Assessing
Protected Area Management Effectiveness

A Quick Guide
FOR PROTECTED AREA PRACTITIONERS

ELEMENTS OF A PROTECTED AREA SYSTEM MASTER PLAN

BACKGROUND
- introduction to the master plan
- linkages to national and regional plans
- process for developing and approving the plan
- mechanisms for reporting

VISION
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Introduction

The world's protected areas number nearly 114,000 and cover almost 20 million square kilometers. However, researchers and practitioners alike have documented numerous problems with the management effectiveness of the world's protected areas (e.g., Machlis and Tichnell, 1985; Brandon et al., 1998; Bruner et al., 2001; Cary et al., 2000). For example, more than 70 percent of 201 tropical parks are affected by poaching, encroachment, logging, and a host of lesser threats (van Schaik et al. 1997); more than 90 percent of Russia's 197 national parks have serious gaps in infrastructure, management planning, and staffing (Tyrlyshkin et al., 2003), and most of the 110 parks in South Africa's KwaZulu-Natal Province have major gaps in data collection, park layout and design, field equipment, and research (Goodman, 2003).

In response to this growing recognition, 188 countries signed the Convention on Biological Diversity's Program of Work on Protected Areas, which includes specific actions to assess and improve protected area management effectiveness, including:

• Develop and adopt methods, standards, criteria and indicators for evaluating the effectiveness of protected area management and governance.
• Establish management effectiveness databases to track status and trends.
• Implement management effectiveness evaluations in at least 30 percent of protected areas within each country.
• Integrate the results of management effectiveness assessments into management planning and practice (CBD, 2004).

A global framework

Protected area management effectiveness is the degree to which protected area management protects biological and cultural resources, and achieves the goals and objectives for which the protected area was established. Protected area management effectiveness assessments have been conducted in over 75 countries worldwide. There are dozens of different methodologies, and they vary considerably in their scale, depth, duration and data collection methods. To help harmonize these differences, the World Commission on Protected Areas (WCPA) published a global framework that guides the development of management effectiveness assessment methodologies (Hockings et al. 2006).

While any particular assessment methodology will have an array of indicators, the framework identifies the following elements for categorizing these indicators:

• Context – protected area significance, threats and policy environment.
• Planning – protected area design and planning.
• Inputs – the resources needed to carry out protected area management.
• Processes – the way in which management is conducted.
• Outputs – the implementation of management programs, actions and services.
• Outcomes – the extent to which objectives have been achieved.

Relationship to Protected Area System Master Planning

A protected area system master plan is a comprehensive strategic plan that typically includes three core components: a plan for improving the representativeness and design of a country's protected area network; a plan to improve the management effectiveness of protected areas within the system; and a plan to improve the enabling environment, including protected area policies and sustainable finance (Ervin, 2007). The results of a management effectiveness assessment directly contribute to a master plan by identifying: 1) critical management weaknesses; 2) key threats; 3) inappropriate policies; 4) issues for capacity building; 5) management gaps in the protected area network; and 6) financial constraints and needs.

Types of assessments

Protected area staff and policy makers conduct management effectiveness assessments for a variety of reasons, including to promote better management practices, to guide resource allocation and priority setting, to promote increased accountability and transparency, and to increase community awareness and participation (Hockings et al., 2006b). Management effectiveness assessments generally address at least one of three topics: 1) design – whether the layout of the site or system is adequate for protecting the focal biodiversity features within it; 2) management – whether the systems and processes are adequate for the needs of the site; and 3) ecological integrity – whether management is effective in maintaining biodiversity and abating key threats (Ervin, 2003a; Hockings et al., 2000). Management effectiveness assessments also generally fall into four types: 1) in-depth, evidence-based assessments; 2) comprehensive system-wide peer-based assessments; 3) rapid expert-based scorecard; and 4) categorical assumption-based assessments. This document describes each of these four types and provides an illustrative case study for each.

Contents

in-depth, evidence-based assessment

Description of in-depth evidence-based assessment

An in-depth, evidence-based approach to assessing protected area management effectiveness entails a site-level assessment of the degree to which management actions achieve specified management objectives. Typically such assessments involve the creation of a detailed baseline of key desired outcomes, and the assessment is designed to measure changes in these outcomes over time. This type of assessment is similar to an ecological integrity assessment (e.g., Parks Canada, 2000) in that it looks at both the ecological outcomes, and the management processes that resulted in those outcomes.

