution

Rangeland strategy

- need/effect of strategy
- rangeland definition
- planning process/administration
- make-up of working group

Government services/infrastructure

Stocking rate

- change use of unviable areas
- stop use in unviable areas
- overstocking

Mining

Funding for rangelands

- sources and priorities

Drought planning/management/policy

Fire

The draft strategy

The draft strategy comprises a 25-year vision, shared principles and nine goals covering:

- policy, legislation and administration
- commercial use
- management
- conservation of the natural environment
- recognition of the knowledge, rights and interests of indigenous people
- conservation of the cultural and social heritage
- research and monitoring
- coordinated planning
- programs and services.

Issues raised in the submissions

There have been 214 written submissions received to date as a result of the five-month public consultation period. Key issues raised in submissions fall into two broad categories: strategy development issues, and issues of content.

Strategy development issues

There has been wide support for the development of a national rangeland strategy, although some pastoralists and local governments are opposed to it. The draft, however, is seen as too broad, too bureaucratic and 'top-down'. There is a diversity of views as to who should have been involved and who should now be involved in developing the strategy. Few rangeland dwellers accept that there should be a core involvement of the urban community in rangeland management.

There is seen to be a need to better reflect the importance of mining and tourism as the main economic and populating activities in the rangelands. Aboriginal economic use of the rangelands, which is often outside the 'normal' economy (that is, no cash-based transactions), needs recognition.

The action plan should be required to set roles and responsibilities for implementing the strategy. A hierarchical structure was often suggested for tackling issues of concern with, for example, some issues requiring national action (taxation, native title). However, there was widespread support for most

issues to be tackled through regional processes, driven by the local community. There is seen to be a need for a commitment to act by all parties.

A need for more consultation was expressed, particularly in different areas and levels of government.

Issues of content

Security of tenure or purpose is seen as critical by the majority of stakeholders. Pastoralists predominantly link security of tenure with probability of personal investment in infrastructure. Environmentalists want security of purpose for biological diversity conservation both on- and off-reserve. Indigenous interests want their rights acknowledged and access to land for making a living and carrying out traditional practices. The mineral industry wants access to areas which have high mineral potential and security of tenure for subsequent developments.

Few submissions delivered by those already managing land in the rangelands proposed a vision for the rangelands which was vastly different from the status quo, in terms of industries, land uses and community types: more or less, they saw us doing what we do now, but a bit better and without government interference.

People living in the rangelands want access to the same level of essential services as other Australians, or assistance in obtaining them, particularly access to education for their children. Access to communication technology was identified as a required element in developing ecologically and economically sustainable enterprises.

Pastoralists were predominantly of the view that investments in environmental management are only possible with profitability. The lack of profit from pastoral use in many areas in recent years has restricted the ability of pastoralists to undertake further activities to improve the natural resource base, therefore there have been calls for increased financial support from governments. It was submitted that the financial system should provide lower cost services as well as products better tailored to the variable cash flow of pastoral enterprises, caused by climate and commodity price fluctuations. The alternative view was that without sustainable environmental management the pastoral use of land will not be profitable anyway. The suitability of existing land use in some areas should be reviewed.

These comments on security of tenure, productivity and profitability from stakeholders indicate the increasing demands of current resource users and those of emerging interests. Although mining and tourism are the major economic activities, it is the pastoral industry that is the dominant land user. Because of this, the pastoral industry continues to be the subject of policies aimed at addressing natural resources management, rural adjustment, property amalgamation, feral animal and weed control, land rehabilitation, and drought and risk management.

In many parts of the rangelands, some of these issues have persisted for almost a century. While an increasing number of pastoral holdings can demonstrate their capacity to address these issues, evidence exists linking poor economic viability with an inability to achieve ecological sustainability due to the lack of management options available to these landholders. This has implications for the types of institutions required to handle problems of declining profitability in some areas, emerging resource uses which offer a more sustainable future, and the economic, social, and cultural goals of stakeholders.

