



Woodward Clyde
Dames & Moore

*Development of Project Planning and
Evaluation Skills: A Framework for
Regional Farm Forestry*

*Final Edited Version: basis for booklet & web
document*

20 October 2000

*for Agriculture, Fisheries and Forestry,
Australia - Farm Forestry Program*

URS AUSTRALIA

Level 1, 25 North Terrace, Hackney South Australia 5069

Telephone: +618 8366 1000 Facsimile: +618 8366 1001

*Development of Project Planning and
Evaluation Skills: A Framework for
Regional Farm Forestry*

*Final Edited Version: basis for booklet & web
document*

20 October 2000

*for Agriculture, Fisheries and Forestry,
Australia - Farm Forestry Program*

TABLE OF CONTENTS

Foreword to regional farm forestry groups	v
1 Purpose of this document	1
2 Guide to the Project Planning and Evaluation Framework	3
3 Project planning and implementation	5
3.1 Project planning and implementation cycle.....	5
3.2 Project logic	6
4 About evaluation	8
4.1 Why evaluate?	8
4.2 Characteristics of a good evaluation	9
5 Outline of Evaluation Framework	10
5.1 Vision	10
5.2 Project goals	10
5.3 Objectives	11
5.4 Activities.....	12
5.5 Performance Indicators (PI).....	12
5.6 Choosing which PI to measure	12
5.7 Goal Attainment Scaling (GAS)	12
5.8 Data requirements	13
6 Evaluation Framework in detail	16
7 Instruments for collecting evaluation information	26
7.1 Instrument 1: Organisation's internal activity register and on-going monitoring information	26
7.2 Instrument 2: Database analysis.....	26
7.3 Instrument 3: Workshops with focus groups.....	27
7.4 Instrument 4: Interviews – structured and semi-structured	27
7.5 Instrument 5: Mailed questionnaires	28
7.6 Instrument 6: Document review	28
7.7 Instrument 7: Comprehensive study	29
7.8 Instrument 8: On-ground assessment.....	30
8 Goal Attainment Scaling (GAS) – elaborated	31
8.1 Weighting.....	31
8.2 Scoring.....	31

8.3	Reflection	32
8.4	Raw data vs GAS scores	32
8.5	Aggregation across PI within a project.....	33
8.6	Displaying the evaluation data	33
8.7	Aggregation of evaluation information across projects and regions...	35
9	The Framework applied – hypothetical examples or case studies	36
9.1	Examples of Performance Indicators, associated data collection methods and their relationship to the evaluation process.....	36
9.2	Examples of Goal Attainment Scaling scales	46
9.3	Integrating GAS scores across Performance Indicators for a project	52
10	Sources of information	54
10.1	References cited in this booklet.....	54
10.2	Other useful references	54

LIST OF FIGURES

Figure 1.1	: What is farm forestry?	2
Figure 2.1	: Road map to the Project Planning & Evaluation Framework.....	4
Figure 3.1:	Project planning and implementation cycle	5
Figure 3.2	: The project logic	7
Figure 4.1	: Five steps for monitoring and evaluation	9
Figure 5.1:	Structure of the evaluation framework for regional farm forestry groups developed by this project.....	15
Figure 6.1:	Detailed Evaluation Framework – Goal 1: Integrated Development Incorporating Farm Forestry.....	17
Figure 6.2:	Detailed Evaluation Framework – Goal 2: Informed Decisions.....	19
Figure 6.3:	Detailed Evaluation Framework – Goal 3: Optimal Farm Business Viability.....	20
Figure 6.4:	Detailed Evaluation Framework – Goal 4: Optimal Industry Development and Processing Capacity.....	21
Figure 6.5:	Detailed Evaluation Framework – Goal 5: Vigorous Domestic and International Markets.....	22

Figure 6.6: Detailed Evaluation Framework – Goal 6: Responsive Regional Communities	23
Figure 6.7: Detailed Evaluation Framework – Goal 7: Supportive Institutional and Regulatory Environment.....	24
Figure 6.8: Detailed Evaluation Framework – Goal 8: Optimal Environmental Benefits	25
Figure 7.1 : Interview Structure.....	28
Figure 8.1: Example of Goal Attainment Scaling	31
Figure 8.2: The evaluation wheel.....	33
Figure 8.3: Display of two hypothetical and contrasting project scores	34
Figure 9.1: Example of Framework Basis and Performance Indicator example for ‘fostering partnerships’	37
Figure 9.2: Example of Framework Basis and Performance Indicator example for a regional farm forestry training course	38
Figure 9.3: Example of Framework Basis and Performance Indicator example for establishing trial sites	40
Figure 9.4: Example of Framework Basis and Performance Indicator example for co-ordination activities (for supply and demand of timber).....	41
Figure 9.5: Example of Framework Basis and Performance Indicator example for provision of R&D information and marketing for vigorous markets.....	42
Figure 9.6: Example of Framework Basis and Performance Indicator example for community acceptance of farm forestry and willingness to invest.....	43
Figure 9.7: Example of Framework Basis and Performance Indicator example for developing and making available planning guidelines.....	44
Figure 9.8: Example of Framework Basis and Performance Indicator example for developing environmental guidelines	45
Figure 9.9 : GAS scale for PI: ‘Level of stakeholder satisfaction with information forums with partners’	46
Figure 9.10 : GAS scale for PI: ‘Level of confidence amongst farmers who participated in training course’	47
Figure 9.11 : GAS scale for PI: ‘Quality of R&D procedures used to plan, establish & maintain trial sites’	48

Figure 9.12 : GAS scale for PI: ‘Extent of incorporation of supply – demand information into regional planning’	48
Figure 9.13 : GAS scale for PI: ‘Extent that R&D is communicated to stakeholders’	49
Figure 9.14 : GAS scale for PI: ‘Extent of willingness to invest in farm forestry’	50
Figure 9.15 : GAS scale for PI: ‘Extent that planning guidelines encourage farm forestry’	51
Figure 9.16 : GAS scale for PI: ‘Awareness and acknowledgment of environmental benefits of farm forestry by stakeholders’	51
Figure 9.17 : Matrix of evaluation data, and summaries	53

LIST OF BOXES

1. What is farm forestry?	1
2. Benefits of evaluation	8
3. What is Goal Attainment Scoring (GAS)?	13
4. Example – Same Performance Indicator, different scoring	35
5. Participatory monitoring and evaluation	Appendix 1

LIST OF APPENDICES

1. Brief introduction to evaluation concepts and terms
2. Bennett’s Hierarchy
3. Benefits of an effective evaluation framework identified by regional farm forestry groups
4. Checklist for high quality information delivery
5. Example questionnaire about course review and program delivery
6. Example questionnaire for training needs
7. Example questions

Foreword to regional farm forestry groups

The Farm Forestry Program promotes projects that support the development of farm forestry in key regions throughout Australia. The Program recognises that sound evaluation skills are crucial to the development of effective farm forestry projects, and the success of Regional Plantation Committees in particular. The Farm Forestry Program has therefore supported the development of evaluation skills at a regional level for commercial farm forestry through the commissioning of this study to develop a framework and tools to assist those managing farm forestry across Australia to better assess and learn from their own efforts.

Whilst the Program has placed a high priority on ensuring there is a national framework to assist the development of regional evaluation skills in farm forestry, the underlying philosophy of the Program encourages regions to develop their own approaches within the framework. This booklet seeks to provide advice and a range of tools to meet the evaluation requirements of regional groups promoting farm forestry. The project also seeks to enhance the capacity of regional farm forestry groups to monitor and evaluate project outcomes and farm forestry development.

The Framework has been developed with the active support of Regional Plantation Committees, state farm forestry coordinators and Natural Heritage Trust evaluators. It is the result of a nine-month process of extensive consultation¹. The publication represents the best available knowledge. However, it is recognised that this booklet and the web site version are a beginning of a process of continuous improvement. While the framework has been developed to assist current reporting requirements under the Farm Forestry Program, it is also applicable to the needs of future projects.

In implementing the framework it will be important to ensure that there is follow up training and discussion in the regions. This will be important in refining farm forestry project and program planning and preparing the groundwork for developing an evaluation plan. Additional follow-up will assist the finalisation of regional evaluation plans. The Farm Forestry Program will be considering this issue further in coming months.

We hope that users of this booklet will provide feedback to the farm forestry program managers. The program managers plan to capture your collective experience from using the Framework in a workshop within 18 months of releasing this Version 1 to develop a refined Version 2.

The Framework is available as:

- A printed booklet available from the Forest Industries Branch, Agriculture, Fisheries and Forestry – Australia, GPO Box 858, Canberra ACT 2601 (ph: 02 6272 4620); or
- A template for downloading from the AFFA website www.affa.gov.au.

Your feedback can be provided to AFFA (Forest Industries Branch, Fisheries and Forestry Industries Division, Agriculture, Fisheries and Forestry, Australia, GPO Box 858, Canberra ACT 2601).

¹ The consultations followed a 3-stage process: a meeting of a technical reference group which shaped a Discussion Paper that formed the basis of three regional consultation workshops (Merimbula NSW, Perth and Melbourne). These enabled the draft Framework to be formed which was successively refined by an advisory committee and a road testing workshop of key regional stakeholders.

Martin Andrew and Digby Race, co-authors

October 2000

1 Purpose of this document

This document presents and explains the Evaluation Framework that has been developed to enable regional farm forestry groups to evaluate their program of activities across the multiple dimensions of their work, covering social, economic and environmental objectives in line with ESD principles. For a definition of ‘farm forestry’ see Box 1. The project has been prompted by the need to report on the progress of regional farm forestry development, which has a mix of short and long-term outcomes. The framework aims to help groups to answer questions like:

- Why do we need to evaluate, and what’s in it for us?
- How do we go about it?
- What options are there to do this?

Importantly, the Framework provides a generic template to guide monitoring and evaluation of regional farm forestry development.

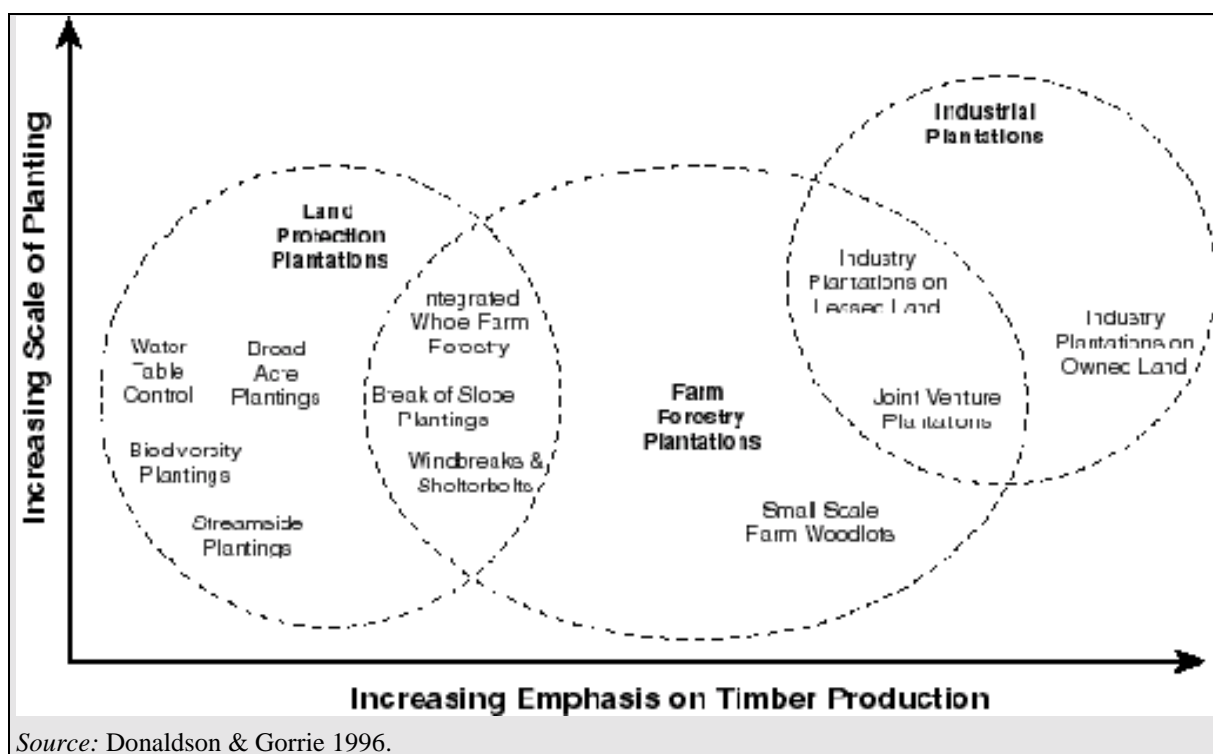
The target audiences are regional farm forestry groups and the principles and tools can be applied to other projects. A regional farm forestry group has a program of activities to implement its strategic plan, which may include one or more individual projects. Whilst the Framework could be applied to small individual projects, especially the project planning steps, it is anticipated that the real value of the Framework will be for evaluating the achievement of strategic plans as a whole and major projects. The Framework will be useful both during the implementation phase (to support a process of continuous improvement), and at the completion of a suite of activities. Henceforth the word ‘project’ is used to encompass whole programs or major projects.

Note that the focus of the Framework is the regional groups – it is not designed as an evaluation framework for AFFA’s Farm Forestry Program *per se*, even though information gathered by the regional groups will be useful for this purpose.

Box 1 : What is farm forestry?

‘Farm Forestry’ is defined as the incorporation of commercial tree growing into farming systems under a range of activities that are generally smaller in size and variable in configuration, species and purpose (Figure 1.1). The term ‘farm forestry’ has generally displaced the term ‘agroforestry’. Key points are:

- Plantings can take many forms: plantations on farms, woodlots, timberbelts, alleys and wide-spaced plantings but does not include larger scale plantations;
- Farm forestry includes plantings where there are both commercial and non-commercial benefits, and can range from industry plantations on leased land and joint ventures to integrated whole farm agroforestry, windbreaks and shelterbelts;
- Farm forestry plantings occur on farms and other land not owned and controlled by the larger industrial growers;
- Landcare plantings with a strong environment protection focus can be part of farm forestry, provided there is some commercial production intent (Donaldson & Gorrie, 1996);
- They are part of whole-farm management planning – individual landholders are closely involved in the decision-making processes and derive benefits from the activities; and
- There will be some differences of interpretation about what constitutes farm forestry vs industrial plantings vs Landcare plantings since there is overlap between these. The Framework can be applied to all these kinds.

Figure 1.1 : What is farm forestry?

The Framework was commissioned by AFFA's Farm Forestry Program (FFP), with the aim of developing a flexible menu and 'toolbox' for regional farm forestry groups to use, select from and modify to suit their own evaluation purposes (including to help them meet the reporting needs of their various program investors). It was developed² via a series of national and regional workshops attended by key regional farm forestry coordinators (eg, RPC executive officers), FFP managers and allied project managers (eg, Master Tree Grower coordinators, Natural Heritage Trust project officers, Australian Forest Grower representatives). An Issues Paper and subsequent Discussion Paper provided input to these workshops. Much of the information provided here builds on the Discussion Paper, but this document stands alone.

Note that the Framework is designed to be a guide for regional farm forestry groups to use to prepare evaluation plans specific their particular needs, by selecting, modifying and adding to the information it contains. The Framework should be quite generally applicable, but how any one group implements it very much depends on their particular objectives and activities.

² The project was conducted by a consortium of URS Australia and ANU Forestry. URS Australia includes groups formerly known as AACM, Fortech and Dames & Moore – NRM.

2 Guide to the Project Planning and Evaluation Framework

Figure 2.1 provides a road map of the Framework, and references to information needed. The Framework complements the recommended booklet '*Participatory Evaluation for Landcare and Community Groups – A Guide for Facilitators*' by Jim Woodhill and Lisa Robins (1998)³, available from Greening Australia and Landcare coordinators.

The overview of the Framework and its logic is provided in Chapters 3 to 5. Read these first, and read only as much of the rest as you need. Note how the Framework is a cycle of continuous improvement from planning, to implementation, to evaluation.

³ Funded by AFFA and Environment Australia, through Greening Australia.

