

IUCN
WPC
005

Evaluating effectiveness

**A summary for
park managers
and policy makers**

Marc Hockings,
Sue Stolton
and Nigel Dudley

IUCN Bibliothèque
CH - 1196 Gland



IUCN
The World Conservation Union



Evaluating effectiveness

A summary for park managers and policy makers

Marc Hockings, Sue Stolton and Nigel Dudley

INTRODUCTION

A fundamental premise of protected areas is that they should remain secure in perpetuity, to conserve their biological and cultural values. However, there is increasing evidence of a serious breakdown in many protected area systems and as a result many individual protected areas are currently being degraded and destroyed. Some only remain secure by virtue of their remoteness – a situation likely to change. Recognition of the scale of problems facing protected areas has forced a reassessment of their design and management and recognition of the need for better knowledge about their status and the effectiveness of their management. Even, in countries where the prospects for protected areas seem more secure, the issue of management effectiveness is still a priority. Political and public support for protected areas cannot be assumed and there are increasing demands for all public programmes, including protected areas, to demonstrate their effectiveness. Managers want to know that their management activities are achieving desired results but, in most instances, they lack the information needed to make this assessment. An adaptive approach to management is impossible without this type of information. Many countries have no centralised source of information about the status of their protected areas, and there is often a poor understanding about what management effectiveness means and how it might be measured.

In 1997, IUCN's World Commission on Protected Areas (WCPA) set up a Management Effectiveness Task Force to focus attention on the issue of management effectiveness and to look at options for assessment. Marc Hockings carried out initial work for the WCPA Task Force on the topic in 1997 at the World Conservation Monitoring Centre in Cambridge, UK. Subsequently, through a series of workshops and meetings held in association with IUCN, WWF, the World Bank and the World Heritage Convention in the UK, Costa Rica, Thailand and Australia, an overall framework for assessment has been prepared.

The WCPA Framework has now been published by IUCN as part of the Best Practice Protected Area Guidelines Series (Hockings *et al*, 2000). This summary document provides an outline of the WCPA Framework presented in that publication and makes some suggestions about how this might be used in practice.

Copies of the English version of *Evaluating Effectiveness* along with a range of material on both the theory and practical application of the assessment of management effectiveness of protected areas can be found on the WCPA web site, <http://www.iucn.org/themes/wcpa/theme/effect/publications.htm> or can be ordered from the IUCN publications unit in the UK, email: info@books.iucn.org, fax: +44-1223-277-175.

THE WCPA FRAMEWORK FOR ASSESSING MANAGEMENT EFFECTIVENESS OF PROTECTED AREAS

Over the past decade, a number of methodologies for assessing the effectiveness of management of protected areas have been developed (see Hockings (2000) for a review of methodologies). These range from detailed monitoring systems, such as one implemented on Fraser Island National Park in Queensland, Australia (Hockings and Hobson, 2000) to a rapid assessment system developed by WWF to prioritise protected areas at risk within a national protected areas system. Most existing methods fall between these two extremes and aim to provide a reasonably quick overview of the strengths and weaknesses of a particular protected area. Six case studies outlining some of the main approaches that have been taken are included in Hockings *et al.* 2000. Other examples of management effectiveness assessment and related papers can be found in the June 1999 issue of PARKS devoted to this issue (PARKS, 1999).

It is clear different situations and needs require different levels of assessment, different approaches and different emphasis: thus one global assessment system is unlikely to be suitable for every situation. In particular, there will be major differences in the amount of time and money that is available to devote to assessment in different parts of the world and the issues that need to be assessed will tend to change from place to place. This was the reason why the WCPA Task Force concentrated on developing a 'framework' rather than attempting to develop a standard global methodology. The WCPA Framework aims both to provide some overall guidance in the development of assessment systems and to encourage basic standards for assessment and reporting. This is not intended to be a straitjacket that seeks to force assessments in a particular direction, but rather an overview that helps in the design of systems, provides a checklist of issues that need to be measured and suggests some useful indicators.

