CASE STUDIES from:
Managing Effectively in the Face of Change: What lessons have we learned?
Preparatory Workshop for WPC2003
4-7 February, 2003
Linley Estate, Victoria, Australia

Case Studies by First Author:

1. Alex Bruner: Conservation International: Peru and Ecuador
2. José Courrau, Heredia, Costa Rica
3. Nigel Dudley, Forest Innovations Project
4. Ian Dutton, Performance Assessment of the Victoria Park Nature Reserve
5. Jamison Ervin: RAPPAM
6. Chris Fagan: ParksWatch
7. Marc Hockings: Fraser Island World Heritage Area
8. Glenys Jones: Tasmanian Wilderness World Heritage Area
9. Rosa Lemos de Sa, Assessment of Federal Protected Areas in Brazil
10. Fiona Leverington, Queensland Park and Wildlife Service
11. Kathy Mackinnon, Use of the IUCN Management Effectiveness Scorecard by the World Bank and WWF
12. Josep Mallarach: Catalonia
13. Moses Wafula Mapesa: Bwindi Impenetrable National Park: Uganda
14. Richard Margoulis, Effectiveness of Specific Conservation Tools
15. Bill O'Connor, organisational framework for performance assessment
16. Mark Peterson:US National Parks
17. Dan Salzer: Cosumnes River Project, California, USA
18. Shekhar Singh, Management Effectiveness of Protected Areas in India
19. Ileana Solares Sian Ka'an Biosphere Reserve
20. Sue Stolton, Enhancing Our Heritage
21. Rauno Väisänen: I. Oulanka National Park and II. Finland
22. Lani Watson, WWF MPA Management Effectiveness Initiative

Conservation International's Pilot Evaluation of Management Effectiveness of Protected Areas in Peru and Ecuador

Case study by:	Aaron Bruner, Lisa Naughton, Ted Gullison, Katrina Brandon,
Institutional affiliation:	Center for Applied Biodiversity Science, Conservation International
Address:	1919 M St., NW, suite 600, Washington, DC, 20036, USA
Telephone:	202 912 1707
Fax:	202 912 0772
Email:	abruner@conservation.org

The Case Context

Peru and Ecuador both manage extensive protected area systems covering some of the most biologically diverse ecosystems in the world. Both countries contain over 19,000 species of plants, of which around 5,000 are endemic to each country, and over 2,500 non-fish vertebrates, of which over 300 are endemic to each country. The protected area systems also cover a wide range of social contexts - many protected areas in the Amazon have relatively little human activity, while many areas in the Andes and in coastal forests are heavily fragmented and surrounded by densely populated areas.

Periodic assessment of both the effectiveness of the protected areas in the system as well as the changing social context in which they are situated is important both to take stock of the current situation as well as to draw lessons from experiences to date. Both countries have conducted a range of protected area studies, however a number of key issues are not adequately understood across the protected area systems. Assessment of these issues is important both as a means to increase the information available to decision makers at all levels, as well as to provide useful tools for repeated assessments if appropriate.

1. Why was the evaluation done?

The evaluation was done to try to improve understanding and increase information sharing related to three management issues:

a) What is the social context in and around each protected area (PA), and what management activities have been most effective in addressing the threats and opportunities presented by each social context.
b) How has each PA changed over time in regard to size, shape and zoning, and what caused each change.
c) What are actual funding levels and how do these compare to the amount necessary to address the specific context of each area.

The evaluation was piloted in Peru and Ecuador, and is currently in the phase of assessing the information gathered.

2. How was it conducted?

Data gathering for the evaluation had 3 major components:

a) Literature review and coordination with other relevant monitoring initiatives for each PA. Much of the information needed for evaluating the context of each area was available from secondary sources and was gathered from these first. Coordination was also valuable in making the evaluation as broadly useful as possible.
b) Preparation of maps of land cover change for each PA and its surrounding area, using classification of Landsat TM satellite images from ~1990 and ~2001. These maps provided detailed information for evaluating both threats and outcomes in each PA.

c) In-person interviews with the manager of each PA and representatives of one or two local groups with significant experience working in the PA. The interviews were largely composed of mapping exercises, and took place at the office of each manager or NGO. Interviews covered issues of context (including PA history, zoning and pressures such as hunting and logging), inputs (including a detailed accounting of management capacity) and outcomes (including levels of impact in each PA from each pressure) (see final page for an example).

Analysis is currently underway and will result in a series of working maps and an evaluation for each area, identifying major threats, quantifying management capacity, and estimating management shortfalls. There will also be a broader report on general findings.

3. Who was involved and why??

a) In-country partner: the evaluation team was composed of one person from Conservation International-Washington, and one person from a local organization with experience with the national PA system. This allowed the modification of the evaluation process to fit the conditions of each country, increased support for the process, and made the evaluation process logistically smoother.
b) PA managers: managers and PA staff were the main source of information about most of the issues evaluated and were a key audience for the results.
c) At least one organization (NGOs, foundations, etc.) active at each PA: these groups added an additional perspective to that of the manager for issues of context and outcome. This perspective was valuable especially in some cases in which the organization had been working at the PA for longer than the managers. Working with these organizations was also useful in improving coordination with other initiatives.
d) Central PA office: coordinating with the central PA agency was important in refining the design of the evaluation, integrating the evaluation into the needs of PA system, and getting official endorsement for managers' participation.

4. How was the evaluation process developed??

The process was developed through a combination of:

a) assessing what needed to be measured to address relevant issues as rigorously as possible (e.g. a focus on outcome measures using deforestation analysis and participatory mapping of other major resource uses),
b) trying to keep the burden on participants as light as possible (e.g. minimizing questions, consulting a range of groups for each area, visiting sites for interviews),
c) trying to make the process interesting (e.g. using mapping exercises with working maps to cover as many questions as possible rather than just listing questions), and
d) trying to make the products used in the evaluation useful to other initiatives (e.g. being able at the end to provide other groups with spreadsheets on management capacity, deforestation maps, etc.)

5. What was covered in the evaluation and why?

In general:

a) For social context: location of communities, their rights, major resource uses, major conflicts, major pressures on the PA. These factors were combined to generate a *pressure measure* based on activity outside the PA, and an *effectiveness measure*, based on the difference in levels of activity outside and inside. These measures were calculated both for deforestation mapping and resource use mapping separately and then together. The goal was to provide a rigorous performance measure that accounted for context.

b) For management: current capacity of the PA management in terms of infrastructure, equipment, and personnel, managers estimates of unmet needs for each component of management, and an estimation of the contribution of other organizations to PA management goals. The goal of monitoring these issues was to allow a detailed assessment of overall management needs as well as an evaluation of what strategies and components of management have been most successful in addressing specific situations.
c) For boundary and zoning changes: current state and changes since PA creation of boundaries and zoning. Understanding current zoning and boundaries is essential to understanding the state of an area. Information on how these have changed over time was used to understand the complexity of management objectives of each area, how zoning has functioned as a management tool, and to bring out lessons for the creation of new PAs.
d) Cost of effective management: purchase and maintenance costs for infrastructure and equipment, cost of staff, cost of operations. Combining this information with measures of threat, effectiveness, and physical management needs was used to generate information about the cost of effective management under a range of threats and local conditions.

6. Which elements of the WCPA framework were covered in your evaluation process?

The evaluation had two major components each comprised of two elements from the WCPA framework:

a) A component focused on trying to assess threats, pressures and opportunities for management, and success in addressing these threats. This component was composed largely of context and outcome indicators.
b) A component focused on trying to assess the effectiveness of different inputs to management. This component was limited to planning and input level indicators. Process and output indicators were largely not included, although they might also have been useful to consider.

7. How was the evaluation reported?

The evaluation was reported in the form of interview responses and deforestation maps. All of this information was later digitized and transferred to spreadsheets.

8. What changes in management resulted?

Results of the evaluation are being finalized, but changes will be sought through:

a) Provision of useful information to managers in the form of working maps, spreadsheets accounting for current management capacity and needs, deforestation maps, and information on how other managers have successfully addressed different situations.
b) Dissemination of general information on management needs and other important findings to central decision makers, donors and other relevant groups.

9. What did you learn about the process of assessment?

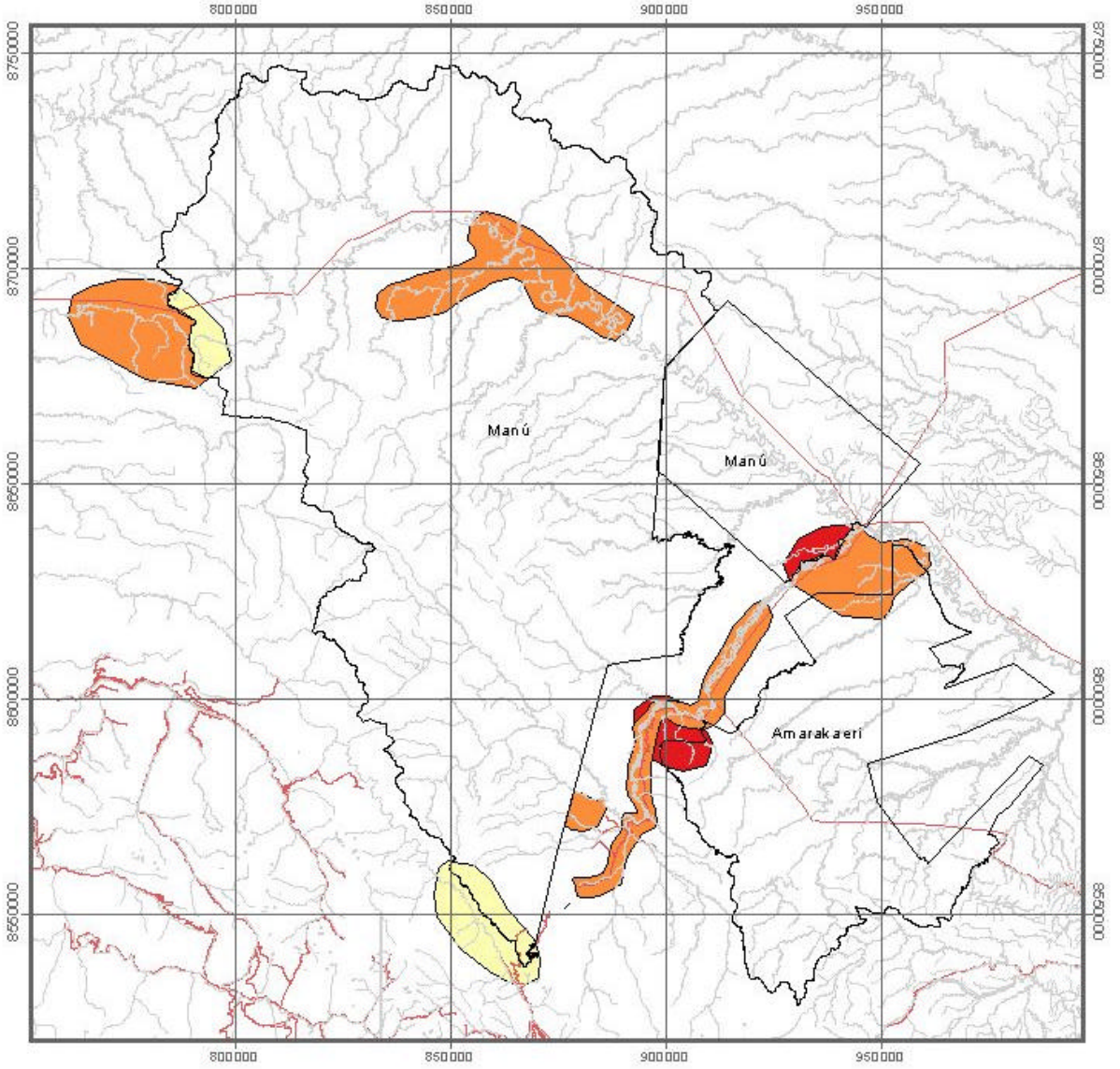
a) It is valuable to have an objective measure of outcome (in this case deforestation analysis), as it facilitates a rigorous understanding of both actual results of management, and the contribution of different inputs to those results.
b) It is valuable to build context variables into the assessment of outcome because in their absence, the effect of management is difficult to judge. Measuring context also permits lessons to be learned on how to address different situations.
c) It can be useful to conduct evaluations in which the evaluator is not in a position of direct influence over the PA.
d) It is important to have a clear purpose to the assessment and not try to meet the interests of too many groups. Each purpose requires a separate set of

considerations, which can rapidly make the assessment too complex or less rigorous.

10. ***What have you done differently (or what would you do differently) based on what you learned about evaluation?***

a) Seek to reduce the scope of the assessment through focus on fewer issues. The assessment process took too long in some cases (3 to 6 hours).
b) run the assessment from in-country. It was complicated to run from the outside, and was especially difficult to adequately coordinate with other related initiatives.

Parque Nacional Manu - Perú
Caza



M. Chalco

Nivel de cacería
- Poco
- Moderado
- Fuerte

Límites del área protegida
Vías
Ríos

50 0 50 100 Kilometers

Regional Project on Evaluation of Management of Protected Areas in Central America

Case study by:	José Courrau
Institutional affiliation:	Consultant
Address:	P.O. Box 1157 Heredia 3000, Costa Rica
Telephone:	+ (506) 380-2765
Fax:	+ (506) 223-1609
Email:	jcourrau@racsa.co.cr

The Case Context

Central America is a region that comprises 7 countries: Belize, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica and Panama. Central America encompasses approximately one half million km^2 of land which extends from the Peten region of Guatemala and Belize to Serrania del Darien of Panama. Some three or four million years ago, an isthmus of land formed a bridge that connected North and South Americas. This land connection allowed animal species to move freely in both directions, transforming the region into a biological bridge. Central America is a complex biogeographic region, representing a unique melding of North American and South American biotic elements. Together with the region's topographic and climatic heterogeneity, this mixture has contributed to the development of an unusually diverse assemblage of vegetation types and ecosystems.

1. Why was the evaluation done?

It was part of a region-wide project. Pilot sites were selected to test the model.

2. How was it conducted?

The model was developed by the project and we were contacted by the national protected area authorities to apply the model in some of their sites as pilots. Previous to start the initial evaluations, a training session was conducted by the project. Each evaluation was conducted following a participatory approach in which different stakeholders were present. In a 7 hour session the participants first developed what was called an "optimum scenario" or proposed expected conditions of the site for a certain period of time that varied from 4 to 5 years. Since the evaluation proposed by the model consists of a series of indicators, the participants in the session reviewed evidence, discussed and assigned a rank to each indicator.

3. Who was involved and why?

Different stakeholders participated in the evaluations because the model is constructivist. The protected area staff participated because they are responsible for the site management. Local government (municipalities) representatives attended because they are in charge of enforcing legislation and policy; and also to strengthen coordination with the protected area authorities. National protected area agency representatives generally attended to oversee the process and evaluate its potential for replication in other protected areas of the country. Local neighbors attended to provide the average citizen perspective and to increase their awareness about the site and its resources. Local NGOs representatives because, in many cases, these NGOs implement different projects in the protected area and have the potential to raise more funds or develop strategic alliances to support the site. Others such as hoteliers, tour operators, the Red Cross participated wince the protected areas authorities wanted them more involved.

4. How was the evaluation process developed?

This strategy was developed during a workshop organized and carried out in Tegucigalpa, Honduras, by PROARCA/CAPAS (Programa Ambiental Regional para

Centroamérica/Central American Protected Area System), in coordination with the Executive Secretariat of the Central American Council of Protected Areas and Forests (CCAB-AP).

The principal objective of the workshop was to develop the components of a monitoring strategy for Central American protected areas. This tool should fulfill some basic requirements that were agreed upon at the beginning of the event. These requirements included: simplicity, low cost, short time necessary for generating data and that excellent management of protected areas would be promoted. Due to the lack of a tool of this kind, once it was validated in the field, it should be adopted at the regional level as a monitoring strategy for Central American protected areas.

5. What was covered in the evaluation and why?

The model followed a hierarchical structure. It is divided into 5 different aspects: social, administrative, resources (natural and cultural), policy/legal, and economic/financial. Each aspect is divided into a set of factors. Each factor is divided into a set of criteria. Each criterion is divided into a set of indicators.

6. Which elements of the WCPA framework were covered in your evaluation process?

Planning, process, input and output components of the WCPA framework were covered.

7. How was the evaluation reported?

A field report form was developed for the sites to report to the participants in the sessions and the institutional hierarchy. Later on a database was developed to facilitate the management of data and to allow analysis of different sessions across time and to accumulate information from the sessions of all the sites of each country. The database allowed to generate different reports according to pre-designed forms included in the system and depending on the queries allowed.

8. What changes in management resulted?

In most of the case there was a new perception of what they could accomplish with the same resources they had available. The monitoring model was institutionalized by 5 countries and now is mandatory for most protected areas in those countries. The national protected areas offices prepare annual reports on the state of the areas based in a big part on the results generated in the monitoring sessions at the site level.

9. What did you learn about the process of assessment?

a. That it is possible to enhance the management of a protected area with a structured model that empowers staff and partners of that site to evaluate themselves and work together to improve the condition of a site.
b. That it is possible to develop a basic model as a departure point and develop various versions of the model to fit the needs of different countries.
c. That consistent and periodic training is key to maintain the evaluation system working in a country due to continuous staff changes in the protected areas organizations.

10. What have you done differently (or what would you do differently) based on what you learned about evaluation?

I would have continued providing training for more years and should have documented the different experiences in the different countries.

Forest Innovations Project:
Developing a Protected Area Effectiveness Methodology for Africa

Case study by:	Nigel Dudley and Sue Stolton
Institutional affiliation:	Equilibrium Consultants for WWF and IUCN
Address:	23 Bath Buildings, Bristol BS6 5PT
Telephone:	+44-117-942-8674
Fax:	+44-117-942-8674
Email:	equilibrium@compuserve.com

1. Why was the evaluation done?

Until the late 1990s, little systematic assessment of management effectiveness had been carried out in Africa: the project described in this case study aimed to address this lack. The IUCN/WWF/GTZ Forest Innovations project, which ran from 1998-2000, included a component for developing methodologies for assessing management effectiveness of protected areas. After consultation with the WCPA task force on protected areas, the work in Africa was developed with five specific aims, to:

- Develop and field-test a methodology based specifically around the evolving WCPA framework
- Feed lessons learnt back into the process for finalising the WCPA framework
- Address specific concerns of African protected area managers that had been less well developed in existing methodologies – in particular issues relating to local communities
- Develop a level 2 assessment that was fairly cost effective and quick to apply to individual protected areas
- Promote assessment of management effectiveness of protected areas in Africa

2. How was it conducted?

Two questionnaires were used to assess management effectiveness (one for staff and one for local communities). Background research included a literature survey and was followed up by site visits, interviews and analysis. The structure and timeline of the assessment system is illustrated below.

Element	Description	Time
Research and setting up the process	Gathering background material on the protected area, investigating possible past assessments, setting up meetings with stakeholders, in particular those not site-based	2 days
Introducing the concept to protected area managers	Ensuring transparency of the system by ensuring that protected area staff and staff of related projects know that the assessment is taking place are aware of the possible implications	1 day
Interviewing protected area staff	Semi-structured meetings with protected area staff, ideally at the site itself	1.5 days
Interviews with local inhabitants	Semi-structured meetings with key stakeholder groups	1.5 days
Initial analysis of results	Ideas developed for discussion with protected area staff	0.5 days
Discussion about results with protected area staff	Discussion of e.g. differences between perceptions of protected area staff and local inhabitants	0.5 days

and others		
Reporting and recommendations	Brief report including recommendations and action plan drawing on a SWOT analysis from the results of the questionnaires. Scoring systems, such as an adaptation of the WCPA framework scorecard for process and outputs can also be included in the final report.	3 days

Note: 1) This timeline does not include travel time, which in some areas may be considerable.

2) The timeline suggested is not necessarily a continuous process but may stretch over a few weeks.

3. Who was involved and why?

The methodology was developed by the Forest Innovations project working with the forest programmes of WWF and IUCN in Central Africa in close cooperation with the WCPA task force on management effectiveness of protected areas. During the development phase the consultant also liaised closely with UNEP-WCMC in the UK, the Ministry of Environment in Cameroon and with other NGOs in both Cameroon and Gabon. An independent consultant from the region carried out the actual assessment.

The methodology was as participatory as possible, given the short time period and limited resources. In relation to the process of evaluation, the main limitation recorded during the process of field-testing was the suspicion manifested by the protected areas management team toward the assessment, making it particularly important to engage with protected area managers and staff. Introductory meetings were needed to explain the objectives and the importance of assessing management effectiveness. Involving protected area staff in the development of the assessment process allowed for both an increased awareness of management effectiveness as an issue and the building of confidence between the assessor and staff. However the benefits of working with an external and independent assessor were evident in the community consultation phase of the assessment. Conducting discussions with the local communities in the absence of protected area staff created an environment of open and interactive discussions. Communities raised a number of issues concerning management of the site which, in the opinion of the assessor, would not have been raised if management staff had been present.

4. How was the evaluation process developed?

The draft WCPA Framework was used to develop a system for the assessment of management effectiveness for two pilot sites in the Congo Basin. The methodology put particular emphasis on social aspects and increasing the participation of a wide range of stakeholders in assessment. Considering the need to reduce cost, whilst achieving maximum details, and to raise stakeholders' awareness about the need of effective management of protected areas, a participatory approach was adopted consisting of combination of Rapid Rural Appraisal (RRA) and Participatory Rapid Appraisal (PRA). Initial work on development was carried out by Forest Innovations staff in the UK, then the consultant from the Congo region spent time in Bristol with the Forest Innovations team, followed by a further period of working together in Africa and meeting the various protected area staff involved, before full testing took place.

The test sites were chosen at a workshop held in Yaoundé, Cameroon in early 1998. The evaluation process was developed by the Forest Innovation team and then modified before and during testing by the consultant hired in Africa.

5. What was covered in the evaluation and why?

The methodology looked at a range of issues relating to management, in line with the WCPA framework. It is based around the use of two questionnaires – one with protected area staff and one with local communities: protected area managers are then given the opportunity to respond to comments from communities. The questionnaire is not a rigid formula but is supposed to help the consultant to cover all the points: it is expected that new lines of enquiry may evolve during the research period as well and the format is not rigid.

Testing of the methodology took place in the Dja reserve, which covers 5,260 km^2 in Cameroon and Minkébé Forest Reserve in Gabon. Dja was protected as a *'Réserve de faune et de chasse'* in 1950, a '*Faunal Reserve*' in 1973, a Biosphere Reserve in 1981 and was inscribed on the World Heritage list in 1984. Ecologically, the Dja Reserve is characterised by a deciduous and semi-deciduous forest mixed with extensive swamps. Dja harbours 109 mammal species including threatened species such as the gorilla (*Gorilla gorilla gorilla*) and elephant *(Loxodonta africana*). About 30,000 Bantou and Pygmies (Baka) people depend directly on the resources of the reserve. There is no commercial timber exploitation within the reserve although logging and mining take place close by. Poaching is common for home consumption and commercial purposes. The Minkébé Forest Reserve, covering 6,000 km^2, includes wetlands, a variety of primary forest types, and ancient patches of secondary

forest. This diversity of habitat, coupled with the low human activity, provides an incredibly rich and varied environment for a large number of animal species. Minkébé is considered to be one of the few remaining regional strongholds for forest mammals.

6. Which elements of the WCPA framework were covered in your evaluation process?

The methodology collected data on all elements of the WCPA Framework. It did not involve field monitoring of *outputs* and *outcomes*, but instead relied on working closely with a range of stakeholders, such as villagers from the area, who had some knowledge of these aspects. Of the 128 conclusions recorded in the SWOT analyses for the two sites that could be associated with one of the WCPA framework elements, the majority related to the *planning* and *process* elements of the Framework (each 25 per cent), followed by *outcome* elements (19.5 pr cent), *input* and *context* (each 12 per cent) and *outputs* (6.5 per cent).

7. How was the evaluation reported?

After collection of data and information, the results were analysed to formulate conclusions and recommendations for an action plan for adaptive management. Two methods were used – a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis and scoring. The open-ended questionnaire covering relevant biophysical and socio-economic issues related to management of the protected areas was developed following the defined criteria, and used to collect information during group discussions.

The SWOT analysis looked at strengths, weaknesses, opportunities and threats under the headings of design and planning, inputs and influences, processes, outputs and outcomes. Scoring was carried out using a subjective scorecard adapted from the WCPA framework. This provided an idea about the level of management effectiveness and helped to evaluate changes over time. The score is a trade-off of weaknesses against strengths in relation to predefined management objectives. Generally a four level rating scale was adopted. Additional points were added to issues of high importance to give them more weight. The level of the management effectiveness was related to a percentage. Although rating was subjective, results can show the areas requiring improvement.