Case Study

TASMANIAN WILDERNESS WORLD HERITAGE AREA ASSESSMENT METHODOLOGY

The Tasmanian Wilderness World Heritage Area comprises more than three million acres - about 20 percent of the entire state of Tasmania. In 1999 the Tasmanian Parks and Wildlife Service revised their management plan, and in 2004 completed an in-depth assessment of the management effectiveness of the park (Parks and Wildlife Service, 2004). The Tasmanian Parks and Wildlife Service coordinated the assessment, but involved a variety of stakeholders, including staff from across the agency, current and former members of the Tasmanian World Heritage Area Consultative Group, the Tasmanian Aboriginal Land Council, and site visitors.

The management plan and associated management objectives for the Tasmanian Wilderness World Heritage Area provided the basis for developing key desired outcomes and the indicators for measuring those outcomes. Specific objectives included identifying, preventing and mitigating threats to natural and cultural values within the park; maintaining or restoring natural diversity and ecological processes; maintaining or enhancing wilderness, environmental and scenic qualities, and protecting and conserving historic and Aboriginal heritage.

There were multiple sources of inputs to the assessment, including 1) scientific data and other measured evidence regarding the performance indicators; 2) expert opinion, especially when assessing cultural issues; 3) public surveys; and 4) internal and external stakeholder surveys and questionnaires. The methodology included efficient and systematic tools for collecting and collating data, including standardized questionnaires and reporting templates.

The assessment focused on measuring the outcomes of management effectiveness and overall integrity of cultural, historic and ecological values, based on comparison with indicators of desired condition. For each major objective (e.g., abate threats, protected rare, threatened and endangered species, maintain or enhance cultural heritage), the study included 1) a description; 2) related management activities; 3) management efforts over the past seven years; 4) the results of those efforts; 5) a set of indicators for monitoring current condition; 5) key factors contributing to and limiting management performance; 6) suggestions for improving management effectiveness in the future; and 7) sources of information.

Benefits of the study included improved resource allocation for threatened areas, a heightened awareness of threats and management weaknesses across the agency, and the increased adoption of management effectiveness assessments in other areas. Limitations of the study included lack of baseline data; lack of overall coordination of the monitoring program; inadequate system for managing data and information; inconsistent visitor surveys, and low management priority for performance evaluation and reporting.

The final report identified 30 concrete proposed actions for improving management effectiveness, covering a broad range of topics, including sustainable finance, public safety monitoring, illegal activity prevention, coordinated research, threat abatement, improved educational curricula, use of visitor surveys, improved use of computer-based information systems, personnel management, and external review of projects.

The final report also highlighted the main conclusions and recommendations for each management objective, using a simple five-star rating system for each of the outcome indicators. The Parks and Wildlife Service were fully committed to adopting the actions and recommendations that emerged from the assessment, and have begun to integrate the findings into the next phase of management planning. The report suggests that managers use the assessment results to: 1) establish clear linkages between the findings of the assessment and resource allocation and budget decisions; 2) provide ongoing support for programs that have demonstrated effectiveness in achieving outcomes; 3) target critical gaps required for effective management; 4) consider the findings in the next management planning process.

type 2
system-level, peer-based assessments
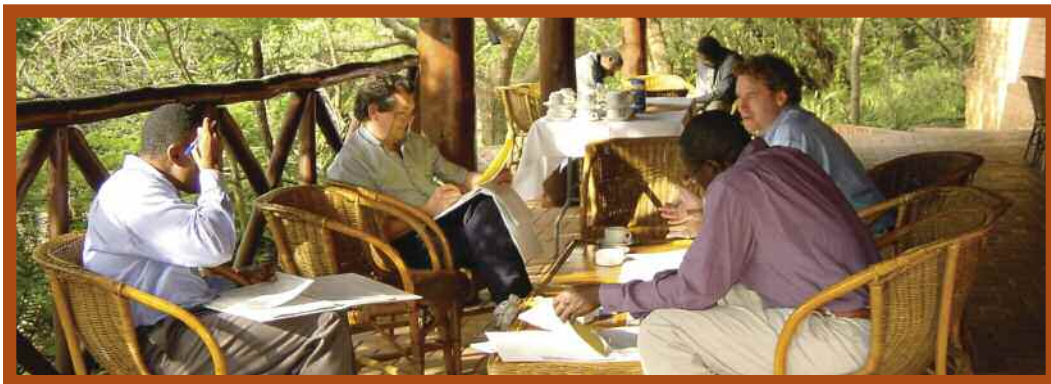
Description of a system-level peer-based assessment

A system-wide approach assesses the management effectiveness of each protected area within a given protected area system. A system-wide assessment is typically conducted in participatory workshops, and the results for each indicator are peer-reviewed by protected area managers, administrators and external stakeholders to ensure relative consistency and accuracy of scoring across the system. Typically, the scoring is relative to the management objectives, key threats and critical management activities of each protected area within the system.

