

A user's guide to evaluating and improving management of protected areas —lessons from the Tasmanian Wilderness World Heritage Area

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Abstract

If the fundamental purpose of management is to achieve objectives, then the primary measure of management performance should be the extent to which the management objectives are achieved. Based on experience in the Tasmanian Wilderness World Heritage Area, this paper provides a simple yet robust system that allows protected area managers to undertake meaningful and credible evaluations of management effectiveness to inform adaptive management and continuous improvement.

CONTENTS

Introduction	1
Practical benefits of the evaluative approach	1
The Management Evaluation System	2
How the system works.....	3
Key documents that support the management evaluation system.....	4
Main inputs to the evaluation	4
Ten useful questions to address in evaluation	5
Delivering a credible evaluation	9
Keeping on track through change.....	11
Conclusions	13

Introduction

Evaluation of management effectiveness is an essential component of sound protected area management. As such, protected area managers have an important role to play in establishing systems that allow the effectiveness of management to be determined.

The Parks and Wildlife Service in Tasmania, Australia, has developed a practical system for evaluating and reporting on management effectiveness that is successfully operating in the Tasmanian Wilderness World Heritage Area. The system is simple and flexible and can be scaled up or down to suit a broad range of management contexts.

The system integrates performance monitoring, evaluation and reporting into the overall management cycle for the area through provisions in the management plan. Application of this 'outcomes-based' evaluation system to protected area management provides for informed and transparent management and can be expected to lead to better delivery of desired outcomes.

Practical benefits of the evaluative approach

The application of an evaluative approach to management in the Tasmanian Wilderness World Heritage Area (TWWHA) has proved to be both practical and beneficial to operational management of the area, and has attracted strong support from external stakeholders. The program has already resulted in a number of tangible changes and benefits including:

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Note that the views expressed in this paper are those of the author and do not necessarily reflect official views of the Tasmanian Parks and Wildlife Service.