In addition to the scoring, a key part of the assessment was the requirement to record information on why a particular score was allocated and comments on current issues or problems relating to the particular aspect of management. Whether these issues and problems were able to be controlled by managers and current and potential management initiatives in relation to each issue was also noted. After collection of data and information, results were analysed to formulate conclusions and recommendations for future management.

8. What changes in management resulted?

In Dja, the project being assessed was wound up soon afterwards for lack of funding (not associated with the assessment), in Gabon the protected area staff drew on the assessment but no further analysis of its use has been attempted. However, the two assessments reported here were undertaken mainly to develop the methodology (and indeed staff were promised that the results would be confidential). Since the research was completed, WWF and its associates (particularly the Nigerian Conservation Foundation) have been involved in several other assessments, which have been based in part on the Forest Innovations methodology and in part on other assessment methods (including RAPPAM, also reported at this workshop). Country-level assessments of protected areas have now taken place in:

- Côte d'Ivoire
- Ghana
- Nigeria

The management implications of these assessments are not known (indeed, assessments are still very new). In June 2002, WWF and the World Bank held a joint meeting in Kribi, Cameroon, between representatives from eight West and Central African countries to develop plans for further

implementation of management effectiveness work in the region. It is hoped that the World Parks Congress will provide a further impetus to this work.

9. What did you learn about the process of assessment?

- Assessment of the management effectiveness of a protected area is a matter of in-depth investigation of various factors that may affect the sustainability of resources according to the local conditions. It therefore needs a multidisciplinary team or an assessor with wide experience in natural resources management and sufficient skills and capacity in the use of participatory methods such as Participatory Rural Appraisal (PRA) for evaluation, as this permits the collection of the maximum of information at low cost while creating an awareness in the audience. This must involve field visits and individual and group discussions with different stakeholders using a pre-prepared checklist/questionnaire. The review of the reports related to the protected area concerned is very important to create a basis for in-depth investigation and to collect general information.

- It is important to involve protected area staff actively in the process of the management effectiveness assessment. This builds awareness on how implementation is taking place and will help develop confidence between the assessor and the project staff.

- Where possible, discussions with stakeholders should be carried out without the presence of project staff. Where translation is needed, it is advisable to select the translator from village members. This prevents villagers' reluctance to provide accurate information, and create an environment of open and interactive discussions.

- The main limitations recorded during the process of field-testing the system for the management effectiveness of the Dja and Minkébé reserve was the suspicion manifested by the managers. Introductory meetings permitted the explanation of the objectives and the importance of carrying out field-testing. They were happy that the information collected for this work would be shared with them.

- Limited time did not allow in-depth investigation and collection of maximum information. Some important stakeholders were not been involved in the assessment process. For instance, logging companies were not contacted despite the influence they have on the use of forest resources around and within the reserves.

- Further tests involving in-depth investigation and a large number of stakeholders are recommended. This will also permit the fine-tuning of the system.

- One important issue to be monitored in the future is the dynamics of forest people as a result of logging activities. Their practices in the use of natural resources at their refuge must also be analysed. The fact that they have been pushed from their homeland may lead them to lose interest in the sustainable use of natural resources.

- Another key point, which may need in-depth investigation during the assessment, is the impact of the creation of the protected area on local communities' livelihoods (income, well-being, vulnerability, social organisation, food security, use of natural resources) and on the local communities commitment to the sustainable use of resources.

- Developments in Africa since the original research suggest that most managers and protected area agencies are not satisfied with using an "off-the-shelf" methodology, but will want to adapt and modify this for local conditions.

10. What have you done differently (or what would you do differently) based on what you learned about evaluation?

The methodology was developed several years ago; since then most of those involved have had time and experience of other systems to revise many of the questions (for example drawing on the experience with use of Appendix 2 of the WCPA framework and the WWF/World Bank tracking tool, also reported here).Many of the questions could therefore be refined

Serious questions remain about what real impacts management effectiveness assessments will have on park management – this question will not really be possible to answer for several more years until successive analyses have been undertaken. Our own experience suggests that assessments can usefully fall into two main types:

- A **detailed assessment associated with a particular need** – for example development or rewriting of a management plan – where both the time and resources are available for assessment

- A **replicable assessment that can monitor progress** (and perhaps annual work programmes) over time – in this case cheapness and ease of use are of paramount importance and we would suggest that many current methodologies are too expensive to be anything but donor driven.

This case study also draws heavily on the work of Elie Hakizmwami, ‘Wale Adeleke and Marc Hockings

Importance-performance assessment (IPA) of the Victoria Park Nature Reserve

Case study by:	Ian Dutton
Institutional affiliation:	The Nature Conservancy
Address:	Wisma Kemang Lt3, Jl. Kemang Selatan Raya No.1, Kemang, 12560, Jakarta, Indonesia
Telephone:	62-21-7817040
Fax:	62-21-781 7038
Email:	idutton@tnc.org

The Case Context

This case study has involved the first in-depth examination (and one of only a handful of applications ever) of the potential utility of the IPA technique in the specific context of Australian protected area management. Despite the acknowledged limitations of aspects of the survey method and the difficulty in integrating the study with measurement of actual change in the area studied (as originally hoped), the study firmly established the potential utility of the IPE as a component of the suite of monitoring techniques available to managers.

The technique was assessed because it possesses many potential advantages for protected areas managers, including:

(a) a relatively simple and potentially cost-effective (limited mostly by survey administration capacity) methodology - it is easily adapted from standard visitor survey techniques, although as various authors suggest, further effort in developing measures which can be easily understood by all stakeholders on a common basis is desirable;

(b) ready linkages with bio-physical assessments or monitoring of use or management impact - a common set of biophysical and attitudinal indicators could be developed as a basis for monitoring of management efficacy, particularly if managers can better define what aspects of the protected area experience they are actually providing or influencing (in a market sense) and develop corollary biophysical measures that provide an additional, empirically-derived measure of use impact/resource condition;

(c) immediate understanding of user preferences and guidance/feedback on management effort(s) needed - although there are several ways in which it is possible to construct and interpret the Action Grid, these are (as Renzi, 1998) observes, exercises within the domain of management and as such can be tuned to management interests (as was done in this case study by relocating the cross hairs of the action grid and displaying the standard deviation for each attribute rating); and

(d) high capacity to be integrated with annual performance measurement and reporting systems - the Action Grid provides an annual performance baseline which allows managers to define priorities for future effort and progress - via such integrative techniques, management intentions can be linked more closely with management implementation.

1. Why was the evaluation done?

The evaluation was undertaken as part of a broader study to assess alternative monitoring frameworks for measuring management performance in protected areas. In essence, this project was a pilot study that was designed to test aspects of the methodology prior to a larger scale application in the nearby Central Eastern Australian Rainforests (CERA) World Heritage Property.

The specific aims of this project were to:

(a) to test the potential suitability of the IPA technique in the field of protected area monitoring, in particular to test claims such as the technique.... *"can yield important insights into which aspects of a marketing mix a firm should devote more attention as well as identify areas that may be consuming too many resources"*;

(b) to apply the technique in a setting which would enable comparison of the perception of site attributes by a range of stakeholders in a protected area;

(c) to identify limitations and possible innovations with the IPA method;

(c) to compare the perception of change with measurements of actual environmental change; and

(d) to establish a basis for comparison (of the results of the IPA technique and of the method employed) with results from a proposed follow up study which applied the IPA technique at a nearby World Heritage site (Mt Warning National Park - see Chapter 8.0)

2. How was it conducted?

Data gathering for the evaluation had 3 major components:

a. Literature review – involved assessment of both relevant case studies from Australian and global protected area management;
b. Site monitoring data review – compiled data on site management history and current condition (data from remote sensing, files, local oral histories, etc.); and
c. Stakeholder surveys – a standardized IPA questionnaire was administered to samples of each of the six major stakeholder groups.

The site selected was the Victoria Park Nature Reserve. Victoria Park is one of the larger remnants (17.5 ha), of the Big Scrub (a rainforest complex that originally covered 75,000 ha in northern NSW). The actual area of rainforest within the boundaries of the Nature Reserve is only 9 hectares. Victoria Park was dedicated for public recreation on December 3rd, 1898 and was formally declared as a Nature Reserve under the New South Wales National Parks and Wildlife Act, 1974. It was the first Big Scrub remnant to be gazetted as a Nature Reserve.

3. Who was involved and why??

a. The NSW National Parks and Wildlife Service (NPWS) was the primary partner and client for this evaluation – the NPWS manages the Victoria Park Nature Reserve and the nearby NSW properties within the CERA WHA. It had just begun to develop service-wide standards for monitoring of management performance and was interested in assessing new methods that could simply and reliably provide insights to management performance

b. The evaluators were led by a team from Southern Cross University, the local NPWS partner for many science and planning activities related to management of rainforest remnants in the Northern NSW area; the author was also Chair of the District Advisory Committee of the NPWS at that time and was engaged in a broader research program to assess approaches to monitoring World Heritage Area management in Australia

c. Participants in the survey comprised the six key local stakeholders: Managers, Special Interest Groups (notably volunteers involved with rainforest rehabilitation), Adjacent Landowners (the reserve is surrounded by privately owned land, not all of which is managed in sympathy with reserve objectives), educators (local school and university teachers who use the forest for education purposes), site visitors (on site users) and regional residents (randomly selected members of the general community within a 100km radius of the reserve). Response to the survey is outline din the table below.

Sample Group	N. Distributed	No. Returned	Return rate (%)
On-Site Users	55	37	67.3
Regional Residents	130	69	53
Adjacent landowners	24	12	50
Educators	33	8	24
Special Interest	25	21	84
Managers	25	15	60
Total	302	162	53

4. How was the evaluation process developed??

The process was developed through a combination of:

a. Review of local and global experience with IPA;
b. Consultation with the NPWS on their requirements for simple and reliable data that could help them address the frequently cited issue that "management of such sites involves managing visitor expectations"; and
c. Revision of the survey instrument after pre-testing of questionnaire
d. Using feedback from a notice sent to members of the rainforest network in the district

5. What was covered in the evaluation and why?

a. Physical condition of the reserve – using a range of sources, an assessment of the physical condition of the reserve was prepared and was intended for use as a basis for comparison with stakeholder 'perception' of reserve condition and trends. Interestingly, despite having been a priority site for rainforest rehabilitation (and the closest conservation property to the NPWS District office, documentation for the site was more limited than expected;

b. Stakeholder perception of the importance and management performance in relation to two key sets of variables:
    1. <u>Infrastructure</u>

Access roads, road signage, on-site signage, car parking, walking trails, BBQ facilities, lawn areas, toilets, drinking water

2. Site Quality

Rainforest condition, rainforest replanting, litter, weeds, crowding, other activities (affecting amenity), adjacent land use

These variables were chosen as they were considered most likely to capture both "standards of service" concerns raised by the NPWS, and because these pilot measures of site quality were also target measures for a larger (multi-site) evaluation to be conducted as a second stage project. Two further practical reasons related to the survey length (pre-testing had shown that respondents were less likely to thoughtfully complete a more detailed survey) and because they were factors of concern to all survey groups.

6. Which elements of the WCPA framework were covered in your evaluation process?

While this project incorporated all elements of the WCPA framework, particular emphasis was placed on Element 4 (how do we go about the process?)

7. How was the evaluation reported?

The evaluation was reported in three ways:

(a) general feedback to each of the stakeholder groups surveyed – a short media release was prepared and circulated locally describing the key findings;
(b) personalized feedback was given to NPWS district and regional staff at a workshop of managers in which the results were presented and reviewed, particularly in relation to the applicability of the method (see references); and
(c) in the combined findings of the research project (e.g. as part of progress report to the Southern Cross University Research program that funded the work)

8. What changes in management resulted?

The most immediate impacts of the study were:

(a) an increased commitment by managers to improved documentation of management effort and related monitoring of the biophysical condition of the reserve;
(b) a re-assessment of why managers perceptions of performance were consistently different from those of other stakeholder groups; and
(c) fine tuning of the IPA instrument before application in further studies (notably in relation to framing questions on how to rate the importance of particular variables for reserve users)

9. What did you learn about the process of assessment?

(a) to not make presumptions about management knowledge and capacity – after failing to develop an adequate database for measuring change at the site it became very difficult to reconstruct the history of environmental change even at such a small site unless data for such analysis have been purposefully collected and maintained;
(b) the process of evaluation, if undertaken in a collaborative manner and with full communication between the evaluation team and key stakeholders can build new understandings on stakeholder perspectives that may otherwise not be adequately considered in the management process.

(c) providing results in a form that is readily understood by non technical audiences improves the quality of subsequent analysis and discussion with all stakeholders and ultimately enhances the likelihood of follow up action
(d) experimentation with evaluation techniques can be more rewarding than just meeting the objectives of the project – by approaching this project with a view to maximizing learning, significant insights were gained into the methodology and various nuances of the management approach; and
(e) obtaining supplementary information from survey respondents provides very helpful context for interpreting results from the IPA instrument and helps build management awareness of the spontaneous concerns of respondents.

10. *What have you done differently (or what would you do differently) based on what you learned about evaluation?*

(a) pre-tested the survey instrument with a larger and more diverse sample to ensure that questions are unambiguous and easily analyzed before proceeding with the full survey;
(b) involve the managers more fully in data collection and analysis phases of the evaluation – some of the potential value added of the evaluation process was lost by making this a "third party" process in these phases;
(c) gained a greater insight into "standards of service" for key site management variables so as to interpret IPA results in more detail (i.e. by considering management standards individually, it is possible to adjust the cross hairs on the IPA grid); and
(d) there is considerable value added by seeking to utilize standard indicators and results from comparable studies in other locations.

References:

Dutton, Ian (1994a) Measuring Environmental Change, ROBS (Remnants of the Big Scrub) Newsletter, 2(1):2.

Dutton (1994b) Visitor Use of Victoria Park Nature Reserve, Report to NSW NPWS, Lismore District, Alstonville, 23pp.

The Rapid Assessment and Prioritization of Protected Areas Management (RAPPAM) Methodology

Case study by:	Jamison Ervin
Institutional affiliation:	Independent consultant to WWF International
Address:	1061 Mountainview, Duxbury, VT 05676 USA
Telephone/Fax:	1.802.244.5875
Email:	jervin@sover.net

The case context:

WWF International has developed a tool for assessing the management effectiveness of protected area systems, called the Rapid Assessment and Prioritization of Protected Area Management (RAPPAM) Methodology. The RAPPAM Methodology is intended to: 1) identify management strengths and weaknesses; 2) analyze the scope, severity, prevalence and distribution of a variety of threats and pressures; 3) identify areas of high ecological and social importance and vulnerability; 4) indicate the urgency and conservation priority for individual PAs; and 5) help to develop and prioritize appropriate policy interventions and follow-up steps to improve PA management effectiveness.

The RAPPAM Methodology has been field-tested in several countries (France, Cameroon, Gabon, China, Algeria), but only fully implemented in four countries -- Bhutan, Russia, China and South Africa. Each of these cases presents very different conditions. The Bhutan assessment, sponsored by WWF Bhutan, The World Bank, and the Nature Conservation Division of Bhutan, looked at four of the five operational parks in Bhutan. This assessment went into greater detail for each protected area than the other assessments, but included fewer comparative assessments and analyses. The China assessment, sponsored by WWF China, with the support of Beijing Forestry University and Chinese Academy of Forestry, focused on the Upper Yangtze Ecoregion, and included 88 national-level forest protected areas. The Russia assessment, sponsored by WWF Russia and IUCN, focused on 197 national level protected areas across the entire country, and thus provides a series of regional and cross-cutting analyses. The South Africa assessment, which focused on the KwaZulu Natal Province and was sponsored by the KZN Parks and Wildlife Department, covered all 110 protected areas within KZN. Protected areas in this assessment, which ranged in size from 4 hectares to several hundred thousand hectares, covered a variety of biomes, including forest, grassland savannah, scrub forest and marine.

Participants from these assessments developed four separate case studies, which are available from WWF International, along with the RAPPAM Methodology.

1. Why was the evaluation done?

The rationale for undertaking the assessment was different for each case study. The goal of the Russian assessment was to develop a picture of the extent of problems within the entire national protected area system, including threats and pressures, but also institutional problems stemming from recent economic and political changes. The goal of the China assessment was to assess the management effectiveness of protected areas within the Upper Yangtze Ecoregion as part of a systematic conservation planning process. This broader process sought to prioritize support to critically threatened protected areas. The goal of the Bhutan assessment was to reflect back over the first decade of park management, identify areas for improvement, and establish baseline data for future assessments. The goal for South Africa was to prioritize and reallocate budget expenditures for the recently consolidated parks department. KZN

Wildlife was also involved in a systematic conservation planning exercise for the province, and planned to use the data in that broader assessment process.

2. How was the evaluation conducted?

The Rapid Assessment and Prioritisation Methodology (RAPPAM) includes five steps: Step 1: Determining the scope of the assessment; Step 2: Assessing existing information for each protected area; Step 3: Administering the Rapid Assessment Questionnaire; Step 4: Analysing the findings; and Step 5: Identifying next steps and recommendations.

WWF emphasizes that the most thorough and effective approach to implementing the RAPPAM Methodology is to hold an interactive workshop or series of workshops in which protected area managers, policy-makers and other stakeholders participate fully in evaluating the protected areas, analyzing the results, and identifying subsequent next steps and priorities. All four case studies included a series of workshops; Bhutan held one for each park, while Russia held one for each region of the country, and South Africa held one for each sub-region of the KZN Province. China held a workshop of protected area managers to confirm and triangulate data that was independently derived. Because the data in the RAPPAM Methodology are qualitative and subjective, a workshop is essential for establishing a negotiated and mutually agreed-upon bias for scoring answers across different parks.

3. Who was involved and why?

In Russia, the assessment involved park managers, WWF and IUCN staff, and a variety of regional and national-level stakeholders. In Bhutan, the assessment involved park staff, governmental officials, WWF staff, a World Bank consultant, and two dozen national-level stakeholders. In China, the assessment involved WWF China, the State Forestry Association, Beijing Forestry University, the Chinese Academy of Forestry, and protected area managers. In South Africa, the assessment involved staff from KZN Wildlife, as well as governmental officials and policy makers. The varying levels of stakeholder involvement depended on the goal of the assessment. The high level of stakeholder involvement in Russia, for example, stemmed from the project's secondary goal of improving the participation of civil society in governmental processes.

4. How was the evaluation process developed?

WWF developed the RAPPAM Methodology between 1999 and 2002, field testing it in Algeria, Cameroon, France and Gabon and supporting its implementation in China, Russia and South Africa. Three regional workshops provided substantial input to its development: September 2000 in Vermont USA, January 2001 in Bali, Indonesia, and September, 2001 in Kwazulu Natal, South Africa.

5. What was covered in the evaluation and why?

The major tool of the RAPPAM Methodology is the Rapid Assessment Questionnaire. The questionnaire covers all aspects of the WCPA Framework (see below), but focuses on two major areas: 1) contextual issues, including threats and pressures, vulnerability, and biological and socio-economic importance; and 2) management effectiveness, including a variety of measures under planning, inputs and processes. The questionnaire also includes a series of system-level questions that look at system-level design issues, protected area policies, and the broad policy environment.

6. Which elements of the WCPA Framework were covered in your evaluation process?
The RAPPAM Methodology and the WCPA Framework were developed concurrently, and the RAPPAM Methodology drew heavily from the framework. Below is a breakdown of the major categories of questions in the Rapid Assessment Questionnaire:

Context	PA Design and Planning	Inputs	Management Processes	Management Outputs	Outcomes
• Threats • Biological importance • Socio-economic importance • Vulnerability • PA policies • Policy environment	• PA Objectives • Legal security • Site design and planning • PA system design	• Staff • Communication and information inputs • Infrastructure • Finances	• Management planning • Management practices • Research, monitoring and evaluation	• Threat prevention • Site restoration • Wildlife management • Community outreach • Visitor management • Infrastructure outputs • Planning outputs • Monitoring • Training • Research	• Pressures

7. How was the evaluation reported?
Each of the four assessments produced a detailed case study (approximately 30 pages each). These will be circulated to protected area professionals within each country, as well as within WWF's network during late winter of 2003. Each country has also held or is planning to hold a meeting with governmental officials regarding the findings of the assessment. In addition, WWF Russia has plans to develop a report of the assessment findings aimed at park managers, and KZN Wildlife has developed a database that captured all of their assessment data, and they have made this database available to all park managers across the province.

8. What changes in management resulted?
The case studies have only recently been completed. Nonetheless, the KZN Wildlife has begun to discuss how the findings can help them formulate the next fiscal year's budget. In Bhutan, there are plans to undertake an assessment of park effectiveness every year, and to incorporate assessments into the routine tasks of park managers. The results from the China assessments will be used in their systematic conservation planning process to help set priorities for park support. In Russia, WWF has plans to follow up the report by conducting more detailed site-level assessments in the most threatened and critically important protected areas.

9. What did you learn about the process of assessment?
There were several lessons to be learned from the four case studies:

Find a champion: It helps to have a designated, enthusiastic leader of the assessment process. For example, Peter Goodman of KZN approached WWF International early on, expressing his interest in implementing the RAPPAM Methodology. His enthusiasm and commitment ensured not only that the assessment was run smoothly and efficiently, but also that he contributed to the design of the methodology itself, collaborated with others in the region interested in assessing management effectiveness, and was instrumental in ensuring that the provincial government supported the findings of the assessment.

Hold an initial planning meeting: An initial planning meeting of the organizers, as well as a few key protected area staff and administrators, can be useful to 1) establish a common list of threats and pressures to assess in each protected area; 2) establish a common procedure for running workshops; and 3) agree upon the parameters of the assessment process.

There are recurring threats and pressures: Despite the very different context in which the assessments took place, there emerged a consistent list of major threats and pressures across all four countries: tourism, collection of non-timber forest products, poaching, and fires.

There are recurring management weaknesses: Similarly, there were similarities in the major management weaknesses across all four areas, including: inadequate management planning, inadequate natural resource inventories, problems in human resource management, lack of financial support, lack of scientific research and data management skills, and poor community relations.

10. What would you do differently based on what you have learned?

The RAPPAM Methodology offers a series of questions to help in clarifying the scope of the assessment, including:

- What are the specific objectives of conducting the protected area assessment?
- How will the information be used and by whom?
- Who will participate in the process?
- How will the results be communicated?
- What resources are available for conducting the assessment?
- Who will be responsible for co-ordinating and undertaking the assessment?
- What is the timeframe for completion?
- What are the follow-up steps planned after the assessment is completed?

Not all of these questions were fully answered at the outset of the assessment processes. Ambiguity invariably led to confusion and misunderstanding. Future assessments should take care to answer each of these questions fully and explicitly before initiating the assessment.

ParksWatch Evaluation of Management Effectiveness of El Mirador, Guatemala

Case study by:	Chris Fagan (Director, ParksWatch) Carlos Albacete (Director, ParksWatch - Guatemala)
Institutional affiliation:	ParksWatch
Address:	Duke University, The Center for Tropical Conservation, 3705-C Erwin Road, Durham, NC, 27705, USA
Telephone:	919 490 6678
Fax:	919 493 3695
Email:	ctf2@duke.edu

The Case Context

ParksWatch is a watchdog and monitoring organization that conducts on-the-ground inspections ("audits") of parks and equivalent protected areas in Latin America. We work in partnership with in-country conservation organizations and individuals. The inspections follow a standardized questionnaire and each completed questionnaire is compiled into the ParksWatch database. Our product is "Park Profiles." These compile and synthesize the large amount of information that results from each park audit. The centerpiece of each profile is a multi-disciplinary evaluation ("diagnosis") of the state of the park based on an analysis of threats, local socioeconomic context, management needs, links to other regional and national organizations, and other such crucial matters. Each diagnosis leads to a prescription for actions needed to alleviate or remedy the most pressing needs. The profiles are shared directly with government agencies, NGOs, and community groups to help them develop strategies to strengthen parks and succeed at the ultimate goal of protecting biodiversity.

1. Why was the evaluation done?

ParksWatch has been active in Guatemala since February 2001 through a partnership with the NGO Trópico Verde. The evaluation we are describing in this case study is for El Mirador – Rio Azul National Park, one of the core zones of Guatemala's Maya Biosphere Reserve (MBR) and the country's most pristine park due to its relative inaccessibility. ParksWatch became especially concerned with El Mirador – Rio Azul in mid-2001 when the government entertained two proposals for the park: one for the construction of a highway through the park to link the MBR with Mexico, and another for a large-scale tourism project around the archeological ruins called El Mirador. Both proposals were rejected and no longer pose an immediate threat to the park.