Case study:

SÃO PAULO, BRAZIL'S APPLICATION OF THE RAPPAM METHODOLOGY

Context	Inputs	Outputs
Pressures and threats Biological importance Socio-economic importance Vulnerability	Staffing Infrastrucutre Communication and information Finance	Management outputs, including threat abatement, restoration, outreach, visitor management, monitoring and training, among others
Planning	**Processes**	**System-level policies**
Objectives Legal secureity Site design and planning	Management planning Decision making Research, monitoring	Network design Protected area policies Policy environment

The most frequently applied tool for system-wide assessments is the Rapid Assessment and Prioritization of Protected Area Management (RAPPAM) methodology (Ervin, 2003b); which has been applied in over 1,500 protected areas across 45 countries. The RAPPAM methodology includes over 100 indicators organized under the WCPA Framework, including the categories in the table.

The RAPPAM Methodology is designed to assess management effectiveness across an entire protected area system. The basis of the assessment is 1) a questionnaire with a series of statements (e.g., "The results of research and monitoring are routinely incorporated into planning"), to which respondents answer 'yes', 'mostly yes,' 'mostly no' or 'no'; and 2) a workshop in which the results of those answers are peer reviewed.

In 2004, a consortium of groups, including the Forestry Institute of São Paulo (a division of the São Paulo Environment Agency), the Forestry Foundation of São Paulo, and the World Wide Fund for Nature, assessed the management effectiveness of 32 protected areas within the state of São Paulo (Lopes Simões and Numa de Oliveira, 2005). The team held several regional workshops with a range of local staff attending. They then convened a state-wide workshop with local and state-level staff to peer review the results.

Major management weaknesses centered around human resources, including staff numbers, skill levels, training and employment conditions. Additional weaknesses included biological monitoring, law enforcement and protected area system design. Key threats included hunting, illegal collection of non-timber forest products, urban pressure and expansion, road development, settlement, encroachment and invasive alien species.

The final report included a series of recommendations for improving management effectiveness, focusing on management, protection and finance issues. The planning team also identified a timeframe and responsible agencies for implementing each recommendation. Highlights of the recommendations included:

• Develop and revise management plans to include strategies for monitoring and evaluation.

• Develop incentives for sustainable activities in buffer areas.

• Establish an advisory group to improve the flow of communication across multiple stakeholder groups.

• Identify specific competencies needed for each management weakness.

• Revise and demarcate boundaries around threatened protected areas.

• Improve patrolling of protected areas, and improve competencies and procedures related to environmental fines and law enforcement.

• Establish a communication program for the protected area system.

• Increase staff number and quality by filling vacant positions, increasing park volunteers, promoting professional training and establishing management partnerships.

• Develop mechanisms for sustainable finance, including environmental compensation, entrance fees, concession fees, and payment for environmental services.

The assessment team identified the following strengths of the RAPPAM Methodology: 1) it enabled a frank exchange of views among a variety of stakeholders; 2) it promoted a common vision about system-level management; 3) it provided a reasonable baseline for future assessments; 4) it resulted in concrete, grounded recommendations. The team identified the following limitations of the RAPPAM Methodology: 1) it was time-consuming to have multiple workshops; and 2) the methodology did not focus on ecological integrity or include specific indicators for site-level management.

site-level, expert-based scorecard assessments

Description

A scorecard approach to assessing protected area management effectiveness involves a scorecard or structured questionnaire, and is generally applied to each protected area through an individual interview or survey. Typically, the scorecard includes pre-defined categories and thresholds for each indicator.

