



**AgEcon** SEARCH

RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

*No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.*

# **Sustainability Profitability and Australian Landcare**

**Lachlan Polkinghorne**

**Paper prepared for presentation at the 13<sup>th</sup> International Farm Management Congress,  
Wageningen, The Netherlands, July 7-12, 2002**

*Copyright 2002 by Lachlan Polkinghorne. All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.*

# **SUSTAINABILITY PROFITABILITY AND AUSTRALIAN LANDCARE**

---

**Lachlan Polkinghorne**

National Landcare Facilitator Project  
PO Box 279  
Geelong Victoria 3220  
AUSTRALIA

Ph: 61 3 5229 6050  
Fax: 61 3 5222 6643  
Email: [nlfp@rrg.com.au](mailto:nlfp@rrg.com.au)

# CONTENTS

|                                                                                                                            |           |
|----------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>ABSTRACT .....</b>                                                                                                      | <b>i</b>  |
| <b>SUSTAINABILITY: ENVIRONMENTAL MANAGEMENT SYSTEMS .....</b>                                                              | <b>1</b>  |
| Introduction and Aims .....                                                                                                | 1         |
| Measurement of Sustainability .....                                                                                        | 1         |
| Demonstrations of Sustainability .....                                                                                     | 2         |
| Sharing the Cost of Sustainability .....                                                                                   | 4         |
| What is an EMS and how does it relate to the broader topic of sustainability? .....                                        | 5         |
| <i>How does EMS relate to sustainable land management? .....</i>                                                           | <i>7</i>  |
| <i>EMS and QA (Quality Assurance) .....</i>                                                                                | <i>8</i>  |
| <i>Why should the farming community take an interest in EMS? .....</i>                                                     | <i>9</i>  |
| Sustainability Across Australia: A Political Perspective .....                                                             | 10        |
| <b>SUSTAINABILITY ON FARMS – A BUSINESS PLAN APPROACH.....</b>                                                             | <b>12</b> |
| Introduction .....                                                                                                         | 12        |
| Managing Farm Systems for Sustainability .....                                                                             | 12        |
| A Business Plan Approach .....                                                                                             | 16        |
| Key Issues .....                                                                                                           | 18        |
| <b>LIST OF TABLES AND FIGURES</b>                                                                                          |           |
| <b>Table 1:</b> Examples of Practices Leading to Sustainability .....                                                      | 4         |
| <b>Table 2:</b> NLF Project ‘Wish List’ for EMS and Sustainability .....                                                   | 11        |
| <b>Table 3:</b> Managing Farm Systems for Sustainability .....                                                             | 13        |
| <b>Table 4:</b> Example Report Card using SCARM Indicators, Revised Attributes and<br>Walker’s Concept for Reporting ..... | 15        |
| <b>Figure 1:</b> EMS as Part of a Sustainable Land Management System .....                                                 | 8         |
| <b>NOTES.....</b>                                                                                                          | <b>19</b> |
| <b>BIOGRAPHICAL SKETCH.....</b>                                                                                            | <b>20</b> |

## ABSTRACT

*The landcare movement in Australia has contributed towards a significant change in environmental awareness, and understanding of the immediate and real issues that face landholders. Consequently, many are now questioning the very farming systems that they implement and are keenly aware of the fragility of the environment around them.*

*The long-term future for Australia's agriculture depends on linking environmental management with sound commercial food and fibre production. Sustainable and profitable farm systems are the key to achieving this future. The farming community is faced with increasing calls for the farming community to be more sustainable. Unfortunately, while most farmers accept this, they do not have access to regional indicators for the measurement of sustainability.*

*Therefore, there is an immediate need to develop further some of the work that has been completed nationally into regional models, where farmers reliably adapt the sustainability indicators to on farm applications. To achieve this, national leadership and cooperation between government, industry and research organisations is required.*

*Environmental Management Systems (EMS) are receiving close scrutiny as a means of measuring the impact of a business on the environment. There are many perceived advantages of EMS. These include achieving market access, protection and enhancement of the environment, provision of better management information, and providing a positive image for agriculture. Equally, the farming community is wary of yet more administration and bureaucracy, and would like to be convinced of the positive cost benefits from EMS before embracing EMS as a concept.*