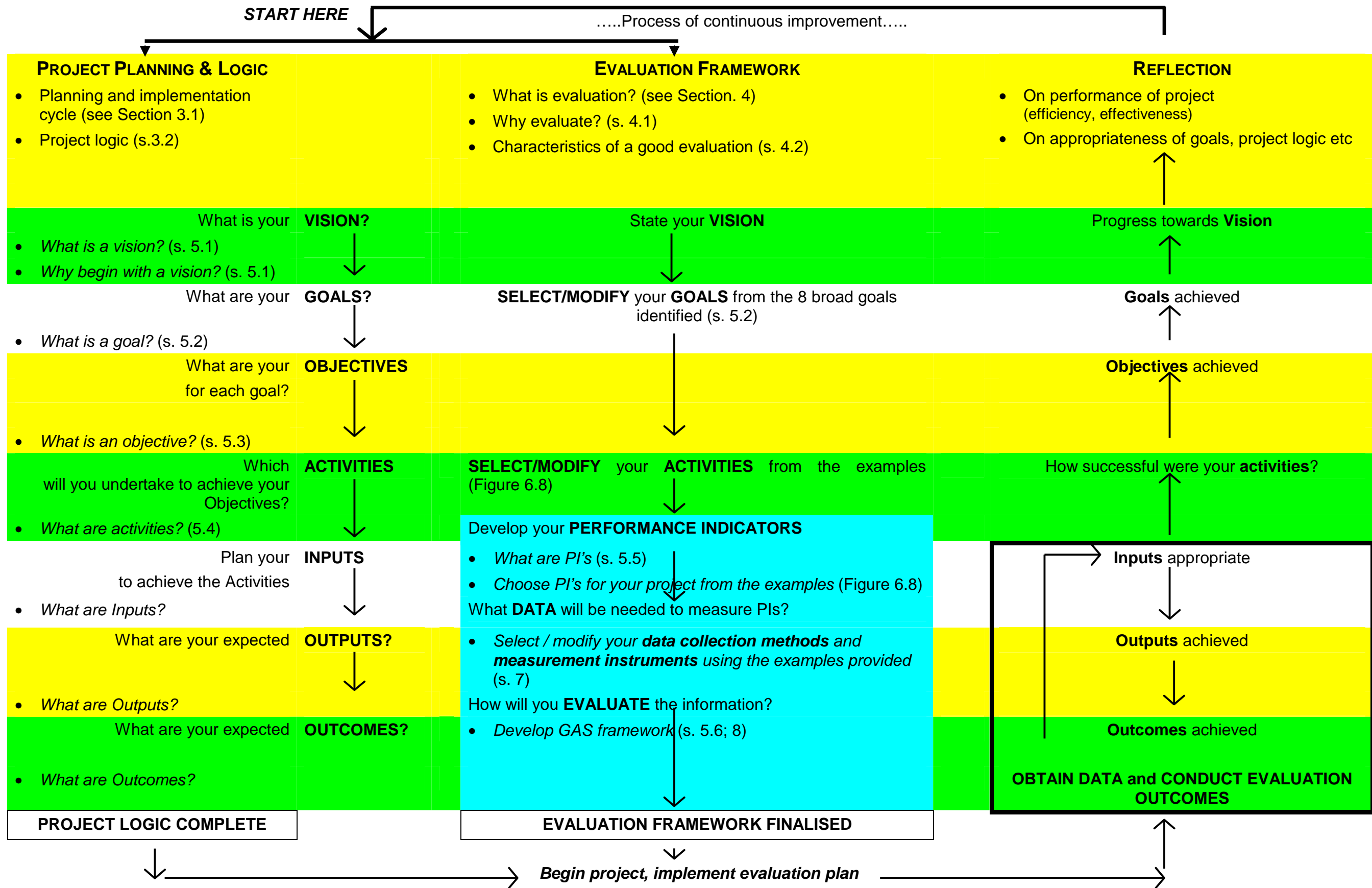


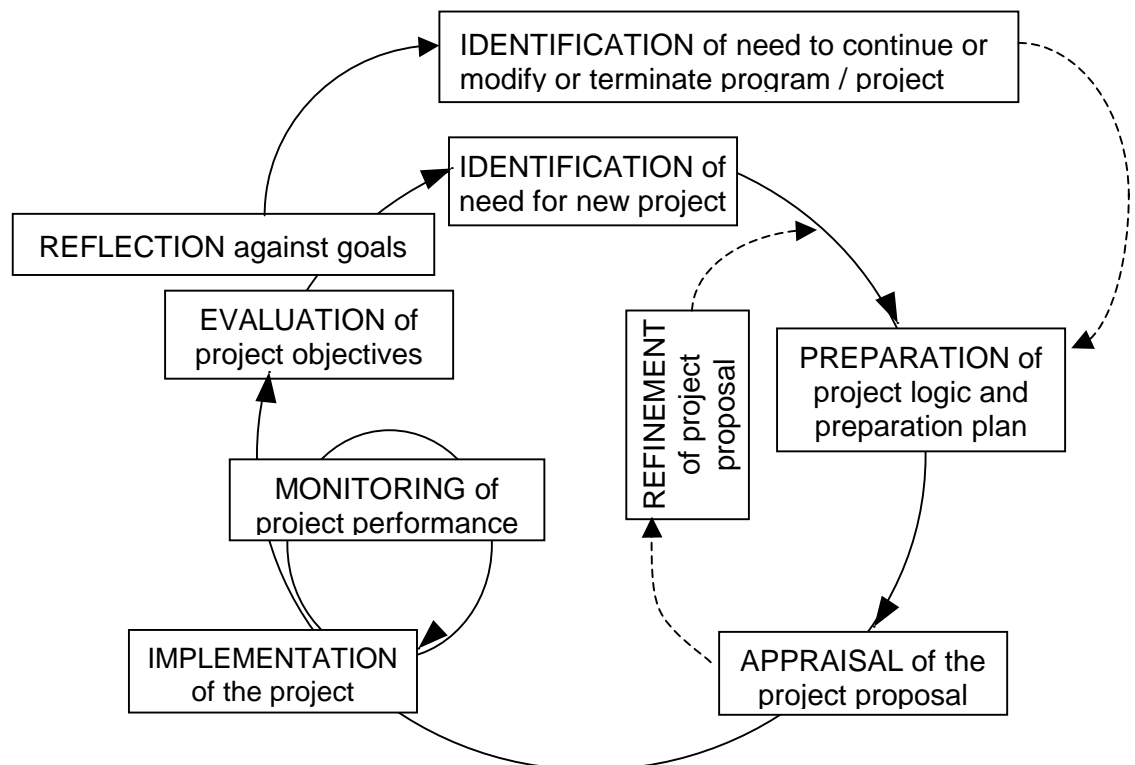
Figure 2.1 : Road map to the Project Planning & Evaluation Framework

3 Project planning and implementation

3.1 Project planning and implementation cycle

The project planning and implementation cycle (Figure 3.1) represents the sequence of activities in project development. It identifies what we are seeking to achieve, how we are going about it, and sets the context for monitoring and evaluating the project.

Figure 3.1: Project planning and implementation cycle



A good project begins with:

- knowing clearly *why* it needs to be carried out (*IDENTIFICATION*); then
- planning it in detail – including understanding the project logic or rationale, and developing the implementation plan and a process for iterative evaluation (*PREPARATION*⁴);
- having some objective review before beginning to implement it (perhaps with some experienced evaluators ‘outside’ the project, especially if the project represents a significant investment) (*APPRAISAL*);
- (Note that Preparation and Appraisal is usually a 2-step process – first a concept plan (‘Expression of Interest’) which is appraised and approved for full development, then development and appraisal of the detailed project plan);
- implementing and monitoring project performance (*IMPLEMENTATION AND MONITORING*); then

⁴ As farm forestry projects are about change on-ground, which requires changes in people, a useful model is Bennett’s Hierarchy (Appendix 2) which describes the process of how outcomes are ultimately achieved.

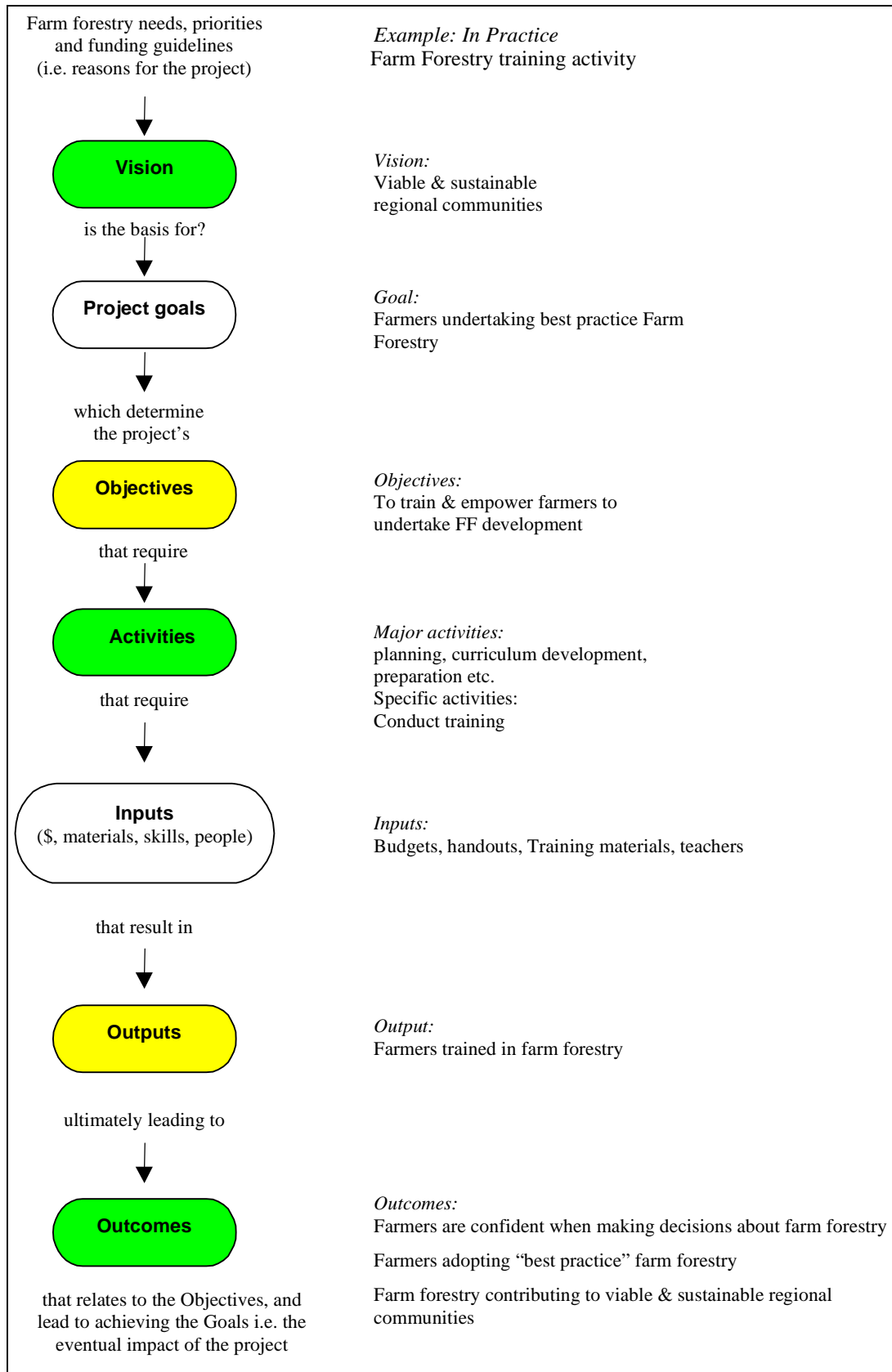
- evaluating the project's performance, reflecting on the appropriateness of the goals, revising the rationale and plans before commencing further work (*EVALUATION*, *REFLECTION*, and leading to *IDENTIFICATION*).

The key point is that project planning must occur before the evaluation is designed. Evaluation is a vital tool for continual performance of the project planning and implementation cycle.

3.2 Project logic

The identification and planning stages of the project planning and implementation cycle require clarifying the project logic or rationale - that is, why our actions or activities should achieve our expectations.

A project is an investment of resources to achieve particular outcomes. Like any investment a project should be carefully planned to be effective. Figure 3.2 shows how the various components of a project fit together. For a clear account of project monitoring and evaluation, see Woodhill & Robins (1998). It is recommended as a companion to this document. For an explanation of terms, refer to Appendix 1 or Woodhill & Robins (1998) for additional detail.

Figure 3.2 : The project logic

Source: adapted from Woodhill & Robins, 1998.

4 About evaluation

4.1 Why evaluate?

Farm forestry groups (like any project groups) undertake projects for a reason – to achieve goals and produce outcomes that achieve their vision. Projects are investments – of time, money, and other resources – by the various investors such as the Farm Forestry Program, private companies, and individuals. Project outcomes are the results of these investments. Evaluation lets us determine how good these investments have been (ie, how well are the projects achieving their goals?, what are the extent of the outcomes?) and how our efforts may be improved.

Evaluation should be an integral and positive part of project planning and implementation (see Figure 2.1). It should not be seen as a separate add-on.

Evaluation can broadly take two forms:

- *formative* – undertaken during the project as part of a cycle of continuous improvement; or
- *summative* – undertaken after the project is completed.

The evaluation techniques are the same for both types of evaluation. Regional groups will want to undertake both kinds.

A good evaluation reflects the logic of the project and gathers the key information needed to assess how successfully the project is being implemented and to what extent it is achieving its objectives. Without knowing clearly the project's goals and expected outcomes, and the underlying project logic (ie, how inputs enable activities that produce outputs that lead to the desired outcomes), it is impossible to set up a framework to evaluate the project. The benefits of a well-conducted evaluation are summarised in Box 2.

Box 2 : Benefits of evaluation

- Improves the focus and procedures of your project as it proceeds (*formative* evaluation);
- Develops the skills and understanding of those involved;
- Provides information for planning new projects;
- Demonstrates the worth of your group / organisation;
- Demonstrates the accountability of your project to its investors;
- Justifies and promotes your project to the wider community; and
- Contributes information to broader scale monitoring and evaluation, such as the NHT.

Appendix 3 summarises the benefits that were identified by regional farm forestry groups.

How to evaluate

Project evaluation should be undertaken as an integral part of the project, as

Figure 2.1 shows. Indeed, much of the time spent developing an evaluation framework is actually time invested in project planning. One way to go about monitoring and evaluation is to follow the 5-step method for monitoring and evaluation as illustrated in Figure 4.1. A key point is that this should be a '*cycle of continuous improvement*' where step 5 leads into a new step 1 in a new or updated project activity. This is described in the project planning and implementation cycle (Section 3.1 and Figure 3.1).

Figure 4.1 : Five steps for monitoring and evaluation

Step	Comment
1. Reflect	what's our context?
2. Design the evaluation	what do we need to know?, how can we find out?
3. Gather evaluation information	collect what is appropriate, relevant and possible
4. Analyse and draw conclusions	what do the results tell us about how effective and efficient the project has been?
5. Revise plans	how should we do things differently or better next time (both the project and how we evaluate it)?

Source: Wadsworth, 1991

4.2 Characteristics of a good evaluation

The essence of good evaluation is that it should be a self-learning activity and it typically will:

- involve a variety of people (for *comprehensiveness* – through effective participatory processes);
- gather information from a range of sources (for *reliability*) and perspectives (for *validity*);
- use a *range of approaches* and techniques, as appropriate;
- involve *self-assessment* (we learn best from analysing our own performance);
- be of an *appropriate scale* (matched to the size and nature of the project);
- describe the *context* in which the project evaluation occurs;
- accurately and fairly report the views and ideas of the relevant people and groups;
- report *important findings* and lessons learned (both expected and unexpected, positive and negative);
- provide a *useful analysis* of the project's performance;
- *assist* the project to meet its *goals*; and
- feed into a *cycle of continuous improvement*.

5 Outline of Evaluation Framework

The structure of the Farm Forestry Evaluation Framework developed by this project builds on the project logic of Figure 3.2. The Framework is shown in outline in Figure 5.1 and elaborated in Figure 6.1 – Figure 6.8. Parts of the Framework will apply to any one regional group or particular projects. Groups will draw from and adapt those parts of the Framework that are relevant to their own needs.

Figure 6.1 – Figure 6.8 are designed to be read in rows from left to right. Each elaborates one of the eight *goals* that have been identified for regional farm forestry group activities. These goals encompass most of the work undertaken by regional farm forestry groups. However, it is important to note that it is not expected that each group should aim to achieve each of the eight goals – just the ones that make sense for them. For each goal there is at least one *major action* which regional groups will undertake, and for each of these major actions there are *specific activities* – each of which relates to a stage of development along the project logic. For simplicity we have combined these two stages as ‘*activities*’. For each specific activity there are one or more *performance indicators* (PI) that could be used, and each of these requires specific kinds of *data* and *measurement methods*. The degree of achievement under each PI can be assessed via *Goal Attainment Scaling (GAS)* (refer to section 5.6), although other methods could be used. The performance indicator (PI) is the finest point of resolution - with each PI determining the data required and corresponding GAS description.

The Goals, Objectives and Activities were identified from the many regional projects funded under AFFA’s Farm Forestry Program, and were refined via three regional workshops involving regional farm forestry coordinators/managers.

5.1 Vision

The overarching vision for regional farm forestry development can be expressed as:

“A vigorous and integrated farm forestry sector that delivers multiple benefits to enhance the viability of regional communities”.

A vision is a general statement of some future improved state that the project will contribute to. It could embody basic motives or reasons for beginning the project. The vision is the beacon that guides progress. Each regional farm forestry group needs to identify their own vision.

5.2 Project goals

Goals or aims are general descriptions of what your project will achieve. The eight medium-term goals for regional farm forestry group activities (perhaps achievable after 3-5 years) together aim to deliver broad economic, environmental and social benefits. Collectively these achieve the Vision (section 5.1). The eight Goals are:

- 1. Integrated development incorporating farm forestry** – to ensure complementarity between natural resource management, industry and regional development efforts.
- 2. Informed decisions** – to provide stakeholders with comprehensive information so they can make informed decisions about participating in farm forestry.

3. **Optimal farm business viability** – to ensure that farm forestry is incorporated into farm businesses so as to optimise their viability – including logistics, profit, social. This goal focuses on achieving on-farm benefits, in contrast to Goal 4 that focuses on industry viability or off-farm businesses.
4. **Optimal industry development and processing capacity** – The focus of this is on achieving off-farm business development, in contrast to Goal 3.
5. **Vigorous domestic and international markets** – to ensure competitive buying and selling, and so maximise genuine business opportunities.
6. **Responsive regional communities** – that support and benefit from farm forestry and which are able to embrace change.
7. **Supportive institutional and regulatory environment** – which encourages the adoption of farm forestry by ensuring at least a ‘level playing field’ if not positive encouragement where this is needed to assist the change process.
8. **Optimal environmental benefits** – so that farm forestry is implemented as an integral part of environmental planning within regions. Environmental benefits include: habitat enrichment, biodiversity, ground water management, and carbon sequestration.

‘Optimal’ is a notion that indicates there are tradeoffs involved which must be assessed in each case. Each case must be assessed for tradeoffs and a decision made that is most advantageous. Maximum benefits for one aspect usually mean reduced benefits for other aspects.

The 8 goals are listed in the Framework Figure 6.1 – Figure 6.8 respectively along with their associated Objectives, Activities and Performance Indicators.