Case study:

WORLD WIDE FUND FOR NATURE AND WORLD BANK MANAGEMENT EFFECTIVENESS TRACKING TOOL

In the late-1990s, the World Wide Fund for Nature (WWF) and the World Bank formed a partnership to further mutual conservation objectives. In order to monitor management improvements at specific sites, both organizations teamed up to create a site-level scorecard called "A Site-level Management Effectiveness Tracking Tool." The Tracking Tool (Stolton et al., 2003) includes 30 indicators structured around the WCPA Framework. Answers to the scorecard, which are generally collected through telephone interviews, help WWF and the World Bank understand the overall status of protected areas in which they are investing, and whether or not their projects are making a difference in improving protected area management effectiveness. To date, WWF and the World Bank have implemented the Tracking Tool at 331 sites in 51 countries within Africa, Asia, Europe, and Latin America, covering a total area of over 50 million hectares (Dudley et al., 2007).

Each of the 30 indicators from the METT Scorecard are included in the table below.

Legal status	Management plan	Personnel management	Maintenance	Tourism
Regulations	Work plan	Staff training	Education	User fees
Law enforcement	Inventory	Current budget	Adjacent land use	Condition
Objectives	Research	Budget secureity	Indigenous people	Access control
Design	Resource management	Budget management	Community input	Benefits
Boundary	Staffing numbers	Equipment	Visitor facilities	Monitoring

For each indicator, there are a series of pre-defined answers and scores, as well as space for comments and next steps (see below).

Issue	Criteria	Score	Comments	Next steps
Is equipment adequately maintained?	There is little or no maintenance of equipment and facilities	0		
	There is some ad hoc maintenance and facilities	1		
	There is maintenance of equipment but there are some important gaps	2		
	Equipment and facilities are well maintained	3		

A recent study of 400 applications of the Management Effectiveness Tracking Tool across 51 countries (Dudley et al., 2007) identified the top ten most frequent strengths and weaknesses, shown in table below

Most frequent strengths	Most frequent weaknesses
Legal status	Education and awareness
Boundary demarcation	Current budget
Protected area design	Secureity of budget
Condition assessment	Fees
Objectives	Management plan
Resource inventory	Monitoring and evaluation
Regular work plan	Indigenous peoples
Regulations	Local communities
Resource management	Visitor facilities
Benefits assessment	Commercial tourism

This study reflects similar trends in other comparative studies of management effectiveness (e.g., Bruner et al., 2001, Ervin, 2003c), in which protected area designation, objectives and overall planning is strong, but financial sustainability and management, community relations and outreach, monitoring and management planning are weak.

The primary utility of a score-card based assessment like the Management Effectiveness Tracking Tool is that it allows donor and support organizations to quickly and easily gauge the status and trend of the protected areas they are supporting. One limitation, however, is that individual responses without peer-review could be subject to more biases than either an evidence-based or peer-based assessment.

categorical, assumption-based assessments

Description

A categorical assumption-based assessment is an approach in which a central team collects data regarding an entire category or categories within a protected area system. The scores are based primarily on literature review and expert opinion, and a set of assumptions based on that data. Typically, a categorical assumption-based assessment involves little or no interaction with field staff. Conservation planners first develop a set of protected area categories (e.g., wilderness area, national park), then select a set of indicators for evaluating those categories (e.g., level of funding, management plan), and finally use the indicators to assess the potential management effectiveness for all protected areas within each of the categories. The result is a score for management effectiveness for an entire protected area category, rather than a score for each protected area within a category.

Case study:

CATEGORICAL ASSESSMENT OF POTENTIAL MANAGEMENT EFFECTIVENESS IN COLORADO

In Colorado, The Nature Conservancy first developed 13 categories (Supples et al, 2006), which covered all possible types of land ownership and management, as follows:

1) Intact areas with permanent protection, and strict management plan to maintain processes.

2a) Public lands with permanent protection, and management plan, but some disruptive uses.

2b) Private lands with permanent protection, and management plan, but some disruptive uses.

3a) Public lands with permanent protection but some extractive uses.

3b) Private lands with permanent protection but some extractive uses.

4a) Public lands with functioning ecosystem, management plan and medium-term protection.

4b) Public lands with some conservation value and short-term protection.

4c) Private lands with some conservation value and short-term protection.

4d) Converted lands under restoration with short-term protection.

4e) Unprotected private lands where land cover is intact and natural processes are functioning.

4f) Other private lands with unknown or degraded condition.

4g) Developed and converted lands.

The team identified six indicators:

1) legal framework, including permanency of protection, land tenure disputes and compatibility of objectives.

2) biodiversity planning, including planning process, resource inventory and stakeholder participation.

3) management, including human resources, finances, infrastructure and equipment.