*In comparison to many overseas countries, Australian agriculture is relatively unregulated in an environmental sense. The need to address the challenging question of sustainability, and the potential of EMS as a tool of measurement, provide grounds for strong debate within the country. There is no question that Australia must establish credible systems that are profitable and sustainable. To achieve this, both national leadership and a commitment from the farming community are required.*

# **SUSTAINABILITY: ENVIRONMENTAL MANAGEMENT SYSTEMS**

## **Introduction and Aims**

The National Landcare Facilitator (NLF) Project believes that the long-term future for Australia's agriculture depends on linking our concern for the environment with sound commercial food and fibre production. In addition to a requirement to address environmental imperatives, there is an urgent need to underpin Australia's international reputation as a sustainable and 'clean green' producer.

Hence, it would be desirable for all Australian farmers to adopt sustainable and profitable farm systems. These sustainable farm systems must not only conserve or enhance our natural resources but must also have a positive impact on all components of the environment. The community increasingly expects farmers to supply clean green produce.

The key issues which stand in the way of the wide adoption of 'clean green' are:

- The identification and measurement of sustainability for all farms
- How to receive an adequate reward for the investment in clean green production

These issues will be discussed and the changes required to achieve success.

## **Measurement of Sustainability**

The word 'sustainability' is used very broadly, and is often confused with environmental management systems (EMS). While they are part of the same issue, work involved in sustainability is usually focused on the entire production and business system, while work on EMS is usually focused on the impact of the production system on the environment. EMS are most certainly related to sustainability, and are seen by many environmentalists as vehicles for quantifying Australia's commitment to agricultural sustainability. Therefore, at a government level there is considerable interest in EMS and developing a role for government in facilitating the voluntary adoption of EMS.

The term ‘sustainability’ is widely used in the context of ensuring that activities involving the use of natural resources do not degrade the production base in which they operate. For farmers, it usually means ensuring that the farm itself is as productive or more productive in the long term as it is today. A farm system may be sustainable in relative isolation but at the same time have a detrimental effect on the wider environment. Hence, the concept of farm sustainability must be extended to include the off-site impacts that the farm system has on the general environment. To this must be added an economic or profitability element if sustainable practices are to be widely adopted. There are many definitions of sustainability and it is very easy to create debate regarding the use and application of any one definition of sustainability. Whichever definition is adopted, it is important to ensure that sustainability is linked to profitability.

What is evident is that at regional level the farming community has very little access to models of sustainable farm systems that they can adopt on their own properties to improve their own sustainability practice. There is a clear gap between policy discussions and farm practice. Against this background there are increasing calls for the farming community to be more sustainable. Farmers generally do not have access to regional indicators for the measurement of sustainability. At a national level there has been a considerable amount of work published on sustainable indicators<sup>1</sup> and this is now being extended to include social, economic and environmental indicators. It is a concern that this work has not been extended to regional areas in Australia. This, of course, is not an easy task and requires considerable resources. However, it is unreasonable to expect the farming community to be more sustainable when sustainability models are not provided.

There have been some initiatives which address this issue on a regional basis. The Land Management Society Testing Kit from Western Australia is one example. However, much, much more has to be done to genuinely address the issue on a regional and local basis throughout Australia.

### **Demonstrations of Sustainability**

There are few farm-scale and commercial demonstrations that the farming community can access to assist them with their farm management practices. In Victoria, Australia, the dairy industry has been very successful with the use of model (focus) farms to demonstrate Best

Management Practice to the dairy community. Of course, with the constant measurement of milk production, the responses to management are very quick and therefore dairy farmers can respond promptly by implementing practices on their own properties. Generally, it is usual that demonstrations are associated with production without consideration of whole system approaches.

There are some other very encouraging initiatives. The OBE Beef operation based at Birdsville in Queensland has successfully linked organic production with increasing profitability. The environmental accreditation is achieved through the National Agricultural Sustainability Association Australia (NASAA). This accreditation allows for marketing approaches where significant product premiums can be achieved. Another mixed farm example recently promoted by the National Landcare Facilitator Project is based at Kybybolite in South Australia, where organic farmer Huck Shepherd is now operating at a higher level of profitability than would be possible in a conventional system.