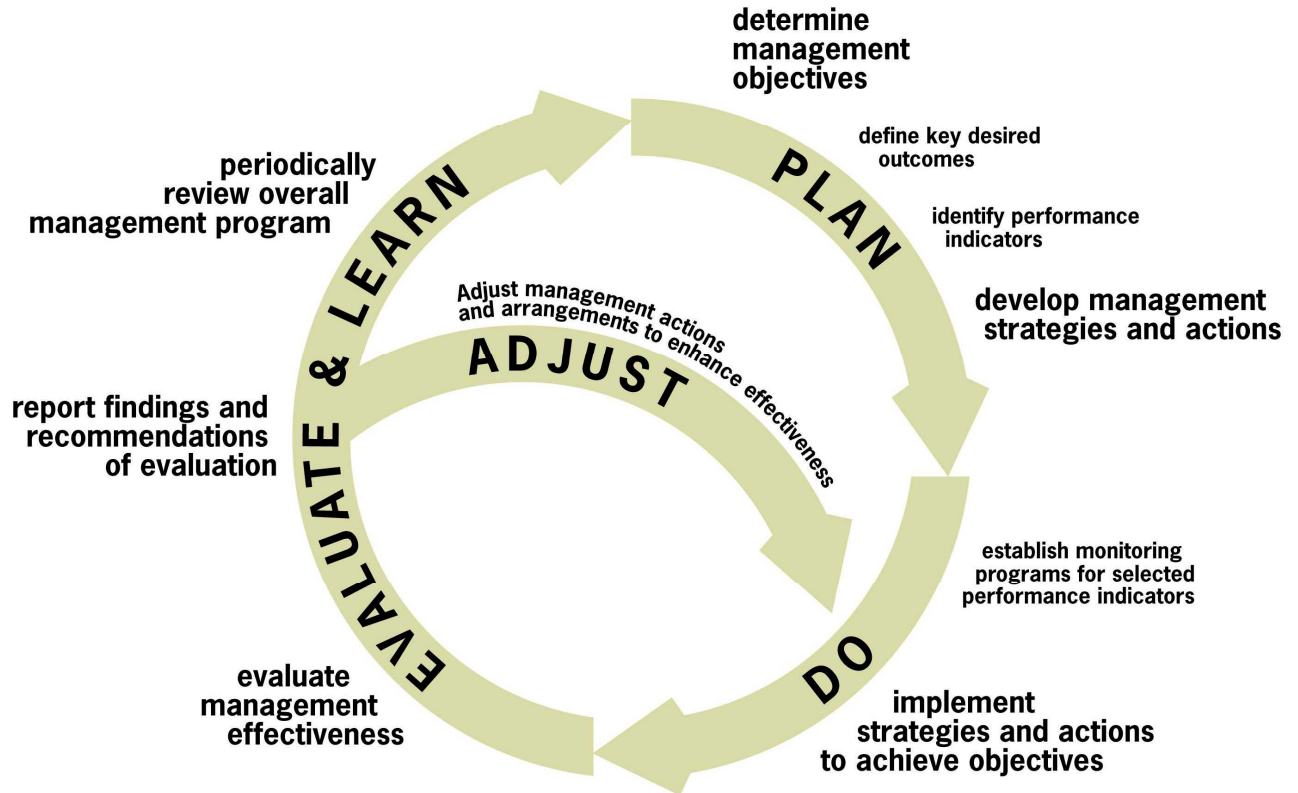
- Application of an evaluative approach to preparation of the 1999 TWWHA management plan resulted in a more systematic and transparent linkage between the management objectives and the actions prescribed in the management plan. In doing so, it revealed a number of gaps that had previously existed between management responsibilities and management actions, which were consequently rectified by the addition of prescribed actions in the 1999 management plan.
- The simple knowledge that the implementation and effectiveness of the management plan were being monitored and evaluated has in some cases acted as a prompt to invigorate and maintain staff's focus on implementing the plan's prescriptions.
- Application of an evaluative approach to management is bringing about a change in the way staff are viewing their roles and responsibilities. For example, staff are increasingly taking responsibility for articulating and focusing on the outcomes they are seeking, and assessing the quality of their strategies and actions in the light of these goals. There is a growing focus on being able to document and demonstrate the results of management and declining reliance on the paradigm of 'trust us, we're the experts'.
- The findings of monitoring and evaluation have in some cases strongly influenced management decisions and the allocation of management resources, eg. in the management of serious riverbank erosion on the lower Gordon River.
- 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 and/or political barriers to proposed management actions.
- Requirements for reporting on the performance of management are prompting the more systematic collection, collation and presentation of information. This information, in turn, is being made accessible to a broader audience. This shift in information management and sharing is not only benefiting stakeholders directly through increased transparency in management but is also proving to be of indirect benefit to researchers and managers who need others to understand the relevance of their work and their findings.
- The process of evaluating management performance is providing a basis for recognising excellence in management programs and strategies, and for recognising the people behind them.
- The development and implementation of a practical system of performance monitoring, evaluating and reporting for the TWWHA is providing a model for the broader application of performance-based management approaches and adaptive management in other protected areas in Tasmania, nationally and internationally.

The management evaluation system

The management evaluation system developed and applied in the Tasmanian Wilderness World Heritage Area is illustrated in Figure 1.

Figure 1. The management cycle, with integrated evaluation and adaptive management

The integration of performance monitoring, evaluation and reporting into the cycle of management for the protected area generates informed feedback that enables managers to learn from and improve on past management approaches and so progressively improve management effectiveness.



How the system works

The starting point in the management cycle is the development of the management objectives. The next step is to articulate these objectives in terms of tangible goals or 'key desired outcomes' to clarify what on-ground results would be expected if the objectives were fully realised. The inclusion of statements of key desired outcomes against the management objectives in the management plan ensures that these outcomes are subject to extensive public consultation and are formally endorsed as part of the management plan.