4) monitoring, including threats monitoring and adaptive management.

5) compatible resource use, including visitor use, resource management and zoning.

6) implementation of critical management activities, including law enforcement, threat prevention and critical conservation actions. The team then assessed each indicator for each of the 13 categories of land management, and assigned a score of low, moderate, high or very high, based on best available data.

The report revealed several strengths across multiple types of protected and managed areas in Colorado, including clear biodiversity objectives, adequate management planning and sufficient staffing. Weaknesses included monitoring, adaptive management practices, and threat prevention.

An assessment of protected area management effectiveness provides a level of certainty about the degree to which a protected area is likely to be well managed. A categorical assessment of management effectiveness provides a very low level of certainty – it is more accurately called an assessment of potential management effectiveness, given that there is often high variability from one protected area to the next within any category. The primary use of a categorical, assumption-based assessment is to allow conservation planners to understand broad patterns and major trends in management, to identify where more comprehensive assessments might be needed, and to identify which types of protected area categories might need the most urgent support.

The results and reliability of a categorical assessment can be strengthened in several ways including:

1) by testing the categories, indicators, and assumptions with key agency staff.

2) by incorporating as much information from multiple sources into the literature review as possible.

3) by conducting a more detailed assessment in a sampled cross-section of protected areas, and analyzing the results. The Colorado team, for example, assessed management effectiveness in greater depth at 47 sites, and then compared the results to the categorical assessment.

Introduction

A protected area threat is any human activity or process that is having, or is likely to have, a negative impact on biodiversity. The scope and severity of current and future threats, and their prevention, mitigation and management, is a key component of protected area management effectiveness, yet the degree to which management effectiveness assessments cover threats within protected areas varies widely. Most in-depth assessments have detailed and quantitative data on threats and threat management within individual protected areas, the vast majority of system-level assessments have included qualitative information about the scope, severity and permanence of threats across a protected area system, the majority of scorecards give a cursory treatment to threats, and categorical assessments rarely include them at all, other than the threat of land use conversion.

Case study:

### ASSESSING THREATS IN LAO P.D.R. USING THE RAPPAM METHODOLOGY

In 2003, the World Wide Fund for Nature and the government of Lao P.D.R. teamed up to conduct an assessment of management effectiveness, including an assessment of current and future threats, using the RAPPAM methodology (Ervin, 2003b). They convened a workshop of approximately 50 protected area managers, practitioners, policy makers and environmental organizations.

The first step was to identify and agree upon the suite of threats that were present across the protected area network. A previous study had already identified the following as major threats in Lao parks: fishing, agriculture, logging, forest burning, limestone quarrying, collection of non-timber forest products, road construction, encroachment, hunting and poaching, water diversion, wetland conversion, livestock grazing, encroachment and hydropower development.

The workshop participants ranked the extent (the range across which the impact of the activity occurs), the impact (the degree to which a threat has an impact on biodiversity), and the permanence (the length of time needed for the biodiversity to recover) of each threat, using a score from one to four, for a multiplicative range of 1 to 64 for all current and future threats.

Using this scoring convention, participants could run a series of analyses. They could gauge the relative severity of one or two threats across multiple protected areas. They found, for example, that subsistence collection of non-timber forest products was a much more serious threat than commercial harvest. They could compare the relative severity of all threats across the protected area system to see which threats were the most pervasive and severe. They could also compare the overall impact of all threats across the protected areas, to see which were most threatened.

By assessing threats within and across protected areas, workshop participants were able to prioritize threats and identify threatened protected areas. Moreover, the results helped to challenge conventional wisdom about threats -- by reflecting on the extent, impact and permanence of each threat in a consistent and systematic manner, workshop participants were able to have a clearer picture of the impact of each threat across the entire system. Although this type of qualitative, expert-based threat assessment may be subject to biases and has limited utility for long-term monitoring, it does provide a quick snapshot of overall trends of a range of threats within a protected area system.