The Framework

The WCPA Framework is based upon the premise that the process of management starts with establishing a vision (within the context of existing status and pressures), progresses through planning and allocation of resources and, as a result of management actions, eventually produces goods and services. Monitoring and evaluation provide the link that enables planners and managers to learn from experience and helps governments, funding agencies and civil society to monitor the effectiveness of protected area networks. Assessment should ideally look at all aspects of the management cycle, including the context within which management takes place. It requires both monitoring and evaluation at various stages, each with a different type and focus of the assessment (see Table overleaf).

Figure 1 below presents a common framework within which evaluation and monitoring programmes can be established, combining context, planning, inputs, processes, outputs and outcomes.

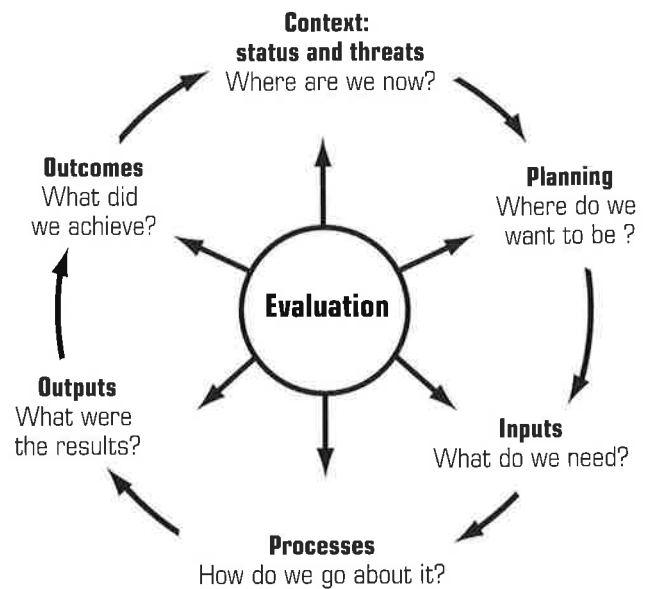


Figure 1. The management cycle

The elements to be measured

Design issues

Context – *Where are we now?*

This question looks at the conservation and other values of the protected area, the current status and the particular threats and opportunities that are affecting it, including the broad policy environment. This is not an analysis of management, but provides information that helps put management decisions into context. Where assessment is being used to identify management priorities within a protected area network, or to decide on the time and resources to devote to a particular protected area, this may be the main task required. It also helps to provide information about management focus. For example, if poaching is a major problem and there are no anti-poaching measures in place, then an important discrepancy has been identified; conversely the existence of extensive anti-poaching brigades when the poachers have moved on elsewhere may be a waste of resources.

Planning – *Where do we want to be?*

This question focuses on the intended outcomes for the protected area system or the individual protected area: the vision for which the system or site is being planned. Assessment may consider the appropriateness of national protected area legislation and policies, plans for protected area systems, the design of individual protected areas and plans for their management. It may consider the design of a protected area in relation to the integrity and status of the resource. The selected indicators for evaluation will depend on the purpose of assessment and particularly whether it is looking at a system of reserves or at an individual protected area. With systems, issues of ecological representativeness and connectivity will be particularly important; the focus of assessment of individual protected areas will be on the shape, size, location and detailed management objectives and plans. System assessments should consider, for example, if protected area systems omit or under-represent certain habitat types: and site assessments ask questions like whether the protected area is too small to protect biodiversity over the long-term.

Appropriateness of management systems and processes

Inputs – *What do we need?*

This question addresses the adequacy of resources in relation to the management objectives for a system or a site. Assessment is based primarily on measure of staff, funds, equipment and facilities required at either agency or site level along with consideration of the importance of partners.

Processes – *How do we go about it?*

This question is about the adequacy of management processes and systems in relation to the management objectives for a system or a site. Assessment will involve a variety of indicators, such as issues of day-to-day maintenance or the adequacy of approaches to local communities and various types of natural and cultural resource management.

