

Outcomes-based evaluation of management for protected areas —a methodology for incorporating evaluation into management plans

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Abstract

Evaluation of management performance for protected areas is an essential ingredient of sound conservation management. Without evidence about the on-ground outcomes of management, it is difficult for managers and stakeholders to determine the extent to which management is actually achieving its objectives. The integration of evaluation programs into core management systems—such as management plans—offers a number of significant benefits for protected area management. In particular it:

- encourages the development of clear management objectives with articulated criteria against which management performance will be assessed;
- establishes programs of monitoring, evaluation and reporting to be undertaken as part of the prescribed actions under the plan, and so increases the likelihood that informed evaluations will take place; and
- allows the findings of evaluation to feed back into and guide ongoing management so as to progressively improve management performance.

This paper presents a methodology for incorporating evaluation of management outcomes into management plans for protected areas. The methodology is based on the approach being applied to the Tasmanian Wilderness World Heritage Area in Australia.

Introduction

Worldwide there is a growing expectation that the performance of management for protected areas should be able to be demonstrated through evidence of results rather than on the basis of educated guesses, 'gut feelings', or assurances of 'trust us we're the experts'. A number of protected area managers are responding to this call by seeking new ways to demonstrate management performance objectively. This paper examines the prevailing management system for protected areas and then presents a methodology for applying a better system of management which incorporates monitoring, evaluation, and reporting on management performance. The proposed methodology fosters adaptive management and continuous improvement in management performance, and is proving both practical and beneficial to management of the Tasmanian Wilderness World Heritage Area in Australia.

The ability to demonstrate the results or outcomes of management has many advantages. These include:

- providing feedback to management about the extent to which previous actions are achieving management objectives;
- providing the opportunity to learn from past management experience and so progressively improve management performance;
- providing a more informed basis from which to make ongoing management decisions and for allocating and prioritizing management effort and resources;
- providing the necessary link to public accountability and to those funding management by demonstrating the outcomes for expenditure on protected area management.

Why outcomes-based evaluation?

The purpose of management is to achieve objectives. This is the primary interest of governments, funding bodies and stakeholders. Consequently, the principal measure of management performance for protected areas should be the extent to which the management objectives are achieved. Evaluations that seek to demonstrate performance against management objectives should focus primarily on outcomes.

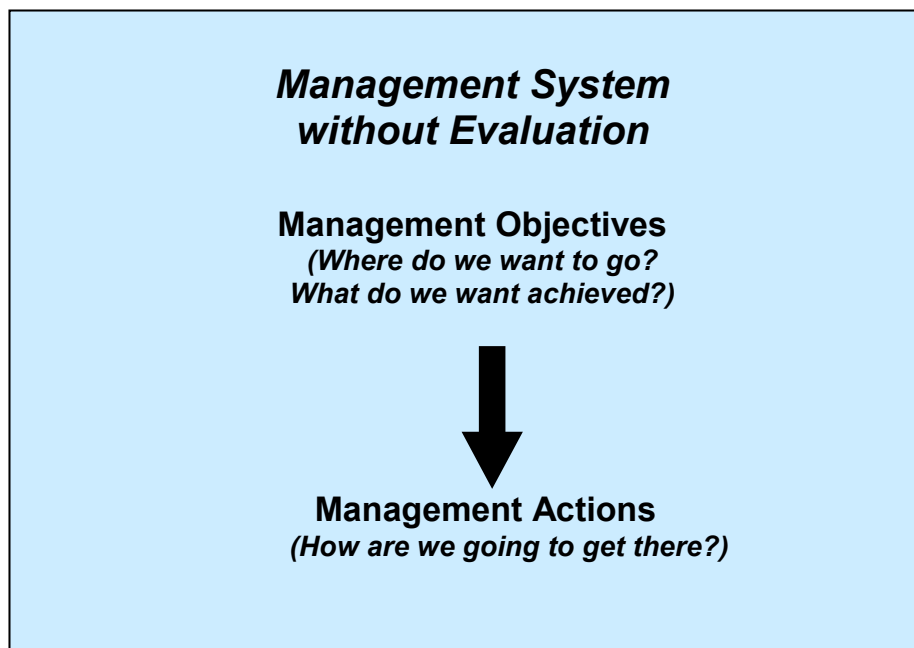
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Performance information about inputs, process and outputs can significantly contribute to an outcomes-based evaluation. This type of information is often of particular interest to the agency administering the funds for managing protected areas.