These Goals interact, so the achievement of one Goal may help achieve others. For example, ‘informed decisions’ will generally result in ‘optimal farm business viability’ and ‘optimal environmental benefits’. Also, measuring the achievement of one goal can indicate progress with achieving others.

In the interests of having coherence and consistency within the Farm Forestry Program, try to work with these Goals rather than modifying them or adding to them. However, the Framework is not intended to be restrictive, and if you need to modify these goals, then do so.

5.3 Objectives

Objectives are specific statements about what the project is intended to achieve – they are ‘specific goals’. In the Framework each Goal has one or more subordinate Objectives. These Objectives are listed along with their associated Goals in Figure 6.1 – Figure 6.8. Objectives should be ‘SMART’:

- Simple;
- Measurable;
- Attainable;
- Realistic; and
- Time-bounded.

The Objectives listed in Figure 6.1– Figure 6.8 do not meet all these criteria. It is the task of regional farm forestry groups to tailor the Framework to specific circumstances, particularly the time dimension.

5.4 Activities

Activities are specific actions (Inputs) which lead to Outputs. Activities and associated Inputs need to be matched to the Objectives so that the Goals of the project have a realistic chance of being achieved in a balanced way.

5.5 Performance Indicators (PI)

Performance Indicators are descriptions of how Inputs, Outputs and Outcomes can be assessed or measured. Having the right Performance Indicators (PI) is a key to a successful evaluation plan.

As a guide, Activities should have between 1 and 3 Performance Indicators (more than 3 Performance Indicators suggests that the PI's need to be more carefully defined to avoid excessive data collection). The values of PI's have a time dimension, and as a general rule, the longer the time horizon the greater the expected achievement.

Different stakeholders undertaking the same farm forestry activity may choose to use different PI – reflecting the different focuses of their respective work. For example, some people may focus their work on building constructive business partnerships, while others may focus on the design and establishment of farm forestry systems. As such, different PI will need to be developed to suit the different objectives. The Framework (Figure 6.1– Figure 6.8) lists Performance Indicator topics for some Objectives and Activities, as examples for each of the eight Goals.

There is more than one PI topic for most Goals and Objectives. The achievement of the Goals and Objectives can be assessed by aggregating the results across the PI (using GAS in full). GAS is particularly useful for summarising the results for a number of PI under an Objective, or for a project as a whole (see Section 5.7). The relative importance of the PI can be expressed via weightings in the Goal Attainment Scaling analysis.

5.6 Choosing which PI to measure

The focus needs to be on those PI that are most critical to measuring the key features of the project, and some of these will be more difficult or expensive to measure than others. Bearing the overall purpose of the project in mind, it is better to focus effort more on Outcomes than Outputs, and more on Outputs than Inputs. The project logic serves as a good guide to what PI will be most important, and the final selection will be a trade-off between importance, cost and feasibility. Advice could be sought from experienced evaluators.

5.7 Goal Attainment Scaling (GAS)

Goal Attainment Scaling (GAS) is a useful tool for measuring the achievement of Outputs and Outcomes, with the advantage of it allowing a consistent approach for measuring the *degree* to which each objective is being achieved.

When an expected project output or outcome is defined as a Performance Indicator, it is usually defined as a single *target* value. For example, the target of establishing a demonstration site of 10 tree varieties by a specific date is either achieved, or it is not. If it is not, it may be because the work has gone better than expected (ie, the target was exceeded by earlier site establishment or by planting more varieties, or by establishing more than one site), or worse than expected (ie, target was not achieved), and if so the work may have just missed the target

or it may have fallen short by a long way. GAS captures this range of achievement (see Box 3). Further details are in Section 8.

Box 3 : What is Goal Attainment Scoring (GAS)?

GAS defines a *range* of ‘degrees of success’ outcomes (rather than a single *target*) for each performance indicator on any project or activity. The possible results range from:

Performance very much below expectation (GAS score = 1)

to

Performance at expectation (GAS score = 3)

to

Performance well above expectation (GAS score = 5)

GAS is a tool developed in the social sciences. It has been in use in land management contexts since 1997, and has proved useful for resource management evaluations conducted by URS Australia, and others.

Benefits of GAS

GAS is well suited for our present purposes because it:

- closely involves stakeholders and reinforces what they wish to achieve;
- is logical, simple, intuitive, non-threatening and useable by all stakeholders including AFFA Farm Forestry Program managers;
- can be applied to all aspects of projects and activities, and at all stages in their implementation;
- enables easy, quantitative and qualitative comparison between quite different projects and activities; and
- is best used when incorporated in a monitoring and evaluation framework developed at the outset of a project.

More information about GAS, its advantages and pitfalls are provided in section 8.

5.8 Data requirements

No one data collection method or ‘tool’ can provide accurate, reliable, in-depth and representative understanding of the performance of a regional farm forestry group. A range of methods is presented in this Framework in order to take advantage of the strengths of each method (through cross-referencing) so that the true performance of the project can be more accurately assessed. Typically, each data collection method will seek information across a range of activities and objectives.

Monitoring and evaluation usually relates to measuring the frequency, quality and coverage of various farm forestry activities and progress towards meeting project objectives and goals.

There are three aspects to data requirements.

- **Description** of the types of data to be collected.
- **Measurement process** – How, who and when the data will be collected. Several methods can be used – the more important the PI, the more effort that is justified.
- **Resources required for measurement** - A rule of thumb is 2-5% of project resources should be allocated for evaluation (although greater resourcing may be required for a particularly innovative Activity). The amount of time and resources for measuring performance against PI should be appropriate to the scale and importance of the Activities. This in turn should reflect the importance of the associated Objectives for achieving the project's Goals. An individual data collection method can be used to collect information for several PI at once – hence the importance of developing an evaluation plan at the beginning to obtain maximum benefit from the evaluation effort.

Data requirements will depend on the degree of sophistication, precision required and resources available (eg. time, expertise, finance). The more important an action is to achieving the group's goals, the greater the emphasis that should be placed on measuring the PI. A greater evaluation effort can be justified for the most important activities and goals.

Types, methods and resources that are required to collect data to satisfy the PI, are detailed in Section 7.

For realistic case study examples of evaluation in practice, see Section 9.

Figure 5.1: Structure of the evaluation framework for regional farm forestry groups developed by this project

Goals	Objectives	Activities	Performance Indicators	Data:			Example of a tool to measure project performance: Goal Attainment Scaling (GAS):		
				Description	How to measure	Resources for measurement	Scale	Weighting	Score
Description of medium to long-term goals or outcomes. Numbered 1 – 8.	Specific statements about what your project will achieve in the short-term. May be Outputs or Outcomes. Numbered as subordinate to individual Goals.	Description of specific actions or activities (Inputs) which lead to Outputs. Numbered as subordinate to Objectives.	Description of how Inputs, Outputs and Outcomes can be assessed or measured. Specific Activities should have between 1 – 3 Performance Indicators (more than 3 Performance Indicators suggests that the PF's need to be more carefully defined to avoid excessive data collection). Performance Indicators can be worded to suit the needs of different kinds of stakeholders, eg, from AFFA farm forestry managers to farmer practitioners	Description of the type of data to be collected.	How the data are to be collected, who is to collect it & when.	The level & type of resourcing required for data collection & analysis. A rule of thumb is that between 2-5% of project resources should be allocated for evaluation (although greater resourcing may be required if a particularly innovative Specific Activity).	Description of the scale to be used for the Performance Indicator. The expected performance (ie. target) should receive a GAS rating of 3.	Relative weighting of importance of Performance Indicators (best represented as a numeric proportion of whole).	The GAS score, which best describes the result obtained (between 1 & 5). An overall score for the project (between 1 & 5) is obtained as the average of these, or if weightings have been assigned, as the weighted average.

6 Evaluation Framework in detail

This section provides detailed Evaluation Frameworks covering Goals, Objectives, Activity topics, Performance Indicator topics, Performance Indicators and Measurement methods. Figure 6.1 to Figure 6.8 are sorted according to Goals and provide a wide range of examples so that most regional farm forestry scenarios will be addressed either directly, or indirectly by simply modifying these examples.

The Goals and Objectives, as listed, should be sufficient, based on consultation with regional farm forestry groups – only modify these if absolutely necessary.

It is not expected that a farm forestry group will be actively working to directly achieve all eight goals, so delete those not directly relevant to your project.

Groups are likely to need to modify the Activities and PI. For any group or any project, some will not apply, and other Activities and PI may need to be developed.

Figure 6.1: Detailed Evaluation Framework – Goal 1: Integrated Development Incorporating Farm Forestry

Goal 1 aims to ensure complementarity between natural resource management, industry and regional development efforts.

Objectives	Activity topics (& Objectives they relate to)	<i>Performance Indicator topics</i> (and reference to numbered Objectives) Performance Indicators
1.1 To establish viable networks of relevant stakeholders	Networking, co-ordination and planning (Objectives 1.1, 1.2, 1.3, 1.4)	<p>Partnerships fostered (Objectives 1.1, 1.4) PI = Extent there is cross-organisation membership between major stakeholder groups Extent there is a regular forum for key stakeholders to share information Level of stakeholder satisfaction with information forums Level of participation & outputs generated</p> <p>Networks established (1.1, 1.4) PI = Extent key interest groups brought together to explore regional prospects for FF Extent interest groups have on-going access to FF networks Extent & quality of leadership played by RPCs Extent networks valued by FF groups</p>
1.2 To coordinate the inputs of the various stakeholders	<i>As above.</i>	<p>Farm forestry information ‘hub’ supported (1.2) PI = Extent the hub is recognised as regional contact point Frequency & quality of hub service</p>
1.3 To have effective and efficient planning processes	<i>As above.</i>	<p>Development of strategic plan (1.3) PI = Extent strategic plan is based on feasibility study results Extent strategic planning process involved key interest groups in its development Extent strategic plan is being used by FF groups</p> <p>Relevant R&D planned and overseen (1.3) PI = Extent R&D is seen by recognised farm forestry coordinating & technical body</p>
1.4 To establish effective partnerships / networks with local government	<i>As above. See also Goal 7.</i>	<i>See PI for Objective 1.1</i>

Objectives	Activity topics (& Objectives they relate to)	<i>Performance Indicator topics</i> (and reference to numbered Objectives) Performance Indicators
1.5 To ensure financial investment in farm forestry development is effective	Monitoring & evaluation (1.5)	<p><i>Needs of key stakeholders identified</i> (1.5) PI = Extent periodic assessments of key stakeholder needs are undertaken Extent project has the capacity to adapt to changing stakeholder needs if required</p> <p><i>Effective program administration processes established</i> (1.5) PI = Extent financial records independently audited Extent efficient administration practices are used Extent transparent decision making processes are used Extent an effective business plan developed & in use</p> <p><i>Project performance regularly reviewed</i> (1.5) PI = Project has an appropriate M&E procedure in place Extent project/initiative reporting accurately reflects performance Extent participatory M&E procedures are in place were desirable</p> <p><i>Incorporation of lessons & ideas from previous project stages & earlier projects</i> (1.5) PI = Extent lessons & report findings communicated to current project managers</p>
1.6 To create a positive institutional environment (eg, regulatory, advisory)	<i>Refer to Goal 7.</i>	<i>Refer to PI for Goal 7.</i>

Figure 6.2: Detailed Evaluation Framework – Goal 2: Informed Decisions

Goal 2 aims to provide stakeholders with comprehensive information so they can make informed decisions about farm forestry.

Objectives	Activity topics (& Objectives they relate to)	<i>Performance Indicator topics</i> (and reference to numbered Objectives) Performance Indicators
<p>2.1 To develop and refine baseline decision making information</p> <p>2.2 To deliver information to stakeholders</p> <p>2.3 To develop the analytical capacity of stakeholders</p>	<p>Obtain baseline information (2.1) Establish process for ongoing improvement of information (2.1)</p> <p>Extension, education & training (relates to objectives 2.2, 2.3)</p>	<p><i>Assessment conducted of training & skills needed by stakeholders</i> (2.1) PI = Extent needs assessed, & training & skills deficiencies addressed</p> <p><i>Effectiveness of ongoing processes to improve information</i> (2.1) PI = Extent informative is improved using an effective ongoing process</p> <p><i>Database developed of resource information and industry status</i> (2.1) PI = Existence, completeness and usefulness of database</p> <p><i>Demonstration sites established and maintained</i> (2.2) PI = Number and quality of demonstration sites established Quality of plan developed for long term maintenance of sites Frequency of access to sites for target audience Quality of information derived from sites</p> <p><i>Effective training opportunities provided to improve landholder skills:</i> (2.2) PI = Extent landholder needs for skills assessed Appropriateness of training opportunities developed with experienced staff Frequency & quality of training opportunities Proportion of target audience with access to training Level of confidence amongst farmers participating in the training course</p> <p><i>Relevant information made accessible for FF groups</i> (2.2) PI = Extent the principal information needs carefully identified for key stakeholder groups; Frequency & quality of information</p> <p><i>Credible and independent market information made available</i> (2.2) PI = Extent the information is based on recent in-depth feasibility study Extent information is developed by experienced staff Extent information is generated by independent sources Extent there is on-going use of information by target audience</p> <p><i>Links established with relevant extension, education or training providers</i> (2.2) PI = Extent joint activities can be/are organised with Landcare Extent related opportunities have been identified & links formed Extent links have fostered FF developments</p> <p><i>High quality R&D results made available</i> (2.2) PI = Extent R&D results made available Quality of R&D information</p> <p><i>Analytical skills of stakeholders developed</i> (2.3) PI = Assessment of level of analytical skills of stakeholders, both by stakeholders themselves, and by relevant experts</p>

Figure 6.3: Detailed Evaluation Framework – Goal 3: Optimal Farm Business Viability

Goal 3 aims to ensure that farm forestry is incorporated into farm businesses in order to optimise their viability – including logistics, profit, social. This goal focuses on-farm, in contrast to Goal 4 that focuses on industry viability or off-farm businesses.

Objectives	Activity topics (& Objectives they relate to)	<i>Performance Indicator topics</i> (and reference to numbered Objectives) Performance Indicators
3.1 To ensure farm forestry enhances farm business viability	Research & development (3.1, 3.2, 3.3)	<p><i>Trial sites established and/or maintained for species selection and performance</i> (3.1) PI = Quality of R&D procedures used to plan, establish and maintain trial sites</p> <p><i>Land-capability assessment developed</i> (3.1) PI = Quality of assessment Extent information is used by target audience in practice</p> <p><i>Register develop of industry needs</i> PI = Quality of register Extent register is used by stakeholders</p> <p><i>Availability & quality of technical information</i> (3.1) PI = Quality of technical information Extent information is made available to the target audience</p> <p><i>Identify areas where farm forestry is a commercially competitive land use</i> (3.1) PI = Extent areas are identified where farm forestry is a commercially competitive land use</p>
3.2 To encourage diverse markets to emerge for growers	Market development (3.2)	<p><i>Diversity of markets that develop</i> (3.2) PI = Extent a diverse range of markets have developed suited to farm forestry</p>
3.3 To undertake effective R&D to support viable farm forestry systems	Refer to Activity Topics for 3.1, above.	<p><i>Appropriate support made available for industry development, including adaptation of new technologies</i> (3.3) PI = Extent an R&D needs analysis of regional industry has been conducted Proportion of regional industries given access to latest R&D information</p> <p><i>R&D findings made available to FF groups</i> (3.3) PI = Extent of access to the latest relevant R&D findings Extent R&D findings scrutinised by independent experts for quality & applicability Extent of use of R&D results by stakeholders</p>

Figure 6.4: Detailed Evaluation Framework – Goal 4: Optimal Industry Development and Processing Capacity

The focus of Goal 4 is off-farm business development, in contrast to Goal 3, which concentrates on on-farm.

Objectives	Activity topics (& Objectives they relate to)	<i>Performance Indicator topics</i> (and reference to numbered Objectives) Performance Indicators
4.1 To ensure farm forestry enhances industry (ie. non-farm) business viability	Industry development. <i>Refer also to Objectives 5.3 and 5.4.</i>	<p>Register developed of industry needs (4.1, 4.4) PI = Extent a full and prioritised register of industry needs is developed Extent register is used to guide strategies for industry support</p> <p>Availability of technical information to all industry stakeholders (4.1) PI = Extent relevant technical information is made available to industry stakeholders</p> <p>Increase the industry’s resource base (ie. future supplies) (4.1, 4.2) PI = Extent an appropriate resource base is developed for industry</p>
4.2 To increase harmony between supply and demand	Coordination of supply and demand (4.1)	<p>Coordination between supply and demand development (4.2) PI = Extent of communication and sharing of information between producers and processors Extent of incorporation of supply – demand information into regional planning</p>
4.3 To undertake effective R&D for regionally optimal processing capacity	Research & development (4.3)	<p>R&D developed that contributes to additional regional processing/value-adding (4.3) PI = Extent, quality & applicability of R&D conducted Extent R&D communicated to stakeholders Extent R&D adopted by industry</p>
4.4 To attract sustained investment (type?; who for?; from whom?)	Attract sustained investment (4.4)	<p>Adequate and appropriate resource established to supply industry (4.4) PI = Industry assessment of adequacy and appropriateness of resource</p> <p>Commercially-attractive investment initiatives developed (such as joint ventures) (4.4) PI = Opportunity cost of joint ventures compared to alternate investments</p> <p>Relevant business information made available (4.4) PI = Extent, quality & relevance of information Extent information is communicated to stakeholders Extent of use made of the information</p> <p>Suitable infrastructure in place or can be readily assembled (4.4) PI = Extent infrastructure is available, and is of adequate quality</p>

Figure 6.5: Detailed Evaluation Framework – Goal 5: Vigorous Domestic and International Markets

The focus of Goal 5 is to ensure competitive buying and selling, and maximise genuine business opportunities.