Delivery of protected area objectives

Outputs – *What were the results?*

Questions about output evaluation consider what management has done and examine the extent to which targets, work programmes or plans have been implemented. Targets may be set through management plans or a process of annual work planning. The focus of output monitoring is not so much on whether these actions have achieved their desired objectives (this is the province of outcome evaluation) but on whether the

activities have been carried out as scheduled and what progress is being made in implementing long-term management plans.

Outcomes – *What did we achieve?*

This question assesses whether management has been successful with respect to the objectives in a management plan, national plans and ultimately the aims of the IUCN category of the protected area. Outcome evaluation is most meaningful where concrete objectives for management have been specified either in national legislation, policies or site-specific management plans. Approaches to outcome evaluation involve long-term monitoring of the condition of the biological and cultural resources of the system/site, socio-economic aspects of use, and the impacts of the management of the system/site on local communities.

In the final analysis, outcome evaluation is the true test of management effectiveness. But the monitoring required is significant, especially since little attention has been given to this aspect of protected area management in the past. Thus, the selection of indicators to be monitored is critical.

Evaluating management effectiveness

Ideally, systems for assessing management effectiveness will incorporate components covering each of the above elements, which are complementary rather than alternative approaches to evaluating management effectiveness. Time series data for both inputs and outputs within a protected area or system can be particularly valuable in assessing changes in the efficiency of management and may enable a judgement to be made about the effectiveness of a management change. However, assessments will be driven by particular needs and a partial evaluation can still provide very useful information.

What level of assessment is needed?

The WCPA Framework can be applied at different levels depending on circumstances, resources and needs. Three broad levels of monitoring and evaluation are proposed (Figure 2). Deciding on how much time and effort to spend is the first stage in any assessment and the detailed WCPA Framework contains a methodology for helping planners and managers to make this decision.

- Level 1 requires little or no additional data collection but uses available data to assess the *context* of the protected area network or individual site along with the appropriateness of *planning, inputs* and *processes* of management. It may include limited assessment of outputs.
- Level 2 combines the approach taken in Level 1 with restricted additional monitoring of *outputs* and *outcomes* of management.

- Level 3 emphasises monitoring the extent of achievement of management objectives through focussing on *outputs* and *outcomes* while retaining measures of management *context*, *planning*, *inputs* and *processes*. Level 3 assessments are directed mainly at site level.

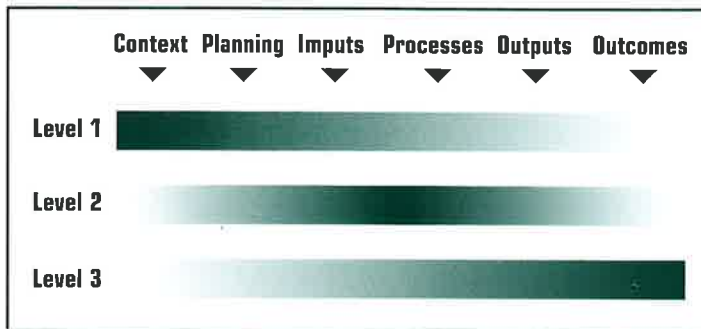


Figure 2. Levels of monitoring and evaluation

A project's objectives will often determine the level at which the WCPA Framework is applied. For example, an NGO reviewing a national protected area system for advocacy purposes is more likely to use a level 1 assessment, whereas protected area authorities trying to establish the effectiveness of individual sites would usually be better served by a level 3 assessment. Some assessment systems also focus almost entirely on outcome thereby shortcutting steps 1-5: only if the outcome is not being achieved are the earlier stages examined to see where the problem lies.