Management system without evaluation

Currently, few protected areas have management systems in place to monitor and evaluate the outcomes of management. Management of protected areas is typically based on a simple management system that consists of management objectives and actions that are considered appropriate to achieving those objectives (see Figure 1).

Figure 1: Management system without evaluation



Without a linked program of monitoring and evaluation to provide evidence about the outcomes of management, it is difficult to know the extent to which management actions are effective in achieving the objectives. Managers who rely on a management system without evaluation against objectives can, in a sense, be ‘flying blind’ and lack the necessary feedback to learn from, and improve on, past management approaches. In short, evaluation is needed to provide a reality check to show what worked, what didn’t, and to open the doors to better ways of achieving management objectives.

Evaluation of management performance can no longer be seen as an ‘optional extra’ but must be treated as a fundamental component of sound conservation management.

Management system with evaluation

The incorporation of an outcomes-based system of evaluation into management for protected areas provides a mechanism that reveals whether management actions are achieving the objectives. If the management objectives are regarded as ‘where we want to go’, and the management actions are ‘how we’re going to get there’, then evaluation provides the navigation system that reveals ‘where we are, and whether we’re getting where we want to go’ (see Figure 2). This process is consistent with

international standards for environmental management systems (e.g. ISO 14004:1996)¹.

Figure 2: Management system with evaluation

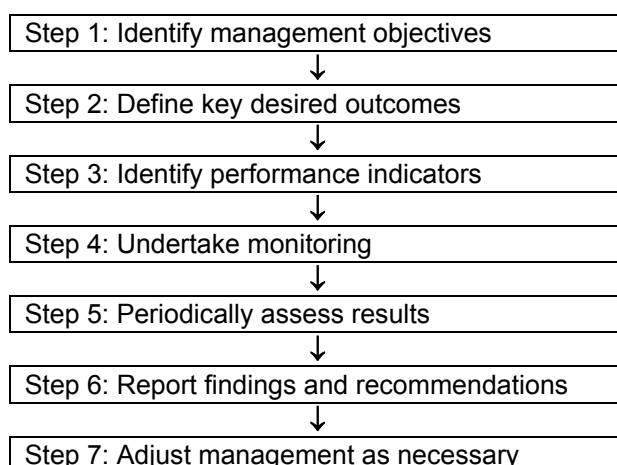


The seven key steps in an evaluative management system

The key steps in developing and applying a process of monitoring and evaluation that feeds back into management to improve ongoing management performance is outlined in Figure 3. As with all management planning, it is important to seek the involvement of relevant stakeholders in key aspects of this process.

¹ Standards New Zealand, Standards Association of Australia. Joint Technical Committee QR/11. Environmental Management Australian/New Zealand Standard. 'Environmental management systems: general guidelines on principles, systems and supporting techniques' AS/NZS ISO 14004:1996.

Figure 3: The seven key steps in an evaluative management system



These seven steps are discussed below in the light of experience gained from applying the approach to the Tasmanian Wilderness World Heritage Area.

- 1. Identify management objectives.** Objectives of management are usually based on legislation, corporate goals or other mandates (such as the obligations of World Heritage management). Objectives at this level are usually of a general or broad nature and require further interpretation to clarify their practical meaning with respect to a particular protected area. An example of this type of objective is: ‘To conserve natural biological diversity’.
- 2. Define key desired outcomes for each objective.** Clearly articulate specific tangible desired outcomes for each objective. These may be regarded as ‘mini vision statements’ that reflect a range of different aspects of each objective, and provide a practical interpretation of what each management objective would deliver if it were fully realised. This step helps to clarify what is meant by the objective and assists in setting defined goals. Statements of key desired outcomes help to focus management effort on achieving outcomes, and provide a basis for evaluating management performance.

In developing statements of key desired outcomes, it sometimes helps to consider the concepts of ‘maintaining what we’ve got’, ‘improving the current situation’ and ‘restoring the damage’. A cascade of statements may be required to deliver specific statements that have direct practical relevance to management of a particular protected area. In some circumstances, it may be appropriate and desirable to express key desired outcomes as targets or limits.

Key desired outcomes (KDOs) derived from the example objective cited above might include:

- **KDO 1.1:** Maintenance of the full range of species, communities, ecosystems, genetic diversity and biogeographic integrity. No loss of native species or communities.
 - The endangered ground parrot *Pezoporus dooinporli* has been delisted and viable populations now exist within and outside the park
 - The park continues to support secure populations of all other native flora and fauna.