2. How was it conducted?

Park audits begin by gathering background information from all relevant sources, including existing databases, governmental agencies, conservation organizations, newspaper reports, and other published literature. The on-site data collection follows a standardized ParksWatch questionnaire. Completed questionnaires are added to the ParksWatch database which allows the comparison of parks from the same or different countries. ParksWatch staff gather photographic documentation and interview park managers, park guards, researchers, NGO workers, and local inhabitants living inside and near the park. Through these first-hand accounts, we are able to uncover information not readily available elsewhere that elucidates the nature and extent of external and internal threats to parks. The selection of protected areas to be audited is based on several criteria including levels of biodiversity, endangered species, endemism, size, and degree of threat. Our goal is to revisit priority parks on a four-year basis to update our data and gauge changes in conservation status. The length of time for each park visit varies depending on the size of the park and its accessibility. ParksWatch staff spend an average of ten days per month in the field, averaging six to ten audits per year and per country.

This particular evaluation of El Mirador – Rio Azul was conducted by Carlos Albacete, ParksWatch-Guatemala Director, between September 2001 and January 2002. Carlos spent approximately three weeks in the field and several additional weeks meeting with park stakeholders.

3. Who was involved and why??

Carlos completed the ParksWatch questionnaire through background research from his office, his own personal observations during the on-site visit, and through conversations with people who live and work in the park. Although the on-site visits are the key component to ParksWatch's evaluations, it is also extremely important that we discuss park issues with those people who live and/or work in

and near the park, and therefore, have an intimate knowledge of the threats to the park. In the case of El Mirador – Rio Azul, Carlos attended numerous meetings, conferences and workshops with park "stakeholders." The stakeholders for this park are comprised in three principal groups: 1) local communities, 2) the government agencies in charge of the park, and 3) NGOs involved in the management of the park and adjacent lands. Carlos has worked in the MBR for several years and has strong relationships with various members of the local conservation community. The following is a brief description of the primary groups with whom Carlos worked to complete his evaluation of the park.

The communities of Carmelita and Uaxactun. They are the only two communities on lands adjacent to the park. They have been located in the multiple-use zone of the MBR for most of the past century, well before the creation of the park and the MBR. Both generate the majority of their income through the sustainable collection of the ornamental palm xate and the tree resin chicle, and, overall, have a strong conservation ethic. Carlos has strong ties to the leaders of both communities and often advises them both on conservation and development issues.

IDAEH and CONAP. IDAEH (Institute of Anthropology and History of Guatemala) and CONAP (National Commission of Protected Areas) share the management responsibilities of the park; thus it was imperative to meet with members of both organizations, the guards on the ground as well as the respective directors.

The Wildlife Conservation Society. WCS is involved in several projects within the park including Rapid Assessment Programs and wildlife transects using local men form Uaxactun. WCS is considered the experts on El Mirador – Rio Azul Park. Thankfully, WCS is a strong ally of ParksWatch which facilitated the ease with which we were able to gather accurate information.

4. How was the evaluation process developed??

ParksWatch has been active for three years, during which we have evaluated 35 protected areas in five countries: Mexico, Guatemala, Venezuela, Peru and Brazil. As previously mentioned, the on-site evaluations follow a standardized questionnaire. Once this questionnaire is completed, it is used to write a summary of the protected area evaluation. These reports are called Park Profiles.

As we have gained more experience, the questionnaire has been revised and missing information added, to make it as comprehensive as possible. Last month we held a 3-day workshop, in which our field staff from the five countries worked to create a final version of the questionnaire, containing all previously missing data needed to properly evaluate protected areas. Staff at headquarters at the Center for Tropical Conservation are currently working on this final version. A copy of the "old" questionnaire has been sent with this case study.

5. What was covered in the evaluation and why?

ParksWatch is concerned with uncovering and analyzing threats to protected areas; therefore, our evaluations, and our questionnaire and Park Profiles, are primarily concerned with information on threats. We do, however, gather background information on such characteristics as Management and Administration, Budgets, Staff, Laws, Maps, Reference Materials, Conservation and Research Projects, Biodiversity, etc. but we are primarily concerned with threats and the majority of our questionnaire and the Profiles deal directly with them.

The questionnaire (currently under revision) includes 20 threats including administrative (illegal but condones uses i.e., petroleum concessions), internal (poaching and agriculture), external (pollution), and resource extraction (mining, logging). In addition to describing each threat, we use a scoring system to assess the level of each threat: 0 = no threat; 1 = low—needs monitoring; 2 = medium—needs attention; and 3 = high—needs urgent solution. (Again, we are in the process of improving and standardizing this system in order to assure objectivity among different evaluators from different countries and over time. In particular, we are developing a scoring system based on 5 levels instead of 4.)

6. Which elements of the WCPA framework were covered in your evaluation process?
Apart from Outcome, we cover all of the elements: Context, Planning, Input, Process, and Output. Our evaluations are concerned primarily with threats, including not only easily identified threats like logging or poaching but less tangible threats like insufficient budgets, mismanagement of funds, and lack of personnel.

Once we begin to reevaluate areas we will cover Outcome as well. We plan on reevaluating priority areas every 3 or 4 years.

7. How was the evaluation reported?
In the case of Carlos' evaluation of El Mirador – Rio Azul, the resulting Park Profile was shared directly with CONAP (the Guatemalan agency in charge of protected areas). In addition, Carlos conducted an extensive advocacy campaign publicizing the importance of the park for Guatemala and the proposal to build a highway through the park. The Profile is available on our website (www.parkswatch.org).

8. What changes in management resulted?
Initially, CONAP was against the construction of the highway but was not informed of the details of the proposal. We served as an advisor to CONAP. Carlos explained to CONAP where the road was to be built, where the funding was coming from, and most importantly, what the road would mean to the park. He showed them images of the already built road in the Calukmul Biosphere Reserve in Mexico, to which the new road would be attached. They were easily convinced that the road was a very, very bad idea.

CONAP took our Park Profile to members of the Guatemalan government to show an independent evaluation of the park and inform them about the highway proposal. The President eventually rejected the proposal. Although we do not claim to be directly responsible for this incredible victory, we do believe that our evaluation lent needed support to CONAP'S recommendation for the final rejection of this highway proposal.

9. What did you learn about the process of assessment?
ParksWatch can be most effective if we are recognized as a reliable source of unbiased, objective information about protected areas. Although we will not hesitate to confront park managers guilty of corruption or general mismanagement, we would rather work in partnership with these groups. We want to be recognized as a tool that they can use to identify threats and strengthen management.

Also, we are constantly reminded of the Importance of evaluations conducted by an independent third-party in order to ensure objectivity. Surveys answered by park directors are not always objective, for example. Along these same lines, the only true way to ensure accurate information is to get in the field to document threats in person.

10. What have you done differently (or what would you do differently) based on what you learned about evaluation?
As previously mentioned, we are standardizing our scoring system for threats. This is critical if we want to compare parks among different countries, and when we are ready to re-evaluate parks to measure threat reduction and improvements in park management.

Also, we will begin to incorporate GIS data and video footage into our park evaluations.

Evaluating Management Effectiveness of the Fraser Island World Heritage Area

Case study by:	Marc Hockings – Fraser Island World Heritage Area
Institutional affiliation:	University of Queensland
Address:	School of NRSM, University of Queensland, Qld 4343
Telephone:	+61 7 546010140
Fax:	+61 7 54601324
Email:	m.hockings@mailbox.uq.edu.au

The Case Context

This case study commenced in 1994. There was little information then available on methodologies or approaches to assess management effectiveness in protected areas. In the absence of any accepted and published methodology in this field, guidance was sought from evaluation methodologies and approaches in other fields, primarily social program evaluation and public sector program evaluation.

1. Why was the evaluation done?

Evaluation was undertaken for two reasons. Firstly the Queensland Parks and Wildlife Service was in the process of completing a new management plan and wanted to build in a process for evaluation and review of the plan. Secondly, I was interested in using the site as a case study to look at developing a methodology for evaluating effectiveness of management of protected areas in Australia. While this motivation was primarily related to research, my interest in this issue had been sparked by a realisation that performance assessment and management:

- was an emerging issue that was likely to increase in importance;
- was rarely used by managers despite nomination of "performance indicators" in many planning documents;
- was critical to building a culture and capacity for adaptive management;
- would help park managers to meet expanding requirements for reporting and accountability.

2. How was it conducted?

Partnership between researcher and park managers. Specific objectives for the evaluation strategy were established in consultation with managers. The system was designed to:

1. enable judgements about the degree of achievement of outcomes specified in the plan;
2. meet the needs of managers for information of use in assessing, reviewing and adjusting management programs;
3. provide a basis for managers to report on the implementation of the plan;
4. provide feedback to managers on a continuing basis as well at the review periods specified in the plan;
5. meet the needs of government, stakeholders and the public for accountability in management of the area;
6. be as comprehensive as possible in its coverage of management issues identified in the plan; and
7. be capable of being conducted within the resourcing levels that could reasonably be expected to be allocated to an evaluation program for the park given its size, importance and management context.

Once the overall approach had been defined, the nature, content and mechanisms for implementation of monitoring programs were agreed between the researcher and local site managers. The initial focus of the assessment program was on:

- the evaluation of the achievement of management objectives established for the site through the management plan (outcome assessment); and
- monitoring of implementation of the strategies, policies and actions contained in the management plan (output assessment).

For the outcome assessment, potential items for performance assessment were identified on the basis that they would reflect achievement of key attributes of the desired outcome. The information required to make these performance assessments was then specified along with ideas on an appropriate methodology for collecting this information and notes on problems or issues to be considered in relation to data collection.

For the output assessment, the evaluation strategy tracks the extent of implementation of the policies and actions specified in the plan. The objective of this element of the strategy is to provide managers and the broader community with data on the general status of plan implementation and specific information on progress of individual components of the plan.

Subsequently assessments of management inputs and processes were also introduced. The input assessment tracked the allocation of funds to the area based on funding source and purpose (staff, capital works etc). The process assessment rated performance against a set of standards for different management activities.

3. Who was involved and why?

1. Site managers – participated in design of the evaluation system and conduct the majority of monitoring programs in the field, some participation in analysis of evaluation results and production of reports.
2. University researchers – Responsible for overall design of the evaluation system, conduct of the some monitoring programs (gradually handed of to site managers), primarily responsible for data analysis and report preparation.
3. World Heritage area advisory committee members – Participated in the process assessment, received reports on the various monitoring programs and commented on findings in the course of committee meetings with QPWS.

4. How was the evaluation process developed?

Developed by university researcher based on a review of evaluation literature from other fields, wide discussions with evaluation experts and conservation managers.

Subsequently, the evaluation model developed for Fraser Island formed the starting point for the development of the WCPA Evaluation Framework. The Framework was developed and reviewed in collaboration with an international task force, workshops and pilot studies.

5. What was covered in the evaluation and why?

Monitoring programs were developed to assess the extent to which key objectives specified in the management plan were being achieved. Initial monitoring programs focused on objectives relating to key issues identified in discussion with site managers. These were:

- Camping – extent and impact of camping on the integrity of the coastal zone assessed from aerial photography and field survey;
- Vehicular use of beaches – extent of vehicular use and impact on wader populations assessed by field survey;
- Marine and terrestrial wildlife – incidental recording of fauna sightings combined with a site survey program sampling all major vegetation communities across the island; survey techniques for site survey included cover-abundance survey of plant species, mammal trapping, bird survey and pit-fall trapping
- Fire – vegetation plot survey in sites selected to sample all vegetation types and fire management classes;

- Roads – monitoring of road characteristics against established performance standards; and
- Water quality – monitoring of key water quality attributes in sample of lakes of different types and usage levels.

An annual assessment was made of the extent to which the policies and actions specified in the management plan for the area had been implemented. A database, recording progress for each action, allows comprehensive analysis of the extent of progress in relation to different issues and strategy areas within the plan. This assessment was undertaken to provide a means of tracking plan implementation (for reporting and annual operational planning purposes) and to provide context for the interpreting the results of monitoring programs focussed on achievement of key objectives.

An annual assessment was made of the way in which management is carried out on the island using a set of ideal management standards and rating management in relation to these standards. Initially, this assessment was made only by a group of managers in consultation with the researcher. Later, the assessment was also made by stakeholder representatives. This assessment was undertaken to identify strengths in weaknesses in management processes

Data on the budget allocated to manage the island was collated from management records. This data was collected to identify trends in resourcing levels and to identify where management effort was being allocated (i.e to which management functions).

6. Which elements of the WCPA framework were covered in your evaluation process?

Inputs – partial coverage dealing with changes to resource levels but not involving any assessment of resource needs
Processes – using a modified form of Appendix 2 from WCPA Framework
Outputs – Assessment of extent to which each action in the site management plan has been implemented.
Outcomes –.see 5. (above) for details

7. How was the evaluation reported?

Interim reports were prepared, primarily for QPWS and site managers, either on an annual basis (e.g. for process and output evaluation), at the conclusion of a round of data collection (e.g. water quality, roads), on request for management workshops (e.g. fire, camping). Briefings on the findings of specific programs were given to members of the various management advisory committees on request. Results from some monitoring programs have been published as scientific papers in peer-reviewed journals.

At the conclusion of the initial evaluation study, a full report was prepared on all assessment programs. This was distributed by QPWS to members of the advisory committees. Copies have been provided to IUCN, WCMC and other relevant government departments and have been made available to others on request.

8. What changes in management resulted?

Results of assessment and monitoring programs have been used in the following ways:

- decision-making within management plans for coastal camping, fire management, dingo management etc (e.g. decisions not to permit continued camping within specific areas);
- identification of priorities for annual burning programs;
- development of rehabilitation programs for certain sites;
- initiation of research programs into issues identified through the monitoring program (e.g. fire management)

- input to a review of World Heritage values for the site;
- as an information source for Ministerial replies concerning management of the site.

9. What did you learn about the process of assessment?

- Commitment from senior management is critically important
- Desirable that one person has overall responsibility for evaluation and monitoring program
- Investment of time and funds for monitoring achievement of outcomes (especially relating to biophysical and ecological outcomes) is considerable. The number of monitoring programs that can be sustained in the long term is therefore limited. As a consequence, monitoring must be targeted to critical issues (key values and principal threats) Simple "early warning" indicators must often be used in preference to more detailed or precise measures.
- Evaluation results will be more useful for adaptive management if the assessment information has high explanatory power. It is not enough to know what has been the result of management actions (i.e. the outcomes); there is a need to be able to hypothesise about why certain results have or have not been achieved. The explanatory power of evaluations can be increased by looking at a variety of different types of assessment data. The different elements of the WCPA Framework can provide this diversity of information.
- Involvement of managers in the design of the evaluation process and in the collection of monitoring and assessment data will enhance utilization of the assessment findings.
- One of the major uses of evaluation results is identification of the need for, or input into, issue-specific planning. This represents a form of adaptive management.
- Not every aspect of management can be evaluated. A clear understanding of key values/objectives and threats to these values/objectives can help to focus the monitoring and evaluation on the most critical aspects of management.
- Some monitoring programs will take a number of years to generate useful information. Management commitment to maintain these programs is needed. This can be enhanced by balancing these programs with assessments that produce useful results in the short term.
- The combination of independent researchers and site managers in design and implementation of evaluation programs can be an effective way to establish programs but there needs to be a planned process of "hand-over" of the programs to managers over time.

10. What have you done differently (or what would you do differently) based on what you learned about evaluation?

- Included assessment of all elements from the WCPA Framework from the beginning.
- Paid more attention identifying values and threats as a guide to selecting components of outcome assessment rather than just focusing on objectives from the management plan.
- Provided greater opportunity for stakeholder input into the assessment of relevant aspects of management.
- Prepared a more detailed documentation of the rationale and design of the monitoring and evaluation programs in a form that could be used to brief incoming managers. Management staff changes are inevitable and it was noticeable that the understanding and commitment of incoming managers was significantly less than that of staff who had been involved in initial program design.
- Negotiated and implemented a more explicit process of hand-over of monitoring and assessment programs to managers.

EVALUATION OF WORLD HERITAGE MANAGEMENT PROGRAM FOR THE TASMANIAN WILDERNESS WORLD HERITAGE AREA

Case study by:	Glenys Jones
Institutional affiliation:	Parks and Wildlife Service, DTPHA (Tasmania)
Address:	PO Box 44 Hobart TAS 7001, 134 Macquarie St Hobart TAS 7000
Telephone:	(03) 6233 6567
Fax:	(03) 6224 0884
Email:	glenys.jones@parks.tas.gov.au

The Case Context

The Tasmanian Wilderness World Heritage Area is one of the largest conservation reserves in Australia and protects vast tracts of high quality temperate wilderness together with a wealth of natural and cultural heritage. The area was originally inscribed on the World Heritage List in 1982 on the basis of all 4 natural criteria and 3 cultural criteria. Expanded in 1989, the area now protects approximately 1.38 million hectares (about 3.46 million acres) or about 1/5 of the island state of Tasmania. For more information about the area and its values, visit the web site http://www.parks.tas.gov.au >Parks & Wildlife>Visitors' Guides>Tasmanian Wilderness World Heritage Area.

The majority of the land within the Tasmanian Wilderness is protected under Tasmanian legislation and primary responsibility for managing the area is with the Tasmanian Parks and Wildlife Service, a division of the Department of Tourism, Parks, Heritage and the Arts (formerly of the Department of Primary Industries, Water and Environment).

The Tasmanian Wilderness is managed under joint commonwealth and state government arrangements. These include a Ministerial Council which comprises 2 Ministers each from the commonwealth and state governments; a Standing Committee of government officials; and a 15 member Consultative Committee of scientific and community representatives which provides advice on matters relating to the development and management of the area. Half the members of the Committee are appointed by each of the state and commonwealth governments, with the chair being appointed by Ministerial Council.

The area is managed in accordance with a 10-year statutory management plan, which details the policies, and actions that will be implemented to achieve the management objectives. The management plan is developed through a comprehensive process of public consultation (which includes release of a draft plan for public comment and subsequent revision of the draft in light of that input) leading to finalisation of the plan and formal approval by the Governor-in-Council.

The level of funding for management of the Tasmanian Wilderness World Heritage Area is negotiated between the state and commonwealth governments based on the estimated requirements to adequately implement the jointly approved management plan for the area. The level of funding for management of the area has been relatively stable over the past 10 years at approximately $AU8.4 million per year (approximately $US4.5 million), comprising about $5 million from the Australian federal government, and $3.4 million from the Tasmanian state government.

1. Why was the evaluation done?

An evaluative management system was developed for the Tasmanian Wilderness World Heritage Area to provide reliable feedback to managers and stakeholders about the effectiveness of management in achieving its objectives under successive statutory

management plans. This feedback provides the necessary information to enable ongoing management to improve and become progressively more effective and accountable.

2. How was it conducted?

The objectives of management for the Tasmanian Wilderness World Heritage Area were articulated into statements of 'Key Desired Outcomes' (tangible results that management is seeking to achieve against each objective).

Requirements for monitoring, evaluation and reporting on management performance against these Key Desired Outcomes were integrated into the statutory management plan for the area.

Under the management plan, major reports on the performance of management are required to be produced every 5 years. These reports are to include recommendations for improving management. The findings and recommendations of evalaution are expected to guide ongoing management, including future management plans.

The methodology developed is described in the paper:

Jones, Glenys (2000) *Outcomes-based evaluation of management for protected areas — a methodology for incorporating evaluation into management plans.* In "The Design and Management of Forest Protected Areas. Papers presented at the 'Beyond the Trees Conference' 8-11 May 2000, Bangkok, Thailand". WWF, Switzerland, p. 349-358. Available at the website: http://www.panda.org/downloads/forests/beyondthetrees.pdf and also at www.parks.tas.gov.au/wha/whahome.html.

The practical experience of developing an evaluative approach to management of the Tasmanian Wilderness World Heritage Area is described in the paper:

Jones, Glenys and Dunn (Hocking), Helen (2000) Experience *in outcomes-based evaluation of management for the Tasmanian Wilderness World Heritage Area, Australia.* Case study 1 in 'Evaluating Effectiveness. A Framework for Assessing the Management of Protected Areas'. World Commission on Protected Areas (WCPA) Best Practice Protected Area Guidelines Series No. 6. IUCN in collaboration with Cardiff University. Hocking, M, Stolton, S and Dudley, N. Gland, Switzerland and Cambridge, UK. Also available at the website: www.parks.tas.gov.au/wha/whahome.html.

3. Who was involved and why?

One staff member within the Parks and Wildlife Service is responsible for coordinating the evaluation program and for preparing reports on the performance of management. Many staff across the Parks and Wildlife Service contribute to the program by undertaking scientific monitoring projects related to their field of expertise (eg. in flora, fauna, earth science, walking track management etc), and by providing GIS and mapping assistance etc. Consultants are employed as required to undertake public opinion surveys etc and/or collect other required data for the evaluation, and to assist with graphic design and production of the report. Stakeholders closely involved in management of the area (including an external community advisory committee, experts in conservation values, the Commonwealth Environment Department (Environment Australia), and the Aboriginal community etc) provide assessments and critical comment on management performance through targeted questionnaires. This qualitative input to the evaluation complements the monitored data on management performance.

4. How was the evaluation process developed?

The evaluation process was initiated through the employment by the Parks and Wildlife Service of a professional consultant to develop a framework for evaluating management performance for the Tasmanian Wilderness World Heritage Area. The consultant (Helen Dunn, formerly Hocking) worked closely with departmental staff to identify key desired outcomes of management along with potential performance indicators. The consultant's input was developed and adapted by Planning staff of the Parks and Wildlife Service so that a framework for evaluating management performance could be integrated into the (10 year) statutory management plan for the area. This has now been done in the 1999 Tasmanian Wilderness World Heritage Area Management Plan (available at http://www.parks.tas.gov.au). The management plan also prescribes requirements for monitoring and regularly reporting on the performance of management.

The managing agency has responsibility and control for continously adapting the evaluation process so it can respond to and meet changing circumstances.

Credibility in the evaluation process is assisted through the close ongoing involvement of an external community advisory committee (The World Heritage Area Consultative Committee).

5. What was covered in the evaluation and why?

The evaluation provides evidence of management performance against each of the objectives of management in the statutory management plan.

The main inputs to the evaluation were:

- Scientific and other measured data on performance indicators linked to the objectives of management (especially in relation to the World Heritage obligation of protecting and conserving the natural and cultural heritage), eg. distribution and abundance of endangered species; stability/erosion of river banks subject to erosion by cruise boats; distribution of plant diseases; sightings of feral goats; mapped distribution of weeds etc.
- The views of the general public and on-site visitors (especially in relation to the World Heritage obligation of presenting the World Heritage) e.g. public attitudes and opinions about the World Heritage Area and its management are monitored periodically (5 yearly) by random sample public phone survey by a market research company; and
- Assessment and critical comment on overall management performance by internal and external sources closely involved with management of the area (including. staff of the managing agency with professional expertise and/or responsibilities for World Heritage management, the World Heritage Area Consultative Committee (an independent community advisory group), the World Heritage Branch of Environment Australia (the federal agency with responsibilities for World Heritage Areas), and the Tasmanian Aboriginal Land Council).

6. Which elements of the WCPA framework were covered in your evaluation process?

The focus of evaluation for the Tasmanian Wilderness World Heritage Area is on the delivery of outcomes. However other elements of the evaluation include outputs (e.g. the extent to which the prescribed actions under the management plan have been implemented); inputs (e.g. funding and expenditure); as well as assessments and critical comment on overall management performance by internal and external stakeholders closely involved with management of the area.

7. How was the evaluation reported?

The management plan prescribes that the findings of evaluation will be reported in a major report every 5 years, with an interim progress report every 2.5 years.

The first major report on the performance of management over the term of the first management plan for the Tasmanian Wilderness World Heritage Area (1992-1999) will be published shortly.

In addition, progress reports and preliminary findings of evaluation are reported to staff and advisory committees as information comes to hand. Where appropriate (and especially in the event that findings indicate that management objectives are not being achieved), the findings would be promptly reported as appropriate to senior managers, Advisory Committees, and government.

8. What changes in management resulted?

The findings and recommendations of the evaluation are assisting in informing ongoing management of the area, including guiding the development of the next statutory management plan. The findings and recommendations are also expected to influence budget allocations and priorities, both internally and externally. Increased access by the public to detailed information about management performance is also expected to provide stakeholders with greater opportunities for influencing management through normal democratic processes.