Table 1. WCPA Framework for assessing management effectiveness of protected areas and protected area systems

Elements of evaluation	Explanation	Criteria that are assessed	Focus of evaluation
Context	Where are we now? Assessment of importance, threats and policy environment	- Significance - Threats - Vulnerability - National context	Status
Planning	Where do we want to be? Assessment of protected area design and planning	- Protected area legislation and policy - Protected area system design - Reserve design - Management planning	Appropriateness
Inputs	What do we need? Assessment of resources needed to carry out management	- Resourcing of agency - Resourcing of site - Partners	Resources
Processes	How do we go about it? Assessment of the way in which management is conducted	- Suitability of management processes	Efficiency and appropriateness
Outputs	What were the results? Assessment of the implementation of management programmes and actions; delivery of products and services	- Results of management actions - Services and products	Effectiveness
Outcomes	What did we achieve? Assessment of the outcomes and the extent to which they achieved objectives	- Impacts: effects of management in relation to objectives	Effectiveness and appropriateness

In practice, a rough 'hierarchy' of assessment systems is already developing, ranging from country-level assessments of protected area systems through to detailed site monitoring, as summarised in Figure 3 below (with examples of current systems indicative of each level).

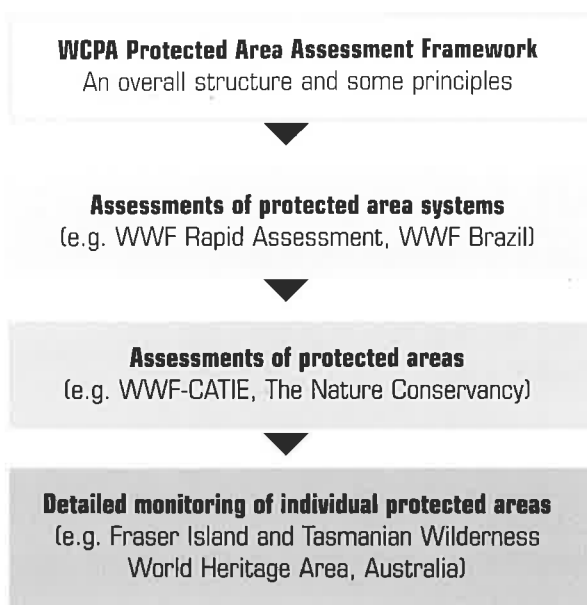


Figure 3. Hierarchy of Protected Area Assessment

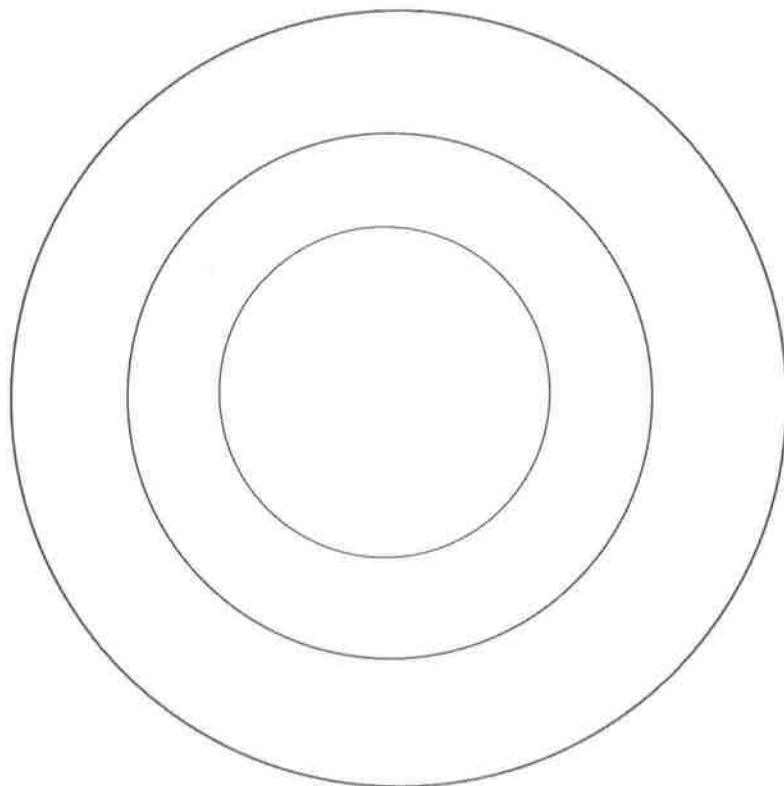
GENERAL PRINCIPLES

While the management effectiveness evaluation framework outlined here is designed to be flexible and accommodate different needs and circumstances around the world, there are general principles that apply to the way in which assessments should be conducted. These guidelines, which relate principally to the processes used in designing and conducting evaluations, are outlined in Box 1 (see overleaf).