**It is important that the organisations which fund agricultural research work ensure that the sustainability and profitability of the whole farm systems are a component of the work.**

The Western Australia based *Valema Farms – Putting Sustainability to the Test* is amongst the nation's leaders. It is the commercial farm-scale nature of the project that sets it apart from many others across Australia. It is unique in that for an entire farming system it has established the following processes:

- Identification of key measures of sustainability and profitability for the region. It is acknowledged that this process is ongoing
- Regular measurement of the criteria
- Regular communication of the findings to the broader farming community. Without this successful communication the project could not be regarded as being a success regardless of what happens inside the boundaries of the property.

A farm-scale comprehensive project is an ideal extension model provided it is commercial in nature and the wider community adopts the practices that are implemented on the property.



## Sharing the Cost of Sustainability

The farming community needs to develop a better understanding of the cost of sustainable practice. The cost of sustainability will vary from region to region. In some areas sustainability can be achieved on farm with little impact on the catchment in which it is located. In other regions, especially where salting is a problem, the cost of developing a sustainable farm system is frequently greater off farm than on farm.

Policy makers also need to develop a clear understanding of these cost-benefit issues before making informed decisions.

It is necessary to better understand the public benefit of the implementation of practices that have public benefit. Some examples of such practices are listed in Table 1 below. These are divided into two categories – those that primarily benefit on farm and those that benefit on farm and at the catchment scale.

**Table 1: Examples of Practices Leading to Sustainability**

| <b>Expenditure and benefits on farm</b>                                                                                                                                                                          | <b>Expenditure and benefits on farm and at catchment scale</b>                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Upgrading irrigation technology</li><li>• Accurate application of lime</li><li>• Use of minimum tillage equipment</li><li>• Application of clay to sandy soils</li></ul> | <ul style="list-style-type: none"><li>• Salinity mitigation</li><li>• Water drainage and control</li><li>• Greenhouse mitigation</li><li>• Biodiversity conservation</li></ul> |

It is likely that a farmer will be much more interested in the on-farm practices where there is a relatively visible short-term return. Usually, economic assessments of these practices are straightforward. This is not the case, however, with activities which impact on a catchment scale.

Therefore, a better understanding is needed on a catchment scale of the costs and benefits of implementing sustainable practice. This then should lead to the provision of appropriate incentives for the farming community to carry out activities where there are considerable off

site benefits, and which also usually provide public benefit. Therefore, there is a need **for greater recognition of the public benefits of capital investment made by farmers.**

While it has already been stated that farm scale demonstrations are an ideal extension model, there are many practical limitations to making change. This is well known to the farming community, however it is necessary to emphasise that where changes to land management are made, the environmental outcomes are medium to long term in nature and often too slow for politicians and funding providers. This does provide considerable difficulty for the farming community who are very keen to not only be seen as implementing sustainable practice but also to be achieving sound environmental outcomes. Where there is a limitation on funds, which is the case with most farming properties, then the rate at which the farming community can change and achieve the implementation of sustainable practice is much slower than is desirable from both their point of view and that of the wider community.

This discussion leads to the consideration of EMS, and the relationship with sustainable land management.

### **What is an EMS and how does it relate to the broader topic of sustainability?**

**An EMS is a systematic approach to organising the planning, implementation and monitoring of an organisation's attempts to manage its environmental impacts with the option of third party audit.** There are many definitions of EMS and most more complex than the one outlined above, however, this is a simple one adequate for our purposes. The main focus of an EMS is to establish a means of continuous improvement in the management of the environment.

An EMS typically consists of:<sup>2</sup>

- A policy
- A procedure
- A process
- Environmental planning
- Management objectives

- Emergency response programs
- Operational controls
- Monitoring programs
- Reviews and audits

Hence, an EMS is a continuous process for the improvement of environmental management. Two important and contentious issues arise relating to the types of EMS to be promoted and adopted in Australia.

The first major issue is whether or not the EMS is to be audited. In order for a system to be audited, measurements must be taken and independent skilled personnel employed to provide audit certification.