9. What did you learn about the process of assessment?

- Two factors stand out as having been critical to the success of the evaluation program established for the Tasmanian Wilderness World Heritage Area:

1. A small number of key external stakeholders played a significant role firstly in encouraging the adoption of an evaluative approach by the managing agency, and secondly in providing ongoing external support for the program during critical periods of departmental/bureaucratic change which could have threatened the program's continuity.
2. The establishment of a practical ongoing evaluation program would not have been possible without the commitment and drive of key staff of the managing agency who integrated evaluation into the core management systems of the agency (eg. through the statutory management plan for the Tasmanian Wilderness World Heritage Area).

- The development of a formatted framework for reporting the findings of monitored performance indicators (eg. for significant values and threats) significantly improved the standard and consistency of reporting of the findings of research and/or monitoring studies. In some cases it also prompted improvements in the design and conduct of ongoing studies. (Note that the reporting framework was developed in close collaboration with scientists and other data providers to ensure that it was meaningful to, and well-accepted by, users.)

- Targeted questionnaires allowed for assessments and critical comments on management performance to be gathered from key stakeholders in management (eg. staff, experts, advisory committees etc). This provided a wealth of feedback on management performance at very little cost, and assisted in identifying a range of opportunities for improving ongoing management. (Note that these qualitative inputs can complement (but should not replace) measured scientific data about the condition of values and status of threats.)

- The inclusion of external sources for assessments and critical comment on management performance proved to be a valuable and important source of complementary inputs to those provided by the managing agency. For example, in some cases it resulted in the capture of views and insights that might not have been readily sourced from within a managing agency.

- The close involvement of an independent body throughout the process of evaluation itself assisted in ensuring credibility in the evaluation and its findings. In our case, this role was fulfilled by the World Heritage Area Consultative Committee (an independent body of scientific and community representatives) whose role is to provide advice in relation to the development and management of the Tasmanian Wilderness World Heritage Area to the responsible State and Federal government Ministers.

10. What have you done differently (or what would you do differently) based on what you learned about evaluation?

I think we basically got it about right for our circumstances. However the following things would certainly help in future:

To the extent possible

- Allocate/quarantine funding specifically for performance monitoring, evaluation and reporting. (Otherwise funds tend to get sidelined for more 'urgent' (though often less important in the long-term) needs.) Formal linkage of funds to the preparation of regular performance evaluation reports may be one way of doing this.
- Provide security of funding and tenure for staffing positions responsible for performance evaluation and reporting. Short-term appointments and lack of funding security were ongoing critical issues that tended to waste time on administrative matters and threaten the continuity of sound long-term evaluation programs.
- Assign one person/staff position to be responsible solely for coordinating the overall performance evaluation and reporting program (e.g. developing the evaluation requirements in the management plan; coordinating the monitoring programs, and reporting the findings and recommendations of the evaluation). If staff have other disparate responsibilities as well, evaluation tends to be the area that gets neglected when the 'going gets tough'.
- Use the management plan to prescribe the specific natural values/resources (including degraded values), and threats or pressures on values that will be formally monitored and reported on in subsequent evaluation reports. (So everyone knows where the priorities for management, monitoring and reporting are.)
- Once a good reporting structure has been developed, establish a formatted web-based reporting system so that reports on management performance can be readily updated and/or generated as new data becomes available. Web-based reporting systems may also facilitate different staff and/or others to assume responsibility for completing or updating different data fields or other segments of the report.

Assessment of Federal Protected Areas in Brazil

Case study by:	Rosa Lemos de Sá
Institutional affiliation:	WWF-Brazil
Address:	SHIS QI 06/08 conjunto E – Lago Sul, Brasília, DF - Brazil
Telephone:	55+61+364-7450
Fax:	55+61+364-7474
Email:	rosa@wwf.org.br

The case context:

Brazil has a total of 91 Federal Protected Areas for indirect use. This report is an assessment of all 86 protected areass created more than six years ago. Six years is considered the requisite time frame for minimum implementation.

The analysis is based on responses to a questionnaire entitled **Form for Collection of Information on Protected Areas** and produced by WWF in partnership with IBAMA. The questionnaire was filled out by heads of Protected Areas at their annual meeting in Maragogi, Alagoas, in April 1998.

Eight of the 13 questions asked were designed to determine the **extent to which Protected Areas have been implemented**. Thus the responses were used to determine the use of the area; appraise existing planning instruments; identify land-tenure status, types of land use, physical demarcation, staffing, equipment and materials; detail the protected area's infrastructure; and examine the relationship between the amount of funding allocated and the amount required. The other five questions were designed to be used in determining the **degree of vulnerability**. This concept reflects the external and internal factors that endanger the integrity of the area, such as the extent to which it is insularized (i.e. the amount of deforestation in the vicinity); the predominant land use in the areas surrounding the protected area; whether there are industrial projects and property developments in surrounding areas or other projects that conflict with the objectives of the protected area; the ways in which natural resources are exploited inside the protected area; and the area within the protected area that has been altered as a percentage of the whole.

1. Why was the evaluation done?

To support a campaign run by WWF-Brazil in favor of protected areas. The campaign was designed to call the attention of the media, civil society, and politicians, so that a Protected Area Bill which had been in Congress for almost 10 years would be voted on. Data about the conditions of the parks was essential for the campaign but was not available, so WWF carried out the evaluation.

2. How was it conducted?

A questionnaire was applied to park managers during their annual meeting. A WWF consultant was present at the meeting to explain the questionnaire and to clarify any questions from the managers. The meeting lasted three days and managers would answer and return the questionnaires at their own time. Later, the consultant contacted managers who were not present at the meeting to answer the questionnaire on line or by fax.

3. Who was involved and why??

Staff from WWF-Brazil and Ibama (the Brazilian environmental agency), researchers working with PA evaluation, and park managers. WWF was carrying out the study and Ibama is the government implementing agency for protected areas, therefore, they had an inherent interest on the evaluation. We invited researchers with experience to learn from them what restrains they had during their work and which was the most successful technique used. Park managers were involved because they could identify the "burning" issues to

management and also indicate which questions were possible to answer and which were too time consuming or impossible to obtain answers for.

4. How was the evaluation process developed??

The process was developed through a series of meetings. The first workshop was carried out to define the methodology to be applied. Once it was determined that a questionnaire would be used for the evaluation, the group worked on identifying which issues could be covered, and then designed the questions best suited to address the issues.
Questions were designed, whenever possible, to generate quantifiable answers to avoid subjectivity and to measure progress against subsequent evaluations. Even though the study included all of Brazil only federal level strictly protected areas that were at least six years old were included in the evaluation.
WWF then prepared the questionnaire and applied it during Ibama's 1998 annual park managers' meeting. The answers were then analyzed by WWF staff and a second workshop was carried out with the initial group to discuss the results and decide on the best way to present the data.

5. What was covered in the evaluation and why?

The evaluation covered two sets of issues; one related to the implementation of the park (did it have management plan?, infrastructure and equipment?, personnel?, and so on); and another related to internal and external threats in which the area was under (such as illegal activities and insularization, respectively).
These two sets of questions indicated the degree of "risk" that the area was under, for example: a well implemented park with high threats had a greater risk than a poorly implemented park with a low risk factor.

6. Which elements of the WCPA framework were covered in your evaluation process?

The evaluation covered all elements of the WCPA framework.

7. How was the evaluation reported?

WWF produced a report which was published and widely distributed as part of the WWF-BR "Technical Series". The report was also made available on the web site, and major results were summarized and distributed to the media. The report was also sent to members of Congress who could influence the voting process of the PA system Bill.

8. What changes in management resulted?

The follow up evaluation has not yet been carried out, so, it is not possible to measure changes in management at this time. However, the evaluation was designed to determine the status of PAs, and not to directly influence management. The results may be used as an incentive to improve management, but not as a guide to do so.

9. What did you learn about the process of assessment?

- The importance of a continuous communication process with the implementing agency, and of feedback to the park managers in the field. The evaluation was instrumental in getting the PA Bill voted and approved in Congress, however, the agency did not realize the importance of the campaign to the approval of the Bill and they felt threatened by the results of the evaluation.
- The importance of maintaining the responsibility of the entire process to a single person (preferably the same person throughout the evaluation and reporting period).
- The importance of reporting in a way that is not threatening to stakeholders.

10. What have you done differently (or what would you do differently) based on what you learned about evaluation?

I would maintain communication with the agency and park managers in the field during and after the evaluation process, and point out the constraints in which the agency has in dealing with management issues before reporting on the negative results of the evaluation.

Case Study on Queensland Parks rapid assessment and integrity statements

Case study by:	Fiona Leverington
Institutional affiliation:	Queensland Parks and Wildlife Service
Address:	PO Box 42, Kenmore, QLD 4069, Australia
Phone:	+61 7-3202 0205
Fax:	+61 7 3202 6844
Email:	Fiona.Leverington@env.qld.gov.au

The Case Context

This case study summarises two initiatives to evaluate management effectiveness in Queensland national parks and forests: evaluation of natural and cultural integrity; and rapid assessment of management processes. Both these initiatives have been through a pilot phase, and staff are currently gathering information across the state.

1. Why was the evaluation done?

A professional approach to planning and reporting on biodiversity conservation for acquisition purposes has been a strength of the Queensland Parks and Wildlife Service for decades. However, once parks are gazetted, traditional methods of evaluating and reporting about management has tended to be reactive and concentrate only on inputs and sometimes outputs (e.g. how much was spent on weed management? How many hectares were burnt last year?). We felt it was important, as 'stewards' of a public parks system, to have at least some approximation of how the parks were progressing in terms of their primary purpose – conservation of natural and cultural heritage.

Over the last few years we have been trying to develop an efficient, replicable and not too onerous system which can fulfill a number of needs:

Better reporting

There is an increased demand for accountability from both government and community. The evaluation should give us sufficient information to reassure the community that parks are in a good state – or to sound alarm bells about the threats to the parks system from weeds, climate change, visitor pressures or other factors. This information needs to be relevant to specific parks and ecosystems but also to be summarised across the state.

Adaptive management

Adaptive management is only possible when information is available to decision-makers so that current management activities can be continued, improved or dramatically changed. Adaptive management occurs at many levels. Management effectiveness evaluation can inform senior staff to assist them in policy development and resource allocation. At the district and park level, natural and cultural integrity evaluation should enable staff to adjust their management activities (e.g. burning frequency or visitor management) to maximise effectiveness. Rapid assessment evaluation of processes points out the gaps in current tools and approaches to management.

Monitoring for extension and community involvement

Parks and forests play an important role as benchmarks demonstrating land management to the wider community. Integrity monitoring helps show the results of land practices and also reveals wider trends in biodiversity survival and ecological processes. Where trusteeships or co-management agreements are being

established, a good evaluation system will establish benchmarks on hand-over, enabling later assessments of effectiveness. The requirement to meet certain standards and criteria on the rapid assessment questionnaire can also be included in management agreements.

2. How was it conducted?

Two projects are currently under way:
Rapid assessment is conducted through filling out 'tick and 'flick' questionnaires totaling over 100 questions (see example below). This process has been shown to be most effective when conducted in distinct or sub-district meetings (up to about 15 staff) to enable discussion and sharing of ideas. A 'mediator' with statewide perspective helps to ensure that results are consistent and comparable. The information can be entered directly onto a spreadsheet and analysed against results from other areas. Questionnaires for a number of reserves can be completed in each one- day meeting.

Sample question – Rapid Assessment

2. Does the park have maps showing rare and threatened native plants at a scale appropriate to management needs?								
	No							
	Yes (for some rare and threatened species)					**Scale:**	**On GIS?**	
	Yes (for most rare and threatened species)					250000		
	Yes (for all rare and threatened species)							

Natural and cultural integrity evaluation is more complex and time-consuming. The survey instrument asks a combination of open and closed questions. The answers are specific for each park and require a higher degree of consideration, discussion and sometimes research.

Park values, threats and opportunities are generally entered on the spreadsheet by a planner or similar staff member, where information is available in existing or draft management plans, reports, file notes or other documents. A meeting with relevant staff is then held to confirm and complete this process, then assess the current condition in relation to the defined values and perceived threats. Where there is little or no written information about an area, or where no previous planning has been undertaken to define values or goals, the entire process might be conducted at a meeting. The information can be entered directly into the spreadsheet or scribed and entered later.

Sample question: natural integrity statement

Significant landscapes and regional ecosystems		
Natural values of reserve	**Management goal**	**Status 2002**
The park contains a mosaic of vegetation and habitat types representative of the Mulga Lands bioregion	to maintain existing regional ecosystems in a healthy condition and re-establish a fire regime for natural ecological diversity	Park is recovering from many years of grazing- changes are starting to occur however full recovery will happen gradually over many years. onitoring vegetative states at XX sites
One of two protected areas conserving important wetland systems within the protected area estate of south-west Queensland, with the lakes and wetland systems having a high level of integrity.	Maintaining water quality, suitable for waterfowl breeding, diversity of wetland systems due to range of water depth, differences in salinity levels within and between individual lakes and wetlands	Currently has good integrity indicated by qualities listed under management goals. Backed up by regular observations and recordings by M & J Handley

The process should generally rely on available knowledge i.e. it should be a summary of existing information and opinion, not a field research exercise. Follow-up research and discussions with other experts may be necessary (e.g. where an external researcher has results which the park staff do not have to hand.) Occasionally field assessments are also undertaken. Any existing reports, monitoring results, research papers, fire maps etc can be referred to or appended to the results as required.

The process also develops a brief statement of management purposes and directions (this can be summarised from management plans where they exist) and of priority actions.

3. Who was involved and why??

Evaluation at this stage is being conducted within the Queensland Parks and Wildlife Service.

- For the rapid assessment process, central office staff from the park management section are driving the process;
- For the integrity statements and park folios, staff from central office, regional offices (planners, researchers, natural resource experts) are involved;
- For all evaluation, field staff from all levels (district managers to park labourers) are key sources of information and in some cases will also compile the natural and cultural integrity statements

4. How was the evaluation process developed??

The process originated during the development of the Queensland Parks Master Plan. As part of an improvement process, we needed to develop some estimation of which parks were at certain levels of service delivery (which we defined from level one “regressive” to five ‘best practice’ in relation to a range of criteria). For this purpose the ‘rapid assessment’ questionnaire was developed. The IUCN methodology was adapted for use, with much effort put into developing relevant and objective criteria. A working group of staff from across Queesnland had input into the rapid assessment methodology, which was then trialled in several districts. Later work has included more detailed questions about resource management activities, which were being gathered in the regions for other purposes. It is more efficient to

gather all the information in one exercise, then produce separate reports for different purposes.

In addition, the Parks Canada work stimulated thought about natural integrity measurement and reporting, which was later expanded to also include cultural integrity. The Master Plan contains a commitment to regular monitoring of integrity. A spreadsheet was devised to enter all this information, some of which is quantitative and can be compared across parks. Further work is still needed to devise indicators for integrity monitoring, so later iterations of the process can have a greater degree of consistency and accuracy.

The processes have been developed, generated and driven from within the ranks of QPWS staff.

5. What was covered in the evaluation and why?

The Rapid Assessment questionnaire covers over 100 aspects of management inputs and process, divided into protection of natural and cultural heritage, presentation, community engagement and management capacity.

The natural and cultural integrity statements are a summary of the condition of defined values, the threats and opportunities facing the park, and the impact and potential impacts of these threats.

With the recent amalgamation of Forestry management and parks management, the processes have been extended to include evaluations of state forests.

6. Which elements of the WCPA framework were covered in your evaluation process?

The two components in this case study cover different elements:

a. The rapid assessment project measures processes, with some inputs to management;
b. The natural and cultural integrity statements report on context and outcomes.

These complement other evaluation processes e.g.:

- The evaluation of progress in implementing management plans;
- Evaluation of progress towards defined goals of biodiversity conservation through acquisition;
- A range of reporting processes relating to budget expenditure and other administrative matters.

7. How was the evaluation reported?

All information is being compiled into park profiles for individual parks, with copies immediately available at the local level. The information is in spreadsheet format, which can be used by people at all levels from park to state-wise. This information will then be fed up into databases which allow analysis of trends on districts, regions and across the state.

In addition, text reports can be generated to summarise the state of parks.

8. What changes in management resulted?

This process is still continuing in its first full implementation. However, even the process of discussion between different staff members has resulted in some improvements as park-level staff become aware of problems and issues of pressing importance, and of resources and processes they could use to improve management.

9. What did you learn about the process of assessment?

a. It is easy to become sidetracked by 'database' issues: there could be better efficiencies by sharing some of the systems among organisations.
b. There is a risk of adding too many elements to an evaluation in response to different demands, resulting in questionnaires/instruments that are too big and unwieldy.
c. It is essential to feed information back to park staff immediately and to compile the results of previous information-gathering attempts, so they feel their time is not wasted.
d. Group processes are very important to elicit different knowledge banks and different opinions.
e. Park staff can feel threatened by evaluations for different reasons e.g. there is a fear of losing resources to parks with less favourable (or more favourable) evaluations.
f. The natural and cultural integrity assessment takes a long time to develop and complete in the field. Many gaps in knowledge are discovered and it is important that they are recorded honestly. However, people must be encouraged to record 'gut feelings' and unscientific information where this is all that is available. Staff often resist the 'superficial' nature of the assessments and have to be persuaded that any recorded information might be better than none.

10. *What have you done differently (or what would you do differently) based on what you learned about evaluation?*

a. The meetings inevitably resulted in lots of suggestions for action, especially in relation to more monitoring or research needed. 'Harvesting' these thought processes, without turning evaluation into a major planning exercise, would be advantageous.

b. In future evaluations, the possibility of including traditional owners, community representatives and outside experts should be considered. This would make the process more transparent and objective, but could also result in some reluctance to discuss certain aspects of management. As an entirely internal process, staff can be frank in discussing management issues (e.g. resourcing, personalities) and about values that might have a high degree of sensitivity. This discussion can be important in reaching conclusions but is not recorded in reports.

Use of the IUCN Management Effectiveness Scorecard by the World Bank & WWF

Case study by: Kathy MacKinnon
Institutional affiliation: World Bank
Address: 1818 H Street, Washington, DC 20007, USA
Telephone: 1 202 4584682
Fax: 1 202 522 1142
Email: kmackinnon@worldbank.org

1. Why was the evaluation done?

We are using the IUCN management effectiveness scorecard developed by Hockings et al and modified for the World Bank/WWF Alliance for two purposes:

- To assess whether our projects are leading to improved PA management effectiveness
- To assess progress in meeting Alliance targets specifically the target of 50m hectares of PAs more effectively managed.

2. How was it conducted?

World Bank supervision teams/team leaders undertook assessments at project level with PA managers. Assessments at least 3 times – beginning of project/midterm and end of project to assess trends.

3. Who was involved and why??

Bank Biodiversity specialists and TMs working with project teams. Bank Biodiversity specialists evaluated results from projects in SE Asia and S Asia. Based on experiences with usefulness/simplicity/ease of understanding revisions proposed. Kathy MacKinnon and Tony Whitten worked with Nigel Dudley on recommended changes to scorecard – see attached document.

4. How was the evaluation process developed??

Bank and WWF agreed on need for monitoring framework. Since IUCN had published simple scorecard, Bank teams decided to test this. WWF agreed but to date little testing by WWF projects. Scorecard being used as regular tool on Bank supervision missions.

5. What was covered in the evaluation and why?

6. Which elements of the WCPA framework were covered in your evaluation process?

Scorecard – see attached.

7. How was the evaluation reported?

In Bank supervision reports. For tracking Alliance targets (data to be collated with partner WWF)

8. What changes in management resulted?

At site level comments section led to next steps and identified actions, either for PA managers or government agencies. Actions followed up by next supervision.

9. What did you learn about the process of assessment?

Simpler the system the better. Strengths of scorecard are sub-categories with PA manager choosing most relevant, comments (why there is a problem) and next steps.

Most useful if repeated over time to show trend in right direction. If not why not – see comments (action needed may be at higher level than PA managers).

Useful to show progress over time, especially in certain categories e.g. working better with local people. Able to use this monitoring to justify extension of India Ecodevelopment project.

10. What have you done differently (or what would you do differently) based on what you learned about evaluation?

Agreed that all Bank projects will use this as a ***minimum*** M&E tool for assessing management effectiveness. Where there are more resources (budget, human) additional monitoring will also be done as appropriate.

Initiating Evaluation of Management Effectiveness in Protected Areas of Catalonia

Case study by:	Josep M. Mallarach i Carrera
Institutional affiliation:	Institució Catalana d'Història Natural
Address:	Carrer del Carme, 47 08001 Barcelona, Catalonia, Spain
Telephone:	34-93-3248582
Fax:	34-93-2701180
Email:	ICHN: ichn@iecat.net
	Personal: mallarach@natura.ictnet.es

The Case Context

Catalonia, an autonomous region located northeastern Spain, has a triangular shape which is limited by the Mediterranean Sea on the East and the Pyrenees mountains on the North. The ridgetop of the Pyrenees, with peaks up to 3,000 meters high, constitute the boundary with France and the tiny country of Andorra. With an area of about 32,000 km^2 and a population of more than 6 million people, Catalonia has an economic and population structure similar to the mean of the European Union. It produces 20% of the Spanish gross national product, about 30% of its exterior trade, and is the most heavily visited Continental European region, partly due to the pleasant summer climate and the beauty of its coasts, receiving over 15 million foreign visitors per year. Although the economy is becoming progressively more service-oriented, Catalonia remains one of the European regions with the highest level of industrial development.

Catalonia's topography is dominated by mountain ranges, which cover most of the territory, resulting in over 50% of its lands having a slope greater than 20%, and only 30% of its lands have slopes lower than 10%. About half of the resident population and the vast majority of industry and tourism are concentrated along the narrow coastal lowlands, 580 km in length and covering only 7% of total land. These facts help to explain that Catalonia still keeps 60% of its land covered with natural and seminatural communities. Spain is the European country with highest biodiversity. Catalonia's landscape and biological diversity is high, including 3600 plant species, from which 69 are endemics. To Catalonia level, 164 plant species (5.4%), 7 mammal species (9%), and 1 amphibian species (7%) are considered endangered or threatened.

The conservation of natural areas and biodiversity is facing challenges comparable to other heavily industrialized and populated Western European countries, such as Belgium or the Netherlands. After 30 years of piece-meal efforts at setting aside areas of exceptional aesthetic and ecological value, the Catalan government undertook an effort on 1986 to elaborate a comprehensive program to establish a basic protection for natural areas. The *resulting Pla d'Espai d'Interès Natural* (Natural Areas Program) of 1992, was the first Spanish attempt to base biodiversity and natural areas conservation planning entirely on ecological criteria from international strategies rather than social preferences. This Program provides legal protection for over 140 sites which encompass over 21% of Catalonia's land, including both public and private properties.

The Department for the Environment of Catalonia is the main agency responsible for protected areas (PA) management (85% of the PA system). The remaining PA are managed by local authorities, such as the Diputació de Barcelona or municipal consortiums, including a few that are managed by private organizations.

The Institució Catalana d'Història Natural (ICHN) is the oldest scientific institution concerned with natural heritage in Catalonia. Since 1898, it has produced a large number of scientific studies and publications concerned with the identification and classification of the natural diversity present in the Catalan speaking countries (including parts of Spain, France & Andorra) as well as the challenges its conservation is facing. Its seminal book *Natura, ús o*

abús? (Nature, Use or Abuse?) (1976) was instrumental in establishing the current protected areas system.

1. Why was the evaluation done?

This evaluation project is one of a number of recommendations our organization made to the Catalan Autonomous Government in a previous study that we carried out (1998-99), aimed to the establishment of a Strategy for Biodiversity Conservation in Catalonia.

Since no agency on natural protected areas followed our recommendation, we decided to take the challenge.
We felt that the lack of public, reliable information on the state of protected areas was an important obstacle for improving the awareness of both managers and the general public. Moreover, most protected areas were created in 1992 and we thought that a ten year period was enough to assess what the main trends are.

Our objectives were the following:

- Assess the condition of the entire system of protected areas of Catalonia (148 PAs)
- Based on the results of the assessment, propose actions for improvement when needed
- Develop, test, and apply a methodology based on the WCPA framework useful for all Spanish protected areas.
- To be the first project aimed to evaluate an entire system of protected areas within Spain, and one of the first to apply the entire WCPA framework in Europe. For this reason, this project was included as a "Living Observatory" in the chapter on Evaluation of the Action Plan for the Protected Natural Areas of the Spanish State (EUROPARC-Spain, 2001).
- To become a significant reference for future evaluations of protected areas in other nations and regions of our country, and perhaps in other European countries.

2. How was it conducted?

A team of two coordinators and 150 were involved in the evaluation. Most of them are members of our organization who have a good knowledge of the natural areas they are evaluating.