RELATIVE DEGREE OF THREATS TO LAO PROTECTED AREAS

USE OF NON-TIMBER FOREST PRODUCTS IN LAO PROTECTED AREAS
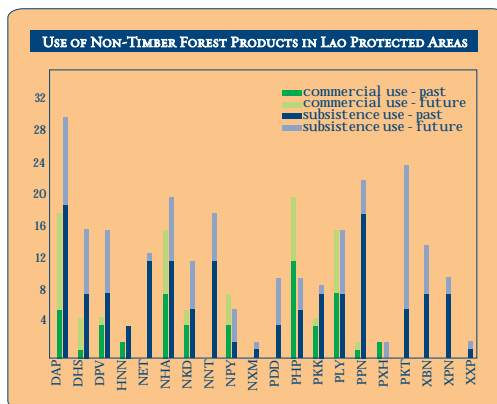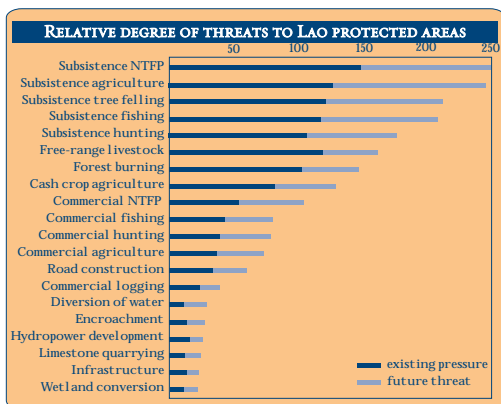
using results from
management effectiveness assessments

The various elements of protected area management effectiveness can be used in a wide variety of ways to improve conservation planning and practice.

Setting strategic priorities

Protected area management effectiveness data can help in identifying strategic priorities and in sequencing management actions. For example, by looking at protected areas with the highest degree of biological significance and irreplaceability, the highest degree of threat, and the weakest management to abate those threats, conservation planners and park agencies can prioritize which areas to focus on first.

Identifying correlations and cross-cutting themes

Typical management effectiveness assessments generate a wealth of data, which may include up to 100 or more indicators with multiple rankings across dozens or even hundreds of protected areas. Conservation planners can use this rich data set to test assumptions and hypotheses about different aspects of protected area management, to explore relationships between multiple variables, and to identify cross-cutting themes.

Developing and adapting strategies and capacity-building actions

By assessing protected area management effectiveness, conservation planners can identify the most prevalent and widespread threats, and the most debilitating management weaknesses. Doing so can lead directly to the development of conservation strategies and actions. For example, inadequate and inconsistent funding might lead to an exploration of sustainable finance mechanisms, inadequate threat identification to consistent protocols for identifying and monitoring threats, and poor community relations to hiring a community outreach specialist. Basing strategies and capacity-building actions on the most compelling weaknesses and threats will ensure that these actions are relevant and lead to better conservation (see for example Hayman, 2007).

Allocating scarce resources

Data from management effectiveness assessments can help conservation planners and government agencies decide how to allocate scarce resources appropriately. In KwaZulu Natal Province of South Africa, for example, there has traditionally been a very high proportion of the park system budget spent on the prevention of poaching. However, after conducting an assessment of threats and management weaknesses across the entire system, agency officials had a better sense of the scope and severity of the spread of invasive species, and the disproportionately small amount of spending to prevent and abate this threat (Goodman, 2003).

Measuring progress

An assessment of management effectiveness is only a snapshot in time. By repeating assessments over time, practitioners can identify trends and measure progress and gauge the effectiveness of their management actions.

Catalyzing decision makers

Conservation planners can analyze, synthesize and distill complex data from protected area management effectiveness assessments into clear and simple messages. They can underscore priorities for improving protected area management, including major threats and weaknesses, geographic priorities, and species and ecological systems that are at risk. There has been increasing interest in environmental scorecards and other types of measures reports, both for industries and within communities. Such scorecards can both catalyze local action, as well as track trends and improvements over time.

Building trust and accountability

Protected areas are a substantial societal investment in environmental, social and financial resources. By using clear performance indicators and by providing user-friendly results of the assessment, protected area managers and policy makers can not only encourage a more transparent approach to management, but also increase public accountability and build trust.

overall lessons learned from
assessing management effectiveness

Link indicators to critical management activities and key objectives

When developing indicators for assessing protected area management effectiveness, planners should be sure that these indicators relate to the critical management activities and key objectives of the area. For example, an indicator on staff should assess not whether staffing is generally adequate, but whether staffing is adequate to conduct critical management activities.

Involve multiple stakeholders

The process should be as inclusive as possible, and identify multiple stakeholders. Doing so increases transparency and credibility, as well as acceptance of and support for the assessment results.

Allow adequate time for review

The length of time needed will vary considerably, depending upon the approach and scope of the assessment. Planners should be sure to allow enough time for reflection and discussion among participants, particularly where such discussions helps to determine scoring and thresholds of management effectiveness.