Certification from a professional organisation will provide credibility but will also add cost. The cost and bureaucracy of the process may stop many farmers from developing EMS, however desirable, and only large profitable farms will embrace the concept. Farmers are unlikely to add the cost of auditing EMS unless they can see a return. Hence, EMS may not be widely adopted. A system permitting a gradual move to an auditable EMS may be the answer.

Landowners could commence with a **best practice** approach to the environment, such as the NHT funded project 'Environmental Best Management Practice on Farms', based in Geelong, Victoria.<sup>3</sup>

The second major issue in EMS policy development is associated with benchmarks and indicators. Without a national policy initiative on EMS it is likely that many EMS systems will evolve with greatly varying levels of credibility. Two farms in the same region can develop different EMS and satisfy the EMS process but not address the key issues for the region.

A process of establishing regional indicators of sustainability for all regions of Australia is therefore desirable. These indicators could be developed jointly by scientists, farmers and the

local catchment management authorities and would then be an excellent guide on which each individual farmer could develop their own system.

As Australia is a major food exporting nation, the Commonwealth government has a key leadership role in ensuring EMS are:

- Credible
- Transparent
- Regionally applicable

It is imperative that the community is not faced with a plethora of environmental management systems. The risk with this is that land managers will become disillusioned about EMS and natural resource management, and both international and domestic consumers will become totally confused.

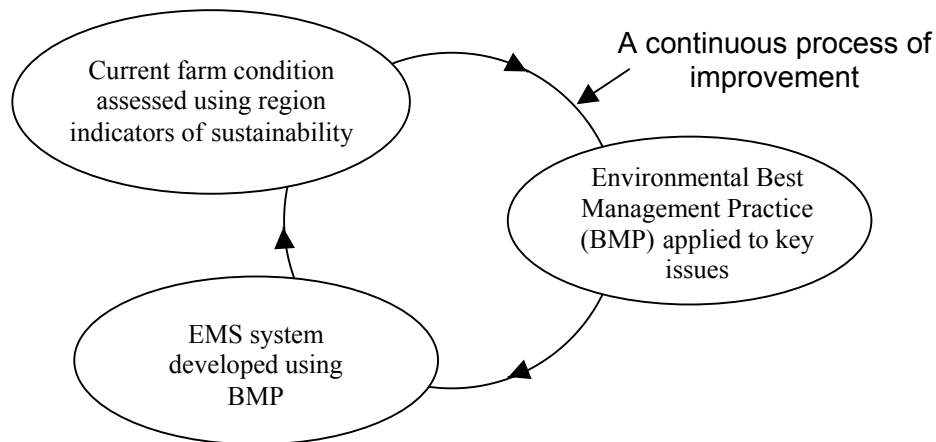
### ***How does EMS relate to sustainable land management?***

The question of how EMS relates to the management of a sustainable farm system is a complex one. An EMS is a process which is applied to a farm system. It is therefore desirable that, before the EMS process is applied, an assessment of the farm system is made using agreed regional indicators of sustainability. The regional indicators focus on the key sustainability issues for the region and are then measured on a selected farm. Hence, the initial condition of the farm is first assessed as recommended by Walker et al. It is also desirable to establish a trend on each indicator. This can only be done after a number of years of observation of each indicator.

Once the condition of each indicator is assessed, then Best Management Practice can be adopted which may eventually lead to the adoption of an EMS.

This process can be described diagrammatically as follows:

**Figure 1: EMS as Part of a Sustainable Land Management System**



Farmers with a concern for the environment can enter the improvement loop at any point.

Farmers are likely to participate most fully in an EMS when they are able to obtain market reward for their efforts. The EMS adopted would desirably integrate with any Quality Assurance (QA) programs that have already been established.

### ***EMS and QA (Quality Assurance)***

While EMS focus on the environmental impacts of producing the product, Quality Assurance (QA) relates to product quality and how it is produced, packaged and marketed.

There are many grey areas between the two, however, and it is important to point out that quality assurance does not guarantee long-term sustainability. Over the past decade, consumers have increasingly demanded quality and consistency of product. Quality assurance systems have grown around these demands, and now assume a high level of priority in the management of many corporations.

This consumer focus on quality has extended to requiring that products be produced in an environmentally sustainable manner. Thus, a much stronger and formal interest in EMS is developing at the consumer level.