Objectives	Activity topics (& Objectives they relate to)	<i>Performance Indicator topics</i> (and reference to numbered Objectives) Performance Indicators
5.1 To attract numerous and diverse traders who are active regularly	Provision of information, and marketing (5.1) Develop mechanisms to attract traders (5.1), & Liaison with authorities and traders (5.1, 5.3, 5.4)	<p><i>R&D conducted that contributes to more competitive markets</i> (for growers & processors) (5.1, 5.2) PI = Extent & quality of R&D conducted Extent R&D supports more competitive markets Extent R&D communicated to stakeholders</p> <p><i>Presence of numerous, diverse and regular traders</i> (5.1) PI = Number of traders for products, volumes traded & prices obtained.</p>
5.2 To undertake effective R&D for increased market information, mechanisms and opportunities	Research & Development (5.1, 5.2, 5.3, 5.4)	<p><i>Information & planning support provided for growers</i> (eg. marketing cooperatives & processors) (5.2) PI = Extent & quality of support provided Extent available support communicated to stakeholders</p> <p><i>R&D conducted that contributes to more competitive markets</i> (5.2) PI = Extent & quality of R&D conducted Extent R&D supports more competitive markets Extent R&D communicated to stakeholders</p> <p><i>Regional market feasibility studies</i> (5.2) PI = Extent feasibility study(ies) completed by accomplished analysts Extent study provides in-depth analysis of key economic, environmental & social issues Extent study reviewed by independent analysts</p>
5.3 To increase trade and market development	<i>As above.</i>	<i>Refer to PI above.</i>
5.4 To develop markets for non-wood products	<i>As above.</i>	<i>Refer to PI above.</i>

Figure 6.6: Detailed Evaluation Framework – Goal 6: Responsive Regional Communities

The focus of Goal 6 is to develop regional communities that support and benefit from farm forestry and which are able to embrace change.

Objectives	Activity topics (& Objectives they relate to)	<i>Performance Indicator topics</i> (and reference to numbered Objectives) Performance Indicators
6.1 To improve access to policy and implementation processes for stakeholders	Create access to policy & implementation processes (6.1)	<i>Process established for wide range of stakeholders to have access to policy & implementation processes</i> (6.1) PI = Accessibility of processes Level of participation in processes
6.2 To enhance community acceptance of farm forestry	Assess & communicate full outcomes of farm forestry (6.2)	<i>Feasibility studies conducted on the full costs & benefits associated with farm forestry & communicated</i> (6.2) PI = Quality of feasibility study Extent results communicated Extent studies address the uncertainties of stakeholders <i>Awareness raised of benefits & strategies to overcome or minimise costs</i> (6.2) PI = Extent awareness of benefit & cost strategies raised amongst stakeholders <i>Widespread community acceptance of farm forestry and willingness to invest</i> (6.2) PI = Extent FF is viewed as a positive development within target audience & wider community Extent of willingness to invest in farm forestry Extent & scale of investment by target audience
6.3 To increase regional employment through farm forestry	Contribute to policies and plans that increase regional farm forestry employment (6.3)	<i>Increased number, diversity and security of regional employment opportunities</i> (6.3) PI = Extent number, diversity and security of regional employment opportunities have increased
6.4 To build social capital of stakeholders that underpins farm forestry development	Develop the social capacity of communities (6.4)	<i>Capacity of communities to adapt to changing circumstances, and adopt farm forestry if desirable</i> (6.4) PI = Assess the extent communities have ingredients to adopt farm forestry Attitude to change

Figure 6.7: Detailed Evaluation Framework – Goal 7: Supportive Institutional and Regulatory Environment

Goal 7 aims to encourage the adoption of farm forestry by ensuring at least a ‘level playing field’ if not positive encouragement where needed to assist the changed process.

Objectives	Activity topics (& Objectives they relate to)	<i>Performance Indicator topics</i> (and reference to numbered Objectives) Performance Indicators
<p>7.1 To have balanced institutional and regulatory requirements for farm forestry development</p> <p>7.2 To assess and communicate the roles and responsibilities of different authorities relevant to farm forestry development</p> <p>7.3 To create positive partnerships with local government</p>	<p>Work with relevant authorities to overcome institutional & regulatory impediments (7.1)</p> <p>Assess roles & responsibilities of different authorities (7.2)</p> <p>Inform farm forestry stakeholders (7.2)</p> <p>Build and maintain effective partnerships with local government (see under Goal 1.4 for similar Objective, Activities and PI)</p>	<p><i>Planning guidelines for farm forestry development with government involvement to address concerns</i> (7.1) PI = Extent guidelines are developed & accepted by government Extent that planning guidelines encourage farm forestry</p> <p><i>Conduct assessment & negotiate roles & responsibilities</i> (7.2) PI = Quality of assessment Quality of negotiation process</p> <p><i>Support provided to local government to assist it in approving local land-use</i> (7.2) PI = Extent & quality of support provided</p> <p><i>Partnerships fostered with local government</i> (7.3) PI = Extent there is a regular forum to share information with local government Frequency and quality of these forums Level of participation and outputs generated</p>

Figure 6.8: Detailed Evaluation Framework – Goal 8: Optimal Environmental Benefits

By seeking to optimise environmental benefits, Goal 8 aims to have farm forestry included as an integral part of regional environmental planning. Environmental benefits include: habitat enrichment, biodiversity, ground water management, carbon sequestration.

Objectives	Activity topics (& Objectives they relate to)	<i>Performance Indicator topics</i> (and reference to numbered Objectives) Performance Indicators
8.1 To develop environmental guidelines for farm forestry best practice consistent with goals of other responsible organisations	Develop environmental guidelines for farm forestry ‘best practice’ (8.1)	<p><i>Environmental guidelines developed that meet farm forestry ‘best practice’ standards</i> (8.1) PI = Extent guidelines developed and adopted by farm forestry practitioners</p> <p><i>Widespread acceptance of definition of ‘best practice’ farm forestry</i> (8.1) PI = Extent ‘best practice’ definition reflects desires of target audience and is accepted by wider community</p> <p><i>Extension and training provide to enhance adoption of FF ‘best practice’</i> (8.1) PI = Extent ‘best practices’ reflected in adopted farm forestry</p>
8.2 To build complementarity between farm forestry development and parallel environmental development	Complementarity with other environmental development (8.2)	<p><i>Compatibility developed with relevant natural resource management programs (salinity, soil conservation, integrated catchment management, vegetation & biodiversity)</i> (8.2) PI = Extent compatibility explored & developed; Extent strategies to minimise or avoid competition used.</p>
8.3 To use the BMP ‘guidelines’ to influence policies and practices of key partners	Liaison (8.3)	<p><i>Adoption of farm forestry systems that are consistent with the environmental BMP ‘guidelines’</i> (8.2) PI = Extent farm forestry systems are consistent with other environmental guidelines</p>
8.4 To increase the level of baseline information to inform key stakeholders	Communication (8.4; also relates to 8.3)	<p><i>Awareness and acknowledgment of environmental benefits of farm forestry by stakeholders</i> (8.2, 8.3, 8.4) PI = Extent the environmental benefits of farm forestry are verified; Extent environmental costs of farm forestry are verified; Extent appropriate mitigation strategies are developed and made available; Extent environmental benefits and costs are made widely available to stakeholders.</p>

7 Instruments for collecting evaluation information

In this section we list the instruments for collecting evaluation data to support the PI which are referred to in section 9.

Each data collection method can potentially provide information for several PI's at once – hence the advantage of developing an evaluation plan at the outset to obtain maximum benefit from the evaluation effort.

7.1 Instrument 1: Organisation's internal activity register and on-going monitoring information

Considerable information can be obtained by analysing the data records of an organisation (eg. RPC). Progress reports from activity 'logs' can be a valuable way of assessing trends in events, aggregated outputs, and lessons or findings noted in reports. If there is no existing register within the organisation, then establishing one can be a good way of keeping track of performance. Data should be collected regularly (eg. weekly, monthly, quarterly, as appropriate), by a range of people using different sources. It may not be necessary nor feasible to collect information on all minor activities (eg. telephone enquiries, regular meetings attended), so a representative sample only of these activities should be undertaken.

Data types that may be useful to collect include:

- Target audience (including key people & organisations to work with) and general stakeholders.
- Needs of target audience.
- Inputs required and used (time, financial, expertise, in-kind – a 'Checklist for high quality information' is provided in Appendix 4).
- Type and number of activities.
- Type and number of participants by activity type.
- Quantitative measures of achievement (eg, number of sites established, number of species trialed, area of farm forestry established, strategic meetings attended).
- Level of satisfaction of participants.
- Suggestions from participants.
- Highlights, lessons or findings.
- Case studies identified and documented (to illustrate performance or lessons) and people to contact within the target audience for follow-up discussions.

7.2 Instrument 2: Database analysis

Existing data bases can supply a wide range of information. Uses include defining the socio-economic issues facing the target audience, learning of past and current work relevant to farm forestry, and identifying activities to focus on, etc.

There are many organisations with relevant databases, including state agencies (agricultural and environmental department and projects), local government (land use, number of landholders, size of properties), Catchment Management Authorities or equivalent (catchment profiles and environmental initiatives in progress), Australian Bureau of Agriculture and Resource Economics (feasibility studies and forecasts of rural industries), Bureau of Rural Sciences (National Forest and Farm Forest Inventories) and the Australian Bureau of Statistics (demographic and other information). These may provide useful contextual or national information for regional farm forestry groups, especially when undertaking feasibility studies, preparing strategic plans or background reports.

7.3 Instrument 3: Workshops with focus groups

Workshops allow in-depth analysis of the outputs and outcomes flowing from your farm forestry group's activities. Start by clarifying the goals and objectives, then move on to review the activities/actions. Participants can also make an overall assessment of the extent to which objectives were met (a 5-point scale is simple and practical). Workshops usually run best when facilitated by two people and with 15-25 stakeholders in each location. Often it is a good idea to prepare some brief background material for the workshop participants to read prior to the event. Workshop participants should be given time to complete a questionnaire individually, as well as having the opportunity to discuss the issues collectively. The aim of the workshop should not be to force a consensus view, but rather to hear and explore any diversity of opinions. Example questions which can be modified are listed in Appendix 7.

Other useful examples of workshop questions or interview guides are CSIRO Land & Water (1998) and NLPEC (undated).

The level of resourcing to prepare, conduct and analyse the results of a half- to one-day workshop is estimated at 6 person days (plus travel & accommodation, telecommunication, printing/postage).

7.4 Instrument 4: Interviews – structured and semi-structured

Interviews are useful for gaining in-depth understanding of issues. It is also a cost-effective way of making contact (via telephone) with stakeholders in remote locations or where workshops cannot be held. The line of enquiry used in interviews is similar to that adopted for workshops, with questioning usually focused on the extent activities/actions met the program's objectives. It is also valuable to send brief background material 10-14 days prior to the interview.

Questions listed in Appendix 7 for workshops should be modified to suit the specific needs of the interviews.

The level of resourcing to prepare, conduct and analyse 20-30 semi-structured interviews is estimated at 10 person days (plus telecommunication, printing/postage).

Figure 7.1 : Interview Structure

Interview Type	Structured Interview	Semi-Structured Interview
Duration	15-30 minutes	1-2 hours
Description	Interview closely follows set of questions	Interview loosely follows set of questions and often allows for wide-ranging informal discussion
Analysis Time	Variable depending on issue complexity and information provided – generally 1-2 times the length of the interview	

7.5 Instrument 5: Mailed questionnaires

Questionnaires are useful for gaining indicative views from a large number of dispersed people. Those developing a mailed questionnaire should follow accepted procedures to ensure a response rate higher than 60% (above 70% preferred) and that random sampling techniques are used. Mailed questionnaires can include a wide range of quantitative (numerical) and qualitative (descriptive) questions to build a broad picture of the views of stakeholders in achieving the regional farm forestry objectives. Questionnaires should be clearly written and allow the respondent to complete it in 10-20 minutes. Also, a record of who has been sent a questionnaire is important to ensure a representative sample has been selected, as well as to allow follow-up reminders to be conveyed. It is strongly advised that support from those accomplished at devising valid mailed questionnaires be sought.

Example questions are listed in Appendix 7.

Questions listed above for mailed questionnaires should be modified to suit the specific needs of the Farm Forestry group.

The level of resourcing to prepare, conduct and analyse a mailed questionnaire sent to 200-300 is estimated at 10 person days (plus telecommunication, printing/postage).

Two example questionnaires are included at Appendix 5 and Appendix 6.

7.6 Instrument 6: Document review

This can be a useful way of assessing the farm forestry group's contributions and influence on committees and forums that develop strategic plans. Developing key documents (eg. feasibility studies, regional farm forestry development strategies) is often a task of regional farm forestry development. Suggested criteria to use when assessing documents are:

- Consistency with project goals (... *is it the right thing for the project to be doing?*)
- Communication to key audience (... *is the project doing it right?*)
 - appropriateness of format, language, readability
 - content (addresses needs of target audience)

- Dissemination
 - accessibility (affordable, availability for target audience)
 - timeliness (of information for target audience)
 - coverage/contact with target audience population
- Impact
 - contribution to behavioural change
 - any project outcomes appearing (... *what difference has the document made/is making?*)

Usually several follow-up phone calls will be needed to clarify aspects of people's involvement and/or the content of the key documents. The level of resourcing to conduct document reviews and make the follow-up phone calls is estimated at 1-3 documents for 1 person day (plus telecommunication) – although this will vary considerably depending on the nature and length of each document. It is not expected that every document produced by a program will be reviewed in detail, but rather a representative sample or just the key documents would be reviewed.

7.7 Instrument 7: Comprehensive study

A comprehensive study, undertaken by a multi-disciplinary team, can be a valuable way of conducting an in-depth analysis of a farm forestry program and the regional context in which it operates. Such study teams should involve key program members together with those with the necessary additional expertise (eg. environmental science, farm forestry research, agricultural and forestry industry analysis, socio-economic analysis, regional development research).

Comprehensive studies are usually undertaken to support the planning of a major development initiative, at the mid-point of a long-term major program, or at its conclusion. Depending of the scope and depth of the study, it may take 4-12 months to complete and cost \$50,000 – \$100,000.

Topics to be included in a comprehensive study may include:

- Market trends – product types, volumes and competitiveness.
- Likely short- and long-term prospects for growers and industry.
- Necessary transport and marketing infrastructure.
- Government policies relevant to farm forestry.
- Codes of practice and local application of 'sustainable forest management' principles.
- Socio-economic implications of changes to regional land use and industries.
- Extent of community support for, and participation in, farm forestry development.
- Contingency plans if markets alter considerably from forecasts.

7.8 Instrument 8: On-ground assessment

Inspection of on-ground activities and the outputs may be needed to gain an appreciation of just what is being done by groups.

The key point is to be well prepared before you visit the site(s), by reading the documentation (which should include the project logic) so that your assessment can be focussed on what is important. During an on-ground assessment a number of other methods may be used, as appropriate, such as interviews and focus group workshops.

8 Goal Attainment Scaling (GAS) – elaborated

This section expands on the brief outline about Goal Attainment Scaling that is presented in section 5.6. GAS defines a *range* of ‘degrees of success’ outcomes (rather than a single *target*) for each performance indicator on any project or activity to capture the range of possible results. Performance may range from very much below expectations (score 1), to well above expectations (score 5). The expected outcome is given a score of 3.

Figure 8.1 shows a GAS scoring for a hypothetical example of a Performance Indicator for a regional group. It is an example of what could be constructed to assess one aspect of a project’s communication strategy. Many regional projects have a strong communication role – that is, to raise awareness within the community of the potential of farm forestry.

Figure 8.1: Example of Goal Attainment Scaling

Degree of Success	Score	Performance Indicator: <i>Communication by regional group</i>
Most unfavourable outcome	1	No promotion at all
Less than expected success	2	No press exposure and occasional update in local newsletter
Expected level of success	3	One newspaper article in the local paper achieved by suggestion of state agency people and regular update in community newsletter
More than expected success	4	As above plus interview on local radio and article in FF magazine
Most favourable outcome	5	As above plus members invited to speak to other regional groups; three tours for other groups hosted to inspect group achievements

To see how to allocate a score, see **Scoring** below.

The GAS scale description should be developed at the outset, before the project activity is undertaken. Ideally, the descriptions of the scoring scale will be determined by the project managers/coordinators together with key project participants – in this case, regional farm forestry groups. The GAS encapsulates how they judge their own performance.

Defining and agreeing the GAS scales can take some time, often because different participants have different expectations, perhaps stemming from different understandings of what the project is about – but this time input is a useful investment to ensure a shared understanding of what the project is really about and what the collective expectations are for it.

8.1 Weighting

Weights are used to indicate which PI should have more influence on the final score, and which less, according to their importance in achieving the overall project aims. These should to be allocated at the start. A method for weighting PI’s is given in section 9.3.

8.2 Scoring

The GAS scores are allocated at key times in the project (eg. milestones) as set out in the evaluation plan. Note that fractional scores are possible, and indeed are sensible.

Using the example of Figure 8.1, imagine that the Group's communication activities had resulted in all of the following:

- several newspaper articles;
- a regular update column in the community newsletter;
- an article in a farm forestry magazine; and
- a couple of media interviews.

However, they did not achieve any of the additional activities listed for score = 5 (i.e., members invited to speak to other regional groups; three tours for other groups hosted to inspect group achievements). This achievement is more than a '4' but less than a '5' on the scale in Figure 8.1, thus it would be scored at about 4.5. Scoring is usually a quick activity, once the data are to hand.

Collectively, the scores for all the PIs comprise a matrix of performance data for each project, one score for each different PI. Furthermore, the scores can be weighted differently according to the relative importance of each PI before being summarised into an overall project score. For an example of how to summarise the PI scores for a project, see section 9.3.

8.3 Reflection

The group then needs to reflect not so much on what level of achievement was attained, but whether it is very different from the group's original expectation, and if so, why? Upon this analysis the group should re-evaluate its business plan and modify its actions accordingly (the cycle of continuous improvement).