CONCLUSION

The challenge for the future is to have these tools widely used and to have monitoring and evaluation established as an integral activity within protected area management. To do this several important factors will need to be in place.

Firstly, there is the need for increased **awareness**. The publication of the WCPA Framework and guidelines is one step towards promoting awareness of the benefits that come from such assessments and the various tools that are available to undertake them.



Secondly there needs to be a **willingness** to use such systems. Many NGOs have recognised the need for information on management effectiveness to assist them in their advocacy work and to help in setting priorities for funding and assistance to protected area systems and projects. International bodies (e.g. Conventions, IUCN and WCMC) have similar interests in the collection and application of this information at a global level for reporting, priority setting and decision making. Furthermore, some managers and management agencies have also recognised the potential for assessment systems to become an integral part of the way they manage – to provide a basis for adaptive management and reporting.

Thirdly there is **capacity**. When many protected areas around the world are suffering from a crisis of under-funding, there is a legitimate concern that requirements to undertake assessments of management effectiveness will just place a further burden on an already overtaxed system. But many of the approaches outlined here for rapid assessment can be part of the solution to this problem. Demonstrating the extent of under-resourcing and its impact on the achievement of the objectives for which the protected areas were established is a first step towards gaining the additional support that is required. Widespread adoption of the methodologies outlined in the WCPA Framework for assessment of protected areas will require a large training effort over many years. Establishing these methods within the curricula of training institutions will be essential to widespread adoption.

The whole question of management effectiveness has emerged from relative obscurity and gained a far higher profile in the last five years, as demonstrated by the number of new initiatives reported here. The test of the usefulness of this work will come from its application.

Box 1

General guidelines for evaluating management effectiveness of protected areas

The main objective of protected area evaluation is: *To improve conservation and management effectiveness of protected areas – both for individual protected sites and protected area systems.*

The findings of evaluation can be used to help managers improve on-going management of protected areas through adaptive management; to influence policy to improve protected area systems and management arrangements; and to provide accountability to, and raise awareness of, civil society.

Guidelines

The following **general guidelines** are suggested as a basis for assessment systems.

- Assessment systems should aim to be participatory at all stages of the process and should seek to involve all relevant organisations and individuals that may have a genuine and demonstrated interest in the management and/or use of a site.
- Assessment should be based upon a well-founded, transparent and comprehensible system. The findings should be readily accessible to all interested parties in a way that is appropriate to their needs.
- The management objectives and the criteria for judging management performance must be clearly defined and understood by the managers and assessors.
- Assessments of management effectiveness should focus on the most important issues – including threats and opportunities – affecting or potentially affecting the achievement of management objectives.
- Consideration of a range of factors (context, design, inputs, processes, outputs and outcomes) can all contribute to an assessment system.
- Performance indicators should relate to social, environmental and management issues, including the relationship between the protected area and its surroundings.
- Limitations of the evaluation should be clearly identified in the assessment report.
- The system should be capable of showing change over time through periodic assessments.
- In reporting on assessment, strengths and weaknesses should be identified and issues should be divided between those that are within and outside the manager's control.
- Assessment should allow prioritisation of conservation effort.
- Clear recommendations for improving management performance should be included in all assessments. Management processes should ensure that the findings and recommendations of evaluation feed back into on-going decision-making so as to improve management performance.
- The methodology for evaluation should be progressively verified and refined as necessary.
- Assessments should be based on sound and appropriate environmental and social science.
- Assessment is likely to include both quantitative and qualitative information that should be supported by measurement or other evidence.