Once the key desired outcomes have been determined, a range of performance indicators is identified that could potentially be measured to reveal whether management is working well (ie. delivering the desired outcomes) or not performing well (ie. not delivering the desired outcomes or delivering undesired outcomes). Management strategies and actions are developed to achieve the objectives and monitoring programs are established for the highest priority performance indicators. The findings of these monitoring programs are collated and published in regular 'State of the Tasmanian Wilderness World Heritage Area Reports' as part of the overall evaluation of management effectiveness under the plan². These reports allow

² The first 'State of the Tasmanian Wilderness World Heritage Area Report' will be launched on 10 September 2004.

managers, funders and other stakeholders to see where management is in relation to its goals, and to guide the appropriate adjustment of management actions and/or arrangements to enhance the achievement of objectives. The management objectives themselves are normally only reviewed as part of the overall process of review of the management plan (which occurs every 5–10 years for the TWWHA).

Key documents that support the management evaluation system

There are two key documents that support the management evaluation system for the Tasmanian Wilderness World Heritage Area:

1. The management plan for the TWWHA; and
2. a linked 'State of the TWWHA Report', which evaluates the effectiveness of management under the plan.

The contents of the management plan include:

- the management objectives;
- clear statements of key desired outcomes from each objective;
- prescriptions for management strategies and actions to achieve the objectives;
- requirements for performance monitoring, evaluation and reporting;
- requirements for review of the management plan.

The contents of the State of the TWWHA Report include:

- evidence of management effectiveness;
- stakeholders' assessments of management performance;
- proposed actions for enhancing management performance.

State of the TWWHA Reports provide a tool that supports adaptive management and continuous improvement in management performance.

Main inputs to the evaluation

The main inputs to the evaluation of management performance are:

- scientific data and other measured evidence about performance indicators (especially in relation to the management objectives for protecting, conserving and rehabilitating the natural and cultural heritage³);
- information and professional opinions of experts (especially natural and cultural heritage specialists);
- the views of the general public and on-site visitors (especially in relation to the management objectives for presenting the natural and cultural heritage); and
- assessments and critical comment on management performance by internal and external stakeholders associated with the TWWHA.

Data and other inputs to the evaluation are gathered via targeted questionnaires to those who could provide relevant data and information about the performance indicators and/or who could play a legitimate role in providing informed and credible assessments and critical comment on particular aspects of management performance.

³ The Tasmanian Wilderness World Heritage Area was inscribed on the World Heritage List on the basis of both its natural and cultural heritage. The area satisfies all four World Heritage criteria for its natural heritage and three of the seven criteria for its (Aboriginal) cultural heritage.

Ten useful questions to address in evaluation

In developing and applying the management evaluation system for the TWWHA, a number of basic questions proved to be particularly useful. These ten questions are presented below, together with examples of their application in the TWWHA.

When developing statements of key desired outcomes:

Question 1. What would we expect to see if management was working well (ie. achieving the objective)?

Question 2. What would we expect to see if management was not working well (ie. not achieving the objective)?

Comment: One of the most fundamental elements of a management plan is the clear statement of the management objectives and the interpretation of what these objectives mean in terms of on-ground results or outcomes that are expected to be delivered. Questions 1 and 2 above assist in developing clear statements of ‘key desired outcomes’ against each management objective. Question 2 serves simply to identify important issues that should be addressed in the statements of key desired outcomes.

In poorly understood systems (e.g. many marine protected areas) there may be insufficient information available to be able to reasonably answer these questions. In this situation, consider asking “What do we need to know in order to answer the questions?” The acquisition of basic resource and/or process information may be one of the first management requirements for developing satisfactory statements of key desired outcomes.

Example of management objective and key desired outcomes

Objective 6: To present the natural and cultural heritage in ways that are compatible with the conservation of those values and that enrich visitor experience.

Key Desired Outcomes (KDO's)

KDO 6.1 Ecologically sustainable human use of the TWWHA.