- KDO 1.2: No establishment of introduced species due directly or indirectly to human activities.
- KDO 1.3: Restoration of natural biodiversity in formerly degraded communities or systems.
 - The feral population of goats in the Old Farm area has been removed
 - Populations of the lesser-spangled bandicoot have returned to the Old Farm area.

3. Identify performance indicators. Identify a range of performance areas and indicators that could potentially be measured to provide information about the extent to which each key desired outcome is being achieved (or is failing to be achieved). In developing performance indicators, it usually helps to ask: ‘how would we know if management was working well?’ And just as importantly, ‘how would we know if management was failing?’ The answers to these questions identify a range of outcomes that could realistically be anticipated, and usually suggest the sorts of performance areas and indicators that should be monitored to provide evidence about management performance.

Performance indicators related to an objective/key desired outcome are often quite site-specific and closely related to the management issues and values of the particular protected area. The identification of meaningful and practical performance indicators usually relies heavily on input from those with local management knowledge and/or specialised expertise. With knowledge and experience of the system, it becomes practical to set well-founded targets or limits for performance indicators.

Performance areas/indicators for the key desired outcomes cited above might include:

Indicators for KDO 1.1:	Changes in the conservation status of species in the reserve. - Changes in population parameters of selected species: distribution, abundance, fertility rates, etc. of <i>P. dooinporli</i> .
Indicators for KDO 1.2:	Changes in number, distribution, and abundance of introduced species. Changes in mapped areas free of introduced species. Evidence of new introductions of species.
Indicators for KDO 1.3:	Evidence of elimination of introduced species (goats) from the reserve. – Distribution and abundance of lesser spangled bandicoot in the Old Farm areas.

4. Put in place monitoring programs to collect data about selected performance indicators. Monitoring programs should be developed and implemented on the basis of the prioritised needs for performance information. Selection of the performance indicators to be monitored should be guided by the importance of the information in relation to the objectives of management, its usefulness in informing management decisions, and the practicality of its collection. It is often prudent to start with a basic monitoring program for a set of core indicators and to expand the monitoring program as appropriate. It is important to ensure that

baseline data are collected early in the management period so that changes in conditions over the management period can be detected. Evaluation methodologies and data need to be scientifically valid and stand up to external scrutiny.

5. Periodically assess the results being achieved against the desired outcomes.

Assessments should focus on the results achieved in relation to the stated objectives and key desired outcomes, and on identifying key factors that have helped or hindered management performance. Data inputs normally include both quantitative data (e.g. measured data about performance indicators) and qualitative data (e.g. critical comment about management performance by those with management responsibility and/or a legitimate evaluative role). It is often valuable to assess both relative performance (e.g. whether results have improved or deteriorated over the management period) and absolute performance (e.g. how satisfactory or unsatisfactory the current situation is in relation to goals). The inclusion of external participants in the assessment team (e.g. experts in particular management issues, or management advisory groups) can enhance the objectivity and/or credibility of the assessment and in some circumstances provide important additional information and insights that may not be readily sourced from within the management agency. Periodic assessments allow changes in the performance of management over time to be demonstrated.

6. Report the findings and recommendations of the evaluation to those who need to know, when they need to know.

Reports on the findings of evaluation should identify areas where management has been performing well (i.e. achieving objectives) as well as areas where management needs to improve. The reasons for areas of weak performance or critical gaps in information should guide the formulation of recommendations for improving ongoing management. Note that if early results show that current management is failing to achieve the objectives, it is essential that decision-makers get the facts when they need to know them and know what needs to be done to improve management. If the results of evaluations don't get back to and influence those who can change ongoing management, the benefits of evaluation can be lost. Reports on the performance of management are usually of interest to site managers, funding bodies, stakeholders and the public. It may be appropriate to tailor the method, style, and level of detail of reporting to meet the needs of different audiences.

7. Adjust ongoing management to better achieve the objectives.

The real test of an evaluation is the extent to which the findings feed back into, change and improve ongoing management performance for the protected area. Management processes must establish appropriate linkages to allow the findings and recommendations of evaluation to input to and influence decision-making that determines management actions, prioritisation and allocation of human and financial resources.