DESIGNING AN EVALUATION SYSTEM

The WCPA Framework described previously provides a structure within which an evaluation system for a site or a protected area system can be designed. A process for developing such a system is outlined in Figure 4.

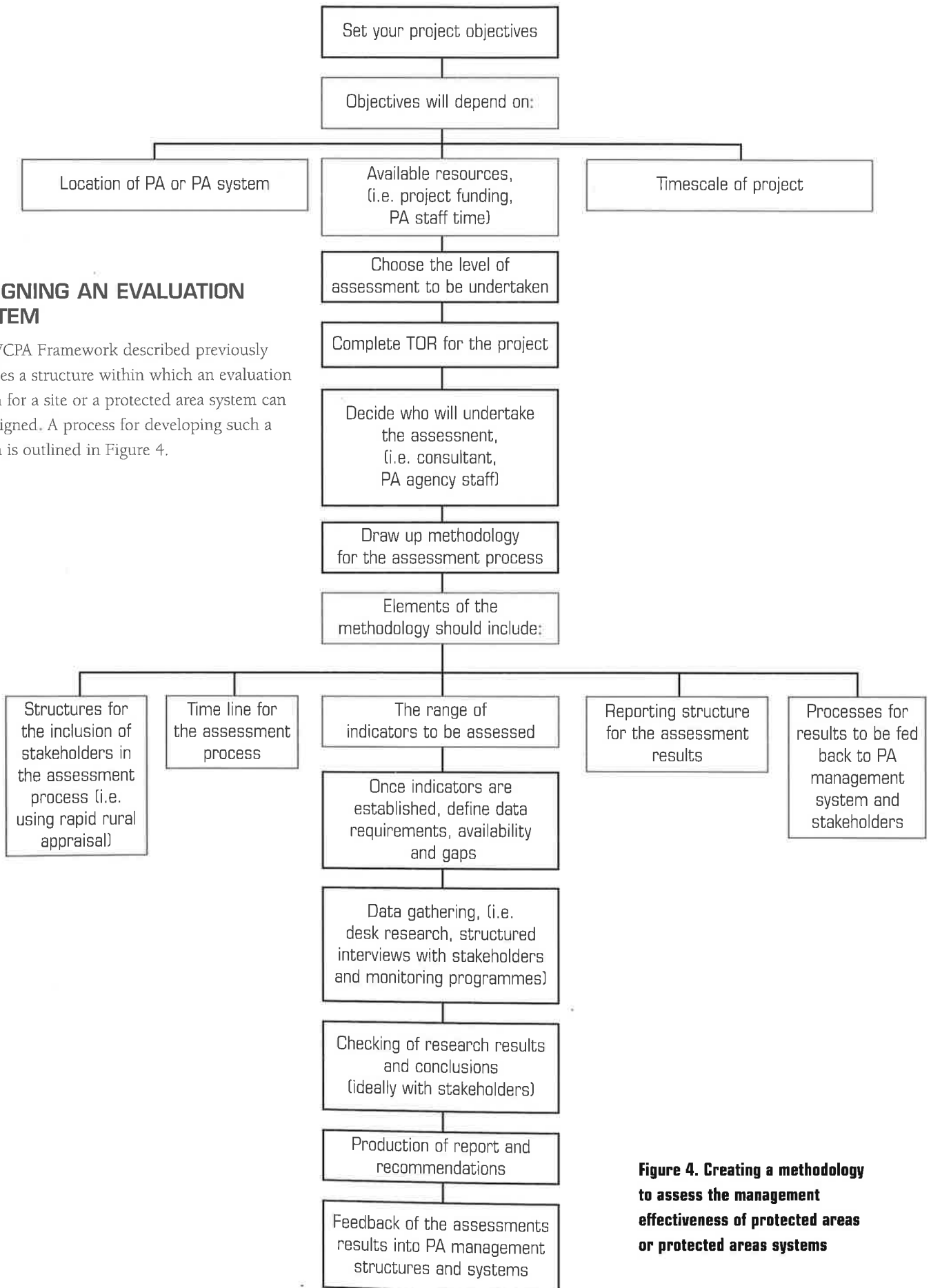


Figure 4. Creating a methodology to assess the management effectiveness of protected areas or protected areas systems