8.4 Raw data vs GAS scores

GAS is not a source of evaluation *data* as such, but a way of interpreting the data for evaluation purposes. For example, consider two regional farm forestry groups, Group A and Group B. Both groups have established 5 demonstration sites in 2 years – that is the *data*. However Group A expected to achieve 3 sites in that time, and they had pre-defined the achievement of 5 sites as being in the range of 'more than expected success' (GAS score = 4). By contrast, Group B planned to establish 10 sites in this time (because they identified establishing demonstration sites as their prime activity). For them, 5 sites established is towards a 'most unfavourable outcome', so they gave this level of achievement a GAS score of 1.5. It is useful therefore to report both the raw data and the GAS scores.

8.5 Aggregation across PI within a project

Raw data cannot easily be aggregated across the PI for a project, because they are usually very different. However, a very useful feature of GAS is that even though each PI may assess a very different kind of result (such as establishment of linkages between stakeholders, establishment of trial sites and availability of relevant information), GAS expresses them all to a common scale. This makes it very straightforward to compare and aggregate across different PI within a project.

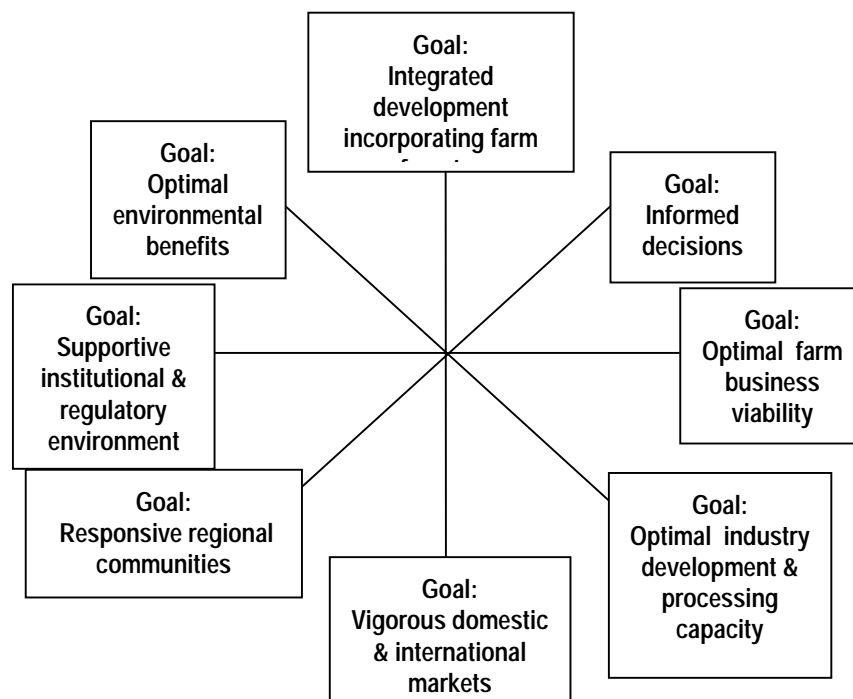
8.6 Displaying the evaluation data

The GAS scores can be summarised for each goal and presented visually in conventional tabular summaries or graphs, or using an evaluation ‘wheel’. These are ways of assessing the progress towards goals which farm forestry projects and activities seek to achieve. The complete set of regional farm forestry goals, listed in Figure 6.1 to Figure 6.8, are shown on an evaluation wheel in Figure 8.2.

Each *Goal forms a spoke* of the wheel, and the *spokes serve as axes*, so that the performance towards achieving each goal (ie. outcome or result to-date) can be plotted. The centre of an axis represents the minimum possible value and the end of the spoke the maximum (ie ‘1’ and ‘5’ respectively if using the 1-5 GAS scaling). The scores for each goal can be integrated into an overall score for the project as a whole.

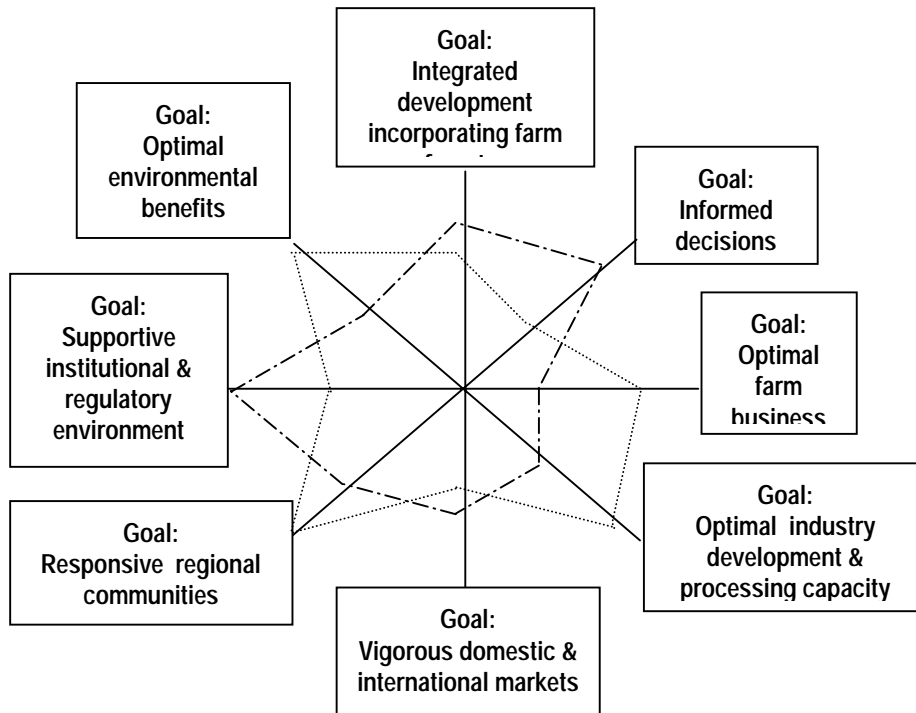
Each project, group of activities, or the work of a regional group, can be displayed as one wheel (Figure 8.2) to show at a glance progress towards achieving the goals.

Figure 8.2: The evaluation wheel



The scores for the eight goals can be joined by a continuous line to give a visual representation of project performance. This is illustrated in Figure 8.3 The two different lines (broken, dashed) connect the scores for, say, two different evaluation times for a regional group (eg. performance in Year 1, performance in Year 3), and the different patterns provide an obvious visual comparison.

Figure 8.3: Display of two hypothetical and contrasting project scores



8.7 Aggregation of evaluation information across projects and regions

Aggregation of evaluation information across projects and regions is more appropriate for groupings of regional groups or for the Farm Forestry Program as a whole, rather than for individual regional groups. Information from regional farm forestry projects is valuable for those managing AFFA's Farm Forestry Program, and so provides a secondary benefit to good monitoring and evaluation.

Care must be taken to ensure that inappropriate aggregation does not occur, and the Groups who generated the GAS scores need to be involved in any aggregation process to ensure that they have confidence in how the data are presented and interpreted.

The scores for different projects or activities can be combined to provide an overall score for the performance of the group as a whole, and so on, to contribute to an overall assessment of the performance of the Farm Forestry Program. Similarly, the performance of particular kinds of activities can be compared between projects or groups or regions by studying a subset of the PI.

Both raw data and GAS scores can be aggregated at the regional, State or national level to assist other people planning, managing and interpreting farm forestry development. An analogy is the data collected by regional and State forest growers and aggregated to form the basis of the National Forest Inventory. However, there is a potential trap in doing this – it can be easy to inappropriately aggregate information. Take for example the case in Box 4 where the PI look similar, but are scored on very different GAS scales.

Box 4 : Example - Same Performance Indicator, different scoring

Consider the Performance Indicator 'Demonstration sites established'.

One group or project defines a GAS score = 3 as '3 sites of 5 species established by October 2002'.

Another group in quite different circumstances defines a GAS score = 3 as '10 sites of 10 species established by August 2001'.

Both have the same PI description but the scoring scales are quite different, and validly so given the different context each Group is working within.

The raw data can be aggregated across projects for the same PI to determine the total number of trial sites established.

The GAS scores can also be aggregated across projects to determine the average extent to which the regional groups have achieved their expectations about establishing trial sites. However, the aggregated GAS score does not provide very much information as to the aggregated number of trial sites established – only the raw data will provide that (unless the scales are defined in exactly the same way for each project – and even then there will be complications).

Thus the aggregated raw data and the aggregated GAS scores are quite different pieces of information, and both useful in their own right.

Care must be taken to ensure that inappropriate aggregation does not occur, and the Groups who generated the GAS scores need to be involved in any aggregation process to ensure that they have confidence in how the data are presented and interpreted.

9 The Framework applied – hypothetical examples or case studies

Following are examples of how to use the Framework to assess in full Performance Indicators using realistic case examples, for one PI topic for one Activity within an Objective for each Goal, as per Figure 6.1 to Figure 6.8. For each Goal, examples of the relevant PI (section 9.1) are provided. Then, examples of the GAS framework, for one PI for each Goal (section 9.2) are given. Collectively these GAS examples show a range of approaches to describing the GAS scales.

These examples are intended as a useful guide only – each regional farm forestry group will want to develop an evaluation plan suited to their individual needs. The examples presented here range over the different kinds of activities likely to be undertaken by regional groups.

The indicative costings of the various evaluation activities are presented, for each activity in isolation. In reality, many of the surveys or focus group discussions will be able to be combined, saving significant costs. This highlights the importance of developing a comprehensive evaluation plan at the outset.

Always remember that the reason for obtaining the evaluation information is to use it to determine how successfully the goals and objectives have been achieved, and to use this information to improve the group's work through adaptive management using the improvement cycle (Figure 3.1). Groups need to evaluate the information from the perspective of their business plan, for example it may be more important that certain categories of stakeholders are satisfied with the results of an activity rather than that all stakeholders are satisfied on average. This is part of tailoring the Evaluation Framework to the group's own needs.

9.1 Examples of Performance Indicators, associated data collection methods and their relationship to the evaluation process

This section uses examples to illustrate one set of Performance Indicators for each Goal. It shows how the evaluation data can be collected and how the information gathered can feed into the evaluation process. References to relevant data collection instruments are shown.

Often several evaluation methods and data collection instruments can be used to collect evaluation data for a PI – the choice of method involves a trade-off between costs and the accuracy required, given how important the PI is for achieving the regional group's strategic plan.

Figure 9.1: Example of Framework Basis and Performance Indicator example for ‘fostering partnerships’

In this example there are four PI that can all be assessed by the same measurement process.

Goal 1:	Integrated development incorporating farm forestry
Objective:	1.1: To establish viable networks of relevant stakeholders
Activity topic:	Networking, co-ordination and planning
Performance Indicator topic:	Partnerships fostered

Performance Indicators	Data			Evaluation and reflection
	Description	Measurement process	Resources for measurement	
<ul style="list-style-type: none"> Extent there is cross-organisation membership between major stakeholder groups Extent there is an established regular forum for key stakeholders to share information Frequency & quality of these forums Level of participation & outputs generated 	<ul style="list-style-type: none"> Qualitative – level of stakeholder satisfaction on information forums with partners Quantitative – extent of cross-membership (expressed numerically & %) against total & potential stakeholders; number of information forums; level of participation & outputs generated. 	<ol style="list-style-type: none"> Interviews with stakeholder representatives (8-12) conducted & analysed by network coordinator (3-4 days) [Instrument 4: Interviews] Draft results & benchmarks discussed with interviewees (3 hrs) Results & benchmarks refined by network coordinator, with any improvements noted for how the key partnership should be developed (2 hrs) If available, review groups’ internal register or key documents (eg. feasibility studies, development strategies) to assess level of participation by members in different forums (4 hrs) [Instruments 1 & 6: Internal register & document review] As a component of a comprehensive mailed questionnaire – survey for level of participation & satisfaction, & seek suggestions for improvement (1 day) [Instrument 5: Questionnaire] <p>Note: Steps 2 – 5 provide the repeatable link between evaluation and the ‘Cycle of Continuous Improvement’.</p>	<ul style="list-style-type: none"> Coordinator’s time 4-7 days Operating expenses \$3-500 	<p>In-depth assessment of partnerships desired by stakeholder groups (growers, industry, agency staff) in developmental phase (first few years) resulting in the Goal Attainment Scoring. Then modified assessment to gauge level of participation & satisfaction thereafter when primary partnerships are established.</p> <p>Network coordinator to refine development approach as required to optimise partnerships.</p>

Figure 9.2: Example of Framework Basis and Performance Indicator example for a regional farm forestry training course

Goal 2:	Informed decisions
Objectives:	2.2 To deliver information to stakeholders; and 2.3 To develop the analytical capacity of stakeholders
Activity topic:	Extension, education and training
Performance Indicator topic:	Effective training opportunities provided to improve landholder skills (<i>Example: a training course</i>)

Performance Indicators	Data			Evaluation and reflection
	Description	Measurement process	Resources for measurement	
<ul style="list-style-type: none"> Quality of planning, teaching expertise & materials for the training course Level of resourcing available for the training course 	<ul style="list-style-type: none"> Qualitative – assess against ‘Checklist for high quality information delivery’ (Appendix 4) Quantitative – level of resourcing (expressed in \$’s) against optimum resourcing level (expressed as % or ratio) (optimum level is \$’s required to meet Checklist) 	<ol style="list-style-type: none"> Data compiled & assessed by training course coordinator (3 hrs) [Instrument 1: Internal register] Draft results discussed with experienced training course providers (3 hrs) Results refined by course coordinator, with any improvements for inputs noted (2 hrs) <p>Note: Steps 2 and 3 provide the repeatable link between evaluation and the ‘Cycle of Continuous Improvement’.</p>	<ul style="list-style-type: none"> Staff time 6 hours Operating expenses \$250 	<p>In-depth assessment of inputs to 1st training course, then modified version thereafter while similar approach used.</p> <p>Training coordinator or independent adviser to assess inputs against Checklist benchmarks (see Appendix 4);</p> <p>Training coordinator to compile from financial records of training course.</p>
<ul style="list-style-type: none"> Coverage & quality of training provided 	<ul style="list-style-type: none"> Quantitative – number & % of farmers offered/accepted for training against total target audience (assessment of target audience in Strategic Plan) Qualitative – assess level of participant satisfaction with training approach & materials (eg. extent farmers are sufficiently informed) 	<ol style="list-style-type: none"> Data compiled & assessed by course coordinator (1 hr) Questionnaire modified by course coordinator (2 hrs) [Instruments 5: Questionnaire] Questionnaire completed by course participants (10 mins) with results compiled & assessed by course coordinator (1 hr) Focus group drawn from target audience to review training approach & materials (based on Guide) – facilitated by course coordinator or ‘outsider’ (4 hrs) [Instrument 3: Workshop] Participant numbers & questionnaire compiled & assessed after each course. Focus group assembled after 1st training course, then once every 12 months. (Telephone survey may be better) <p>Training course coordinator to compile figures & compare against project targets.</p>	<ul style="list-style-type: none"> Staff time 1 day Operating expenses \$250 	<p>Course coordinator to assess level of participant satisfaction using questionnaires &/or focus group/telephone survey, with this project developing the questionnaire and guide to its use).</p>

Performance Indicators	Data			Evaluation and reflection
	Description	Measurement process	Resources for measurement	
<ul style="list-style-type: none"> Level of confidence amongst farmers who participated in training course 	<ul style="list-style-type: none"> Qualitative – number & % of farmers confident about their decisions relating to FF by course participants 	<ol style="list-style-type: none"> Course coordinator to modify questionnaire (2 hrs) Course coordinator or assistant to randomly select 15-20 course participants & conduct telephone questionnaire (3 days); Course coordinator to compile & assess results against targets (1 day); <p>Telephone questionnaire & analysis conducted once every 1-2 yrs for similar courses. [Instrument 4: Interviews]</p> <p>Training course coordinator to sample 12 – 15 course participants randomly using telephone questionnaire to gauge level of confidence (based on Guide) 1-2 yrs after course.</p>	<ul style="list-style-type: none"> Staff time 4.5 days Operating expenses \$500 	<p>Course coordinator to assess the extent farmers are sufficiently confident to make investment decisions about FF.</p>
<ul style="list-style-type: none"> Farm Forestry practices developed by farmers who participated in training course 	<ul style="list-style-type: none"> Quantitative – extent of adoption & quality of FF practices by course participants 	<ol style="list-style-type: none"> Assessments conducted by course coordinator & field staff for a random sample of 12 - 15 course participants (5 days) & for similar sample of non-participants (5 days). [Instrument 3]. However, a cheaper telephone survey with a larger sample size may be sufficient [Instrument 4: Interviews]. A combination of the two options may be warranted if the activities/goals are highly important to the program. Course coordinator to analyse & communicate results (5 days). <p>Field assessments conducted once every 4-5 yrs for similar courses. This will also allow for periodic comparisons.</p> <p>Field assessments conducted by course coordinator & field staff for a random sample of 12 - 15 course participants – assessment of extent of adoption & quality of FF practices undertaken (based on Guide);</p> <p>Field assessments of randomly selected 12 - 15 non-participants – assessment of extent of adoption & quality of FF practices undertaken;</p>	<ul style="list-style-type: none"> Staff time 15 days Operating expenses of \$2,000 	<p>Results compared to project targets (as stated in Strategic Plan) and figures reported for NFFI.</p>

Figure 9.3: Example of Framework Basis and Performance Indicator example for establishing trial sites

Goal 3:	Optimal farm business viability
Objective:	3.3: To undertake effective R&D to support viable farm forestry systems
Activity topic:	Research & development (eg, establish trial sites to assess species suitability)
Performance Indicator topic:	Trial sites established