Historically, a leasehold system dominated by pastoral use has characterised Australia's arid and semi-arid rangelands. This led to the establishment of various institutional and policy arrangements that have tended to focus on the administration of the land rather than land management and sustainable resource use. There has never been a well-defined national government policy on the management of Australia's rangelands.

Many submissions suggested that land degradation was a result of past 'closer settlement schemes' and land management practices and present government policies which inhibit enterprise diversification. A large number of submissions indicated that pastoralists do not have a right to cause environmental degradation and that existing State/Territory legislation should be used to control natural resources management. Overstocking was seen as a major cause of land degradation. It was proposed that research should focus on developing systems for assessing total stock grazing pressure and estimating when to reduce stock numbers. Monitoring of natural resource status and condition was also a common theme.

There is now a much better understanding of the way land administration and tenure arrangements can be used to achieve sustainable pastoral industries

in rangelands. In the past, leasehold conditions rarely specified the responsibilities of the lessee to care for the resource. There is now improved knowledge and technology (for example, the use of remote sensing to monitor vegetation cover) and a greater will to achieve a higher degree of sustainable rangeland use. There is also a better understanding of the needs of lessees. This allows pastoralists and governments to initiate longer term plans. Linking security of tenure (title) to land use and management offers a major alternative to previous administrative measures which have been ineffective in providing an incentive for sustainable land management.

Where to from here?

The working group will provide a collation of submissions and, subject to ministerial council endorsement, will prepare a revised document. The difficulties of producing a generally agreed document from such a wide representation of stakeholders, and one that is owned by all, is clearly a difficult exercise, and as the document will need the support of the ministerial councils it will need to reflect agreed government direction.

An action plan based on the agreed objectives will be essential if change associated with the strategy is to be achieved. It will need to incorporate or recognise previously agreed actions associated with other national strategies, for example, the National Strategy for the Conservation of Biodiversity.

Mounting public interest in rangelands emphasises the need to develop broader policies for land use that encourage the cultural, amenity and natural resource values of rangelands as well as economic goals. The objective of this broader approach is to allow consideration of a range of community views on rangeland use and management and replace the current focus on single use with multiple use wherever this is appropriate. A national strategy for rangeland management could help by providing a blueprint for structural adjustment and an action plan, which is the essential mechanism for involving stakeholders in the process of change.

The need for a rangeland strategy lies in the fact that there are important, but often unrecognised, differences between pastoral enterprises in rangelands and more intensively farmed agricultural regions. These often arise from differences in biophysical factors such as soils and vegetation and, most

importantly, high climatic variability. In particular, these differences demand different management strategies, such as tactical grazing management to conserve vegetation. The unique features of rangelands require strategies which encourage flexible approaches to land management by leaseholders rather than the restrictive administrative arrangements of the past.

This means that rangelands require specific policy development for optimal resource management. Policies and administrative measures supporting the economic use of arid and semi-arid regions need to appreciate that sustainable enterprises impose commitments to very long-term planning. This has implications for business, governments and service organisations which operate on shorter (often annual or 'political') time scales in response to taxation, land rentals, commodity markets, finance repayments, and funding agencies which allocate monies to research and development, extension, education and adjustment.

The recent conclusions of the Fenner Conference on Sustainable Occupation of the Rangelands and many submissions identified a useful process for implementing actions. The key will be changing human and socio-economic systems. Such change can only happen at the local, community or regional level as change, if necessary, must be owned at the local level and must reflect the needs at the local level. Clearly, there needs to be a process for engaging regional communities in developing their own responses to rangeland management issues.

This action planning process based at the local, regional and community level was endorsed by a majority of submissions and is essential as a process for involving all stakeholders. The process will also require the clear identification of the roles and responsibilities of the various stakeholders: governments, land owners, managers and the wider community.

The most significant threat to natural resources in the rangelands will be inaction.