### ***Why should the farming community take an interest in EMS?***

This is a searching question in which the farming community is taking a very keen interest. To many farmers an EMS is merely another administrative burden to be placed on the farming community where others (retailers and consumers) will enjoy the benefits. It will be necessary to very clearly demonstrate the benefits of EMS to the farming community before wide spread adoption can be expected.

### **An ideal EMS is likely to have the following positive outcomes:**

#### **Market**

- Meeting vendor/marketing certification criteria

#### **Environment**

- Protection and enhancement of the resource base of the property, and its environs
- Increased farm productivity linked with sound conservation practices
- Protection of legal liability

#### **Management**

- Provision of management information and guidance for decision-making on environmental issues
- Improved access to capital

#### **Image/perception**

- Demonstrated self regulation rather than expectation of top down statutory regulation
- Encouragement of good community relations

Ideally, EMS will offer clear linkages for achieving better integration of environmental sustainability and profitability.

## Sustainability Across Australia: A Political Perspective

*'Australian agricultural industries must generate credible systems for managing their environmental effects, and for measuring and communicating their environmental performance, either as individual producers and processors, or within a regional or industry framework. Failing this, Australian agricultural industries risk the imposition of harsher regulation, being shut out of markets, missing opportunities, and conveying a negative public image – that of a sector with ongoing traditions of environmental exploitation and recklessness. Agricultural producers or entire industries can no longer expect government, or statutory marketing boards to do their PR on environmental issues.'*<sup>4</sup>

There is a very strong need for farmer/community driven change. In the current era, governments both at State and national level are questioning their role in this issue. It is often quite difficult for them to lead on a matter such as this one of sustainability as community acceptance can be quite difficult for a government to achieve. Therefore, proactive leadership at a community and regional level is necessary, otherwise there is a risk that a regulatory process will be forced onto the farming community as a result of strong lobbying by some elements of the green movement. **This regulated path is likely to occur unless the farming community can present an articulate and unified message.**

Farmer organisations do need to provide an active role in the same way that they need to take a keen interest on issues such as greenhouse emissions. Often these organisations are preoccupied with short-term matters where a payoff to their members is more easily demonstrated.

The current industry based research and development system is not conducive to research into complex natural resource management issues. In putting together a project to either develop regional indicators or to demonstrate sustainability, cross-institutional cooperation is necessary. Under the current arrangements there are only two research and development (R&D) corporations that are non-industry based, being the Land and Water Resources Research and Development Corporation (LWRRDC) and the Rural Industries Research and Development Corporation (RIRDC). These two organisations have the least funding of any of the R&D corporations, therefore they are limited in the research role that they can provide to the complexities of natural resource management. If some organisational self-interest is

added to this discussion, then it further demonstrates the difficulty of acquiring the necessary resources to address sustainability.

In summary, the rural community does need to be careful that the green lobby does not dominate the agenda. Therefore, farmers and their organisations need to be much more proactive in the area of sustainable and profitable farm systems and the role that EMS has.

A wish list is provided in Table 2 indicating to policy makers the direction these issues could be developed.

**Table 2: NLF Project ‘Wish List’ for EMS and Sustainability**

| <b>What is Wanted!</b>                                                                                                                              | <b>What is not Wanted!</b>                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Producers being rewarded for clean green management                                                                                                 | Self-interested agencies and research organisations dominating the agenda                                     |
| Regional measures of sustainability to be developed and then used by farmers                                                                        | Commodity prices that do not reward first class environmental management                                      |
| Government commitment to research and demonstration of sustainable and profitable systems. <i>(Farmers need access to models of sustainability)</i> | State and Commonwealth paternalism towards the rural community. <i>(Governments are part of the solution)</i> |
| An economically rewarding EMS                                                                                                                       | A multiplicity of EMS/QA systems                                                                              |
| Community support to assist with biodiversity conservation                                                                                          | Regulation which doesn't work – <i>it mocks the people who do the right thing</i>                             |
| Clear linkages between sustainable and profitable systems and EMS                                                                                   | An apathetic farming community                                                                                |
| Profitable agriculture which can afford the costs of sustainability                                                                                 | More taxes and bureaucracy                                                                                    |
| A nationally badged initiative to coordinate efforts at demonstrating profitability and sustainability.                                             |                                                                                                               |



# **SUSTAINABILITY ON FARMS – A BUSINESS PLAN APPROACH**

## **Introduction**

The important issues of sustainability and EMS are discussed in the first section of this paper. This section will now discuss how an individual farmer can apply these principles to the management of a farm. It assumes that there are no regional indicators of sustainability. If a regional set of indicators were available to farmers then the process of establishing and managing a credible sustainable farm system would be much easier.