Benefits of integrating monitoring and evaluation into management plans

The integration of monitoring and evaluation into management plans for protected areas offers two significant benefits:

1. It gets monitoring and evaluation to happen

Worldwide experience demonstrates that even where adaptive management and continuous improvement in management are supported in principle too often, in practice, monitoring and evaluation programs are allowed to be displaced by other more ‘urgent’ (though often less important) day-to-day management activities.

The integration of monitoring and evaluation into core management systems for protected areas—such as the management plan—makes it more likely that monitoring and evaluation will be undertaken as part of the suite of ‘normal’ management activities.

2. It strengthens evaluations by providing for the collection of baseline data

Attempts to retrospectively assess the effectiveness of management are usually significantly compromised by the lack of baseline information about pre-management intervention conditions. The most valuable and informative evaluations occur when data about performance indicators have been collected before (or during the early phases of) active management so that ‘before’ and ‘after’ data can be compared and so allow for changes to be detected. The inclusion in management plans of prescriptions for the early establishment of monitoring programs for selected performance indicators paves the way for stronger and more meaningful evaluations of management performance.

Management plans with evaluation

A management plan, which incorporates an outcomes-based system of monitoring, evaluation and feedback that fosters continuous improvement in management performance, could be expected to include the following elements:

- Management objectives
- Statements of key desired outcomes derived from the objectives of management
- Prescriptions for management actions aimed at achieving the objectives
- Prescriptions for monitoring selected performance indicators to inform the evaluation of management performance
- Requirements for reporting on the performance of management (i.e. the findings of evaluation)
- Requirements for the periodic review of management and/or the management plan.

The 1999 Management Plan for the Tasmanian Wilderness World Heritage Area² provides an example of such a plan.

Discussion

Applying evaluation in diverse management contexts

The management context and funding levels for protected areas vary greatly and influence the capacity of a managing agency to monitor and evaluate management performance. Nevertheless, the process of evaluation presented in this paper is

² 1999 Parks and Wildlife Service. (Part of the Department of Primary Industries, Water and Environment). ‘Tasmanian Wilderness World Heritage Area Management Plan 1999’. Hobart, Tasmania. Also available as a downloadable document at www.parks.tas.gov.au/wha/whahome.html under ‘Management/Scientific and Technical Publications’.

applicable across a broad range of management contexts and budgets. Protected areas, which operate on a low management budget, could realistically only expect to implement a very limited monitoring program; however, even the establishment of one or two good monitoring programs for performance indicators, which address critical management issues, can provide extremely valuable feedback to management.

Monitoring and evaluation programs can be tailored to be as simple or complex as circumstances allow – simply start with the most critical and/or strategic monitoring programs and work out from there as circumstances permit.

How much detail to include in the management plan?

In developing a management plan that incorporates evaluation, the question arises as to how much detail of the performance indicators and monitoring program to include in the management plan itself.

Tasmania's experience suggests that in small or relatively simple management areas or those with low management budgets, the monitoring and evaluation program should be fully incorporated into the management plan. In other cases, and especially in the case of large or complex systems or areas with relatively high management budgets, it may be more appropriate to include in the management plan only the basic framework or core elements of the monitoring and evaluation program, and to detail and/or continue developing the performance indicators through a more flexible supporting document. This approach recognises that the current state of knowledge and experience in the use of performance indicators for protected areas is as yet rudimentary and in a state of rapid evolution. Where there is the capacity to continue developing and refining performance indicators and monitoring programs, it may be appropriate not to 'lock' these elements of the evaluation framework into the statutory management plan but to allow the performance indicators to be added, refined or deleted through experience. This approach is proving appropriate in the case of the Tasmanian Wilderness World Heritage Area (for further details, see Jones and Dunn (in prep.)³).

Other types of performance information

Priority for expenditure on evaluation programs should normally be given to monitoring and reporting on the outcomes of management. However, other types of performance information can also contribute significantly to an outcomes-based evaluation.

Performance information across a wide range of management inputs, processes, and external factors can be gathered very cost effectively by simply asking those with management responsibility and/or a legitimate evaluative role to identify the key factors that have helped or hindered management performance. This approach taps the insights, knowledge and experience of those in a position to know what really went on and what really affected management effectiveness. It also provides a powerful means of scanning and sorting through an enormous range of potential performance indicators that may be affecting management performance without incurring the expense of formally monitoring them.