The working group has not developed an agreed position on the development of regional action plans; however, there are some recent and continuing models that could be reviewed to indicate what is required. Examples include the Cape York Peninsula Land Use Study, and the South West Queensland Regional Study. The working group will be

developing a discussion paper on regionalisation for implementing the actions under the strategy, which can be used in conjunction with the development of regional strategies and regional action plans.

Levels of implementation

Actions associated with the issues identified can be divided into four groups (Table 2).

1. Those where there is a clearly identified national problem or requirement, where there is general agreement on the issue and its resolution, and where there is a national strategic framework to guide the resolution. An example would be addressing the issue of biodiversity protection – there has already been a process that has led to the development and agreement by governments of a National Strategy for the Conservation of Australia's Biodiversity. The implementation of this strategy at a national, State and regional level would see protection of biodiversity in the rangelands.
2. Those issues where there is no identified stakeholder agreement. They should be identified for research and further consultation. An example would be the resolution of the extent of land degradation. Methods to obtain accurate and repeatable measures of the extent, severity and significance of the various forms of land degradation at the national level are not agreed, and even the term 'land degradation' means different things to different people, such as administrators and users, and especially to pastoralists. Establishing agreed actions at a regional level will require stakeholder agreement at the regional level.
3. Those issues which have resulted in a significant polarisation of the community will need to be dealt with in the short term, through the political process, but in the longer term through increased public awareness, education and consultation processes. Examples include social issues, native title issues and the extent of involvement of stakeholders in the decision-making processes. They have not been resolved by the working group nor has there been any general agreement from those consulted.
4. There are issues that clearly require a process to identify regionally different issues, differing regional responses and a process for community involvement. There is wide support for regional identification of problems and solutions, but no

clear mechanisms were identified for integrating the various strategies and actions at the regional level. Issues associated with involving the community and industry in regional planning, integration of the various identified national strategies that will affect rangeland management, and regional industry restructure will need an identified process and framework for their resolution.

There are also levels of planning required in order to reach key groups of stakeholders involved in the adjustment process. The national approach being taken here aims to bring together stakeholders who can learn from each other in the adjustment process. Many of the issues identified in Table 2 may have been dealt with successfully in one region or another and the facilitation of information and knowledge transfer across regional stakeholder groups holds the potential for locally self-initiated solutions and leadership from stakeholders.

Elements of a national implementation plan

A national implementation plan should define processes for:

- defining who the stakeholders are and their roles and responsibilities
- obtaining an account of the resource base
- communicating with communities and stakeholder groups about the development of regional plans
- reviewing existing policies and programs to ensure that they facilitate the outcomes which are desired for the rangelands at the Commonwealth, State/ Territory and community level, and where necessary getting institutional change on the agenda for all levels of government
- developing partnerships between governments, and between governments and the community (including relevant stakeholders and industry bodies) to strategically channel resources into regions, as a way of holding all players to a set of commitments on long-term goals which aim at sustainable resource management
- developing alternative production systems and resource uses and linking them to business planning strategies
- identifying lessons learned from the process of developing regional action plans, documenting information gaps and engaging the necessary research and development.

Table 2 – A compilation of workshop issues

Issues that generally have stakeholder agreement – strategies are in place – process for implementation needs identification and funding needs to be allocated

- Pest management
 - Feral animals -- (Various pest management strategies)
 - Weeds – (National Weeds Strategy)
- Biodiversity – (National Biodiversity Strategy)
- Representative reserve system (National Biodiversity Strategy)
- Fire management – (Property management planning)
- Property management planning (PMP) – (National PMP Campaign)
- Education/communication/awareness

Issues requiring clarification – no clear stakeholder agreement – requires specific agreed action and funding allocation

- Economic viability (pastoral)
- Rangeland information
- Water supplies
- Land degradation
- Ecological sustainability – (National Strategy for Ecologically Sustainable Development)
- Diversification of rangeland use
- Access
- Recognition of roles (of pastoralists)
- Stocking rates