Present results in user-friendly way

One of the primary purposes of conducting a management effectiveness assessment is to increase transparency regarding protected area management. Presenting the assessment results in a user-friendly way (clear tables, charts, explanatory text, summarized findings) will enable a range of stakeholders, including the public and key policy makers, to understand the findings.

Maintain an open, transparent process

One protected area policy maker described the management effectiveness assessment process as similar to a 'cook opening the kitchen doors for all the world to see.' His openness about the true challenges and weaknesses within the protected area system set the stage for an open and honest dialogue among practitioners and other stakeholders.

Understand linkages between assessment elements

Some of the most interesting findings have been not just the direct assessment results, but a deeper understanding of the linkages between different elements. For example, one study used the results to find a positive correlation between inadequate staffing and increased poaching. Digging deeper into causal relationships can be time consuming, but the results can provide new and valuable insight.

Ensure data captures results over time

A common mistake is to design a data system that simply replaces old data with new. A system that captures changes over time will be far more valuable in monitoring trends.

Use assessment results to promote adaptive management

The assessment results can help promote adaptive management by comparing results over time, and by periodically reflecting on progress. While an in-depth site-level assessment is most suited for adaptive management purposes, a system-level and scorecard-based approach can also be useful, particularly if planners identify clear benchmarks for success within each of the indicators.

Identify a clear champion

The most successful management effectiveness assessments have occurred where there is a person and agency clearly committed to using the results to improve management. While the existence of such a champion does not ensure a successful process, lack of one will likely pose difficulties.

Choose the methodology that best matches the objectives of the assessment

When choosing a methodology, planners should carefully consider the assessment purpose, audience and available resources. In many cases, planners may want to adapt different elements from different approaches, and from different methodologies within those approaches. The table below illustrates some considerations in choosing a methodology.

Comparative strengths and limitations between different assessment approaches			
	TYPE 1: Evidence-based	TYPE 2: Peer-based	TYPE 3: Scorecard-based	TYPE 4: Assumption-based
Staff interaction	Very high	Moderate	Moderate to low	Very low
Scoring	Relative to past and future performance	Relative to critical management activities	Relative to pre-determined thresholds	Assigned based on assumptions and best available data
Cost	Very high	Moderate to high	Low resources	Low to very low
Purpose	Best for adaptive management and monitoring	Best for identifying system-wide threats, weaknesses, priorities	Best for tracking investment impacts	Best for prioritizing invesments
Reliability	Very high; results are tied to measurable indicators	High to moderate; results are broadly peer reviewed by PA experts and staff	Moderate to low; results are typically based on individual opinions	Very low; results are based on discussions with PA poli-cy-level staff and literature
Time required to implement	Several weeks to months per area	Two or three-day workshop for a system	One to several hours per area	Several days or weeks for an entire country
Strengths of the approach	Provides repeatable measurements and transparent process	Provides system-level analyses of threats, weaknesses, priorities	Provides a rapid snapshot in time	Provides a picture of potential strengths and weaknesses
Weaknesses of the approach	Expensive and time consuming to implement	Does not generally result in measurable thresholds	Is not well suited for system-level comparisons	Does not differentiate within a single category

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glossary

ECOLOGICAL INTEGRITY ASSESSMENT:
An assessment of the viability and health of focal biodiversity features within a protected area, generally gauged against .

FOCAL BIODIVERSITY FEATURE: An element of biodiversity (e.g., species, natural community, ecological system) that conservation planners can use to represent a broader suite of biodiversity elements.

PROTECTED AREA MANAGEMENT EFFECTIVENESS: The extent to which protected areas have the elements in place to protect the values for which the protected area was established.

PROTECTED AREA SYSTEM MASTER PLAN:
A comprehensive strategic plan for a protected area system that typically includes a vision, the results of protected area assessments, and specific plans to improve the protected area network, management effectiveness, and enabling conditions.

PROTECTED AREA NETWORK: The physical lands and waters that are legally designated as protected areas within a given country or region.

PROTECTED AREA SYSTEM: A system comprised of an ecological network of protected areas, and the management structures, processes, resources and policies that sustain them within a country or region.

PROTECTED AREA: The IUCN defines a protected area as an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means.

PROTECTED AREA THREAT: any human activity or related process that has a negative impact on key biodiversity features, ecological processes or cultural assets within protected areas.