APPLYING THE WCPA FRAMEWORK

The WCPA Framework has provided the basis for designing several systems for assessing management effectiveness from Australia to Africa and from detailed monitoring at site level to rapid assessments of protected area systems (see Hockings, 1998; Hockings and Hobson, 2000; Hakizumwami, 2000 and WWF, 2001). The WCPA Framework is also currently being used by UNF/IUCN/UNESCO in a pilot project to develop a system of assessing the management effectiveness of World Heritage sites (see www.enhancingheritage.net), by the World Bank and is being developed specifically to assess marine protected areas. The WCPA Framework also provides a context for understanding the approach taken by various methodologies that have been developed to date. Table 2 illustrates where some existing systems fit within the WCPA Framework in terms of both the level of detail and the range of assessment. An overview of the results from the application of some of these methodologies can be found in Carey *et al*, 2000.

References

- Carey, C N Dudley and S Stolton (2000); *Squandering Paradise: The importance and vulnerability of the world's protected areas*. WWF International, Gland, Switzerland
- Hakizumwami, E (2000); *Protected Areas Management Effectiveness Assessment for Central Africa*, IUCN/WWF Forest Innovations Project, Gland, Switzerland
- Hockings, M (1998); Evaluating management of protected areas: integrating planning and evaluation. *Environmental Management*. 22(3): 337-346
- Hockings, M (2000); *Evaluating Protected Area Management: A review of systems for assessing management effectiveness of protected areas*, The University of Queensland School of Natural and Rural Systems Management, Occasional Paper 7(3). (available on-line from the University of Queensland, School of Natural and Rural Systems Management at www.nrsm.uq.edu.au/nrsm/Research/ocpub.htm)