Issues requiring education and political direction

- Land tenure
- Aboriginal issues
- Government policy and legislation
- Social issues
- Rangelands strategy
- Funding for rangelands

Issues related to process

- Local community involvement in decision-making
- Government involvement
- Implementation plan – development of regional action plans

Rural adjustment

The Draft National Strategy for Rangeland Management could ultimately provide a mechanism for ensuring the (ongoing) commitment from governments, communities and individuals to:

- the process of change and adjustment
- introducing new institutions to address issues such as tenure, property rights, natural resources management obligations
- monitoring, valuing and assessing resources and production systems and research into the impact of the use of natural resources on the environment
- improving the human capital and skills of natural resource users
- making available information and improving dissemination, uptake and use of information
- provisions to ensure markets for technical and economic information, technology transfer, extension and human capital (the acquisition of necessary skills for sustainable development) are established and working appropriately; this will require participation of and assistance from governments at all levels
- fostering research into new ways of doing things, new policies, new technologies and management systems and the introduction of effective performance indicators.

As the issues facing rangelands are complex, there is and will be no single solution. There will be many approaches to these issues and it will be important to provide an adjustment framework which gives communities the opportunity to develop and implement local strategies that address economic development, structural adjustment, natural resources management and social issues in an integrated way. The essential elements of such an approach are:

- community support and ownership
- strategic approaches to rural area development
- coordinated program delivery.

The Commonwealth and States and Territories have recently embarked on such an approach to natural resources management at a regional level through the Rural Partnership Program. The initial case studies for this program have potential application to the design and delivery of programs aimed at various community-based regional approaches. These studies noted in particular that there is a need for improved

program integration and coordination, and community involvement at all stages and the fostering of leadership and skills development at the local level.

The Commonwealth is attempting to address these issues through the Natural Heritage Trust which provides the mechanism to ensure that natural resources management and nature conservation programs delivered by the Commonwealth are complementary; that the interface between these programs and the community is straightforward; and that public funding is directed to catalytic, strategic investments in natural resources with clearly identified and measurable outcomes.

Whilst the Commonwealth has initiated the Natural Heritage Trust, it will be the States and Territories that will have a significant say in the implementation of the various programs and will be responsible for the ongoing resource management. The development of a suitable partnership between governments is the subject of negotiation at this moment.

Conclusion

A meeting of the working group developing the Draft National Strategy for Rangeland Management will precede the Outlook '97 conference. It will meet to collate and discuss the various submissions and to present future options to the two ministerial councils oversighting its development. It will ultimately be up to those councils to decide the future direction.

Acknowledgements

Thanks are due to the staff of the Rural Policy Branch of the Commonwealth Department of Primary Industries and Energy who contributed to the text of the paper.



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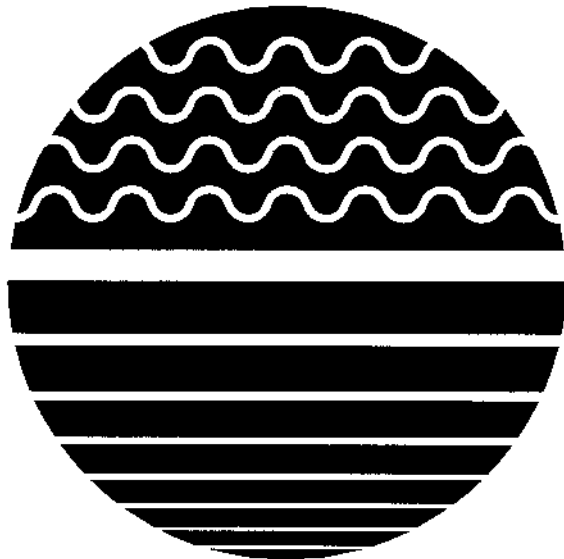
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