Performance Indicators	Data			Evaluation and reflection
	Description	Measurement process	Resources for measurement	
<ul style="list-style-type: none"> Quality of R&D procedures used to plan, establish & maintain trial sites Extent trial sites yield useful information 	<ul style="list-style-type: none"> Qualitative – level of R&D expertise of trial site manager(s); extent useful information has been, or is likely to be, generated by trial sites for target audience Quantitative – extent trial sites will, or has met, R&D objectives (comprehensiveness of trial sites; expressed as a % of total R&D questions that potentially could be addressed by trial sites) 	<ol style="list-style-type: none"> Interviews with trial site manager(s) & accomplished R&D managers to identify what ‘best practice’ may be for this R&D; & to identify benchmarks for trial sites (2 days) Draft ‘best practice’ guidelines & benchmarks as discussed with interviewees (3 hrs) Field assessment of trial sites to gauge performance against ‘best practice’ standards (1 day) Assess key R&D documents once per year when R&D results are reported (1 day) Conduct a workshop with focus group (trial site manager & accomplished R&D managers) to review the quality of trial site management & usefulness of results (every 3 – 5 years) (2 days) [Instrument 3: Workshops] <p>Note: Steps 3 – 5 provide the repeatable link between evaluation and the ‘Cycle of Continuous Improvement’.</p>	<ul style="list-style-type: none"> Evaluator’s time 4-7 days Operating expenses \$500 	<p>Initial in-depth assessment to identify ‘best practice’ standards for trial sites & appropriate benchmarks in consultation with trial site manager(s) & independent accomplished R&D managers culminating in the Goal Achievement Scoring (in 1st year); then modified assessment to gauge quality of trail management & usefulness of reported results.</p> <p>Evaluator to recommend improvements to trial site management &/or reporting of results, if required.</p>

Figure 9.4: Example of Framework Basis and Performance Indicator example for co-ordination activities (for supply and demand of timber)

Goal 4:	Optimal industry development and processing capacity
Objective:	4.1: To ensure farm forestry enhances industry (ie. non-farm) business viability
Activity topic:	Co-ordination of supply and demand
Performance Indicator topic:	Co-ordination between supply and demand development

Performance Indicators	Data			Evaluation and reflection
	Description	Measurement process	Resources for measurement	
<ul style="list-style-type: none"> Extent of communication & sharing of valuable information between producers & processors Extent of incorporation of supply – demand information into regional planning 	<ul style="list-style-type: none"> Qualitative – level of stakeholder satisfaction with supply & demand information; quality of information forums Quantitative – extent of consistency between current & future supply & demand (analytical forecasts of market influences on regional supply & demand using range of economic indicators); frequency of supply & demand analyses; number of information forums; level of participation in forums & outputs generated 	<ol style="list-style-type: none"> Interviews with stakeholder representatives of processors & producers/growers conducted & analysed by market analyst (2-3 days) [Instrument 4: Interviews] Draft results & benchmarks discussed with interviewees (3 hrs) Results & benchmarks refined by market analyst, & forwarded to development coordinator for wider circulation to stakeholders (1 day) Coordinator to inform regional planning forums/teams of current & future supply & demand status (1 day) As a component of a comprehensive mailed questionnaire – survey for level of participation & satisfaction by stakeholders of supply & demand analyses, & seek suggestions for improvement (1 day) [Instrument 5: Questionnaire] <p>Note: Steps 3 – 5 provide the feedback link between evaluation and the ‘Cycle of Continuous Improvement’.</p>	<ul style="list-style-type: none"> Market analyst’s time 3-4 days Coordinator’s time 3 days Operating expenses \$500 	<p>In-depth assessment of desired supply & demand status by processors & growers in developmental phase (ie. initial 1-2 years) undertaken by market analyst; then ongoing assessment to gauge level of satisfaction with market information by coordinator.</p> <p>Regional group to analyse and reflect on the findings, especially differences between stakeholder groups, and review their business plan accordingly.</p> <p>Coordinator to circulate supply & demand analyses widely to stakeholders & regional planning forums.</p>

Figure 9.5: Example of Framework Basis and Performance Indicator example for provision of R&D information and marketing for vigorous markets

Goal 5:	Vigorous domestic and international markets
Objective:	5.2: To undertake effective R&D for increased market information, mechanisms and opportunities
Activity topic:	Provision of R&D information, and marketing
Performance Indicator topic:	R&D conducted that contributes to more competitive markets

Performance Indicators	Data			Evaluation and reflection
	Description	Measurement process	Resources for measurement	
<ul style="list-style-type: none"> Extent & quality of R&D conducted Extent R&D supports more competitive markets Extent R&D communicated to stakeholders 	<ul style="list-style-type: none"> Qualitative – level of stakeholder satisfaction of extent & quality of R&D information; stakeholders’ perceptions of usefulness of R&D information for improving the operations of markets (eg. informing processors & growers of market opportunities); Quantitative – extent of awareness & usage of R&D information amongst stakeholders (expressed numerically & %) against total population of stakeholders; number of information forums conducted; level of participation & outputs generated from forums. 	<ol style="list-style-type: none"> Interviews with 8-12 stakeholder representatives & 2-3 experienced R&D managers conducted (to identify quality standards) & analysed by information coordinator (4-5 days) [Instrument 4: Interviews] Draft results & benchmarks (for extent & quality) discussed with interviewees (5 hrs) Results & benchmarks refined by information coordinator, with any improvements for communicating &/or distributing R&D information noted (3 hrs) If available, review stakeholder groups’ internal register or key documents to assess level of awareness & usage of R&D information; & participation by members in different information forums (4 hrs) [Instrument 1: Internal register] As a component of a comprehensive mailed questionnaire – survey for level of awareness of & satisfaction with R&D information; & participation in & satisfaction with information forums, seeking suggestions for improvement (1 day) [Instrument 5: Questionnaire] <p>Note: Steps 3 – 5 provide the iterative link between evaluation and the ‘Cycle of Continuous Improvement’.</p>	<ul style="list-style-type: none"> Coordinator’s time 6-7 days Operating expenses \$500 	<p>In-depth assessment of R&D information desired by stakeholder groups (growers, industry, agency staff) in developmental phase (initial 1-2 years) culminating in the agreed Goal Achievement Score. Then modified assessment to gauge level of awareness, usage & satisfaction thereafter when key R&D information is identified & generated.</p> <p>Information coordinator to refine communication approach as required to optimise market expertise of all stakeholders.</p>

Figure 9.6: Example of Framework Basis and Performance Indicator example for community acceptance of farm forestry and willingness to invest

Goal 6:	Responsive regional communities
Objective:	6.2: To enhance community acceptance of farm forestry
Activity topic:	Assess and communicate full outcomes of farm forestry
Performance Indicator topic:	Widespread community acceptance of farm forestry and willingness to invest

Performance Indicators	Data			Evaluation and reflection
	Description	Measurement process	Resources for measurement	
<ul style="list-style-type: none"> • Extent of community acceptance of FF • Extent of willingness to invest • Extent of local (non-farmer) investment in FF (<i>see also Objective 3.4</i>) 	<ul style="list-style-type: none"> • Qualitative – tenor of local media reporting and ‘letters to the editor’; attitude of local government (see also Goal 7), attitudes expressed in local forums, attitude of local bankers • Quantitative – number positive vs negative articles and letters in the press; results of surveys of local stakeholders re willingness to invest; amount and trend of local investment in farm forestry 	<ol style="list-style-type: none"> 1. Monitor local media and forums (by regional group members as part of their ongoing daily activities); collate findings at a regional group meeting [Instrument 1: Internal register] 2. Interviews with approximately 10 key stakeholders representatives (local government, service clubs) and analysed by network coordinator (3-4 days) [Instrument 4: Interviews] 3. Survey of financial services people and of FF participants (about 50), prepared, conducted and analysed by coordinator (5 days) [Instrument 5: Questionnaire] 4. Summarise results of 1. – 3. And discuss within regional group 5. Repeat 2. & 3. every 2 years to detect trends <p>Note: Steps 4-5 provide the feedback link between evaluation and the ‘Cycle of Continuous Improvement’.</p>	<ul style="list-style-type: none"> • Coordinator’s additional time outside meetings 10 days • Operating expenses <\$1000 including expert advice on preparation of survey instrument 	<p>Assessment by group of expected results from these measurements prior to beginning, as reflected in the Goal Achievement Scoring.</p> <p>Review results as they come to hand, especially the trends.</p> <p>Decide if specific action is needed by group or if there are opportunities to take advantage of, that are consistent with the group’s goals, and modify action plans accordingly.</p>

Figure 9.7: Example of Framework Basis and Performance Indicator example for developing and making available planning guidelines

Goal 7:	Supportive institutional and regional framework
Objective:	7.1: To have balanced institutional and regulatory requirements for farm forestry development
Activity topic:	Work with relevant authorities to overcome institutional & regulatory impediments
Performance Indicator topic:	Planning guidelines developed to ensure farm forestry development with government to address concerns

Performance Indicators	Data			Evaluation and reflection
	Description	Measurement process	Resources for measurement	
<ul style="list-style-type: none"> Extent planning guidelines are developed that ensure farm forestry is complementary to other government objectives Extent that planning guidelines encourage farm forestry Extent that planning guidelines are made readily available 	<ul style="list-style-type: none"> Qualitative – assessment of the extent that farm forestry planning guidelines are complementary with other government objectives, and that farm forestry is encouraged among the different stakeholders (farm forestry, practitioners, farming & forest industries, general community) & extent to which stakeholders know about the planning guidelines Quantitative – proportion of key points in the planning guidelines that are positive, neutral and negative to farm forestry; % of stakeholders who: <ul style="list-style-type: none"> Know about have a copy of or know where to get ready access to understand the main thrusts of the planning guidelines 	<ol style="list-style-type: none"> Survey of stakeholders stratified across the different stakeholder types (about 150 people), designed, conducted and analysed by coordinator (5 days) [Instrument 5: Questionnaire] Example provided in Appendix 6. (Optional) Focus group discussions within the various stakeholder categories (5 people for each group of stakeholders), conducted by coordinator (4 days) [Instrument 3: Workshops] Results summarised by coordinator and presented to regional group Repeat steps 1–3 at intervals as required by the regional group’s business plan <p>Note: Steps 3-4 provide the feedback link between evaluation and the ‘Cycle of Continuous Improvement’.</p>	<ul style="list-style-type: none"> Coordinator’s time 5–9 days Operating expenses \$400-\$600 including expert advice in the development of the survey 	<p>In-depth reflection by regional group at the start to determine their expectations and hence the Goal Achievement Scoring descriptions</p> <p>Review of findings by regional group, considering especially any differences in response between the different stakeholder categories, leading to refinement of their action plan in response to obtain the outcomes desired by the group’s business plan</p>

Figure 9.8: Example of Framework Basis and Performance Indicator example for developing environmental guidelines

Goal 8:	Optimal environmental benefits
Objective:	8.1: To develop environmental guidelines for farm forestry ‘best practice’ consistent with goals of other responsible organisations
Activity topic:	Develop environmental guidelines for farm forestry ‘best practice’
Performance Indicator topic:	Environmental guidelines developed that meet farm forestry ‘best practice’ standards

Performance Indicators	Data			Evaluation and reflection
	Description	Measurement process	Resources for measurement	
<ul style="list-style-type: none"> Extent environmental guidelines developed and adopted by farm forestry practitioners Environmental guidelines developed within regional / State planning framework 	<ul style="list-style-type: none"> Qualitative – level of satisfaction by group members with the guidelines and the process used to develop them; level of satisfaction by other stakeholders (business, environmentalists, general community, government) with the guidelines; extent to which the regional guidelines were influenced by the activities of the regional group 	<ol style="list-style-type: none"> Questionnaire and focus group discussion by regional group (part of a regular meeting), summarised by coordinator (½ day) [Instrument 3: Workshops] Survey of approximately 100 stakeholders stratified by category conducted and analysed by coordinator (4 days) [Instrument 5: Questionnaire] Discussion of findings by regional group and modification of action planning as required Repeat steps 1-3 at intervals as required by groups business plan <p>Note: Steps 3-4 provide the feedback link between evaluation and the ‘Cycle of Continuous Improvement’.</p>	<ul style="list-style-type: none"> Coordinator’s time 4½ days Operating expenses (including expert advice on the survey design) \$300-\$500 	<p>In-depth reflection by regional group at the start to determine their expectations and hence the GAS descriptions.</p> <p>Review of findings by regional group, especially analysing any differences between stakeholder categories, leading to refinement of their action plan in response to obtain the outcomes desired by the group’s business plan.</p>

9.2 Examples of Goal Attainment Scaling scales

A GAS example is presented for each of the eight Goals. Collectively these show a range of approaches to defining the GAS scales. A score of '3' is the expected result, or your minimum target. Deviation from a '3' indicates that what happened was not what you expected and is cause for reflection. Scores less than 3 warrant perhaps adjusting your plans, and for scores greater than 3, incorporate the lessons wherever possible. These are examples only, regional groups will have different descriptions and scales depending on particular circumstances.

Figure 9.9 : GAS scale for PI: 'Level of stakeholder satisfaction with information forums with partners'

(Reference: Figure 6.1; Goal 1, Objective 1.1)

GAS score	Description
1. (very much less than expected achievement)	All stakeholders score 1
2. (less than expected achievement)	Average score is 2
3. (expected achievement)	Average score is 3
4. (more than expected achievement)	Average score is 4
5. (very much more than expected achievement)	All stakeholders score 5

In this case stakeholders were surveyed (by a postal survey, feedback sheet, or focus groups) about their level of satisfaction with information forums. They were asked to give a score on the scale from 1 (I am very much less satisfied than I expected to be) through 3 (I am as satisfied as I expected to be) to 5 (I am very much more satisfied than I expected to be). This is a very straightforward way to quantify stakeholder opinion.

Figure 9.10 : GAS scale for PI: 'Level of confidence amongst farmers who participated in training course'

(Reference: Figure 6.2; Goal 2, Objective 2.2)

GAS score	Description
1. (very much less than expected achievement)	>70% of farmers do not feel confident enough to decide whether or not to plan to begin even modest-scale FF plantings of well-known species, even with access to ongoing assistance from advisory services
2. (less than expected achievement)	>40% but <70% of farmers feel at least confident enough to decide whether or not to plan, implement and manage modest-scale FF plantings of well-known species, given some access to ongoing assistance from advisory services
3. (expected achievement)	>70% of farmers feel at least confident enough to decide whether or not to plan, implement and manage modest-scale FF plantings of well-known species, with some access to ongoing assistance from advisory services
4. (more than expected achievement)	>80% of farmers feel at least confident enough to decide whether or not to plan, implement and manage modest-scale FF plantings of well-known species, with some access to ongoing assistance from advisory services, and >25% are confident to decide whether or not to undertake large-scale FF plantings and to include lesser-known species in their plantations
5. (very much more than expected achievement)	>90% of farmers feel at least confident enough to decide whether or not to plan, implement and manage modest-scale FF plantings of well-known species, with some access to ongoing assistance from advisory services; and >40% are confident to decide whether or not to undertake large-scale FF plantings and to include lesser-known species in their plantations

This is more complex way of summarising stakeholder feedback, in this case for a single event. The information would be obtained from feedback sheets handed out after the training course, or exit interviews. In this case the success of the training course is about whether the farmers feel confident to make a decision about undertaking farm forestry even if the decision is an informed 'no'. Actual threshold levels need to be determined by the regional group for their specific circumstances.

For a longer-term program of activities, these threshold levels would be expected to change as the project proceeds – in this case, farmer confidence should steadily rise as the program has greater impact.

Figure 9.11 : GAS scale for PI: 'Quality of R&D procedures used to plan, establish & maintain trial sites'

(Reference: Figure 6.3; Goal 3, Objective 3.1)

GAS score	Description
1. (very much less than expected achievement)	No expert advice incorporated into the design of the trial sites, which have fallen well short of the benchmark; external researchers indicate that they will have no confidence in the results (because of flawed design, poor execution etc); farmers also indicate they have little confidence in the findings
2. (less than expected achievement)	Intermediate – some but not all of the requirements of score = 3 achieved
3. (expected achievement)	Trial sites planned in consultation with an acknowledged expert; trial site design and implementation achieve the benchmark standards; researchers indicate that they will have confidence in the results
4. (more than expected achievement)	Intermediate – all of score = 3 criteria met, and some of score = 5
5. (very much more than expected achievement)	Trial sites planned in consultation with several acknowledged experts – may be incorporated into the program of a reputable research organisation; trial site design and implementation exceed the benchmark standards and achieve best-practice research standards (eg for CSIRO); researchers using the findings in their work (or planning to)

Figure 9.12 : GAS scale for PI: 'Extent of incorporation of supply – demand information into regional planning'

(Reference: Figure 6.4; Goal 4, Objective 4.2)

GAS score	Description
1. (very much less than expected achievement)	All stakeholders score 1
2. (less than expected achievement)	Mean stakeholder score is 2
3. (expected achievement)	Mean stakeholder score is 3
4. (more than expected achievement)	Mean stakeholder score is 4
5. (very much more than expected achievement)	Mean stakeholder score is 5

This is best assessed by asking each stakeholder, at the end of an interview or focus group discussion, to summarise their assessment of the situation on a 5-point scale (where 3 is the outcome they would expect) taking into account all of the factors discussed.

This is a good way to get an integrated assessment from each stakeholder, and crystallising their thoughts at the end of the discussion.

Figure 9.13 : GAS scale for PI: 'Extent that R&D is communicated to stakeholders'

(Reference: Figure 6.5; Goal 5, Objective 5.1)

GAS score	Description
1. (very much less than expected achievement)	<20% of relevant FF stakeholders know about the R&D and <10% of them know the thrust of the findings
2. (less than expected achievement)	Between 20% and 75% of relevant FF stakeholders know about the R&D, between 10% and 50% of them know the thrust of the R&D findings, and >10% have used the findings to review their plans (or seriously intend to)
3. (expected achievement)	>75% of relevant FF stakeholders know of the R&D, >60% know the thrust of the R&D findings, and >30% have used the findings to review their plans (or seriously intend to)
4. (more than expected achievement)	Between 60% & 90% of relevant FF stakeholders know the thrust of the R&D findings, and >50% have used the findings to review their plans (or seriously intend to)
5. (very much more than expected achievement)	>90% of relevant FF stakeholders know the thrust of the R&D findings, and >70% have used the findings to review their plans (or seriously intend to)

The information to support this PI would be obtained by questionnaire surveys or focus group feedback sheets. Note that actual threshold levels need to be determined by the regional group for their specific circumstances.