The coordinators provided to the evaluators the methodology as well as basic practical training and support during all the stages.

The ICHN was in charge of calculating five indicators, for all the system. They were the following: 1.8: Area; 1.9: Shape; 1.10: Ecological reconstitution; 1.11: Fragmentation, and 1.13: Fire risk. We used a specific database for calculating each of them, to ensure homogenous results.

Each protected area was evaluated by one person or small team of people, who used a variety of sources: studies and publications available in public libraries, the web database of the Ministry of the Environment, field work and telephone and personal interviews to managers and key stakeholders. It was necessary that all of them were fluent in Catalan and, in addition, those evaluating protected areas in the Val d'Aran were fluent in Aranès (a dialect of the Occitan language, the official language of this mountain valley). In general, evaluators were required to compile and assess all the existing data and identify the information gaps.

For more details see answer question number 4

3. Who was involved and why??

- **Responsible**: Josep M. Mallarach i Carrera and Josep Germain i Utzet, coordinators, and hundred and fifty people participated in different stages (initial methodology seminar, pilot plan, evaluation, diagnose, draft proposal, etc) all of them related to the Institució Catalana d'Història Natural.

- **Support**: University of Barcelona and Autonomous University of Barcelona: around forty graduate students from Environmental Sciences.

- **Information**: Managers and planners of all protected areas, public agencies, rangers, local authorities, economic and sectoral organizations, local population, and environmental NGOs.

- **Funding**: Ministry for the Environment of Catalonia, Fundació Territori i Paisatge (Caixa de Catalunya), and Diputació de Girona (local authority)

4. How was the evaluation process developed??

In 1999, we proposed a project to evaluate the effectiveness of the entire system of natural protected areas of Catalonia. We were able to persuade the responsible public agencies and private organizations to cooperate, providing the necessary information and some funding to cover the development of the methodology and a pilot plan.

The process began with a Seminar conducted in November 2000 at the University of Girona, Catalonia. The goal of this Seminar was to adapt the guidelines that the WCPA just published (Hockings et al, 2000) to the particular situation of our protected natural areas. Over 85 people attended it. During the following weeks, six reporters worked the first draft of 87 different indicators.

During 2001 we completed the definition of 85 indicators covering six fields: 1) context, 2) legislation & planning, 3) means, 4) processes, 5) activities and services, and 6) results. Meanwhile we were securing funding for a pilot plan. See http://www.ies.es/ichn/ (sorry, only in Catalan).

February 2002. We hold a seminar about the scope of the evaluation and the methodology to be used with a selected team from the Ministry of the Environment of Catalonia. They gave us several comments and they accepted to produce a complete and updated digital map, at 1:5000 scale, for the entire system.

March-May 2002. We conducted a pilot plan with seven protected areas, including large mountain natural parks, small steppe natural areas, riparian reserves and coastal strict nature *preserves (Aiguamolls de l'Empordà, Illes Medes, Sant Llorenç del Munt-l'Obac, Serres d'Odén-Port del Comte, El Miracle, Alfés i Aiguabarreig Noguera-Cinca*). The pilot plan's goal was to test the methodology and refine and adjust the indicators. We reduced to 85 the number of indicators, dropping four initial indicators and adding two new ones. We also introduced improvements in the structure or definition of 45 indicators (51%) while improving the terminology of most descriptions, and introducing changes in many ratings so they become 1-5 or 1-10. In addition we elaborated a specific form for each indicator to reduce the amount of error during the process of data compilation. Finally, we decided to include two recommendations from the Eurosite methodology (Eurosite, 1999), one regarding the neutrality of the evaluators, and the other regarding the need for providing an opportunity to the managers to comment on the findings of each individual evaluation.

July 2002. We conducted a series of meetings in different parts of the country to explain the methodology to small groups of evaluators and make sure everybody had a sufficient understanding.

August-December 2002. Evaluation of the 148 protected natural areas of Catalonia. It is important to stress that each indicator was applied to each separated unit of each NPA and to each different IUCN category present in the same NPA. Practically speaking, that implied to fill between 1 and 27 forms for each indicator, in each individual protected area, depending on its level of complexity (we have natural areas that have as much as six different legal types of protection). Therefore, the total number of separate evaluations finally numbered 420, although in the simplest protected areas, with no management plan or management team, only 55 indicators were applied. During this period both coordinators remained in touch with all the evaluators, replying hundred of questions, either personally, by telephone or by e-mail.

After each evaluation was completed, the evaluator sent all the forms by electronic format to the corresponding NPA managers, asking them to review and comment the findings. Once this was completed, both the evaluation and the comments were sent to the secretariat of the ICHN, were one person was in charge of reviewing again all the forms, making sure everything was completed and coherent. When this was not the case, we contacted again the evaluator to solve the problem.

January 2003. Data compilation (420 sets including between 55-85 indicators each) in a data base that has been created with this specific purpose.

February – Mid March 2003. Elaboration of the diagnose and proposals for improvement. We plan to conduct a workshop with 20-30 people for each of these two phases. Circulation of the final report for comments to all the evaluators.

End of March: Submission of the final report.

September 2003-June 2004: Dissemination of the methodology and results of the evaluation project in Catalonia, Spain, and the international community.

5. What was covered in the evaluation and why?

We evaluated the entire system of natural protected areas of Catalonia, which includes 148 different protected areas (21% of Catalonia's land), from a medium size National Park in the Pyrenees mountains, to small island nature preserves in the Mediterranean Sea. Catalan and Spanish legislation establish 20 different types of protected natural areas, which correspond to I-V IUCN categories. In Catalonia, there is a large majority of category V protected areas.

We developed six sets of indicators: context (21); planning and legislation (13); means or inputs (15); processes (1); activities/services or outputs (13), and results or outcomes (22). The reason for developing so many indicators is that we attempted to be as rigorous and comprehensive as possible. Since this was our first experience on evaluating a large and heterogeneous system of protected areas, we wanted to be sure we left nothing outside. For the entire list of indicators, see the attached sheet. For a complete description of each indicator and its associated form, see our web page http://www.iecat.net/ichn (currently only in Catalan).

6. Which elements of the WCPA framework were covered in your evaluation process?

All of them: Context, planning, inputs, processes, outputs and outcomes. However, the focus of the evaluation was on the outputs and outcomes.

7. How was the evaluation reported?
It has not been reported yet. It is planned to submit the results by the end of March, 2003. After September 2003, we have an ambitious plan to disseminate both the methodology and the findings in Catalonia (Catalan), in Spain (Spanish) and to the international community (English). We will use different formats, depending on the target audience, from seminar presentations, technical summaries, CD-Rom, general public articles, and so on.

Since there is a generalized social distrust of our governments assessments, coupled with an almost complete lack of performance evaluation tradition in our country, we hope that the results of this evaluation project will have general credibility. Therefore, we aim for a positive impact on natural areas conservation that will hopefully be a stimulus to introduce performance evaluation in other environmental fields.

8. What changes in management resulted?
It is too soon to anticipate it. However, many managers already told us that this evaluation meant a great deal to them, since it force them to think on many matters that they had never thought about before.

We hope that this evaluation will be used a one of the basic inputs for the Action Plan for the Protected Areas of Catalonia.

9. What did you learn about the process of assessment?
Many important lessons, among them:

- The difficulty of getting the public agencies interested and involved in an evaluation project for protected areas (PA).

- The positive impact that a committed NGO can make on assessing the management of protected areas.

- The value of an iterative, participatory process. After the pilot plan (7 PAs) we refined the methodology, and we expect another refinement and simplification after this evaluation (148 PAs). Both these improvements will enable us to produce a better guidelines for future evaluations in our country and similar countries.

- The critical importance of the commitment of the key agencies, local governments, and other private NGOs. Without their support this evaluation could not have been possible.

- The complexity of coordinating over one hundred different evaluators with different backgrounds, experience level, and knowledge of the protected areas they were evaluating.

- The necessity to provide the appropriate training and ensure an effective coordination to the evaluators during the entire process.

- The frequent difficulty of getting significant data from public local and regional authorities that are not used to be evaluated and have a variable level of distrust or suspicion towards this type of process.

- Many of the agents involved (policy-makers, managers, planners, evaluators) acknowledge that have learned a great deal from this evaluation project.

- The necessity to repeat this evaluation in a few years (perhaps five) to be able to better assess the most significant trends.

10. What have you done differently (or what would you do differently) based on what you learned about evaluation?

- Devote more time and efforts to improve and homogenize the training of the evaluators.

- Try to obtain more funding to pay for the evaluation and the dissemination of the findings.

- If possible, simplify the methodology. We hope to be able to identify redundant indicators that could be dropped.

- Improve the clarity of some indicators, both within the forms and definitions, that were confusing. For instance, we found that many evaluators were insure on selecting between "lack of data", "not applicable" or "zero".

ANNEX:

Methodology applied in the evaluation of the system of protected natural areas of Catalonia: List of indicators.

1. Context indicators

1.1. Conservation value of geology
1.2. Conservation value of flora and vegetation
1.3. Conservation value of vertebrate fauna
1.4. Conservation value of invertebrate fauna
1.5. Conservation value of domestic traditional breeds
1.6. Presence of habitats of European significance
1.7. Spiritual, cultural or historical relevance
1.8. Dimensions
1.9. Shape
1.10. Ecological reconstitution stage
1.11. Fragmentation
1.12. Ecological connectivity
1.13. Fire risk
1.14. Geological risk
1.15. Urban pressures
1.16. Infrastructure pressures
1.17. Threats significance
1.18. Population
1.19. Sectoral work force
1.20. Area with economic production
1.21. Visitors

2. Planning and Legislation indicators

2.1. IUCN equivalent category
2.2. Adequacy of existing legal protection
2.3. International designations
2.4. Adequacy of design
2.5. Coherence of the protected natural areas system
2.6. Land ownership
2.7. Natural resources management planning level
2.8. Existence and adequacy of the protected area management plan
2.9. Time span between the declaration of the protected area and the approval of the management plan
2.10. Conservation categories included in the management plan
2.11. Public participation during the elaboration of the management plan
2.12. Dissemination of the management plan
2.13. Annual reporting on the management of the protected area

3. Inputs indicators

3.1. Staff by type of contract
3.2. Staff by functional responsibility
3.3. Participation of volunteers
3.4. NGOs and corporations making contributions
3.5. Budget
3.6. Level of economic autonomy
3.7. Adequacy of the available resources
3.8. Funding sources

4. Processes indicators

4.1. Formalization of internal procedures
4.2. Facilities inside the protected natural area
4.3. Facilities outside (around) the protected natural area
4.4. Fire prevention plan and management
4.5. Use of new technologies
4.6. Environmentally friendly facilities
4.7. Access with motor vehicles
4.8. Public participation on the Board of Management
4.9. Informative boards
4.10. Signposted paths and trails
4.11. Physical identification of boundaries and accesses

5. Outputs indicators

5.1. Number of visitors making use of the protected area facilities
5.2. Staff devoted to the attendance of visitors
5.3. Litigation and prosecution
5.4. Mandatory consultation reports
5.5. Technical and economic support to local population
5.6. Scientific publications
5.7. Popular publications
5.8. Research related to management
5.9. Educational activities
5.10. Execution of planned activities

6. Outcomes

6.1. Changes in key geologic features or elements
6.2. Changes in key species
6.3. Changes in key habitats
6.4. Local extinction of species
6.5. Land use/land cover changes
6.6. Negative impacts due to legal activities
6.7. Changes of rivers' ecological conditions
6.8. Eutrophy of marine waters
6.9. Changes on the quality of groundwater
6.10. Impact of wildfires
6.11. Shape and dimension changes
6.12. Changes on the condition of historical and cultural heritage
6.13. Changes on the number of visitors
6.14. Changes on education and sensitivity
6.15. Changes on the perception on natural environment's and landscape's quality
6.16. Monitoring and research
6.17. Economic activity that has been induced by the protection of the natural area
6.18. Number of jobs that have been created
6.19. Changes on the (local population) average family earnings
6.20. Changes on the local population types of jobs
6.21. Changes in the number of farms
6.22. Demographic changes in the local population.

Case Study on Bwindi Impenetrable National Park: Uganda

IUCN Management Category: II (National Park)
Natural World Heritage Site: Criteria iii, iv

Case study by: Moses Wafula Mapesa,
Institutional affiliation: Uganda Wildlife Authority
Address: P.O. Box 3530, Kampala, Uganda
Phone: 256-41-346287/8
Fax: 256-41-346291
Email: moses.mapesa@uwa.or.ug

The Case Context

Bwindi Impenetrable National Park (BINP) covers 32,092 ha and is located in southwest Uganda. The park's rare afromontane vegetation provides one of the richest habitats in East Africa for birds, butterflies (over 300 species), trees and mammals, the latter includes chimpanzees and half the world's remaining mountain gorillas. Sectors of the forest have been protected since the 1930s. The National Park was gazetted in 1991 and inscribed as a World Heritage Site in 1994. It is close to, and managed together with, Mgahinga Gorilla National Park.

BINP is managed by the Uganda Wildlife Authority (UWA) with the prime purpose of conserving the montane forests and their associated wildlife populations especially the endangered mountain gorillas. All other functions, including the re-known mountain gorilla based tourism, are secondary. Tourism, however, provides a major source of income for BINP and UWA, and a modest contribution of 20 per cent of the park's revenue from entrance fee is directed towards meeting the basic social and economic needs of the local people.

1. Why was the evaluation done?

Deficiencies in past management have been recognised and a range of new management systems, including a new General Management Plan (GMP), have been put in place. This GMP recognises the various activities instituted by management over the years within and around the park as part of the bid to protect and conserve natural resources, but notes that: ***there has not been sufficient evaluation of the successes or failure of such programmes' and that 'inadequate evaluation results into failure to improve on the strategies for implementation of park programmes and sometimes wastage of resources'***. This observation was in line with the WCPA framework for management effectiveness

2. How it was conducted

Using the Management Information System (MIST) developed by Uganda Wildlife Authority (UWA) and the WCPA evaluation framework, UWA staff with relevant stakeholders through a series of workshops; interviews and field visits undertook the evaluation. Preparation of the General Management and Annual Operations Plans for Bwindi which is a multidisciplinary and participatory approach allowed for a practical evaluation based on an informed background by the participants. The same people who were involved in the planning process as stakeholders including community representatives most of whom almost on a day to day basis stay near and traverse through the park gave their practical assessment on achievements and constraints based on the management objectives, legislation and available funds and logistics. Initially there was a training session to agree on common principles and parameters of evaluation and the exercise was done in phases over a 6-month period.

3. Who was involved and why?

The site management team comprising of John Makombo, Chief Warden; Alastair McNeilage, Director, Institute of Tropical Forest Conservation (ITFC), Ghad Mugiri, the Warden responsible for Research and Monitoring, Benon Mugyera, Community Conservation Warden, Pontius Ezuma Law Enforcement Warden, Komakech Okidi, Tourism Warden and the park rangers were at the core of the evaluation. The UWA headquarter based Director Field Operations, Monitoring and Research Co-ordinator and the Planning and Environment Impact Assessment Co-ordinator provided technical guidance. The major site partners including other ITFC staff, CARE-development through conservation (CARE-DTC), Mgahinga and Bwindi Impenetrable Forest Conservation Trust (MBIFCT), International Gorilla Conservation Project (IGCP), Community Protected Area Institution (CPI) representing neighbouring communities, Local District leaders, Local government (District) technocrats (District Environment Officers), Community Tourism representatives and leading institutions of higher learning and conservationists were all involved in the evaluation through a workshop process, interview of staff and stakeholders and field visits.

All the above who were involved are either staff of the park or Uganda Wildlife Authority with the primary responsibility of managing the park. The others are either researchers, conservation non-governmental agencies or local community representatives or leaders who neighbour with the park and suffer the costs of its existence e.g. through denied benefit opportunities or crop raiding.

4. ***How was the evaluation process developed?***

Starting April 1996, UWA embarked on developing an in-house monitoring system for effective management. UWA staff both at headquarters and field level discussed in great detail how the information gathered daily by patrol rangers and occasional observations by individual staff and visitors to the park on ecosystem health and management infrastructure could be improved into a monitoring and management planning tool. These efforts were further improved with assistance from GTZ whereby a Technical Advisor worked with relevant UWA staff to computerise the system. The system came to be known and is known as Management Information System (MIST) and is now officially used by all UWA staff. Basically the system involved development of easy to fill field-based data sheets on various parameters of management and the ecosystem. This information collected by rangers in the course of their duties and other relevant staff is then fed into the MIST computer program and database, analysed and interpreted.

When the "Management Effectiveness Project" was introduced to Bwindi, the UWA system was up and running and was therefore simply integrated into our system alongside further improvement of the UWA MIST system. A lot of training had to be done in data collection and use of Global Positioning System and Computers. This training is ongoing. It was also essential to demonstrate the usefulness of the monitoring and evaluation process, for example distribution maps were developed showing animal sightings, patrol coverage and illegal activities, resource off-take and used in deployment of patrol rangers and improvements in budgetary and staff allocations.

5. What was covered in the evaluation and why?

The evaluation covered:

1. The context review to include biodiversity values, other natural values and socio-cultural values. The engagement of stakeholders in management of the site, adequacy of management plans, site design and legislation were all evaluated. This was done to help establish whether the reasons for gazetting the site as a

National Park and listing as a World Heritage Site are still valid or its conservation status should be reviewed.

2. Input assessment to include staffing, equipment and logistics and funding. Here the objective was get an insight into staffing, equipment and funding levels and whether these match the tasks and challenges of managing the site with its local, national and international importance. The second objective was as to whether optimal use of existing staff, equipment and funds is being done. And the third is an attempt to establish an optimal balance in terms of requirements for the site. Staff morale and motivation was an integral part of the input assessment.
3. Process assessment to include the mechanisms and approaches being employed in site management like resource use programs and community benefits, law enforcement, tourism development, infrastructure developments. The objective is to evaluate the approaches/techniques of service delivery and impact based on management objectives and available inputs. Creativity and innovation are key and integral factors at this stage. Effectiveness of staff in communication and transparency are crucial. This affords a measure of level of acceptance of changes and a need for review where necessary.
4. Output assessment to cover level of production. What is achieved based on set targets e.g. for patrols, court cases, resource use programs and, maintenance quotas or schedules like roads, trails, boundaries, vehicles etc, both in qualitative and quantitative terms. This affords a measure of effort based on planned targets.
5. Outcomes covers level of productivity. In real management terms this is where success and failures can be determined. Based on the site values this is a very important undertaking that helps ascertain whether management is on track or there are needs for major changes in approach. This evaluation will show trends and changes over time in the ecosystem health, individual species, and impacts on resources either through use or no use by humans as well as impacts on the local, national and international human population by way of appreciation of management values for the case of Bwindi the endangered mountain gorilla and the diversity of natural life and the landscape.

6. Which elements of the WCOA framework were evaluated?

All elements in the WCPA framework were covered save for the complexity of using the tables and the ICN Protected Area Categorisation.

7. How was the evaluation reported?

The evaluation was reported as a management report to UWA headquarters and as an Initial Assessment Report to the Enhancing our Heritage Project.

8. What changes in Management resulted?

The resultant changes in management include an increase in staffing levels as well as individual staff changes, further training of staff particularly in computer use and data storage and analysis, a plan for acquisition of more equipment specifically vehicles and radio communication, a plan for infrastructure development, a plan for acquisition of more land through purchase from a neighbouring community to contain the gorillas that have often strayed to this land causing considerable damage to peoples crops but more importantly a plan to work together with communities in ecotourism efforts in this very landarea. A re-focus on research and monitoring particularly on gorilla health and the impacts of tourism on the gorillas themselves.

9. What did you learn about the process of assessment?

The process provided an opportunity for in-house evaluation and evaluation by partners (outsiders) moreover at a relatively low monetary cost. The process of assessment specifically made us aware of the following (comments from staff):

- In-house staff have tremendous potential to take on various roles at relatively low costs. They are able to comprehend the system of assessment and undertake it once given a few tips.
- The process is quite simple to undertake once used to it. Initially it is a bit time consuming especially working with the tables.
- The process provides an opportunity to review management values, objectives approaches and targets and allows for a re-focus of efforts on critical areas.
- The process can also be used for evaluation of individual staff efforts more positively. Many times staff are scared of evaluations and will even tell lies because they fear for jobs. But when they undertake the evaluation themselves, they have to be honest especially when they know that it will not result in victimisation.
- The partners, especially the community members and leaders who have often been very critical of management (and sometimes antagonistic) were very supportive and objective during the assessment because the process allows them to get more informed about management and the interventions including the constraints and challenges and are now able to give their assessment from an informed standpoint.
- Fortunately for Bwindi, the partners had already been involved in the planning process. The evaluation therefore provided a participatory feed back mechanism, moreover with field visits as opposed to just written reports some of which find some officers too busy to study them.
- Compared to an external evaluation by a team of experts, this process is quite cheap, affordable and practical. In any case external evaluation reports are sometimes rejected or explained away by management and even some of the good recommendations are not taken on. On the other hand external evaluations still rely on the same people (staff and partners) and simply compile a report to their credit and the staff feel cheated.
- The process brings together all stakeholders in the management of the site and allows for a second opportunity after joint annual operations planning to review who has done what and ensure complementarity and avoid duplication.

10. What have you done differently, or what would you do differently based on what you learned about evaluation?

Based on the above observations and the experience there are a number of areas that would require some improvement:

- Before starting on the evaluation, it is essential to show or demonstrate how results of the previous evaluations have been used to improve on management. This is a question that was put to the team by some of the stakeholders who participated largely in external evaluations and evaluations of projects working around the site.
- The lower cadres of staff particularly the rangers and some community members need to be given the confidence to speak up in the language they can best express themselves especially in workshops.
- The workshops sessions need to be held on site where facilities allow and undertake joint field visits to refresh the memory. There should also be sufficient reference documents during the workshops. We relied on our institutional memory and individual observations during the final workshop.
- The worktables need to be simplified, especially the use of additional points and ratings, some of them appear as repetitions. The IUCN categorisation of Protected Areas is also rather confusing. For Bwindi the ICUN categorisation allows the site to fit in almost all the categories although it is a national park.

- We shall continue to improve on computer skills of most of our key staff.

Learning about The Effectiveness of Specific Conservation Tools across Protected Areas: Lessons on Sustainable Agriculture in Central America and Mexico

Case study by:	Richard Margoluis and Caroline Stem
Institutional affiliation:	Foundations of Success
Address:	7209 Garland Ave, Takoma Park, MD 20912
Telephone:	+1 (301) 270-1331
Email:	Richard@FOSonline.org; Caroline@FOSonline.org

The Case Context

The work for this case study was facilitated by the Biodiversity Support Program (BSP). Much of BSP's work focused on developing a framework for conducting adaptive management at site and cross-site levels. BSP field-tested this framework in many protected areas in Asia, Africa, and Latin America. This study represents a three-year field test in two biosphere reserves in Guatemala and Mexico.

BSP's work in site-level adaptive management is described in the publication *Adaptive Management: A Tool for Conservation Practitioners*. Its work in cross-site adaptive management is described in *Greater Than the Sum of Their Parts: Designing Conservation and Development Programs to Maximize Results and Learning*. A complete description of the sustainable agriculture project is found in *Maximum Yield? Sustainable Agriculture as a Tool for Conservation.* Information regarding these publications is available from Foundations of Success (FOS) at info@FOSonline.org or www.FOSonline.org

1. Why was the evaluation done?

The "evaluation" was really an on-going process that involved two conservation PAs in Guatemala (the Sierra de las Minas Biosphere Reserve, managed by Defensores de la Naturaleza) and Mexico (the El Ocote Biosphere Reserve, managed by Linea Biósfera). The two participating NGOs (the "partners") responsible for managing these PAs conducted the evaluations as part of a process of adaptive management (AM) at each site and as an experiment in sharing cross-site lessons in order to learn about the conditions under which sustainable agriculture could be employed as a successful conservation intervention. Both partner organizations were a part of a larger project promoted by WWF-US to use sustainable agriculture to reduce perceived threats from subsistence crops in the reserves. Partners received training and some follow-up from WWF on the implementation of sustainable agriculture and had worked on this project for at least 5 years. Both partner organizations approached the Biodiversity Support Program (BSP) with the question: "How do we determine if sustainable agriculture is working as a conservation tool the way it is supposed to be?"