KDO 6.2 High levels of community and visitor satisfaction with visitor facilities, services and quality of experience etc.

KDO 6.3 And so on.

When developing performance indicators:

Question 3. What can we measure to see whether desired outcomes—or undesired outcomes—are being delivered?

Comment: This question assists in identifying a range of potential performance indicators that could be monitored to reveal whether management is delivering the desired outcomes (i.e. achieving the objective) or not. Performance indicators can be any measurable feature or characteristic that provides feedback about management effectiveness and may include such diverse items as scientific parameters, periodic aerial or fixed point photographs, social survey results etc.

Tasmania's experience suggests that performance indicators that are meaningful to management of a particular protected area are often very specific to that particular area or issue, and so may have limited cross-site applicability. However some indicators that relate to widespread issues or species may provide the potential for comparisons between protected areas e.g. the results of public opinion polls.

Example of the use of performance indicators

Management of tourist boat operations on the Gordon River

Background

Research demonstrated that the wakes from tourist boats were causing serious ongoing erosion of the riverbanks of the lower Gordon River.

Performance indicators and targets

Condition indicator: rate of bank erosion (monitored through regular measurements of 250 erosion pins at some 50 sites along the river bank).

Target: No detectable vessel-induced erosion.

Pressure indicator: wake wave height (determined by measurements of wake wave characteristics).

Target: Total wake wave power less than the erosion threshold (presently estimated as 15 watts per meter in Zone 1 etc).

Management actions

Vessel speed limits were introduced and access restrictions were applied to the most vulnerable stretches of river. Licence conditions were introduced that required new vessels to have low wake hull design.

Outcomes

Riverbank erosion ceased in some areas and dramatically decreased in others.

Question 4. What are the highest priorities for monitoring and reporting?

Comment: Funding levels are rarely sufficient to support a full and comprehensive evaluation of all aspects of management. It is therefore essential to prioritise monitoring needs so that they will compete realistically alongside other demands on the total management budget.

Tasmania's experience suggests that it is prudent to start with a core set of key performance indicators, and to expand the monitoring program as time and experience dictate. Remember, you can't monitor everything!

When selecting assessors of management performance:

Question 5. Who can best provide a legitimate and credible assessment of management performance for each objective?

Comment: In addition to presenting measured data about performance indicators, evaluations need to provide an interpretation of whether or not the results achieved reflect a satisfactory standard of management performance. The use of a range of credible assessors to provide independent assessments and comment on management

performance for each objective or major area of management responsibility provides a transparent and credible means of making such judgements.

Example of assessors for respective management objectives

Objective to be assessed	Assessor/stakeholder
All management objectives	World Heritage Area Advisory Committee (an external group of scientific and community representatives for the TWWHA) Staff of the managing agency
Conservation and protection of the natural and cultural heritage	Natural heritage experts Cultural heritage experts
Aboriginal heritage management	Tasmanian Aboriginal Land Council (representative body of the Tasmanian Aboriginal community) Tasmanian Heritage Office (government agency)
Presentation of the natural and cultural heritage	Tasmanian public (through telephone polls of randomly selected residents by a market research firm) Visitor surveys
<i>Etcetera</i>	

When stakeholders are assessing management performance:

Question 6. Is the current state better or worse than it was at the beginning of the management period?

Comment: This question (which is asked for each major area of management responsibility) provides an assessment of relative performance i.e. whether the situation has got better or worse.

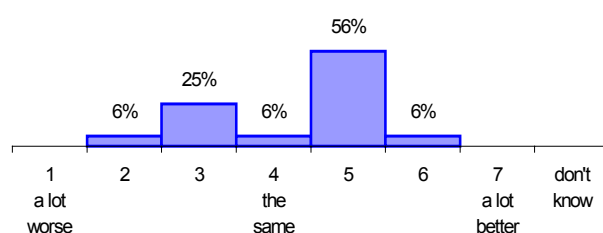
Question 7. How would you describe the current state?