³ Jones, Glenys and Dunn (Hocking), Helen (in prep) 'Experience in outcomes-based evaluation of management for the Tasmanian Wilderness World Heritage Area—a case study'. In *Evaluating Management Effectiveness – a Framework for Evaluating Management of Protected Areas*. IUCN World Commission on Protected Areas Management Effectiveness Task Force.

Other performance information that is often important for protected areas is the extent to which the plan's prescriptions have been implemented, and information about the financial and staff resources, and expenditure over the management period.

Practical benefits of evaluation programs

In practice, the application of an outcomes-based system of evaluating management performance for the Tasmanian Wilderness has resulted in a number of changes and benefits:

- Application of an evaluative approach to preparation of the management plan resulted in a more systematic and transparent linkage between the management objectives and the actions prescribed in the management plan. It also revealed several gaps that had previously existed between management responsibilities and management actions, which were consequently rectified.
- The simple knowledge that the management plan and its implementation are being monitored and reported has acted as a prompt to invigorate and maintain responsible officers' focus on implementing the management plan's prescriptions.
- Application of an evaluative approach to management is bringing about a change in the way managers are viewing their role and responsibilities. For example, it is assisting the agency culture in changing from one that in the past has not expected critical analysis of management performance to one with an increased emphasis on accountability for the results of management. There is a growing focus on being able to document and demonstrate the results of management, and declining reliance on 'trust us, we're the experts'.
- Involvement in the development of monitoring and evaluation programs is encouraging managers to take responsibility for, and pride in, the results achieved. Program managers have become more inclined to articulate and focus on the outcomes they are seeking, and to assess the quality of their strategies and actions in the light of these targets. Preparation of reports on the findings of evaluation is enabling those involved in work programs to see their work, alongside others', from a different and broader perspective, and to take pride in the contribution they are making to management progress.
- The opportunity for managers to provide critical comments (both positive and negative) on management performance places value on their knowledge and expertise, and allows them to contribute directly to improving ongoing management performance.
- The findings of evaluation have, in some cases, strongly influenced ongoing management decisions and allocation of management resources.
- The process and findings of monitoring and evaluation have in some cases 'taken the heat out' of management decision-making through the systematic collection and use of information for decision-making and the transparency of that process. In other cases, while not achieving resolution of controversial issues, the process has served to highlight social or political barriers to management effectiveness.

- The development and implementation of a system of evaluation for the Tasmanian Wilderness World Heritage Area is providing a model for the development of similar performance-based management approaches for other protected areas in Tasmania and elsewhere.

Encouraging wider application of evaluative management

National and international bodies and agencies with responsibilities or interests in protected area management could play a significant role in encouraging the wider application of evaluative management by taking a leading role in progressing the following initiatives.

Management planning manuals and guidelines

The adoption of an evaluative approach to management can be encouraged and assisted through the development of agency, state, national and/or international level planning manuals that guide the preparation of management plans for protected areas. The inclusion in generic planning manuals of guidelines, instructions and examples related to monitoring, evaluation and reporting on management performance can provide an effective means of accelerating the widespread application of evaluative management.

Performance standards for protected area categories

The development of performance standards for protected area categories can assist in focusing management effort on core obligations of management and — in the absence of more fully developed criteria — can provide a ‘default’ basis for evaluating management performance for protected areas.

In Tasmania, management standards for reserves are being developed to provide a general benchmark of the expected standards of management to be met in each type of reserve. The standards are based very closely on the objectives of management for the reserve category as specified in legislation. The standards provide a starting point for developing more detailed ‘key desired outcomes’ for particular reserves, and can assist managers in developing programs of monitoring, evaluation and reporting on management performance. In reserves for which there is no current management plan, the standards alone provide a basis against which to evaluate management.

The development of internationally accepted performance standards for protected area categories, such as World Heritage Areas, could significantly assist the application of performance-based management and provide a standardised basis for evaluating and reporting on management performance.

Reports on the state of protected areas

The development of agency, state, national and/or international requirements and protocols for reporting on the outcomes of protected area management could hasten the adoption of performance-based management. In some circumstances appropriate reporting vehicles may already exist that simply require adjustment to focus more strongly on the outcomes of management and on the state of conservation of the protected area.

Accreditation of protected area management

As performance-based management of protected areas becomes more widespread, a growing need for an independent system or process of quality assurance or accreditation for protected area management and evaluation of management performance will emerge.