2. How was it conducted?

BSP worked with management teams at both sites to develop the adaptive management process. This included using the BSP "Measures of Success" approach at the site level in which the following steps were taken:

a. **Conceptualization/Design** – project teams developed conceptual models for each site, identifying conservation targets, direct and indirect threats, and opportunities.
b. **Development of management plans** – based on the conceptual models, the teams refined goals, objectives, and activities for each site.
c. **Development of monitoring plans** – based on the management plans, each site identified appropriate indicators and defined how, when, and by whom data would be collected.

d. **Analysis** – based on the type of indicators collected, each team developed an analysis plan to understand the changes being observed at each site.
e. **Communications** – Each team decided how the analysis would be communicated to internal and external audiences.
f. **Use, adaptation, iteration –** project teams determined how lessons learned would be incorporated into decision-making and management, and how they would use the AM cycle in the future.

At the cross-site level, BSP brought the project teams together on a periodic basis in order to harmonize the steps described above. In addition, BSP and its partners developed a "learning framework" – questions that would guide our inquiry into the efficacy of sustainable agriculture as a conservation tool. This framework described the assumptions that were inherent in the application of sustainable agriculture and, and formed the basis for monitoring the effectiveness sustainable agriculture across the sites.

Questions and assumptions described in the learning framework were used to develop the specific monitoring instruments and tools that were used in each site. In this way, both sites collected the same data using the same methods, thus making comparison of the two sites more feasible.

The evaluation process lasted almost two years. BSP and the NGO partners met on numerous occasions to bolster data collection and analysis activities and to document lessons learned.

3. Who was involved and why?

NGO Partner NGO management teams – These were the NGO staff tasked with managing the PAs. They were involved because they are the ones who expressed an interest in figuring out if sustainable agriculture was doing what it was supposed to do (i.e., achieving the conservation goals it was intended to achieve). They are also the ones that would use the information generated by the evaluation to change the way they did conservation at their respective sites.

Key local people from the sites – These individuals helped the NGO staff articulate the questions related to how well the conservation tool – sustainable agriculture – was working. And they helped collect the monitoring data.

BSP – Acted as the coordinating and facilitating body. It provided technical assistance in AM – including data collection and analysis. BSP acted as the "glue" that held the project together and to bring the partner NGOs together. (It also provided the financial resources to complete the study.) In the end, BSP provided the necessary technical and financial resources to develop and produce various communications products that came out of the evaluation – including brochures and other publications.

Outside consultant – Assisted in the most difficult phases of the study – primarily the data management and analysis of results.

4. How was the evaluation process developed??

Two processes were developed in anticipation of this project. At the site level, the adaptive management process that was used was BSP's "Measures of Success: Designing, Managing, and Monitoring Conservation and Development Projects." At the cross-site level, BSP developed the "learning portfolio" approach that is best represented by the publication "Greater than The Sum of Their Parts: Maximizing Results and Learning." Both of theses processes were field test in a number of sites, including the ones included in the sustainable agriculture study.

5. What was covered in the evaluation and why?

Adaptive management at the site level and cross-site learning. The purpose of this was to:

a. Measure the effectiveness of a particular conservation intervention at site and cross-site levels
b. Build the capacity of partner organizations to do AM
c. Document the conditions under which sustainable agriculture is successful in reducing the threats to biodiversity (and by doing this, learning about this specific tool)
d. Learn about the best way to develop networks of site-level projects to maximize results and learning

6. Which elements of the WCPA framework were covered in your evaluation process?

No elements of the WCPA framework were explicitly incorporated to this process, although there are many similarities between Measures of Success and the WCPA framework.

7. How was the evaluation reported?

Internally, each conservation NGO presented findings the communities that were included in the sustainable agriculture project. In addition, case studies from each site were published separately by BSP. BSP also published the combined analysis between the two sites and distributed about 4000 copies. Case studies and final reports are available on line.

8. What changes in management resulted?

(Need a question here: What were the results?)

Results

We divide this section into two categories: results at the partner level and results across the partner organizations:

Results at partner level

- Partners were able to test if sustainable agriculture worked as a conservation tool at their sites. One partner found it worked, the other found it had just the opposite of the intended outcome.
- By going through the AM process – conceptualization, management, monitoring, analysis, and communications - partners could determine why sustainable worked or didn't at their site.
- Each partner organization made changes to their respective sustainable agriculture project based on what they learned.
- Partners learned a framework for the adaptive management of other initiative.
- Partners had new skills to do adaptive management.

Cross-partner level

- Partners were able to compare their results using a common process and common terminology. This made comparisons and communications much easier.
- By analytically comparing sites, BSP and partners generated concrete guiding principles for using sustainable agriculture under varying conditions.
- BSP and partners published the results in a format accessible to other practitioners around the world and distributed 4000 copies.

Changes in Management

- At one site, one partner learned that subsistence crops were not the main threat to the PA (the focus of the sustainable agriculture project) and shifted their efforts from projects focused on subsistence crops to one focused on reducing the threats associated with cash crops.

- At the other site, the partner organization learned its sustainable agriculture project was working and those continued it with only minor modifications.
- Both partners integrated AM principles into their routine management.

9. What did you learn about the process of assessment?

Site level

- The process must be complete – i.e., it must work through conceptualization, design, management, monitoring, analysis, communications, use of information, adaptation, and iteration.
- Must clearly articulate assumptions up front
- Must have a clear plan to implement actions and monitor results
- Implementation and monitoring must be adapted to the reality of the situation
- Must be need driven
- It helps to do AM in institutions that have a high degree of curiosity – they want to learn
- AM really only works in institutions that are not afraid to share all lessons-learned – both successes and examples of where interventions did not go as planned.
- Partners must do the adaptive management and M&E themselves
- Analysis is the Achilles heel of adaptive management. In order to tease out causality in AM, M&E, and assessment you often need fairly sophisticated analysis skills.

Cross-Site level

- Best to have a have a common process to be able to compare sites
- Best to have a common language to facilitate cross-site communications.
- Projects working on doing AM together find it less onerous task and thus seem to be more willing to do it.
- Working to do AM across sites requires the presence of a coordinating team that is actively engaged in management and facilitation.

10. What have you done differently (or what would you do differently) based on what you learned about evaluation?

- Try to address the issue of analytical capacity in the management team before attempting to implement an adaptive management process.
- Try more cross site adaptive management
- Test assumptions that are action-based – i.e., do adaptive management around the testing of specific tools, strategies, and interventions

An integrated organisational framework for performance measurement

Case study by:	Bill O'Connor
Institutional affiliation:	Parks Victoria
Address:	Level 10 535 Bourke St Victoria, 3000, AUSTRALIA
Telephone:	03 8627 4686
Fax:	03 9619 0739
Email:	boconnor@parks.vic.gov.au

The Case Context

Parks Victoria is one of Australia's foremost park management agencies. Under the Parks Victoria Act 1998, its responsibilities are to provide services to the State of Victoria and its agencies for the management of parks, reserves, waterways and other lands.

Parks Victoria's management responsibilities encompass the management of National Parks, metropolitan parks, crown land reserves, piers and jetties in Port Phillip Bay and Westernport and recreational boating on these bays. These managed areas total approximately 3.8 million hectares, or 16% of the total area of Victoria. Together they attract over 65 million visits a year.

Parks Victoria's vision and purpose statement articulate its aim to conserve and protect environmental and cultural values and responsibly meet the needs of its customers for quality recreation services.

Refer to attached presentation (Parks Victoria's Organisational Framework for Performance Evaluation) and case study (A case study of management reform in Parks Victoria) for a more detailed description of the performance measurement framework.

1. Why was the evaluation done?

The case study presents an integrated performance measurement framework for Parks Victoria. The framework was developed to bring together a number of external and internal demands for organisational performance reporting with the intent of meeting those in a effective and efficient way. The framework links organisational 10,3 and 1 year objectives and provides measures of progress towards these objectives (refer Attachment 1 – Output Performance Measures). In addition the framework was required to ensure that performance measurement and reporting was meaningful and useful in management decision making, leading to continuous improvement in response to evaluation. Lastly the framework was required to identify gaps and set direction for improvements in measuring organisational effectiveness and efficiency.

2. How was it conducted?

The framework brought together a number of existing performance frameworks and reporting requirements for the organisation. These reporting requirements included:

- the Victorian Department of Treasury and Finance (DTF) performance reporting framework and management reform program
- legislative accountabilities
- Parks Victoria Board accountabilities and information requirements
- management information needs

The requirements of each were identified, grouped and structured to identify commonalities, differences and the most appropriate methods and timing of reporting. In addition to the above requirements the positioning of the organisation with Government and the broader community was also considered and integrated into the framework through "Triple Bottom Line" reporting of the "flow on contributions" made by parks (eg. economic benefit from ecotourism, number of jobs provided in regional locations, etc).

3. *Who was involved and why?*

The framework was constructed internally and then discussion and consultation undertaken with key stakeholders. These included Parks Victoria Board, representatives from DTF and other Government Departments. Other key external stakeholders are now being engaged to discuss and evolve the framework.

4. How was the evaluation process developed?

The process for constructing the framework was developed with key players within Parks Victoria. The process brought together key learnings from an organisational history of performance measurement development, benchmarking and information sharing with other key park agencies worldwide. As described above it also examined and brought together a number of other key frameworks, some local and some international - such as the WCPA framework.

5. What was covered in the evaluation and why?

The framework includes all organisational performance evaluation for reporting and governance purposes, and includes performance information required to improve management decision making. The framework also covers measures and information regarding the broader contribution of parks to the community. The framework included these elements to bring together all requirements for the organisation to report and understand its management effectiveness to allow efficient and effective means of addressing these, and identify key improvement areas into the future.

6. Which elements of the WCPA framework were covered in your evaluation process?

The framework includes a range of elements that are covered within the WCPA framework, including:

- a similar management cycle of planning – resourcing – delivery- evaluation
- use of a similar structure of inputs, processes, outputs and outcomes
- many of the WCPA guiding principles for evaluating management effectiveness were used in building Parks Victoria's framework
- similarity in segmentation of scale of application with Parks Victoria framework focussing on the agency/system level

7. How was the evaluation reported?

The framework has been presented and discussed at length with key audiences within Parks Victoria. Presentations and discussions have also been held with a range of external stakeholders accompanied by a brief written report (where appropriate). The framework has now been embedded within the organisational business planning processes.

Elements of the framework have also been reported as separate case studies completed in partnership with other government departments (refer attached DTF case study).

8. What changes in management resulted?

The key changes in management that have arisen from the framework are an improved focus on programming works to impact on performance measures; more acceptance of the validity and usefulness of various measures and reports; and clear direction for key improvements in measuring management effectiveness.

The framework has provided clearer measures of success and accountability for achieving targets. This has inturn driven changes in the way Parks Victoria programs and targets works and resources. These are now more focussed to achieve improvements in measures of effectiveness (eg. visitor services works are targeted strongly to impact on visitation and satisfaction and are significantly less bound by historical resourcing regimes).

The framework has improved the acceptance of measures of effectiveness in the organisation by providing a holistic context for each measure. Management is more accepting of the uses and limitations of each measure given this context.

The framework has also focussed management on what actions will occur to continue to improve and evolve measurement of management effectiveness and when these will be implemented and reviewed.

9. What did you learn about the process of assessment?

Key learnings from developing and implementing the framework include:

- it is important to embed performance evaluation into the normal business processes of the organisation to ensure its sustainability and continual improvement and evolution
- it is important to involve key stakeholders in its development to improve the final product and importantly "bring them along" on the journey to improve acceptance of measures
- a strategic framework is important in providing context to individual measures of effectiveness. In isolation individual measures may seem too limited to be useful, however in the right context they may provide useful information on management effectiveness
- the need to be realistic about reporting timeframes and likely time for changes in management practices to impact on certain measures of effectiveness
- nomenclature of performance evaluation can be confusing, a holistic framework can clarify this for an organisation and allow focus on more important issues (such as development of a sound conceptual framework and performance measures)
- statistcailly robust and repeatable measurement is important when dealing with quantitative indicators/measures of performance
- it is important to periodically question usefulness, relevance and cost effectiveness of measures collected.

10. What have you done differently (or what would you do differently) based on what you learned about evaluation?

Given the constraints of time in developing the framework, extensive stakeholder engagement was not possible in the initial stages. Acceptance of the framework and measures of performance would have been improved with greater stakeholder engagement throughout the process.

ATTACHMENT 1

Identification of Appropriate Key Output Measures

Parks Victoria is committed to reporting its performance in meeting the objectives of each of its key outputs against measures that reflect the real impact of its activities on external customers and the natural and cultural environment. It has also structured its reporting framework to reflect the intentions of the 'Management Reform Program' for the public sector, endorsed by the Victorian Government in 2000.

The measures detailed here are the first stage in implementing the framework. The best measures currently available have been included. In some cases existing measures will be suitable for the longer term. In others, more work is necessary to improve the measures currently available for them to better reflect the 'on-ground' impact of Parks Victoria's performance and its contributions to desirable Government outcomes. Some require more work to enable their quantification and others will be progressively replaced as better measures are identified.

Measures that are arrived at through the carrying out of social surveys are subject to normal statistical variation in the data collection methodology. This standard variation is reflected in the measures with progress and targets being expressed as a range rather than an absolute number.

To assist in evaluating the performance measures a table has been prepared for each key output group that sets out the 10 and three year objectives of the group and those measures that will be adopted to reflect Parks Victoria's performance. The measures have been chosen to reflect overall performance for each key output group and not for each objective. If these measures are successfully met, the individual objectives/strategies will have been successfully implemented.

The tables identify the following types of measures:

- **quality** – reflects standard or effectiveness of output delivery
- **quantity** – describe outputs in terms of how much, or how many and have a unit of measurement
- **timeliness** – provides parameters for how often, or within what timeframe outputs will be delivered
- **cost** – reflects the full accrual cost to Parks Victoria of producing outputs. While specific program costs are allocated in detail to specific outputs, expenditure associated with internal servicing and indirect costs are allocated across outputs through a defined methodology to allocate staff time to each output.

The tables also establish a 2001/02 forecast performance for each measure together with progress expectations for 2002/03 and 2003/04 and a target for 2004/05. The timeframe necessary to address issues and gain the necessary on-ground impact from management activities make it more realistic to set performance targets over a three year period. However, progress expectations for the two intervening years will be set, monitored (where possible) and reported.

Natural Values Management

Performance Measures to be reported in 2002/03-2004/05

10 year	3 year	Measure	Unit of measure	2001/02	2002/03 Progress	2003/04 Progress	2004/05 Target
Protection and enhancement of Victoria's Natural Environment	**Improved ecological integrity** *Enhance natural values of sites of high ecological value.* **Risk reduction** *Reduce the greatest risks threatening the highest environmental values.* **Managing additions to the estate** *Manage new additions to the parks and reserves system* **Building knowledge and capacity** *Improving understanding of ecosystem function and effects of management.* **Community partnerships** *Encourage and support community and agency partnerships*	***Quality***					
		National Parks assessed as being subject to high impact from pest plants	Percent	28	-	-	19
		National Parks assessed as being subject to high impact from pest animals	Percent	31	-	-	22
		Community satisfaction with Parks Victoria as an environmental manager ('good' or 'very good')	Percent	91	90 - 95	90 - 95	90 - 95
		Community satisfaction with management of National, state, Regional Parks & Conservation Reserves ('good' or 'very good')	Percent	91	88 - 93	88 - 93	88 - 93
		Quantity					
		Total area managed	Ha	3,736,000	3,736,000	3,736,000	3,736,000
		Area treated in parks to eradicate or control pest plants and animals	Ha	117,000	111,000–129,000	111,000–129,000	111,000–129,000
		% of *National Park Act* parks (Schedule 2 – National, Wilderness and State Parks) with approved management plans	Percent	94	100	100	100
		Timeliness					
		Natural Values Management priority actions (as defined in the Business Plan) delivered within defined timeframes	Percent	88	100	100	100
		Cost					
		Total cost of natural values management	$ (000's)	32,865	32,665	31,736	32,295
		Cost per hectare (Total ha managed)	$/Ha	8.8	8.7	8.5	8.6

Cultural Values Management

Performance Measures to be reported in 2002/03-2004/05

10 year	3 year	Measure	Unit of measure	2001/02	2002/03 Progress	2003/04 Progress	2004/05 Target
Respecting diversity and promoting indigenous rights **Protecting Victoria's shared heritage**	**Building relationships** *Further improve relationships and consultation with Indigenous communities* **Developing and supporting Koori business opportunities** *Support the development of Indigenous business opportunities.* **Employment and training** *Continue to increase the number of Indigenous staff in Parks Victoria's workforce* **Site protection (Indigenous)** *Increase protection of threatened sites* **Site protection (heritage)** *Focused protection works on priority sites* **Conservation through use** *Investigate and implement compatible uses for appropriate historic places* **Interpretation and education** *Deliver programs to develop a shared understanding of Victoria's heritage*	***Quality***					
		Community satisfaction with management of historic places ('good' or 'very good')	Percent	94	91 – 96	91 – 96	91 – 96
		Quantity					
		Total number of Indigenous cultural heritage sites/places and non-indigenous historic places	Number	11,560	11,560	11,560	11,560
		Total number of sites where works/surveys are undertaken	Number	67	65	65	65
		Proportion of Indigenous staff	Percent	3	4	5	5
		Timeliness					
		Cultural Values Management priority actions (as defined in the Business Plan) delivered within defined timeframes	Percent	100	100	100	100
		Cost					
		Total cost of cultural values management	$ (000's)	9,249	9,545	9,474	9,757
		Cost per site (total sites managed)	$/site	800	826	819	844

Visitor Services

Performance Measures to be reported in 2002/03-2004/05

10 year	3 year	Measure	Unit of measure	2001/02	2002/03 Progress	2003/04 Progress	2004/05 Target
High quality and accessible park and waterways services	**Minimise visitor impact on natural and cultural values** *Reduced 'ecological footprint' associated with the provision of visitor services.* **Improve consistency and quality of services** *Progressive implementation of changes to service levels in line with 'Levels of Service'.* **Improve asset management** *Improve the financial sustainability of the asset base and manage risk.* **Increase equity of access** *Improve access to parks.* **Developing sustainable tourism partnerships** *Facilitate the growth of new appropriate tourism opportunities*	***Quality***					
		Community satisfaction with management of major metropolitan parks, bays and waterways ('good' or 'very good')	Percent	91	88 - 93	88 - 93	88 - 93
		Community satisfaction with adequacy of recreational opportunities ('good' or 'very good')	Percent	90	87 – 92	87 – 92	87 - 92
		Visitor satisfaction					
		Parks	Weighted index	68	68-73	69-74	70 -75
		Piers	Weighted index	53	54-59	57-62	60 – 65
		Visitor assets:					
		Visitor facilities with greater than 5 years life expectancy	Percent	90	91	93	95
		Piers & jetties with greater than 5 years life expectancy	Percent	87	88	89	90
		2 wd drive access roads in 'fair' to 'good' condition	Percent	94	95	96	98
		Quantity					
		Total number of visits	Visit days (million)	65.6	38-40	38.5-40.5	39-41
		Victorians that have visited a Parks Victoria managed park over the past 12 months	Percent	74	71-76	71-76	71-76
		Timeliness					
		Visitor Services priority actions (as defined in the Business Plan) delivered within defined timeframes	Percent	89.1	100	100	100
		Cost					
		Total cost of visitor services	$ (000's)	84,338	81,834	78,500	80,918
		Cost per visit	$/visit	1.3	1.2	1.2	1.2

Wildfire Management

Performance Measures to be reported in 2002/03-2004/05

10 year	3 year	Measure	Unit of measure	2001/02	2002/03 Progress	2003/04 Progress	2004/05 Target
Contribute to a safer community through wildfire response and prevention **Preservation and protection of the natural environment from fire**	**Succession planning and fire training** *Maintain appropriate levels and quality of resources and staff.* **Fire Suppression and Meeting Model of Fire Cover standards** *Meet Parks Victoria's contribution to regional and statewide Models of Fire Cover requirements.* **Fire management continuous improvement program** *Implement new initiatives for prescribed burning in national parks.*	***Quality***					
		Compliance with Model of Cover requirements	Percent	100	100	100	100
		Quantity					
		Number of Parks Victoria personnel required to assist in wildfire preparedness and suppression	Number	556	556	556	556
		Area of 'Prescribed Fire' on Parks Victoria managed estate	Ha	50,000	50,000	50,000	50,000
		Timeliness					
		Compliance with timelines in Readiness and Response Plans	Percent	100	100	100	100
		Cost					
		Total cost of wildfire management	$ (000's)	6,738	6,718	6,798	6,953

Organisational Performance

Performance Measures to be reported in 2002/03-2004/05

10 year	3 year	Measure	Unit of measure	2001/02	2002/03 Progress	2003/04 Progress	2004/05 Target
World Leading and sustainable management agency	**Support for staff** *Training and support for staff to increase productivity.* **Reviewing systems of work** *Review systems of work to improve organisational performance.* **Future resourcing** *Pursue funding opportunities for future management of the parks system.* **Sustainable Practices** *Minimise impact of operations on the broader environment.*	***Quality***					
		Organisational Health (Rodski)	Percent	63	-	-	63 – 68
		Community satisfaction with Parks Victoria as an efficient manager ('good' or 'very good')	Percent	94	91 – 96	91 – 96	91 –96
		Quantity					
		Proportion of Indigenous staff	Percent	3	4	5	5
		Incident rate	Percent	18	18	17	16
		Number of training days per employee	Number	10	10	10	10
		Water use	Mega litres	770	700	655	615
		Electricity use	Kw/h	4,600,000	4,300,000	4,100,000	3,900,000
		Timeliness					
		Organisational Performance priority actions (as defined in the Business Plan) delivered within defined timeframes	Percent	100	100	100	100

NB: Organisational Performance costs are allocated to outputs as per Management Reform Program guideline

Developing a "State of the Park" Program to Assess Natural and Cultural Resource Conditions in U.S. National Parks

Case study by:	Mark R. Peterson
Institutional affiliation:	National Parks Conservation Association (NPCA)
Address:	P.O. Box 737
Telephone:	Fort Collins, Colorado 80521 USA
Tel:	1 970 493-2545
Fax:	1 970.493.9164
Email:	mpeterson@npca.org
	http://www.npca.org/stateoftheparks

The Case Context

"The State of the Parks" program was conceived by the National Parks Conservation Association, a non-governmental organization working since 1919 to protect resources in the U.S. national parks, in response to concerns that many important park resources are being degraded, sometimes with little notice by a public that generally believes that parks are fully protected. Thus, the program works to objectively and comprehensively "tell the story" of actual resource conditions in specific national parks across the United States to the public based upon existing data and interviews from a variety of sources.

The methodology examines indicators of both natural and cultural resource conditions and management practices. It also provides context in a section called "Stewardship Capacity" that examines funding and staffing, threats, planning, external support and interpretative efforts. The results are published in a booklet or brochure format and placed on the world-wide web (www.npca.org/stateoftheparks) for public dissemination and to members of Congress and other park decision-makers.

The State of the Parks Program provides at least four critical means for addressing park conditions:

- Early warning: A reliable early warning signal to detect and measure key areas where park resources are in unsatisfactory condition;
- Health comparison: A comparison of parks geographically or thematically (e.g., marine parks, mountain parks, battlefield parks, etc.) by using indicators common to all parks, enabling us to identify common strengths and weaknesses of resource protection in these special places;
- Park policy analysis: By assessing only key representative park resources and by conveying results in a user-friendly but scientifically credible manner, the condition of park resources will be made readily understandable, encouraging citizens and decision-makers to take action to correct park problems;
- Long-term care: Tracking changes and trends in park resources over time alerts us to conditions of concern and identifies successful management actions.

1. Why was the evaluation done?

There is widespread concern that the very existence of natural and cultural resources across the 387 units of the U.S. National Park System are threatened and we often don't know what we're losing nor how fast we're losing them. Part of our lack of understanding is that a comprehensive assessment and tracking of resource conditions according to an objective set of standards does not exist. Additionally, the public

generally believes that park resources are preserved simply because of the national park designation. Hence, there is a critical need for information and analysis to identify the most urgent resource needs in the parks so the Park Service and the nation can respond.

The State of the Parks program is based on the premise that communication of park resource conditions, based on a credible methodology, packaged in an understandable manner, and strategically delivered to key audiences, can significantly advance park resource protection over time. The National Park Conservation Association's (NPCA) role as a non-governmental citizens' advocacy group is central to the potential of the program. It is vital that the data be collected by an independent non-biased third party, and then leveraged to vigorously advocate for changes to specific park management policies and overall budget priorities. Such information will greatly aid in advocacy efforts. NPCA has the history, expertise and policy background to develop this product along with the advocacy experience to create change.

In addition, park assessment can help others as well. There is increasing interest from existing organizations in national park issues. This can be seen in the emergence of strong "friends" groups and the interest in media about our parks. This creates an opportunity to coalesce this increasing interest into an organized, strategic force for park protection.