Comment: This question provides an assessment of absolute performance i.e. how satisfactory or not the current situation is.

Example of stakeholders' assessment of management performance

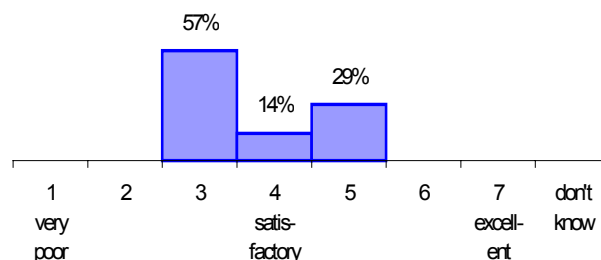
Protection and conservation of values—better or worse?

Q: Is the current state of protection and conservation of the values of the TWWHA better or worse than it was in 1992 (i.e. at the beginning of the management period)?



Current state of protection and conservation of values

Q: How would you describe the current state of protection and conservation of the values of the TWWHA?



The above charts show that the majority of the World Heritage Area Consultative Committee considered that the overall current state of protection and conservation of values of the TWWHA was better than at the beginning of the management period. However, the majority of the Committee also considered that the current state of conservation and protection was slightly less than satisfactory.

Question 8. *What were the key factors that contributed positively to management performance over the management period?*

Question 9. *What were the key factors that limited or threatened management performance over the management period?*

Comment: Questions 8 and 9 (which are asked of all assessors) provide a cost-efficient means of considering the full range of factors that might potentially have affected management effectiveness (eg management arrangements, inputs, processes etc) without incurring the significant costs of formal monitoring. This approach allows limited budgets to be focused on monitoring the condition of values, threats and outcomes.

Example of key factors affecting management performance

The following factors were identified by key stakeholders for the TWWHA as having affected management performance for the TWWHA over the 1992–1999 period.

Key factors that contributed positively to management performance included (in descending order of frequency of mention by stakeholders):

1. the level of Federal–State funding for management;
2. public support and cooperation in management;
3. good staff;
4. an effective World Heritage Area Consultative Committee;
5. a good management plan and key management strategies;
6. good science; and
7. no major wildfires over the period.

Key factors that limited or threatened management performance included (in descending order of frequency of mention by stakeholders):

1. inadequate resources and uncertainty of future funding;
2. inadequate community engagement and support;
3. political decisions were not always consistent with World Heritage management objectives;
4. slow response/low priority to management of impacts and threats to values;
5. inadequacy of fire management; and
6. delays with site plans.

Question 10. Are there any other comments or suggestions you would like to make for improving management performance?

Comment: The inclusion of an open question captures any other opportunities for improving management performance.

Delivering a credible evaluation

For any evaluation, there arises the question of who should conduct the evaluation. There are advantages and disadvantages with using either internal or external sources, and with using those with professional expertise in subject matter versus expertise in evaluation process.

Points in favour of the managing agency taking responsibility for the evaluation relate primarily to practical considerations regarding the ongoing nature and scope of the task. For example, in Tasmania's case, the managing agency could more readily:

- understand the management context, issues and the operational constraints of management and so tailor and integrate a practical program of performance monitoring and evaluation into ongoing management for the area;
- establish long-term monitoring programs for performance indicators which provide for more informed evaluations;
- maintain close ongoing liaison with managers, scientists and other specialists within the managing agency who hold most of the measured data and other information relevant to evaluation and who contribute directly to the preparation of the State of the TWWHA Report;
- access the professional and technical support available within the managing agency to collate and present the findings of the evaluation eg. GIS data manipulation and preparation of maps;
- liaise regularly with key external stakeholders closely involved in management of the TWWHA eg. the World Heritage Area Consultative Committee and Department of the Environment and Heritage (the federal agency with responsibilities for World Heritage management);
- develop in-depth detailed knowledge of the management system, issues and arrangements;
- ensure that data sets are maintained over the long-term;

- facilitate uptake of the findings and proposed actions from evaluation into ongoing management of the TWWHA, eg. through revision of successive management plans; and
- ensure long-term continuity and adaptation of the overall program of performance monitoring, evaluation and reporting for the TWWHA.