Table 2. Applying the WCPA Framework – Some Examples

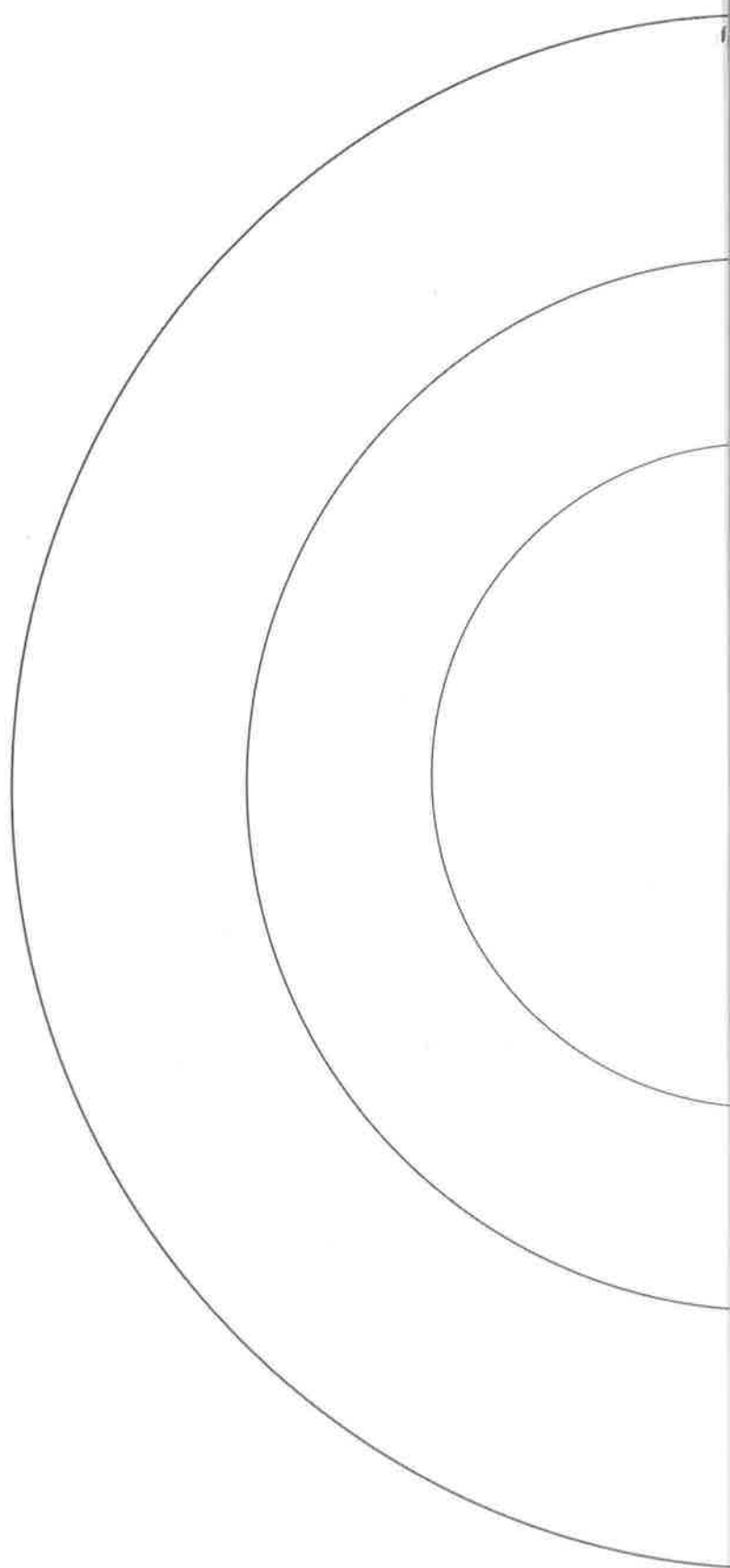
Level of detail	Context	Planning	Inputs	Processes	Outputs	Outcomes
Quick & Broad	Forest Innovations WWF Brazil WWF Rapid Assessment	Forest Innovations WWF Rapid Assessment	Forest Innovations WWF Rapid Assessment Fraser Island PROARCA/ CAPAS TNC Measures of Success	WWF/Brazil WWF Rapid Assessment Fraser Island TNC Measures of Success	WWF Rapid Assessment	WWF Brazil WWF Rapid Assessment WWF/CATIE
Mid-range	WWF/CATIE TNC Measures of Success		WWF/CATIE WWF/Brazil	PROARCA/ CAPAS Forest Innovations	WWF/CATIE	TNC Measures of Success
Focused & detailed				WWF/CATIE	Fraser Island	Fraser Island Tasmanian Wilderness

Hockings, M and R Hobson (2000); *Fraser Island World Heritage Area: Monitoring and Management Effectiveness Project Report*, The University of Queensland, Brisbane

Hockings, M with S Stolton and N Dudley (2000); *Evaluating Effectiveness: A framework for assessing management of protected areas*. Best Practice Protected Area Guidelines Series No.6, IUCN, Gland, Switzerland in association with Cardiff University, UK (available on-line from the WCPA website at wcpa.iucn.org/pubs/publications.html)

PARKS (1999); *Management Effectiveness of Protected Areas*, Volume 9 no.2, June 1999

WWF (2001); *Improving Protected Area Management, WWF's Rapid Assessment and Prioritization Methodology*, WWF, Gland, Switzerland
www.panda.org/forests4life





IUCN
The World Conservation Union

Contact: Marc Hockings.
School of Natural and Rural Systems
Management,
Gatton Campus,
University of Queensland,
4343 Australia.
Tel: +61-7-5460-1140
Fax: +61-7-460-1324
Email: m.hockings@mailbox.uq.edu.au

2002
Published by WWF and IUCN
Design HMD UK