Objectives

1. Assess and rate the condition of natural and cultural resources in selected units of the U.S. National Park System using an objective set of indicators;
2. Identify significant gaps in existing resource inventory and condition data;
3. Track changes in resource conditions over time;
4. Use information to enhance understanding of park resource conditions by key decision-makers, the media, the public and NPCA, and;
5. Solicit support to secure measures to address the identified areas of need.

2. How was it conducted?

The evaluations are conducted in 5 basic steps:

- Background investigation. Research park context and background information according to methodology, including obtaining key park planning documents and legislation.

- Workshop. Conduct a 1-day workshop at the park with key cultural and natural resource staff and other resource experts from academia, NGOs, etc. to explain program purposes, approach, to obtain a collective viewpoint on park threats, issues, accomplishments and priorities (staff often have different perceptions) and to identify natural resource communities and representative species that will serve as indicators for ecological integrity and investigation.

- Research and analysis. Using a selected sample of specific park natural communities and species identified at the workshop, and the mostly qualitative questions for cultural resource assessment, collect existing information called for in the methodology and develop a draft report.

- Review of draft report. Review and comments on the draft report are solicited from workshop participants, and other interested parties.

- Release final report. Release the report to the media, key members of Congress, the National Park Service, select publics and other stakeholders.

3. Who was involved and why?

Five basic groups of people are involved in this process:

- NPCA investigators. Park reports are prepared by outside researchers working with members of the small State of the Parks staff. In some cases the researcher may already be familiar with the park, in other cases we have used graduate students working closely with a professor to collect the information required and produce the draft report.

- NPS staff. The national park staff is instrumental by participating in the workshop, helping to provide necessary information, and to critique the draft report.

- NPCA staff for production and dissemination. The report preparation involves NPCA staff in editing, photo procurement, design, dissemination to media and others, and placement on our web page.

- Advisory Council. A 12-person volunteer advisory council comprised of national authorities in various specific disciplines of natural and cultural resources and park management (e.g., archeology, historic preservation, wildlife management) hold periodic meetings to guide the development of the assessment methodology and in some case critique individual park evaluations.

4. How was the evaluation process developed?

NPCA launched its State of the Parks program in July 2000. The process was initially developed with Colorado State University to devise the general topic areas desired for a resource condition assessment. This draft was applied sequentially in four "test" parks of different resource types. After each assessment was conducted, an evaluation was made on the process and the methods and changes incorporated for the next park with assistance from park staff and other report reviewers. This adaptive management, or "learn by doing" approach has served us well. In addition, the process was further guided by a 12-person advisory council comprised of experts in many of the disciplines that are included in the methodology.

5. What was covered in the evaluation and why?

Our framework seeks to portray the broad range of park natural and cultural resource conditions (based on existing information) and then provide some context for those conditions through an evaluation of stewardship capacity as it relates to resource condition. To accomplish this, a summary of the topics addressed in our framework is as follows:

Natural Resources

- Geographic Context (e.g., setting, adjacent land use, airshed, watershed)
- Aesthetic Resources and Unique Landforms (e.g., natural quiet, dark night skies, geology)
- Terrestrial Communities and Systems (extent of ecosystem, species composition and condition, physical-chemical condition, ecosystem processes)
- Freshwater Communities and Systems (similar to terrestrial but including rivers/streams, lakes, and wetlands)
- Marine Communities and Systems (similar to terrestrial but including intertidal zone, coral reefs, aquatic vegetation)

Cultural Resources

- Park History
- Historic Structures and History
- Museum Collections and Archives
- Archeological Sites
- Ethnography
- Cultural Landscapes

Stewardship Capacity

- Park Funding and Staffing
- Park Planning
- Interpretation
- External Support
- Threats and Stressors

Recommendations

6. Which elements of the WCPA framework were covered in your evaluation process?

The WPCA has certainly been helpful in developing our methodology. Although its purpose is to develop an evaluation broader than ours (which focuses mostly on Outcomes Assessment), it has been very helpful in developing a logical approach to providing criterion and a rating scheme for the various factors of an assessment. For example, its treatment of identifying and then rating threats and stressors has wide applicability and we are in the process of adapting this format in our work.

7. How was the evaluation reported?

The draft evaluation is reviewed by key members of park staff and academic specialists familiar with particular park resources addressed in the report. Suggestions are incorporated into a final document written in a somewhat technical style that is complete with scientific citations and references. This document is then heavily edited to produce an approximately 24 – 32-page summary of report findings that is written for a general public audience and is enhanced by photos and elements of graphic design. About 2,500 copies of this report are printed and distributed to the media, park staff and regional and national park service administrators, key members of Congress, the public upon request, and key decision-makers on the local, regional and national levels. The public report is also placed on our web site as a PDF file for downloading and printing to those who are interested.

8. What changes in management resulted?

While the reports are relatively new and it is premature to adequately assess the impact of assessments, we know in one case it resulted in a congressman working to get a building donated from the private sector for a park's new visitor center, the need of which was a key report recommendation. In another case it resulted in a re-prioritization of funding to secure additional funds for the urgent curatorial needs in a park. Beyond these immediate, tangible benefits, the reports have had value in increasing the awareness of key stakeholders in the needs of specific national parks. Too often park resources are viewed as already "protected" by the mere fact that they have been designated as a national park. These reports have worked to challenge that assumption.

9. What did you learn about the process of assessment?

The value of the iterative process – develop draft methodology, apply it in one park, learn how to improve the methods and incorporate these lessons into the methodology, apply it again in another park, etc. It may take several iterations until one is satisfied with the methodology.

Simple is better – Too often we have made the mistake of attempting to be too rigorous and thorough. That approach can be very costly in terms of time. Since our audience for these reports is mainly stakeholders who do not have in-depth training in the subject matter, detailed information is often counter-productive to their grasp of the issues at hand.

Distinguish the difference between information and understanding – Often there is limited information on the indicators we are examining. Our tendency is to report that information which can lead to the readers' impression that more is known about resource condition than really exists. It is therefore helpful to be clear on areas where insufficient information exists to provide an understanding for meaningful management action.

Provide opportunities for broad review -- Think broadly and inclusively when soliciting reviewers for the draft report findings. Wide dissemination serves a double benefit of getting more input and the public relations value to keep people informed and involved in the project.

Ideal indicators are rare – In the perfect resource evaluation process, one would have indicators of resource condition that are measurable, precise, consistent, sensitive to the phenomenon being tracked, and feasible to collect. Don't get hung up on finding the ideal indicator, they rarely exist. Yet we substantially advance our knowledge and achieve our goals by using indicators that are less than ideal.

10. What have you done (or do) differently based on what you learned about evaluation?

Rating. In rating resource condition, we began by averaging the scores across several metrics to derive an overall score for an indicator. We then took this number and presented it as a percentage of the maximum score possible and presented it as a percentage. However, in presenting this rating on a 0 – 100 % scale, we give the impression of a precision that is lacking in our ability to rate an indicator. Thus, we cannot really tell whether a resource is truly at a 68 or 66. Use of a 1-5 scale or something similar is preferable and we will be changing our rating procedure accordingly.

Condition vs. management. While we strive to evaluate resource condition, sometimes this proves impossible. For example, how does a relatively rapid and inexpensive assessment process evaluate the condition of archeological resources for some of our Alaskan parks that are many millions of acres in size? In many cases we have had to assess management as a surrogate for resource condition by comparing current park management practices to the guidelines and "best management practices" spelled out in the National Park Services policies.

CASE STUDY DESCRIBING AN EVALUATION OF THE NATURE CONSERVANCY'S COSUMNES RIVER PROJECT, CALIFORNIA, U.S.A.

Case study by:	The Nature Conservancy's "Auditing Progress on *Conservation by Design"* Team (case study reported by Dan Salzer)
Institutional affiliation:	The Nature Conservancy
Address:	821 S.E. 14th Ave, Portland, OR 97214 U.S.A.
Telephone:	503-230-1221
Fax:	503-230-9639
Email:	Dsalzer@tnc.org

The Case Context

Ecoregional Setting – Central Valley California Ecoregion

California embraces an unusually rich and varied assortment of ecoregions, having 12 of the 63 ecoregions found in the continental United States. The Central Valley, also referred to as the Great Central Valley or the Great Valley, is a 63,000 km² elongated depression that lies between the Coast Range and the Sierra Nevada. This ecoregion is a mosaic of grassland, arid upland, wetland, and oak woodlands ecosystems, cut by an extensive river network and surrounded by mountain ranges. Ownership in this region is mostly private. The current valley floor landscape consists primarily of intensely managed, irrigated croplands that occupies over 60 % of the total area on the valley floor. Consequently, the remaining natural habitats, composed of wetlands, riparian forests, valley oak savannas, grasslands and scrublands, are increasingly valuable to the valley's remaining wildlife population. The valley floor is bordered by annual grasslands, arid scrublands, and oak woodlands. The nearly 483-km long band of continuous blue oak woodlands along the eastern edge of the valley is mostly in private ownership and abuts some of the state's largest national forest areas. The key natural communities and species of the San Joaquin Valley and Foothill Ecoregion include native fish assemblages, wetlands, riparian systems, valley grassland and native uplands, and blue oak woodlands.

Cosumnes River

The Cosumnes River area encompasses a unique and vast remnant of California's Central Valley lowlands, including the largest undammed Sierran river flowing into the Central Valley, extensive valley oak riparian forests, and unique terrace and mudflow vernal pools. The 2,223 km² Cosumnes River Project spans the full watershed of the Cosumnes River, from the headwaters in the Sierra Nevada to the confluence with the Mokelumne River in the Sacramento-San Joaquin Delta. The area provides a critical stopover for thousands of migratory waterfowl along the Pacific Flyway and spawning grounds for declining anadromous and resident fish. Over the last 15 years, the Conservancy and its partners have protected at the Cosumnes River Preserve nearly 162 km² of lower floodplain, vernal pools, grasslands, and blue oak woodlands here, and have restored nearly 8 km² of high-quality riparian and wetland habitat.

Though a significant amount of habitat has been protected, priority conservation targets are still threatened. Spurred by close proximity to the booming economy of the greater Sacramento region, rapid development pressures continue to encroach on habitat. These impacts are exacerbated by excess groundwater pumping, intensification of agriculture, and existing incompatible flood management.

1. Why was the evaluation done?

The evaluation of The Nature Conservancy's Cosumnes River Project was done as part of The Nature Conservancy's "Auditing Progress on *Conservation by Design*" project. The Conservation Audit took place from August 2001 through January 2002 under the leadership of M.A. Sanjayan. The Conservation Audit project was part of an ongoing effort of The Nature Conservancy to develop and test new measures of conservation success. The Conservation Audit is an in-depth, objective, peer review process to review the way the Conservancy carries out its work. It challenges managers and practitioners to ask how well the Conservancy is doing at abating threats and conserving focal conservation targets. It helps identify and understand uncertainties in the connection between strategies and their outcomes. The Conservation Audit helps the organization assess how well a project is adhering to minimum standards for conservation planning, taking action, monitoring the consequences of our actions, and tracking the general status of biodiversity and threats.

2. How was it conducted?

The Audit began by convening a three-day meeting of the review team and project staff at the Cosumnes River Project on August 13-15, 2001. The purpose of the first meeting was to introduce project staff to the proposed set of benchmark products and to organize an action plan for the subsequent few months. Attendees also participated in a brief ground tour and aerial fly-over of the project area. From August 16 to October 7, 2001, Cosumnes Project staff compiled information and produced draft products for the Core Team to review. A second meeting of the Core Team and Project staff took place on October 15, 2001. Project staff continued work from October to January to revise the draft products and produced a final Audit report in January 2002.

3. Who was involved and why?

A nine-person "Core Team" worked with a five-person Cosumnes "Project Team" to complete the Conservation Audit for the Cosumnes River Project. The Core Team was made up of Conservancy staff plus one member from Foundations of Success. The Conservation Audit project was conceived after a meeting with a Conservancy donor who asked Conservancy science staff the following question: "How do you know you are conserving what you say you are?" The donor's interest in improving The Conservancy's capacity to answer this question led to an offer to help finance a pilot conservation audit process.

4. How was the evaluation process developed?

The Conservation Audit process was built around The Nature Conservancy's Five-S Framework
For Site Conservation. The Five-S Framework is described in a published handbook (available at http://www.consci.org/scp/) and includes an Excel Workbook tool that facilitates the analysis and roll-up of threat status and viability status of focal conservation targets. In addition to summary tables for threats, viability status, strategies, and monitoring information produced in the Excel Workbook, the following additional "benchmark" products were also identified: (1) a written Site conservation plan with explicitly stated goals tied to threat assessment and strategies; (2) ecological models for major components and ecological processes operating at the Cosumnes River Project; (3) situation diagrams that illustrate the relationship between targets, direct threats, and indirect threats; (4) maps showing the distribution of focal conservation targets for the site; and (5) approximate budget of resources (time, money, etc) spent on the project.

5. What was covered in the evaluation and why?

The primary focus of the evaluation was to assess the threat status and viability status of the focal conservation targets given the substantial financial investments made in the project during its 16-year history. In the course of the Cosumnes Audit process, a set of core

"process" questions were developed to help determine whether acceptable standards for conservation planning, taking actions, and evaluating results were being met.

6. Which elements of the WCPA framework were covered in your evaluation process?

All of the elements of the WCPA framework – Context, Planning, Input, Process, Output, and Outcome – were covered to some degree in the Conservation Audit. The primary emphasis focused on assessing the status of the focal conservation targets and threats, which inform the Context elements as well as Outcome elements.

7. How was the evaluation reported?

An electronic copy of the final report was prepared, as was a three-ring notebook that included hard copies of all products generated through the Conservation Audit process. Formal presentations were made, first to the Project Director, then later to the California State Director and other members of the Senior Management Team. Findings and conclusions were discussed and the outcomes of these discussions were used to help set fiscal year 2003 Operating Plan objectives.

8. What changes in management resulted?

The analysis helped project staff focus more on *indirect* threats to biodiversity. For example, the causes and solutions behind a ground water depletion threat led to specific new actions that focused on policy level reforms. The Conservation Audit Report also helped to focus attention on biodiversity conservation needs that were not related to the overall *size* of the protected area. Much of the historical work on the project had focused on expanding the size of the protected area. The assignments of "fair" viability ratings for focal conservation targets contained within the existing large protected area helped elevate the importance of addressing the unsatisfactory condition of some of the key ecological attributes related to condition and landscape context categories.

At the time of the Conservation Audit, project staff had only completed planning and analysis for four out of six focal conservation targets. Project staff found that the tools introduced to them through the audit process were helpful in carrying out planning efforts for the remaining two focal conservation targets.

9. What did you learn about the process of assessment?

We learned that it took a significant amount of time for project staff to pull together existing information and knowledge into a coherent package to be reviewed by the Audit Team. Project staff spent 555 hours (approx. 80 days) on the Audit process (including 3 meeting days in August and 1 meeting day in October). However, some of the time spent preparing materials was a consequence of project staff not being familiar with the Conservancy's Five-S planning process and tools. Also, project staff were introduced to a new technique for assessing the viability of focal conservation targets and the training of this new methodology required additional time. It is anticipated that future Conservation Audits will require substantially less time than the Cosumnes Project did if project teams adhere to Conservancy standards for conservation planning, taking action, monitoring results, and tracking the general status of biodiversity and threats.

10. What have you done differently (or what would you do differently) based on what you learned about evaluation?

The Conservancy is building from the Cosumnes Conservation Audit experience and a similar Conservation Audit conducted for Komodo National Park in Indonesia to create a Conservation Audit function that becomes a routine part the Conservancy's conservation practices. An organization-wide Measures and Audit Team has been chartered to continue work on measures of conservation success and to develop the protocol for conducting

conservation audits. A draft, revised list of Project Process questions has been developed to facilitate the conservation audit process. This draft list is included below.

Draft List of Project Process Questions for The Nature Conservancy's Conservation Audit Process

1. Define Project Scope & Targets

- Has the project been based on the ecoregional objectives for the site?
- Has the general project area(s) been described and have appropriate maps been developed?
- Have appropriate and sufficient personnel resources (i.e., both internal TNC and external partners and volunteers) necessary to complete the full suite of project strategies and actions been identified? What proportion of these personnel needs have been fulfilled?
- Have available and potential project resources (e.g., personnel, financial, planning, etc.) been assessed using the CAP/MOS workbook?
- Has a minimum set of focal conservation targets been selected that are
  - representative of biodiversity
  - representative of targets from higher scale prioritization (e.g., ecoregional planning)
  - representative of local issue of special, heightened importance (e.g., cultural, economic)
- Have key ecological attributes of focal targets been identified?
- Is there some justification/documentation of how key attributes were selected?
- Has the project demonstrated sufficient external participation in and review of their target viability assessment?

2. Conduct Situation Analysis

- Have threats and other factors (e.g., current political climate, local support, etc.) been identified that affect target status and the potential effectiveness of conservation strategies?
- Have threats been prioritized?
- Has sufficient documentation been provided to justify decisions (e.g., for planning/management decisions)? Have the decisions sufficiently included threats and stakeholder assessments as well as an analysis of potential opportunities?
- Has a chain-of-causation and/or conceptual model been developed that links targets, threats, and other relevant factors been? Have they been presented in a situation diagram or narrative description?

3. Develop Work Plan

- Have overall conservation goals and desired status of key attributes of targets been stated, following established criteria?
- Have strategies been prioritized and measurable objectives that meet criteria been developed?
- Has an overall work plan been developed, following established criteria (including objectives, activities, budget and timeline)?
- Have strategies/objectives been added to the chain of causation or conceptual model and spatial map?
- Is there a system for tracking resource investment in strategies and monitoring over time and resource allocation by partners?
- Are project resources being effectively distributed and built around the prioritized strategies in the plan?

4. Develop Monitoring Plan

- Has an *overall* monitoring plan been compiled?

- Have indicators that meet criteria been identified for
  - Work plan goals
  - Work plan objectives (for targets and threats)
  - Other relevant factors
- Have data collection methods that meet criteria been selected and justified?
- Have monitoring indicators been added at the appropriate location and timing relative to actions within the chain of causation or conceptual model and spatial map?
- What other monitoring is underway that does not directly align with identified indicators? To what degree are these monitoring efforts justified?

5. Implement Work and Monitoring Plans

- Is there a periodic (e.g., annual) process for reviewing the completed activities associated with the work and monitoring plans?
- Are any major deviations from the plans being recorded?

6. Analyze, Communicate, Interpret, and Use Information to Adapt and Learn

- Has the work and monitoring plan information been transmitted to the Conservancy's central database?
- Is a system in place at the project or Operating Unit to adequately store, analyze, and summarize data from monitoring efforts?
- Are data from monitoring efforts being analyzed and converted to useful lessons learned with sufficient frequency to inform adaptive management?
- Are results being used to adapt work and monitoring plans?
- Are lessons and information being strategically shared to leverage learning externally (through reports, stories, papers, presentations, etc.)?
- Does external peer review take place?

Evaluating the management effectiveness of Protected Areas in India

Case study by:	Shekhar Singh
Institutional affiliation:	Centre for Equity Studies, New Delhi
Address:	C 17A Munirka, New Delhi 110 067, India
Telephone:	+91 11 26178048
Fax:	ditto
Email:	shekharsingh@vsnl.com

The Case Context

This was a national level evaluation, commissioned by the Government of India, as a part of the World Bank funded project on Forestry Research, Education and Extension. The objective was to evaluate the management effectiveness of Protected Areas in India by, as far as possible, replicating the methodology used in the earlier evaluation (1984-87) and, thereby also determining the changes that night have occurred in the interim.

1. Why was the evaluation done?

To assist the Government of India to evaluate the efficacy of systemic, institutional and other remedial measures taken since the last evaluation. To highlight other issues needing attention. To recommend legal and policy changes and to prioritise Pas for special attention/investment. Also, to help the government to take stock of its performance.

2. How was it conducted?

Through the use of questionnaires, addressed to PA managers, NGOs and state governments, through follow up discussions and field visits, through expert consultations and through review of secondary literature.

3. Who was involved and why??

PA managers and staff, NGOs, interested and knowledgeable citizens, national and international experts, communities living in and around the Pas, state and central government officials. They were each involved because they are important stakeholders and have something to contribute to the evaluation.

4. How was the evaluation process developed??

It was developed through a process of consultations with the important stakeholders, as listed above.

5. What was covered in the evaluation and why?

The evaluation looked at geographical, biological, social and legal/administrative parameters and, based on these, evaluated the response of the PA managers and the state/central government, along with those of NGOs and communities, to required management needs and imperatives. As this was supposed to be a comprehensive assessment, all the relevant parameters were taken up.

6. Which elements of the WCPA framework were covered in your evaluation process?

All.

7. How was the evaluation reported?

The final report, along with dtata sets, was circulated to all the major stakeholders on CD and discussed at regional and national level meetings. Based on these discussions, the report is now in the process of finalisation and will be published.

8. What changes in management resulted?

The last evaluation done (1984-87) led to significant increases in the investments on the PA network, to amendments in the laws governing wildlife and protected areas, and to the setting up of various recommended institutional mechanisms. It also led to the acceptance, by the Government, of recommendations relating to the initiation of ecodevelopment activities around Pas.

The current evaluation report is still to be finalized.

9. What did you learn about the process of assessment?

We learned that our questions in the questionnaire must be in a language that is totally unambiguous, so that answers are comparable. For example, we asked a question: What are, in your opinion, the most important areas in which research should be taken up? This was understood by some to mean subject areas and by others to mean geographical areas!!!

We also learned that the evaluation must include parameters and issues that each of the major stakeholders consider important, otherwise they do not get enthused.

We also learnt that there need to be some incentives for PA managers and others if their whole- hearted cooperation is to be procured. Part of this incentive is the belief that the evaluation would lead to action on issues that concern them. But, in addition, individual incentives also help. For example, this could be done by selecting those who have provided the best (most accurate and comprehensive) information to attend prestigious meetings or to have their contribution recognized in some appropriate manner.

10. What have you done differently (or what would you do differently) based on what you learned about evaluation?

We tightened up the language in the questionnaire, shifted questions so that those that were considered important by various stakeholders were prominent in their questionnaires, and built in many incentives. We also regularly communicated to the major stakeholders the impacts of the earlier evaluation so that they realized that such evaluations can have positive outcomes that are relevant to them.

Evaluation of Management Effectiveness of the Sian Ka'an Biosphere Reserve

Case study by:	Ileana Solares Leal
Institutional affiliation:	Sian Ka'an Biosphere Reserve.
Address:	Kukulcán Km 4.8 Zona Hotelera, Cancún, Q.Eoo. México.
Telephone & Fax:	(52) 998 849 7554.
Email:	isolares@conanp.gob.mx

The Case Context

Sian Ka'an Biosphere Reserve (SKBR) was established by presidential decree on January 20, 1986 and inscribed on the World Heritage List in December 1987. In 1988, Mexico took the MAB - UNESCO model for Protected Areas Management and inscribed into Mexico's Environmental Law, as a management category. This additional stage of management is unique as it includes buffer zones as well as traditional core management zones inside the limits of the legal protected area. On November 23, 1994, the protected surface was enlarged with the establishment of the Uaymil Flora and Fauna Area of Protection, and later in February 1998, by federal decree, a marine and lagoon portion was incorporated with the name of Sian Ka'an Coral Reef Biosphere Reserve. These areas integrate one of the largest protected areas on the Mexican Caribbean Coast of Quintana Roo, Mexico, with a total of 652,192 hectares. SKBR has a enormous biological diversity due to its variety of ecosystems including: fresh water systems, aquatic and marine zones, wetlands and terrestrial zones. The conservation of its biodiversity and natural resources are threatened by urban growth and the establishment of recreational services for tourism— the most influential sector of regional development. This threat, however, could become an opportunity for sustainable development if it is based on adequate planning and implementation strategies.

1. Why was the evaluation done?

SKBR has a enormous biological diversity due to its variety of ecosystems including: fresh water systems, aquatic and marine zones, wetlands and terrestrial zones. The conservation of its biodiversity and natural resources are threatened by urban growth and the establishment of recreational services for tourism— the most influential sector of regional development. This threat, however, could become an opportunity for sustainable development if it is based on adequate planning and implementation strategies.

As a result of this enlightenment of sustainable management practice, the Direction of the Reserve has initiated a process to renegotiate the Management Plan. A fundamental part of this process was to conduct an evaluation of management effectiveness, with the aim of determining if the management team was carrying out the actions necessary to fulfill the area's objectives.