Points in favour of using external sources to conduct the evaluation related primarily to the objectivity and/or credibility of the findings. For example, independent evaluators could more readily:

- be more openly critical of the way an agency has performed (Government agencies can find this particularly difficult, especially in the event that the evaluation reveals that performance has been poor across several areas of management responsibility);
- bring new expertise or broader comparative perspectives from their more diverse experience in evaluation, which can be beneficial; and
- perform an audit-like function of overall management standards—something that is not possible from within a management agency.

The management evaluation system applied in the TWWHA attempts to optimise the use of both internal and external sources to deliver a rigorous, credible and practical evaluation of management effectiveness. The evaluation is coordinated by the managing agency; however, potential concerns about the objectivity and credibility of the evaluation are addressed in the following ways:

- An independent evaluation expert⁴ was involved in the early development of the evaluation framework, which ensured that all core areas of management responsibility were addressed.
- Extensive use is made of external sources closely involved in management of the TWWHA to provide independent assessments and critical comment on management performance. For example, sources include the World Heritage Area Consultative Committee; Department of the Environment and Heritage; and the Tasmanian Aboriginal Land Council.
- Independent consultants or market research firms are engaged to conduct surveys which directly measure public and/or on-site visitors' views and opinions about management performance (eg. telephone interviews of randomly selected Tasmanian residents were conducted by a market research firm to measure changes in public awareness and support for the TWWHA and their views about the Parks and Wildlife Service's performance; and on-site visitor surveys were undertaken by consultants to measure visitor satisfaction with their experience in the TWWHA).
- The World Heritage Area Consultative Committee is closely involved during the whole process of evaluation and through development of the State of the TWWHA Report, including being provided with successive (confidential) drafts of the report.

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In practice, the use of external sources for assessments and critical comment on management performance for the TWWHA has proved to be a valuable and important source of complementary inputs to those provided from within the managing agency. In some cases, the inclusion of external assessors has resulted in the capture of views and insights that might not have been readily sourced from within a managing agency.

Keeping on track through change

Institutional changes in management direction, priorities or focus have the potential to jeopardise long-term monitoring and evaluation programs. Such changes can render years of strategic planning, monitoring of performance data, and evaluation processes irrelevant, and can ultimately prevent consistent and meaningful evaluation of management performance. The experience of Tasmania's managing agency for national parks provides an insight into the factors that can assist long-term evaluation programs to stay on track through major institutional changes.

The Tasmanian agency for national parks is no stranger to change. In the 20 years between 1984 and 2004, the agency underwent five major institutional changes. The average lifespan of each agency was less than 4 years⁵. In addition to changes in the name of the department, there were varying degrees of associated change in departmental responsibilities, Ministers, departmental heads, staff, and internal structures and processes. These changes were typically accompanied by shifts in management direction, priorities and/or focus which typically resulted in some new management programs being initiated, some existing programs being continued, and other programs being terminated or allowed to lapse through staffing or budgetary constraints.

Factors that appear to have contributed to the continuity of successful long-term management programs are presented below together with implications for the management of intended long-term evaluation programs:

- The overall objectives of successful long-term programs were generally aligned to relatively stable mandates for management such as legislation, the obligations of the World Heritage Convention, the requirements of a statutory management plan, or the provisions of a long-term funding agreement. These long-term mandates provided a stable platform for overall management direction that served to minimise problems associated with 'shifting goal posts'. This observation highlights the importance of aligning long-term monitoring and evaluation programs to stable long-term management objectives.
- The professional and personal commitment, drive and continuity of key program staff often made the difference between a program surviving a period of destabilising change, and lapsing. Staff with a strong personal sense of purpose and commitment to their program were often able to sustain the program—at least in a basic form—through periods of significant setbacks such as staff losses, budget cuts, or simply not being 'flavour of the month'. When circumstances became more conducive to the program, these staff were able to revitalise the