Figure 9.14 : GAS scale for PI: 'Extent of willingness to invest in farm forestry'

(Reference: Figure 6.6; Goal 6, Objective 6.2)

GAS score	Description
1. (very much less than expected achievement)	<40% of relevant financial services advisors consider that FF is a viable type of investment and advise their clients accordingly; <20% of relevant potential investors consider that FF is a viable type of investment and say they consider FF opportunities for their investment portfolios
2. (less than expected achievement)	Intermediate between 1 & 3
3. (expected achievement)	>80% of relevant financial services advisors consider that FF is a viable type of investment and advise their clients accordingly; >60% of relevant potential investors consider that FF is a viable type of investment and say they consider FF opportunities for their investment portfolios
4. (more than expected achievement)	Intermediate between 3 & 5
5. (very much more than expected achievement)	All relevant financial services advisors consider that FF is a viable type of investment and advise their clients accordingly; all of relevant potential investors consider FF opportunities for their investment portfolios; and >50% of them hold some FF investments

The information to support this PI would be obtained from questionnaire surveys or focus group discussions with financial services advisors and potential investors. Actual threshold levels need to be determined by the regional group for their specific circumstances.

Figure 9.15 : GAS scale for PI: 'Extent that planning guidelines encourage farm forestry'

(Reference: Figure 6.7; Goal 7, Objective 7.1)

GAS score	Description
1. (very much less than expected achievement)	All participants give a score = 1
2. (less than expected achievement)	The average score = 2
3. (expected achievement)	The average score = 3
4. (more than expected achievement)	The average score = 4
5. (very much more than expected achievement)	All participants give a score = 5

The information for this would be collected by asking individuals at the end of the questionnaire survey and focus group discussions to summarise their individual assessments on a 1-5 GAS-type scale (where 3 is that the guidelines are neutral, i.e.. a 'level playing field'), taking into consideration all of the issues raised in the questionnaire or discussion.

Figure 9.16 : GAS scale for PI: 'Awareness and acknowledgment of environmental benefits of farm forestry by stakeholders'

(Reference: Figure 6.8; Goal 8, Objective 8.4)

GAS score	Description
1. (very much less than expected achievement)	Most of the target audience (>70%) were unaware of, or had not acknowledged, the environmental benefits of farm forestry.
2. (less than expected achievement)	A large proportion of the target audience (about 50%) were unaware of, or had not acknowledged, the environmental benefits of farm forestry.
3. (expected achievement)	Many of the target audience (about 50%) were aware of, and acknowledged, the environmental benefits of farm forestry.
4. (more than expected achievement)	Most of the target audience (>70%) were aware of, and acknowledged, the environmental benefits of farm forestry. Some of the target audience had altered their management to optimise the environmental benefits following such awareness.
5. (very much more than expected achievement)	Almost all of the target audience (>90%) were aware of, and acknowledged, the environmental benefits of farm forestry. Many of the target audience (about 50%) had altered their management to optimise the environmental benefits following such awareness.

Note that actual threshold levels need to be determined by the regional group for their specific circumstances.

9.3 Integrating GAS scores across Performance Indicators for a project

The evaluation information obtained using this Evaluation Framework can be summarised for the project as a whole. This can be undertaken at various times, both as the project proceeds (*formative* evaluation) and at the end (*summative* evaluation). To minimise duplication, the Goals, Objectives and Activity Types are referred to by code number, as listed in the Framework Figure 6.1 to Figure 6.8).

The information can be collated into a matrix as shown in Figure 9.17. From the GAS data in this matrix, project performance can be summarised for each Objective, Goal or over the whole project. (Usually the raw data cannot easily be summarised in this way, because the data are incompatible, like trying to average ‘apples and oranges’).

Weighting

The simplest way to summarise the data is by averaging the GAS scores (sum of the GAS scores divided by the number of GAS scores (= the number of PI)). Expressed as a formula, this is:

$\text{unweighted mean GAS score} = \Sigma g_i / n \quad \text{where:}$ <p>g_i = the GAS scores (1 for each PI) n = the number of GAS scores Σ = sum of...</p>
--

However, some PI are more important than others in terms of achieving the Group’s Goals. Thus a simple average across all PI fails to give some PI the importance they deserve. Weighting the PI enables the different importances to be given effect – the greater the weighting, the more important the PI and the greater impact that PI score will have on the overall project score. Refer to Figure 9.17 for an example of weighting.

The weightings are most easily incorporated by calculating weighted average GAS scores. To do this, multiply each GAS score by its corresponding weight, sum these products, and divide by the total of all the weights. Expressed as a formula, this is:

$\text{weighted mean GAS score} = \Sigma(w_i g_i) / \Sigma w_i \quad \text{where:}$ <p>w_i are the weights. g_i = the GAS scores (1 for each PI) n = the number of GAS scores Σ = sum of...</p>

Example GAS matrix

Figure 9.17 is a hypothetical example of how to summarise the GAS information for a project. For simplicity, only Performance Indicator topics are shown. This example illustrates that not all Objectives, Activities or PI will be undertaken; what it does not show is that there will be some new ones, appropriate for that particular Group’s project, that do not appear listed in Figure 6.1 – Figure 6.8.

This example also illustrates the effect of weighting. If the weighting is high and the PI score is low, or vice versa, the average score will be substantially different from the weighted average score.

Figure 9.17 : Matrix of evaluation data, and summaries

Goal #	Obj. #	Activity Topic	Performance Indicator	Weighting (scale of 10)	Raw data (if applicable)	GAS score	
1	1.1	Networking, co-ordination & planning	Partnerships fostered	5	<i>n.a.</i>	2.5	
		<i>As above</i>	Networks established	5	<i>n.a.</i>	3	
	1.3	<i>As above</i>	Development of a strategic plan	6	<i>n.a.</i>	3	
	1.5	Monitoring & evaluation	Project performance regularly reviewed	3	<i>n.a.</i>	4	
Summary for Goal 1						Average GAS score	3.13
						Weighted average GAS score	3.03
2	2.2	Extension, education & training	Effective training opportunities provided to improve landholder skills	8	4 short courses; 10 seminars	2	
	2.3	<i>As above</i>	Analytical skills of stakeholders developed	3	<i>n.a.</i>	4.5	
Summary for Goal 2						Average GAS score	3.25
						Weighted average GAS score	2.68
3	3.3	Research and development	Trial sites established and/or maintained for species selection and performance	4	5 sites established	3.5	
		<i>As above</i>	R&D findings made available to FF groups	3	<i>n.a.</i>	4.5	
Summary for Goal 3						Average GAS score	4.0
						Weighted average GAS score	3.93
4	4.3	Research & development	R&D developed that contributes to additional regional processing/value-adding	8	<i>n.a.</i>	2	
5	5.1	Provision of information, and marketing	R&D conducted that contributes to more competitive markets (for growers & processors)	3	<i>n.a.</i>	5	
		<i>As above</i>	Presence of numerous, diverse and regular traders	10	<i>n.a.</i>	1.5	
	5.4	Liaison with authorities and traders	Presence of numerous, diverse and regular traders	---		---	
Summary for Goal 5						Average GAS score	3.25
						Weighted average GAS score	2.31
6	6.2	Assess & communicate full outcomes of farm forestry	Feasibility studies conducted on the full costs & benefits associated with farm forestry & results communicated	8	<i>n.a.</i>	2	
	6.4	Develop the social capacity of communities	Capacity of communities enhanced to adapt to changing circumstances, and adopt farm forestry if desirable	3	<i>n.a.</i>	4.5	
Summary for Goal 6						Average GAS score	3.25
						Weighted average GAS score	2.68
7	7.1	Work with relevant authorities to overcome institutional & regulatory impediments	Planning guidelines for farm forestry development with government to address concerns	3	<i>n.a.</i>	4	
	7.3	Build and maintain effective partnerships with local government	Partnerships fostered with local government	4	<i>n.a.</i>	3	
Summary for Goal 7						Average GAS score	3.5
						Weighted average GAS score	3.43
8	8.1	Develop environmental guidelines of farm forestry 'best practice'	Environmental guidelines developed that meet farm forestry 'best practice' standards	6	<i>n.a.</i>	2.5	
			Widespread acceptance of definition of 'best practice' farm forestry	9	<i>n.a.</i>	1.5	
	8.3	Liaison	Adoption of farm forestry systems that are consistent with the environmental 'guidelines'	3	<i>n.a.</i>	4.5	
Summary for Goal 8						Average GAS score	2.83
						Weighted average GAS score	2.33
Overall summary for project						Average GAS score	3.19
						Weighted average GAS score	2.72

10 Sources of information

10.1 References cited in this booklet

- Abbot, J. & Guijt, I. (1998) *Changing views on change: Participatory approaches to monitoring the environment*. SARL Discussion Paper 2, International Institute for Environment and Development: London, UK. pp. 96.
- CSIRO Land and Water (1998) *Self-Help Evaluation Framework for Integrated Catchment Management*. CSIRO and Land & Water Resources Research & Development Corporation: Canberra.
- Guijt, I. (1998) *Participatory monitoring and impact assessment of sustainable agriculture initiatives: An introduction to the key elements*. SARL Discussion Paper 1, International Institute for Environment and Development: London, UK. pp. 112.
- National Landcare Program Evaluation Coordinators (NLPEC) (undated) *Setting up for Success – a guide for designing, managing and evaluating projects*. National Landcare Program [Available at <http://www.landcare.gov.au/landcare/pub/success.html>]
- Donaldson, JD & Gorrie, G. (1996) Farm forestry policy. *Proceedings of Australian Forest Growers Conference*, Mt Gambier, September 1996.
- Wadsworth, Y. (1991) *Everyday evaluation on the run*. Action Research Issue Association Inc, Melbourne. Pp. 89.
- Woodhill, J. & Robins, L. (1998) *Participatory evaluation for Landcare and catchment groups: A guide for facilitators*. Greening Australia Ltd., Canberra. pp. 54 [Available at www.greeningaustralia.org.au]

10.2 Other useful references

Dept of Finance and Administration (1998). *Specifying Outcomes and Outputs: Implementing the Commonwealth's Accrual-based Outcomes and Outputs Framework*. ISBN No. 0642 37318 3

Appendix 1: Brief introduction to evaluation concepts and terms

Evaluation of our own work is essential for improving how we plan, implement, adapt and assess our performance. It is an important part of continuous improvement. Those managing or coordinating farm forestry activities within the region have a direct need to undertake skilled evaluations of farm forestry development, yet many others can also benefit from being involved in the evaluation process. Self-evaluation is a way of 'learning from doing'. Involving a range of people who are participating in regional farm forestry development is a way of creating participatory monitoring and evaluation (see Box 5, below).

Box 5 : Participatory monitoring and evaluation

Monitoring and evaluation (M&E) can be so much more than just a process for accountability. It can be the basis for self-reflection and learning what works best, how to improve performance and reveal any unexpected outcomes. Actively involving those contributing to regional farm forestry in the M&E process allows a wide range of people to benefit from self-reflection rather than simply the project manager. In short, participatory M&E can greatly enrich the project. The active involvement of a range of project participants in the M&E process can provide the benefits of:

- greater self-reflection – different perspectives will more accurately reflect multiple views on what is considered 'successful'
- responsibility by participants for project success – data collected will more likely be personally relevant for different project stakeholders

Issues that need to be considered very carefully when planning participatory M&E are:

- who will use the information?
- who should be involved?
- what is the purpose of M&E?
- what data should be collected?
- what accuracy is necessary?
- can the data be aggregated?
- what finance and time are needed?
- who owns the data?
- who should manage/coordinate the M&E?

Additional reading: Abbot & Guijt (1998); Guijt (1998).

Evaluation terms

Every field of endeavour has its own terminology and monitoring and evaluation is no exception. It is important to be clear what the various terms mean, especially since the same words are used more loosely in everyday language (Woodhill & Robins 1998). Here we define common evaluation terms, in alphabetic order.

- **Activities** - the activities that are carried out to meet the project objectives.

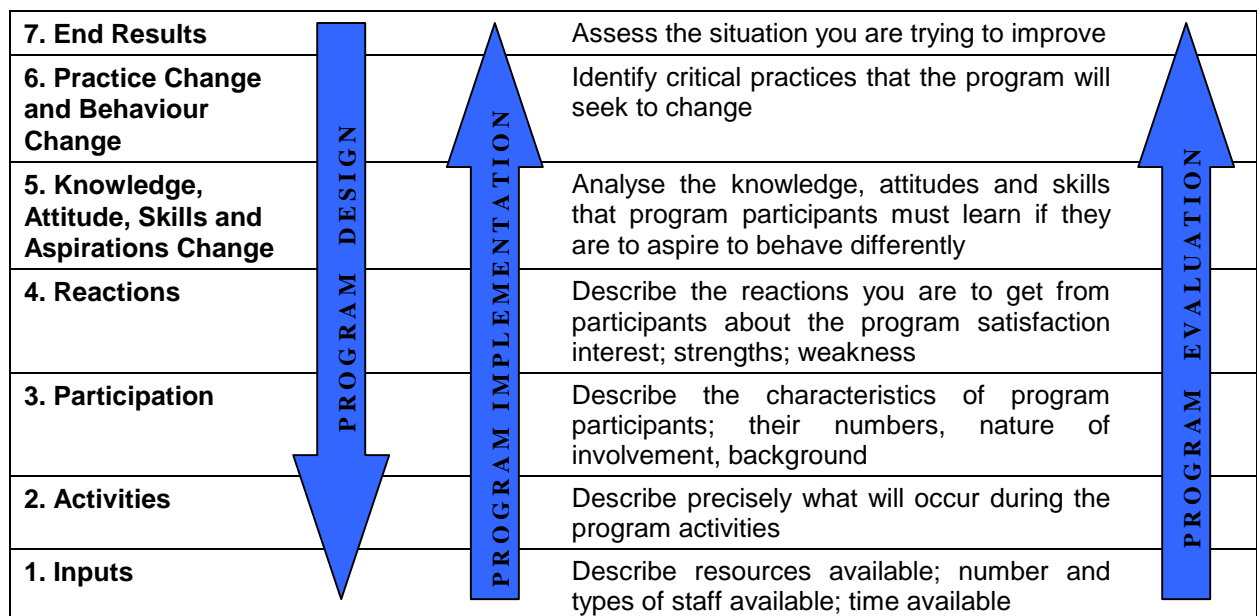
- **Benefit Cost Analysis (BCA)** – a conceptual framework for the economic evaluation of investments – compares the sum value of benefits (often anticipated) against the sum value of costs (regardless of to whom the benefits or costs may accrue).
- **Benchmarking** – the process of assessing performance against targets or milestones.
- **Best practice** – the standard or requirements considered necessary for the best performance within a field or discipline.
- **Evaluation** – a systematic, objective assessment of the appropriateness, effectiveness or efficiency of a project. In other words, a periodic but comprehensive assessment of the overall progress and worth of a project.
- **Goals** - general statements about what your project aims to achieve in the long-term (eg. say after 5-10 years), or even after the life of the project; these are ‘desired short-term Outcomes’. In defining the desired Outcomes, it is important to also consider in more detail how success or achievement of each outcome will be recognised. This is termed defining the ‘attributes of successful outcomes’.
- **Indicators** - the specific characteristics or phenomena that tell you about the progress of a project and what impact it is having on the problem or issue it was set up to tackle - e.g., change in tree cover, level of soil salinity, attendance at a field day, comparison of budgeted to actual expenditure.
- **Inputs** - the resources used to achieve the objectives (time, effort, money, skills, equipment, and materials).
- **Monitoring** - the regular gathering and analysing of information that is needed for evaluation or project management.
- **Objectives** - specific statements about what your project will achieve in the short-term (eg. say 1-3 years) within the life of the project. Objectives can be viewed as a stepping stone towards achieving your long-term goals; they are the ‘desired Outputs’.
- **Outcomes** (sometimes referred to elsewhere as *impacts*) - the results or consequences of the activities or the products of a project. There can be short-term and long-term outcomes from a project, and these may have been intended or unintended.
- **Outputs** - the activities completed or products made during a project; these are the *Objectives* that have been achieved.
- **Performance indicator** - a specific type of indicator that looks at achievements to see if the project’s objectives are being met.
- **Project** - a set of tasks or activities carried out by a group to tackle a particular problem or issue. Each project has a logical sequence of intended *outcomes* - sometimes described as the *project logic*.
- **Project logic** - helps clarify how best the project should be developed if the project logic is written down and periodically referred to. Sometimes the intended outcomes aren’t always clear to everyone involved, leading to confusion and misunderstanding on how to allocate a project’s resources. Identifying the project logic together with the key project participants is often an important starting point for improving monitoring and evaluation. Understanding and describing the project logic can also be applied for analysing more general and ‘big picture’ regional development – such as with farm forestry. That is, understanding the ‘logic’ of development efforts helps to explain how inputs/outputs and activities lead to the desired long-term outcomes (refer to Figure 3.2).

Appendix 2: Bennett's Hierarchy

Bennett's Hierarchy is a frequently used framework for evaluating extension programs in agriculture and natural resource management. The hierarchy is a series of seven progressive levels of program impact and chain of events that must occur to achieve the outcomes desired for the program.

The chain of events begins with the expending of resource *inputs* such as funding and staffing; these in turn result in *activities* that involve *people* (ie the program's clients and participants). These people have *reactions* resulting from the activities, leading to a change in their *Knowledge, Attitudes, Skills and Aspirations (KASA)*. When the people use these KASA changes in their lives and farm management they bring about *practice change*, and it is these on-ground changes that lead to the desired *end results* (i.e, outputs and outcomes).