A process of evaluating and managing an existing farm system for sustainability will be described using the indicators developed by the Standing Committee on Agriculture and Resource Management (SCARM) and using the report card concept developed by Walker et al.

Once a system of assessing and managing sustainability is established, then it is useful to incorporate this process into the farm business plan. This approach will also be described together with some observations on key issues which arise.

## **Managing Farm Systems for Sustainability**

In the absence of regional indicators, use of the SCARM indicators (see Table 3) is recommended in the initial process of evaluating farm systems.

**Table 3: The Indicators and Attributes Examined by SCARM**

| <b>Indicator</b>                          | <b>Attributes</b>                                                                                                                                                                                                                                           |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Long-term Real Net Farm Income<br>NFI  | <ul style="list-style-type: none"><li>• Real net farm income</li><li>• Total factor productivity</li><li>• Farmers' terms of trade</li><li>• Average real net farm income</li><li>• Debt servicing ratio</li></ul>                                          |
| 2. Natural Resource Condition<br>NRC      | <ul style="list-style-type: none"><li>• Nutrient balance: P and K</li><li>• Soil condition: acidity and sodicity</li><li>• Rangeland condition and trend</li><li>• Agricultural plant species diversity</li><li>• Water utilisation by vegetation</li></ul> |
| 3. Off-site Environmental Impacts<br>OSEI | <ul style="list-style-type: none"><li>• Chemical residues in products</li><li>• Salinity in streams</li><li>• Dust storm index</li><li>• Impact of agriculture on native vegetation</li></ul>                                                               |
| 4. Managerial Skills<br>MS                | <ul style="list-style-type: none"><li>• Level of farmer education</li><li>• Extent of participation in training and landcare</li><li>• Implementation of sustainable practices</li></ul>                                                                    |
| 5. Socio-Economic Impacts<br>SEI          | <ul style="list-style-type: none"><li>• Age structure of the agricultural workforce</li><li>• Access to key services</li></ul>                                                                                                                              |

A methodology for assessing and managing sustainability is now described. It is proposed that each individual farm manager could start to manage sustainability on farms by using the following method.

### **Tasks to be Performed by the Farm Manager**

Step 1 **Identify a credible model of indicators and attributes.** The SCARM model has been selected as being suitable for this purpose. (See previous page)

Step 2 **Analyse the model.** This involves analysing the indicators and attributes to determine whether they cover all of the key issues for any particular farm system. This process is likely to involve local agricultural scientists with excellent knowledge of issues in the area.

Step 3 **Customise the model to a specific farm.** The key attributes relevant to the individual farm are identified.

Step 4 **Identify the importance and frequency of measurement of each attribute.**

Classify each of the attributes in terms of their perceived importance using a scale:

- H High importance
- M Medium importance
- L Low importance

Regularly measure the key attributes. A means of measuring these attributes needs also to be identified, together with a program which specifies the frequency of measurement and the benchmarks towards which the farm system is aimed.

Step 5 **Prepare a report card** showing trends in the condition of the key attributes. This involves an assessment of the current measurement of each attribute and rating it from Very Poor to Very Good.