⁵ 1972-1987 National Parks and Wildlife Service
1987-1989 Department of Lands, Parks and Wildlife
1989-1992 Department of Parks, Wildlife and Heritage
1992-1998 Department of Environment and Planning
1999-2002 Department of Primary Industries, Water and Environment
2003—present Department of Tourism Parks Heritage and the Arts

program and once again move forward. This observation highlights the importance to successful long-term evaluation programs of appointing professionally dedicated staff to key positions that have long-term tenure.

- Stakeholders sometimes played a crucial role during times of rapid change and institutional transition by voicing their support for the continuation of particular programs. This advocacy by stakeholders for supported programs provided an important buffer for those programs against the potentially adverse impacts of change. This observation highlights the importance of fostering both external and internal support networks for management and evaluation programs.
- Explicit requirements for reporting on management performance (e.g. the requirements for Periodic Reporting on World Heritage Areas under Article 9 of the World Heritage Convention) and community expectations for transparency and accountability in management contributed to the ongoing conduct of the performance evaluation and reporting program for the Tasmanian Wilderness World Heritage Area. This observation highlights the importance of establishing formal requirements and community expectations for regular reporting on management effectiveness for protected areas e.g. through legislative requirements for 'State of the Parks Reports'.
- Best practice guidelines, standards and other authoritative texts on protected area management (e.g. IUCN, ANZECC, and ISO) established expected standards of management which in some cases influenced the conduct and/or continuity of agency programs. This observation highlights the importance of protected area agencies being aware of, and having ready access to, authoritative guidance on sound management and evaluation practice e.g. through professional networks, conferences, web sites and publications.
- Positive feedback about management programs and achievements (e.g. through national or international awards for excellence, recognition by professional bodies or authorities, positive media coverage, and letters of support from stakeholders) reinforced recognition by stakeholders and the agency of the sound management approaches already being taken. This observation highlights the important role that positive feedback can play in fostering excellence in protected area management.

How can the findings of evaluation feed back into and improve management?

Evaluation provides those with management responsibilities for protected areas with an informed basis for making decisions. As such it is a tool that supports adaptive management and continuous improvement in management performance.

The findings and recommendations of evaluation can be used to improve future management of the protected area through:

- active consideration of the findings and recommendations by the managing agency and others with management responsibilities for the area;
- establishment of clear linkages between the findings of evaluation and budget processes and decisions in relation to management direction and priorities, and the allocation of financial and staff resources for management of the protected area;
- provision of ongoing support for management programs that have been demonstrated to be effective in achieving management objectives, and consideration of the relative merits of increasing or redirecting

management effort to—or from—areas of weak performance and/or low relevance to management objectives;

- targeting critical gaps in information required for sound management and addressing identified limitations of the evaluation; and
- taking account of the findings and recommendations of evaluation during revision of the management plan for the protected area and incorporating appropriate prescribed actions into the next management plan.

Conclusions

Application of an outcomes-based system of performance evaluation and reporting, such as described in this paper, can be expected to contribute to management excellence for a protected area by:

- guiding ongoing management directions and priorities for the protected area to better achieve objectives and deliver desired outcomes;
- providing managers and other decision-makers with a sound information base to support adaptive management;
- providing transparency in management and providing stakeholders with ready access to detailed information about management matters;
- contributing to informed public debate and involvement in management of the protected area.

Performance evaluation and reporting contributes to broader community understanding and involvement in management, and thereby paves the way for effective, community-supported management of protected areas.

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Note: A draft of this paper was originally prepared during the IUCN Vth World Parks Congress, Durban, South Africa, 8–17 September 2003 in direct response to delegates identifying an urgent need for a simple user's guide to evaluation that would allow park managers to apply evaluation in 'their' park.