Diagram of Bennett's Hierarchy



Appendix 3: Benefits of an effective evaluation framework identified by regional farm forestry groups

Regional farm forestry groups have identified (as part of the consultation process that developed this Framework) the following specific benefits that will result from an effective evaluation framework:

Evaluation framework

- 1 A process for evaluation that shows how to go about doing what
- 2 Show how stakeholders can be involved and make inputs throughout the project cycle
- 3 Provide robust and efficient Performance Indicators for farm forestry activities
- 4 In particular, provide simple, practical tools for measuring the important 'intangibles'
- 5 Increasing farmer confidence in FF
- 6 Increase in skills and understanding of FF influencers (bankers, advisers, consultants, accountants)
- 7 Make it easy for FF groups to copy down 'template' framework elements, PI, and methods that they can modify and use to avoid 'reinventing the wheel'
- 8 Gain credibility through using a rigorous, thorough, 'bottom-up' process

Project planning

- 9 Help clarify visions and objectives of various stakeholders
- 10 Provide a consistent approach to project planning and evaluation

Role of monitoring and evaluation

- 11 Show how evaluation fits into the project investment planning cycle, and provides a feedback loop to produce better projects
- 12 Result in sharing of knowledge and experience about the benefits of evaluation feeding back into designing better projects

Reporting

- 13 Simplify reporting, and enable easier reporting to different Departments and investors
- 14 Lead to unified reporting – 1 format for all investors

Using monitoring and evaluation information

- 15 Provide easy access to performance information for the groups themselves and for investors
- 16 Enable easier integration of the statewide FF picture
- 17 Inform a national benchmarking of process and performance between groups [*provided regional contexts and perspectives are respected and the evaluation data are not mis-interpreted*]
- 18 Assist the correct attribution of performance to the inputs from specific funding sources
- 19 Provide a clear way to evaluate holistically – 'whole industry, whole region'

Process for continuous improvement

- 20 Facilitate the sharing of knowledge and experience between groups tackling related issues or challenges
- 21 Facilitate communication within regional groups

Appendix 4: Checklist for high quality information delivery

Features of projects that are effective at providing good advisory and information services and that empower the target audience to improve farm forestry practices, include:

- Providing easily understood and accurate information with practical advice.
- Using written information presented in easily understood language with illustrations and local case studies.
- Presenting information which directly addresses important regional issues.
- Using a variety of approaches for providing advisory and information services that are frequently pre-tested amongst the target audience.
- Refining the advice and information following feedback from the target audience.
- Combining resources with complementary organisations (eg. state agencies) to achieve a greater impact upon the target audience.
- Linking with existing resources (eg. local newspapers, radio) and events (eg. annual regional shows).
- Seeking the views of a ‘critical reference group’ in developing and providing advice and information (eg. use ‘peer review’ process when producing technical information).
- Responsiveness to queries (eg. approachability).
- Providing information within a whole-farm context (accounting for production, financial, environmental, social and personal pressures that farmers face).

Users can add to this checklist with experience. Benchmarks can be added when necessary and when the performance context is understood.

FORM B: Questions for inclusion on the course review for participants

No.	Outcome No.	Question/Issue
		Name of participant Business Trading Name Farm Location: Postcode
1.	3.3	<p>Did you identify the need to undertake this learning activity as part of a planning process (eg. FarmBis skills audit or PMP skills audit)</p> <ul style="list-style-type: none"> • Yes PMP Yes / No Other Yes / No • No
2.	4 7 4	<p>This learning activity is subsidised by the FarmBis Program by%.</p> <p>In future, would you be willing to pay the full cost of training similar to this?</p> <ul style="list-style-type: none"> • Yes • No <p>Do you believe that you got value for money for what you actually paid?</p> <ul style="list-style-type: none"> • Yes • No
3.	8.4	<p>Overall, how satisfied are you with the quality of the course content, materials and delivery by the training provider (using a 5-point Likert Scale helps clarify the degrees of people's responses, as shown below)</p> <ul style="list-style-type: none"> • very dissatisfied • somewhat dissatisfied • neither satisfied nor dissatisfied • somewhat satisfied • very satisfied
4.	8.6	<p>Overall, would you rate this learning activity as relevant to your business (Likert Scale)</p> <ul style="list-style-type: none"> • strongly disagree • mostly disagree • not sure • mostly agree • strongly agree
5.	8.4	<p>Overall, would you say this learning activity met your needs (Likert Scale)</p> <ul style="list-style-type: none"> • strongly disagree • mostly disagree • not sure • mostly agree • strongly agree
6.	8.6	<p>How long have you been a farmer or worked in agriculture? years</p>

No.	Outcome No.	Question/Issue
7.	2	<p>Are you involved in making management decisions on the farm</p> <ul style="list-style-type: none"> • yes • no
8.	8.5	<p>Did you attempt to influence the training delivery offered</p> <ul style="list-style-type: none"> • Yes • No
9.	8.5	<p>Did you receive assistance in attempting to influence the training delivery</p> <ul style="list-style-type: none"> • Yes • No
10.	8.5	<p>If you did attempt to influence the training delivery offered, what changes did you ask for:</p> <ul style="list-style-type: none"> • time • location • course content • training deliverer
11.	8.5	<p>After attempting to influence the training delivery, what changes did you get:</p> <ul style="list-style-type: none"> • time • location • course content • training deliverer • mode of delivery (group, individual, <i>other examples to be included</i>) • none
12	8.8	<p>Overall, how satisfied are you with the quality of the service provided by the FarmBis Coordinator (eg were they knowledgeable, helpful, responsive, or provide consistent advice) (<i>tick one only</i>)</p> <ul style="list-style-type: none"> • very dissatisfied • somewhat dissatisfied • neither satisfied nor dissatisfied • somewhat satisfied • very satisfied
13.	8.6	<p>Optional Question if a Participant considers that they fall within one or more of the following specific equity groups on the basis of either: gender, age, NESB or indigenous considerations.</p> <p>Overall, how satisfied were you with the training in meeting your specific equity needs. (<i>tick one only</i>)</p> <ul style="list-style-type: none"> • very dissatisfied • somewhat dissatisfied • neither satisfied nor dissatisfied • somewhat satisfied • very satisfied

FORM C : Questions for inclusion on the trainer form

Trainer/Administrators to complete after provision of activity

No.	Outcome Number	Question/Issue	Data Source	
			Trainer	Admin
1.	9.2 9.2	Cost <ul style="list-style-type: none"> • FarmBis subsidy • Other subsidies 	Trainer	Admin Admin
2.		Name of training course	Trainer	
3.	8.3	<ul style="list-style-type: none"> • Individual training provider 	Trainer	
4.	8.3	<ul style="list-style-type: none"> • Training Company 	Trainer	
5.	8.6 9.2	<ul style="list-style-type: none"> • Topic (<i>Using agreed keywords</i>) 	Trainer	
6.	8.6	<ul style="list-style-type: none"> • Location of training: Postcode 	Trainer	
7.	8.6 9.2	Delivery method <ul style="list-style-type: none"> • workshops/ seminars • field trip/demonstration • conferences/industry meetings • correspondence courses • consultancy • short courses, ie TAFE, Agricultural College, University 	Trainer	
8.	9.2	<ul style="list-style-type: none"> • Duration of training (hours) 	Trainer	
9.	9.1	<ul style="list-style-type: none"> • Date course commenced 	Trainer	
10.	9.1	<ul style="list-style-type: none"> • Date course ended 	Trainer	
11.		<ul style="list-style-type: none"> • List of participants 	Trainer	

Two-Three Month Follow-up Survey

No.	Outcome Number:	Question/Issue
1.	7	<p>Did any of the following influence your decision to enrol (Yes/No)</p> <ul style="list-style-type: none"> • Cost of the course was subsidised • Delivery mode (eg. flexible, small group) • It was targeted to my group (eg. women, NESB, indigenous group) • Employer • Location • Course provider's reputation • Recommendation of past participants • Course seemed relevant to my needs or situation • Child care was available • The time of the sessions (Time of day or year) • Opportunity for social interaction with other participants • Other
2.	2	<p>What barriers are there that might prevent you from implementing what you have learnt (Yes/No)</p> <ul style="list-style-type: none"> • Need to do other things first • Lack of resources • Wrong time of year • Too costly • Lack of information • Need extra skills • Doubt the likely success of change • The training knowledge and skills are not relevant to my situation • I have no influence over the farm decision making process • Other
3.	11.1	<p>Overall, how satisfied are you with the quality of the service provided by the Program Administrator (State authority or whatever) (eg were they knowledgeable, helpful, responsive, or provide consistent advice)</p> <ul style="list-style-type: none"> • very dissatisfied • somewhat dissatisfied • neither satisfied nor dissatisfied • somewhat satisfied • very satisfied
4.	8.6	<p>Did you experience any unreasonable delays with</p> <ul style="list-style-type: none"> • FarmBis Coordinator or FarmBis Coordination (Yes/No) • Training Provider (Yes/No) • Program Administrator (Yes/No)

Notes

Form A

Question (iii) - Postcode will suffice as a description of farm location.

Question (iv) – States requested to collect telephone numbers, although they won't have to be provided to the C/W for the database, it's to enable telephone surveys to be done.

Question 2 - The age ranges has been adjusted to fit in with ABS age ranges.

Question 3 - Left on Form A rather than moved to Course Review, as previously agreed at 28 May 1998 FEWG, as question forms part of equity information being sought with questions 1 & 2.

Question 5 - This has been reworded, to enable the administrators to make a judgement as to the scale of the operation. Having the year, the type of farm enterprise and the farm postcode, enables a judgement to be made as to whether external factors such as drought have affected their gross income.

(Note: Criteria to determine small/medium/large will be circulated separately.)

Form B

Questions 4 and 5 have been inserted on a Likert Scale.

Question 13 - new optional question to determine, if any participants who may identify with one of the equity needs covering either or gender, age, NESB or ATSI, whether the trainer/training delivery met their specific equity needs.

Form C

Question 5 - *Commonwealth and States still have to agree on the list of keywords and definitions that the training providers will use when describing what their course is about. Draft keywords will be circulated separately for State's comments.*

Question 6 - To collect the postcode where the training course was offered.

Two - Three Month Follow Up Survey

Question 4 - Added to cover reworded performance indicator for outcome 9.1.

Appendix 6 : Example questionnaire for training needs (Private Forestry Council, Victoria)

Name _____

Address _____

Postcode _____

Phone Number _____

Your Training Needs In Farm Forestry - Questionnaire

This questionnaire has been designed for busy people to fill out quickly. The information you provide will assist in the development of more effective training for people in the Farm Forestry area. All information supplied will be treated as confidential and your details are only required to identify regions and notify prizewinners.

Use ticks in the boxes provided and if you wish to change a response, cross out the incorrect tick and place a new one in the box you prefer. **Please tick only one box per question!**

1. Which of the following best describes your current position?

- Full time primary producer
- Part time farmer – resident on property
- Landholder/Investor not residing on property
- Investor /Interested person not currently a landholder

2. How would you describe your involvement in Farm Forestry?

- Interested but not active in any way
- Planning to become involved in the next two years
- Plantations on your property – mostly managed by someone else
- Currently involved – managing trees for commercial timber production

3. If you are currently involved in Farm Forestry which of the following plantation sizes best describes your situation?

- θ Less than 2 ha
- θ 2-10-ha
- θ 10-20 ha
- θ 20-40 ha
- θ 40 ha or greater

4. Please rate yourself in terms of your training needs in the following identified areas.

- θ Need lots of information (you don't have experience and don't know much about the subject)
- θ Need a little information (you could do with a little more information or a demonstration)
- θ Need no Information (you are experienced in this area or it is not relevant to your situation)

Planning	Need lots of Info	Need a little Info	Need no Info
Deciding if farm forestry is right for you (economic viability)			
The environmental need for trees on your property			
Deciding on your tree growing objectives			
Determining the tree growing species and techniques that best suits your needs			
Deciding what you will need to get Farm Forestry up and running on your property			
Deciding on your own ability to do the work			
Knowledge of local legal requirements			
Identifying and analyzing options for a Farm Forestry project			

Site Identification	Need lots of Info.	Need a little info	Need no info
Determining the characteristics of your site that will affect the project			
Designing a site plan for a farm forestry project			
Putting together an establishment plan including sustainable forest practices			

Site Preparation	Need lots of Info.	Need a little info	Need no info
Seed collection, propagation and care of seedlings			
Site preparation techniques including the use of heavy equipment			
Controlling weeds on site using chemical, biological and mechanical methods			
Tree planting techniques–Hand planting/Direct seeding/Mechanical Planting			
Applying appropriate fertiliser/Managing tree crop nutrition requirements			
Pest & disease identification and control			
Fire protection, response and management planning			

Maintenance	Need lots of Info.	Need a little info	Need no info
Weed control around established trees			
Manage tree re-growth (coppice)			
Fertiliser assessment and application in established trees			
Select trees for pruning			
Identification of trees for thinning/Fell trees for thinning purposes			
Manage tree crop (stand) health through identification of diseases & pests			
Assess volume of wood in stands to calculate yield			
Assess timber for grades and recovery potential			
Plan timber extraction activities			
Pruned Stand Certification			

Marketing	Need lots of Info.	Need a little info	Need no info
Identifying markets for your tree crop			
Arranging sale of recovered timber			
Marketing timber products			
Undertaking harvesting operations of mature stands			
Organising transport relevant to access and harvesting of stands			

Administration / Personal Skills	Need lots of Info.	Need a little info	Need no info
Budgeting and financial management			
Implement and maintain a quality management system			
Follow Occupational Health and Safety policies and procedures			
Planning retirement			
Administer your farm business. Business planning, monitoring/evaluation			
Managing and negotiating with staff and contractors			
Use computers to manage farm forestry			

Field Skills	Need lots of Info.	Need a little info	Need no info
Operating and maintaining farm forestry machinery			
Carry out basic fencing operations			
Operate and maintain chainsaws			
Use and maintain basic hand held farm forestry tools			

How would you prefer to learn about the information identified in question 3? Look at the list below and number your first, second and third preferences, by placing the numbers 1,2 or 3 in **only three** of the boxes.

For Example:

<input type="checkbox"/> Formal full time training	<input type="checkbox"/> Part time Training	<input type="checkbox"/> Short Course
<input type="checkbox"/> Seminars/Conferences	<input type="checkbox"/> Field Days	<input type="checkbox"/> Computer Aided learning /Internet
<input type="checkbox"/> Books/Kits/ Brochures	<input type="checkbox"/> Correspondence Courses	<input type="checkbox"/> Site visits

5. What previous learning methods or training activities have you found useful?

6. Do you have any comments you would like to make about your training needs in farm forestry?

Please check that questions 1-4 have been completed.

If you are interested in going into the draw for the pottiputki tree planter or the \$50 book voucher, please fill in your details on the front page.

If you do not wish to supply your details please provide your postcode only, so that regions may be identified.

When completed, place your questionnaire in the reply paid envelope supplied and drop it in a mailbox.

Thank you for taking the time to complete this questionnaire.

Appendix 7: Example questions

A: Example questions that could be used to plan a workshop, to analyse outputs and outcomes from a Farm Forestry group's activities.

1. How well were the regional context and the need for farm forestry defined before this program started?

Very well defined Well defined Broadly defined Partly defined Poorly defined

2. If required, how could the background information be improved?

.....

3. Were the Goals, Objectives and Activities of the program clearly defined?

Very well defined Well defined Broadly defined Partly defined Poorly defined

4. If required, how could the program be more clearly defined?

.....

5. On reflection, how appropriate were the Goals, Objectives and Activities of the program for farm forestry development in this region?

.....

6. On reflection, how realistic were the Goals, Objectives and Activities of the program given the level of resourcing and access to expertise?

.....

7. Was the target audience for the program clearly defined?

Very well defined Well defined Broadly defined Partly defined Poorly defined

8. On reflection, how appropriate was the target audience for the program?

.....

9. To what extent did the program meet the needs of the target audience?

Exceeded needs Met needs Met most needs Met some needs Didn't meet needs

10. If applicable, why do you think the program did not meet all the needs of the target audience?

.....

11. What are the greatest strengths/attributes of the program?

.....

12. What are the greatest constraints/limitations on the program?

.....

13. How could the program be improved?

.....

14. What have been the highlights of the program?

.....

15. What have been the lessons or findings of the program?
.....

16. In summarising the above information, how would you rate the overall performance of the program?

Performed very highly Performed highly Performed as expected Performed less than expected Performed poorly

B. Example questions that could be used in a mailed questionnaire.

1. Do you think farm forestry has potential in your region?

High potential Good potential.... Some potential.... Little potential.... No potential....

2. To what extent are you interested in farm forestry?

Very interested Interested Some interest Little interest No interest

3. What is the primary reason for your level of interest?
.....

4. To what extent do you feel farm forestry complements the other activities of your farm/business?

Highly complementary Largely complementary Mostly complementary Partly complementary Not complementary

5. To what extent do you feel informed of the long-term prospects of farm forestry for your farm/business?

Highly informed Well informed Sufficiently informed Partly informed Not informed

6. What has been the best source or sources of information for you about farm forestry?
.....

7. Who would you contact to receive further information about farm forestry?
.....

8. What additional information or training events would you like attend?
.....

9. What are the major opportunities for farm forestry for your farm/business?
.....

10. What are the major constraints of farm forestry for your farm/business?
.....

11. What is the type and extent of your investment in farm forestry?
.....

12. How important is farm forestry to your farm/business?

Very important Important Some importance Little importance No importance

13. If applicable, what type and level of investment would you consider in the future?

.....

14. Would you like to receive a summary of the results of this questionnaire? (If so, please note your name & postal address / email)

.....

15. Would you like someone to contact you to discuss any of your responses to this questionnaire? (If so, please note your name & contact details)

.....