Step 6 **Establish a management system for continuous environmental improvement.**

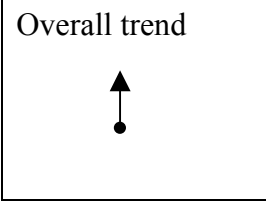
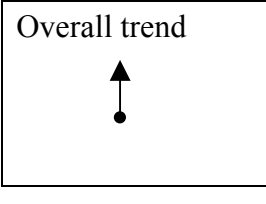
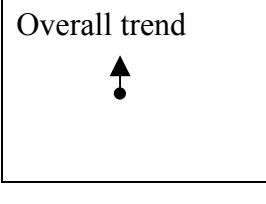
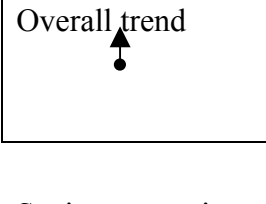
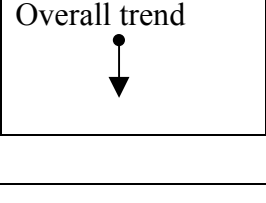
The management process must focus on the key issues. It may involve best management practice (BMP) or the development of a formal EMS such as ISO 14001.

## Summary

The attributes described by SCARM for the whole of Australia are adapted to reflect the key issues for an individual farm. The selected attributes are measured and a report card is prepared which rates the condition and trends of each attribute.

All of the processes involved in completing this report card are not described here fully as space does not permit it. A sample report card is provided as an example for a particular farm.

**Table 4: Example Report Card using SCARM Indicators, Revised Attributes and Walker's Concept for Reporting**

| Indicator                                                                                                        | Attribute                   | Measurement<br>@ 30/6/93    | Trends    |      |      |      |           |
|------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------|-----------|------|------|------|-----------|
|                                                                                                                  |                             |                             | Very good | Good | Fair | Poor | Very poor |
| Long term Net Farm Income<br>   | Farm cash income            | \$47,000                    |           |      | ←•   |      |           |
|                                                                                                                  | Farm business profit        | \$32,000                    |           |      | ←•   |      |           |
|                                                                                                                  | Farm debt                   | \$238,000                   |           | •    |      |      |           |
|                                                                                                                  | Equity                      | 84%                         |           | •    |      |      |           |
|                                                                                                                  | Rate of return              | 1.4%                        |           |      |      |      | ←•        |
|                                                                                                                  |                             |                             |           |      |      |      |           |
| Natural resource condition<br> | Nutrient balance P:K        | P 13ppm<br>K 200 ppm        |           |      | ←•   |      |           |
|                                                                                                                  | Soil acidity and sodicity   | 5.0 PH in CaCl <sub>2</sub> |           |      |      |      | ←•        |
|                                                                                                                  | Conservation area           | 8%                          |           |      | ←•   |      |           |
|                                                                                                                  | Ag species diversity        | -                           |           |      | ←•   |      |           |
| Off site impact<br>           | Chemical residue            | Nil                         | •         |      |      |      |           |
|                                                                                                                  | Salinity in streams         | EC 1200                     |           |      |      |      | ←•        |
|                                                                                                                  | Impact on native vegetation | -                           |           | ←•   |      |      |           |
| Managerial skills<br>         | Farm education              | Nil formal                  |           |      | •    |      |           |
|                                                                                                                  | Participation in training   | 20 hrs pa                   |           | ←•   |      |      |           |
| Socio-economic impacts<br>    | Age structure               | 55 yo                       |           |      | •→   |      |           |
|                                                                                                                  | Access to services          | -                           |           |      | •→   |      |           |

Once this report card has been prepared, the farm manager of the farm can then select a BMP or EMS system in order to commence a process of continuing environmental improvement.

A key issue for any farmer who instigates an EMS on farm is the impact that the commitment of time and money will have on the profitability of the business.

A sound business long term is one which not only manages its environment in an ethical manner but also makes an adequate return on the funds invested. A farm business manager therefore needs to incorporate any EMS policy into the overall business. A formal means of achieving this integration is by the use of a business plan.

### **A Business Plan Approach**

The approach used when formulating a business plan could be a useful model both for focusing landcare activities on farms and for producing more desirable business outcomes.

A business plan will focus the business on its key markets and provide both strategic direction and a means of monitoring results.

The specific benefits of preparing a business plan are many and varied, and are listed below with comments on their relevance to any one farm.

#### **Benefits of Preparing a Formal Business Plan**

- Gaining a better understanding of the business, the market in which it competes and its competitors
- An expansion of focus from short-term local issues only to include an awareness of longer-term issues that may affect ongoing viability
- Creation of an information system that will promote more effective decision making within the business

#### **Relevance to Individual Farm(s) Regarding Sustainability**

- Identifying indicators of sustainability for the farm and the benefits of clean green production
- Assessing the long-term direction of markets and their need for EMS
- Establishing close links with customers requiring EMS

- Identification of key areas of product and service development (both current and future) and the finance and resources that will be required to develop them
- An evaluation of current internal systems, their efficiency and effectiveness and ways in which they can be improved
- Providing a means of communicating with staff and other interested parties (bankers, financiers, business advisers, suppliers, customers, partners etc)
- Providing an ongoing resource in relation to both planning for future action and monitoring progress towards set objectives
- Providing a means of identifying and achieving both the personal and altruistic goals of business owners and of optimising the development of the asset which every business represents
- Identifying new means of production that are sustainable, and for which there are clean green markets
- Analysing weaknesses in current systems
- Providing models of best commercial practice for each area of production
- Providing support to staff for monitoring sustainability, and rewards for goal attainment
- Researching the clean green markets for farm produce

A business plan will usually contain the following information:

### ***Contents of a Business Plan***

- Executive summary
- Statement of business objectives
- Company background and organisation
- Analysis of market structure
- Marketing plan
- Organisational plan
- Production plan
- Implementation schedule
- Natural Resource Management Plan

- Research and development plan
- Financial plan
- Summary
- Appendixes
- Conclusion

To prepare a plan for a selected farm, it is desirable to start with objectives and then proceed to describe the existing organisation and the changes needed to develop a market driven clean green production process. It is highly desirable that every farm business in Australia develops a business plan which addresses sustainability and profitability issues.

### **Key Issues**

The process described in this section provides a method that could be used by farmers throughout Australia to develop sustainable and profitable farm systems. Whether this, or other processes, are adopted by farmers will probably depend on the costs and benefits of the approach and the credibility that the process has with consumers. It is desirable that federal and State governments provide leadership in these areas. If they fail to do so, then a proliferation of EMS systems is likely to occur, which is likely to result in a lack of credibility for all systems.

The development of regional indicators of sustainability is a vital first step in this process. A more important step is that the development of sustainable and profitable farm systems should be a key policy objective for all Australian governments.

## NOTES

1. Agriculture and Resource Management Council of Australia and New Zealand, Nov 1998, *Sustainable Agriculture Assessing Australia's Recent Performance*. Australian and New Zealand Environment and Conservation Council, July 2000, *Draft Headline Sustainability Indicators*.
2. Heinze, KE, *Credible Clean and Green*, Discussion Paper, CSIRO Land & Water, Sept 1999.
3. Geoff McFarlane, Department of Natural Resources and Environment, Geelong.
4. Alexandra, I, *Environmental Management Systems for Australian Agriculture – Issues and Opportunities*, Proceeds of Ballina National Workshop, May 1999, Environmental Management Systems in Agriculture.



## **BIOGRAPHICAL SKETCH**

### **Lachlan Polkinghorne**

Lachlan was appointed to the position of National Landcare Facilitator in December of 1996. A national appointment, this position carries the responsibility of providing a voice for community landcare at a national level, and providing advice to government agencies and the Minister for Agriculture on appropriate policies for landcare programs. It also has been in this position that Lachlan has provided national leadership to the many landcare coordinators located throughout Australia. A relatively new vocation, recognition that they are an integral requirement in natural resource management programs has been a key achievement in recent years.

His background is in agriculture, rural consulting and rural education. Lachlan was raised on a farming property located in South Australia. After tertiary education in Victoria, Lachlan moved to Esperance on the south coast of Western Australia. There, initially, he was involved in large-scale cereal and sheep management and ownership of farming property.

Later, he established a rural consulting business based in Western Australia. This business focussed on providing financial and technical advice to family farming businesses. In 1993 Lachlan was appointed Director of the Farm Management Course at Marcus Oldham College in Victoria. Since this time, Lachlan has continued his activity in rural consulting, maintaining an enthusiastic commitment to the opportunities of the agricultural sector.

In his capacity as National Landcare Facilitator he travels widely and regularly across Australia to make contact with landcare groups and other organisations working in natural resource management.