2. How was it conducted?

The methodology used to carry out the evaluation of management effectiveness was that developed by WWF/CATIE in 2000. This procedure was chosen because it has proven to be a valuable tool for determining the effectiveness of general management in the area. It also makes it possible to measure the discrepancies between the amount of attention paid to different fields of management, as well as individual fields of management. One may also identify factors or specific management components that require greater attention. In addition, this methodology has been applied to other protected areas in Latin America,

although it is mainly validated in government administered protected areas (Cifuentes et al., 2000).

In order to make the Evaluation of Management Effectiveness, a workshop took place, attended by the technical, administrative and operational staff of the SKBR, during May 13th to 17th 2002 in Santa Teresa Field Station.

3. Who was involved and why?

The Core Evaluation Team was made up of the technical, administrative and operational personnel of the Reserve, representing the following areas of management: Financial Resource Administration, Ecological Restoration, Protection, Surveillance and Enforcement, Public Use Program, Environmental Education, Research and Monitoring, Natural Resources Management, and Maintenance. No community representatives were included in this process because the main purpose of this evaluation was to obtain information about the observations of the management body of the Reserve. Specifically, the individual and group expectations were to reflect on the management body's past achievements, communication skills, and it's ability to respond to future threats.

4. How was the evaluation process developed?

Based on the WWF/CATIE methodological procedures to evaluate the effectiveness of protected area management, the SKBR's Direction selected M.A. Alekcey Chuprine[1] as the facilitator of the process, as he is a specialist familiar with the methodology and the protected area technical, administrative and operational personnel.

The facilitator collected all of the primary and secondary information necessary for the evaluation, such as management plans, laws and regulations, administration of founds, enforcement, organization, among others.

After the formation of the Core Team, a Workshop for the Evaluation of Management Effectiveness took place on May 13th to 17th in Santa Teresa Field Station, SKBR. During the Workshop, the Core Team selected the appropriate set of variables, sub variables and parameters for each evaluation field. As the WWF/CATIE method indicates, the rating scale adopted for the procedure has five rating levels (0-4) associated with a percentage that expresses the level of management from unsatisfactory to very satisfactory. For the rating of variables, sub variables and parameters, the rating is carried out by means of specific matrices for each field, using the same scale described above to determine the level of satisfaction. The numerical optimum for each field results from multiplying the maximum value on the rating scale by the number of variables analyzed. Finally, to analyze the general management of an area, a matrix combining all the fields was used.

5. What was covered in the evaluation and why?

According with the methodology, a set of variables, sub variables and parameters were selected for each evaluation field. A list of these is shown at the end of the document.

6. Which elements of the WCPA framework were covered in your evaluation process?

Even when the methodology used addresses all of the elements of the WCPA framework (context, planning, input, process, output and outcome), was primarily focused on scoring

[1] Protected Areas Specialist. UCI/Costa Rica.

aspects of management as a basis for assessing effectiveness. This means that the information obtained through the assessment was based more on perceptions than concrete monitoring data (Hockings, 2002).

7. How was the evaluation reported?

Results of the Evaluation of Management Effectiveness were discussed by the Core Team, and the third day of the workshop was dedicated to the analysis of Strengths, Opportunities, Weaknesses and Threats, and to identify objectives and future activities to address the identified problems. Once the strengths, weaknesses, threats and opportunities for the management of the protected area were identified, an action plan was developed to adapt the management plan. On the last two days of the Workshop, the Core Team worked together in small groups to address the issues identified in the analysis, and to propose the activities and actions necessary to secure an effective management strategy.

8. What changes in management resulted?

At present, this action plan is being incorporated into the Management Plan of the PA. However, the action plan developed only represents the initial structure of a continuous process of evaluation. Other projects are simultaneously taking place, and their methods of evaluation are also useful indicators of management effectiveness, such as the WCPA-Marine / WWF Marine Protected Areas Management Effectiveness Initiative. Results from these two methodologies will provide with more valuable and realistic information on the Reserve's management effectiveness, since the results will be based in both, perceptions and concrete monitoring data

9. What did you learn about the process of assessment

The results of the workshop were very useful for the staff to learn from, and their experiences in turn were incorporated into the action plan developed after the evaluation. This first evaluation also enlightened the need for substantial evaluation of management effectiveness, in order to improve management in the PA.

10. ? What have you done differently (or what would you do differently) based on what you learned about evaluation?

Remembering that this evaluation was an exercise to obtain the SKBR's management body perception of its own work and development, this methodology successfully obtained the desired information in the shortest amount of time, which was the goal. Nevertheless, it is important to conduct a deeper evaluation in which the perception of stakeholders and monitoring data would be also considered. The management team of SKBR is optimistic that a combination of initiatives and methodologies will provide an effective framework for evaluation.

Table 1: List of variables, sub variables and parameters selected by the Core Team for the Evaluation of Management Effectiveness of the SKBR.

FIELD	VARIABLE	SUBVARIABLE
❖ ADMINISTRATIVE	♦ Personnel	➢ Directive • Quality • Quantity ➢ Operative • Quality • Quantity - Motivation. - Time dedicated to activities. - Incentives. - Employee attitude. - Capacity.
	♦ Finances	➢ Operational budget. ➢ Regularity of budget preparation and delivery. ➢ Extraordinary and/or special funding. ➢ Capacity for generating own resources • Management capacity. • Institutional capacity • Budget management. • Spending capacity. • Control and auditing.
	♦ Organization.	➢ Files. ➢ Organizational chart. ➢ Internal communications. ➢ Structuring of activities.
	♦ Infrastructure.	➢ Equipment and tools. ➢ Facilities for basic management. ➢ Facilities for specific management. ➢ Health. ➢ Basic services. ➢ Security of facilities. ➢ Boundary demarcation. ➢ Access.
❖ POLICY	♦ Community support and participation. ♦ Intra-institutional support. ♦ Inter-institutional. ♦ External support..	➢ Administration of the PA system: SEMARNAT-CONANP[2].
❖ LEGAL	♦ Land tenure.	➢ Domain / Possession. ➢ Conflicts
	♦ Set of general laws and regulations ♦ Law creating the PA	➢ Clarity ➢ Application
❖ PLANNING	♦ PA management plan.	➢ Plans exist and up-to-date.

[2] SEMARNAT: Secretary of Environment and Natural Resources. The National Commission for Natural Protected Areas (CONANP) belongs to SEMARNAT, of the Federal Government of the Mexican United States.

	♦ Compatibility of management plan with other plans and organizations. ♦ Annual Operational Plan. ♦ Level of planning ♦ Zoning. ♦ Boundaries	➢ Characteristics of the planning team. ➢ Plan implementation. ➢ Plans exist and up-to-date ➢ Plan implementation.
❖ KNOWLEDGE	♦ Socio-economic information. ♦ Biophysical information. ♦ Cartographic information. ♦ Legal information. ♦ Research ♦ Monitoring and feedback. ♦ Traditional knowledge.	
❖ MANAGEMENT PROGRAMS	♦ Research and monitoring. ♦ Environmental education. ♦ Public use. ♦ Protection, surveillance and enforcement ♦ Maintenance ♦ Social sustainable development	Each program is evaluated according to the following variables ➢ Design ➢ Implementation. ➢ Co-ordination. ➢ Follow-up and evaluation.
❖ ILLEGAL USES	♦ Timber extraction. ♦ Extraction of flora and fauna. ♦ Land invaders. ♦ Hunting ♦ Agriculture and cattle ranching ♦ Fishing ♦ Recreation and tourism ♦ Building constructions.	
❖ LEGAL USES	♦ Timber extraction. ♦ Extraction of flora and fauna. ♦ Extraction of non-renewable resources. ♦ Navigation. ♦ Agriculture and cattle ranching ♦ Fishing ♦ Recreation and tourism ♦ Building constructions.	
❖ BIOGEOGRAPHIC CHARACTERISTICS	♦ Form ♦ Size ♦ Isolation ♦ Vulnerability	
❖ THREATS	♦ Visitor impact ♦ Pollution. ♦ Fires. ♦ Advance of human settlements. ♦ Migration. ♦ Exotic organisms. ♦ Development infrastructure. ♦ Drug trafficking and related activities	

The Enhancing our Heritage Project

Case study by:	Sue Stolton, Marc Hockings and Nigel Dudley
Institutional affiliation:	Equilibrium
Address:	23 Bath Buildings, Bristol BS6 5PT, UK
Telephone:	+44-117-942-8674
Fax:	+44-117-942-8674
Email:	equilibrium@compuserve.com

The Case Context

The *Enhancing our Heritage: monitoring and managing for success in Natural World Heritage sites*, is a four-year project of UNESCO and IUCN – the World Conservation Union, funded by the United Nations Foundation and carried out in co-operation with the University of Queensland, The Nature Conservancy, World Wide Fund for Nature and other organisations[1]. The project started in 2001, and is working in ten WH sites in southern Asia, Latin America and southern and eastern Africa[2].

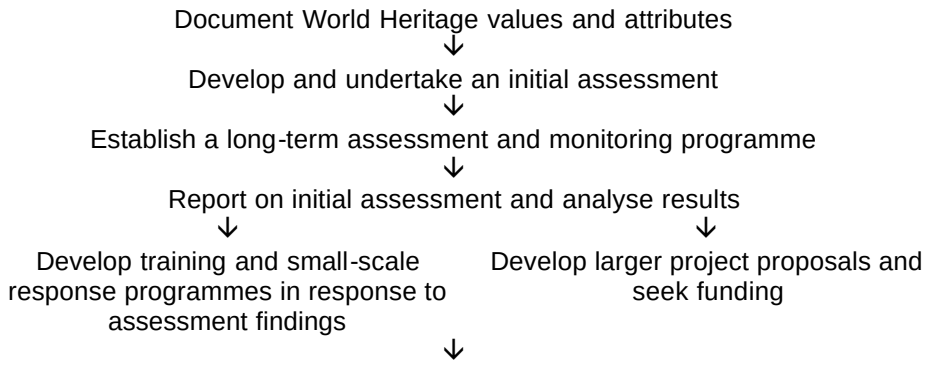
1. Why was the evaluation done?

The EoH project aims to demonstrate a more consistent and reliable mechanism for meeting WH Convention reporting requirements by using systems of management effectiveness assessments. Based on the results, IUCN will provide recommendations to the WH Committee on a consistent approach to monitoring and reporting on the state of conservation and management effectiveness of all natural WH sites and on improving the effectiveness of management of WH sites. The project should also result in improved management of the ten pilot WH sites, by providing:

- an established assessment, monitoring and reporting programme for evaluating management effectiveness and the state of conservation of World Heritage values;
- site managers and others training in the application of assessment and monitoring techniques;
- established or improved communication and co-operation between site managers, local communities and NGOs, regional training institutions and other key experts and stakeholders to ensure continuation of assessment and monitoring beyond the life of the project;
- improved management in areas of identified deficiency resulting from training programmes and small-scale support provided through the project;
- integration of assessment and monitoring practices into management; and
- proposals prepared and funding sought for large-scale projects required to address deficiencies.

2. How was it conducted?

The project is providing technical expertise and financial assistance, to complete an initial (in year one) and second assessment (in year four) of the management effectiveness of the site. The initial assessment provides baseline data on the site, to identify both gaps to be filled in the monitoring system and also steps to address any possible management deficiencies that are identified. The diagram below describes the main project steps.



[1] Further information, documents, and reports are available from www.enhancingheritage.net/docs_public.asp

[2] The sites are: Aldabra Atoll: Seychelles; Bwindi Impenetrable National Park: Uganda; Greater St Lucia Wetland Park: South Africa; Serengeti National Park: Tanzania; Keoladeo National Park: India; Kaziranga National Park: India; Royal Chitwan National Park: Nepal; Río Plátano Biosphere Reserve: Honduras; Sangay National Park: Ecuador; and Canaima National Park: Venezuela.

Repeat assessment at regular intervals

Three steps (not necessarily consecutive) will likely be involved in developing this assessment process.

1. *Data collection*: including from site records, any other relevant literature sources and interviews with key stakeholders.
2. *Managers' workshop/s*: combining the data collected with the knowledge and experience of managers and key staff members/stakeholders to complete a draft assessment framework for the site.
3. *Site workshop/s*: including representatives of a wide range of stakeholders, where the draft assessment framework will be discussed and finalised.

3. Who was involved and why?

The project is being managed by Marc Hockings of the University of Queensland, Australia. Consultants working on the implementation of the project include Sue Stolton and Nigel Dudley of Equilibrium, UK and José Courrau of Costa Rica. Regional Partner Institutions (IUCN-EARO, IUCN-SUR and IUCN-ORMA and Wildlife Institute of India) are co-ordinating the project regional and Site Implementation Groups have been established for each World Heritage property where project activities are being undertaken. These groups work with the Regional Institutional Partners in planning site-specific activities, implementation and reporting. Each site is undertaking the assessment in slightly different ways – usually depending on staffing capacity. Thus in Aldabra a consultant was used to develop the draft assessment for agreement by stakeholders, whereas in Bwindi the assessment was carried out by the manager and the director of the research institute based in the Park.

4. How was the evaluation process developed?

Because World Heritage sites vary in their management and objectives, capacity for assessment and monitoring and resources available, the project has provided variety of different methodological approaches – in effect an assessment toolkit – that can be used for evaluation. *The Enhancing our Heritage Toolkit for Assessing Management Effectiveness of World Heritage Sites*, developed for the project, consists of a *Manual* (Book 1), *Workbook* (Book 2) and a CD containing both publications along with explanatory PowerPoint presentations. The *Manual* provides an introduction to the project and a guide to project implementation. The Manual also includes a brief explanation of the WCPA framework for assessing management effectiveness of protected areas and the six elements of assessment that the framework suggests are important to help build up a picture of management. Each of these six elements is then explained in more detail as they relate to the EoH project, with details of why each element is important in assessment, indicators for each element and a list of methods that can be used to assess these indicators. The *Workbook* contains suggestions of a variety of different assessment systems, with examples of their use, which can either supplement existing approaches to ensure all the elements of the WCPA Framework are assessed or can be used to build a management effectiveness system.

The *Workbook*, and to some extent the *Manual*, should be considered as 'living documents' throughout the life of the project. They will be amended and updated to reflect their practical use by the sites during the project. Project experiences will also be recorded in the overall use of the WCPA framework. PowerPoint presentations have been developed for use in workshops aimed to introduce the project. They can also be adapted to act as a general introduction to evaluating management effectiveness according to the WCPA framework. The *Workbook* , *Manual* and PowerPoint presentations have been produced in English and Spanish versions.

5. Which elements of the WCPA framework were covered in your evaluation process?

The EoH project is using all the six elements of the WCPA Framework (context, planning, inputs, processes, outputs and outcomes) to build assessment systems suitable for WH sites. The Framework identifies three broad levels of monitoring and evaluation - depending on resources and needs. The EoH project is a Level 3 assessment, as it places greatest emphasis on monitoring the extent of achievement of management objectives through focusing on *outputs* (the products of management) and *outcomes* (the impacts of management) while still measuring the other elements of management defined by WCPA.

6. What was covered in the evaluation and why?

Clearly, it is impossible to monitor and assess everything that happens within a WH site. For each element of the Framework therefore key indicators are suggested which should together indicate overall management effectiveness. Because WH sites vary in their management and objectives, capacity for assessment and monitoring, and resources, the EoH project is providing a variety of different ways to help evaluate these indicators. Assessments can be carried out in two ways – through the collection of descriptive information and by the application of specific methodologies. In many cases WH sites will already have a range of systems in place to monitor management actions. The toolkit thus provides suggestions to fill gaps in monitoring and assessment, and does not suggest bringing in new systems to replace established practice: assessment systems will be tailored to the needs and resources of individual sites.

7. How was the evaluation reported?

To date the project has written reports of the initial assessments from six of the ten sites. Because a range of methodologies has been used, reporting also uses a range of approaches including scoring, written assessments etc.

8. What changes in management resulted?

It is too early to assess the extent of any management changes made as a result of the project, although several of the initial assessments include suggestions for change and some of these will be implemented shortly.

9. . What did you learn about the process of assessment?

Building a team is vital

The underlying premise of the EoH Project is that WH sites undertake the assessment of their own management effectiveness. For the self-assessment process to be rigorous it is essential that site managers develop a team of stakeholder representatives to work with them to develop or further develop and agree the monitoring and assessment process. Although all sites were already engaged in some form of stakeholder dialogue, in most cases this tended to be a one way conversation used to provide or elicit information rather than working with stakeholders to ensure effective site management. The requirement of the project to develop site implementation groups to undertake the project, who then work with a wider group of stakeholders to develop and ratify the initial assessment, has reinforced this need to build strong and coherent local teams to work together to assess management.

Two examples from Latin America highlight this clearly. In Canaima National Park, Venezuela, the project has been perceived as an opportunity to combine the separate efforts of civil society, government, local governments and indigenous groups. The local team has demonstrated capacity and commitment to implement the project and quickly identified themselves as a team, ensuring all stakeholders involved in the project are actively engaged in project implementation. At the Río Plátano Biosphere Reserve in Honduras, however, it became clear during the introductory and planning workshop that those involved in the reserve had little experience of working together as a team. It is also evident that unsolved issues between the various organisations involved have affected the implementation of the initial assessment. In particular, the participation of stakeholders and the integration of existing information has been limited. Despite these problems there has been a positive reaction to the project from all stakeholders involved. In year two it will be important to overcome these organisational difficulties and build a strong team to further the EoH process.

- **Identifying management objectives**

The first step in assessment is the definition of site values and associated management objectives. These values are the key attributes that underlie nomination as a World Heritage site. For sites important to biodiversity and nominated for their global biological assets, these values should ideally reflect not only unique or threatened/endangered species or ecosystems, but all the biological diversity (including terrestrial, freshwater, and marine diversity) to ensure sustained ecological function. Site values should also reflect other natural values such as geologic or representative ecological processes, as well as any cultural or social values that are locally, nationally, or globally important to stakeholders.

In several of the test sites the agreement of management objectives has been quite a difficult endeavour, particularly for the areas that did not have agreed management plans. The description of

the process in South Africa provides an example of the difficulties that can arise when stakeholders involved in the management of a WH site disagree on first principles – the values for which the site should be managed. The EoH project is being implemented in Greater St Lucia Wetland Park (GSLWP) in South Africa, during the set-up period of the Park. The declaration of WH status in 1999 has led to major management changes. The Greater St Lucia Wetland Park Authority (GSLWPA) has been set up as the overall management authority with a mandate to enter into co-operative agreements with other institutions to fulfil its core functions. KZN Wildlife, which has been involved in the management of areas within the WH site for many years, will continue to carry out the day to day conservation management of the area, but now GSLWPA is responsible for overall policy and regulation, leading to tensions between the Parks mutual aims of conservation, tourism and development. Within the EoH project this has been particularly apparent in the process of agreeing the management objectives, with debate arising over the relative importance of the conservation values detailed in the WH nomination, and the wider conservation, development and ecotourism objectives contained in the national legislation setting up the park. One major area of concern for KZN Wildlife is that tourism and sustainable development interests could compromise the natural values of the site. The implementation process of the EoH project has thus been dominated by the need to address, define and harmonise the differing management objectives of the GSLWPA and KZN Wildlife. Although at times this has been difficult, all the parties involved in management feel that the process will lead to increased transparency between the two managing partners and in turn to better management in the future.

10. What have you done differently (or what would you do differently) based on what you learned about evaluation?

In general terms, the project has taken longer to establish than was first planned and it is clear that the project team were slightly over-optimistic in their projections. Some more specific questions that have emerged – and that still require an answer, are addressed below.

- **How to determine base-line data?**

For the sites taking part in the EoH project the first stage has been to undertake the initial assessment, which aims to identify the gaps in monitoring, highlight adaptive management requirements and provide sites with the information needed to fulfil a variety of reporting requirements. Initial assessments are only just being completed so it is too early to say whether these aims have been completed. It is however clear that the initial assessment has proved time consuming and has in some cases only had minimal stakeholder involvement. This raises a number of questions: *Is more time needed train people in undertaking and develop initial assessment? Should the initial assessment be simplified?*

- **How do you ensure that sites adapt methodologies to specific conditions?**

It is the strong belief of the EoH project team, and a clear recommendation from the WCPA Framework, that a one-system-fits-all approach could not adequately reflect the management effectiveness of WH sites, or any other protected sites. There is too much diversity in habitat and management needs, resources and style. On the other hand the project does propose assessing all the elements of the management cycle and associated key indicators as defined by the WCPA Framework. The EoH toolkit thus contains suggestions of how these elements can be assessed. It stresses that in the first place these tools should be used to fill gaps in information not covered by existing monitoring and assessment regimes and secondly that the tools should always be adapted to reflect local realities. Despite the team's best efforts it seems that some sites did not attempt to make these adaptations. For instance, the initial assessment from Aldabra Atoll in the Seychelles notes that…"there were initial difficulties with the fact that Aldabra is not a 'typical' World Heritage Site with an indigenous human population who depend on the site..[thus].. many of the data tables didn't seem to fit.' This raises the questions: *How do you ensure that sites use the monitoring systems already in place as a foundation for developing the comprehensive monitoring and assessment system advocated by the EoH project? How do we ensure people see the systems in workbook as a template and adapt them to fit their own site's realities?*

- **How can we ensure that the EoH system not only become institutionalised in the ten test sites, but in other WH sites (natural and cultural) and other protected areas?**

Management effectiveness of protected areas has grown to be a prominent issue over the past decade, and there has been considerable interest in developing methodologies. The initial workshop to introduce the EoH project in Ecuador, for example, created such interest that it resulted in the

development of (and subsequent seed funding for) a larger project to assess all Latin American WH sites. Much of this work however is not yet reflected on the ground – with most protected areas taking part in management effectiveness projects being involved in an outsider driven process rather than the need for monitoring and assessment systems being identified by managers and/or stakeholders. However, we should also recognise that policy almost invariably takes time to develop into practice, and at least in this case the policy developments are firmly based in field experience.

Evaluation of Management Effectiveness in the Oulanka National Park, Finland

Case study by:	Rauno Väisänen
Institutional affiliation:	Natural Heritage Services, Metsähallitus
Address:	PO Box 94 FIN-01301 Vantaa, Finland
Telephone:	+358 205 64 4386
Fax:	+358 205 64 4350
Email:	rauno.vaisanen@metsa.fi

The Case Context:

Finland is a sparsely populated northern European country with about 200,000 lakes and vast boreal forests, with the traditional nordic everyman's right of free access. The Natural Heritage Services (NHS) of Metsähallitus is the main agency responsible for protected areas management in Finland. The network of state-owned areas managed by NHS covers 3.5 million hectares of land and 3.0 hectares of waters, including 34 national parks and 12 wilderness areas. The total area of protected areas increases annually, thanks to government financing allocated for purchasing and exchanging private lands for conservation. NHS is in charge of the conservation of several rare and threatened species also outside protected ares. The nature protection and reacreation services are funded from the state budget of Finland. For additional information of NHS, see http://www.metsa.fi/natural/nationalparks/oulanka/index.htm

The wide spectrum of areas, varying from strict nature reserves to national hiking areas, provides an efficient tool for NHS to direct visitor flows to suitable areas without jeopardizing their natural or cultural heritage. The protected areas suited for hiking etc. have been classified into different infrastructure categories on the basis of their present and optimal level of visitor facilities.

In order to increase management effectiviness of protected areas, NHS is active in networking and searching of partnerships with environment centres, forestry institutions, research bodies, NGOs, tourism companies and other stakeholders. Being part of Metsähallitus group means that NHS participates in the landscape ecological planning of the large commercially used state-owned forests. As regards to the Natura 2000 network of the European Union, the NHS also participates in the management planning of both state-owned and private lands and waters included in the network.

The Oulanka National Park lies in northern Finland at the Arctic Circle near the Russian border. The national park was established in 1956 and its present size is 27,720 hectares. It is characterised by extended spruce forest (western taiga), open peatlands and diverse lake and river habitats. The annual number of visitors in Oulanka is 150,000 (25% foreigners), the main activities being hiking, rafting, canoeing, fishing, and bird watching. A survey indicated that 53% of visitors stay for an average of three days, and that 30% of the annual tourism income in Kuusamo municipality comes from national park visitors. The park does not get any income from the use of its high-quality infrastructure. For more information on Oulanka National Park, see http://www.metsa.fi/natural/nationalparks/oulanka/index.htm.

1. Why was the evaluation done?

The evaluation was carried out to get the PAN Parks certification for Oulanka National Park. The aim of the certification was to promote partnership between the the national park and the local tourism enterprises, to promote and guarantee (ecological) sustainability of tourism, and to create foundations of joint marketing efforts. It was also seen beneficial to the park agency to participate and to learn from the international certification processes and to

compare the experiences from different processes in order to improve management effectiveness of protected areas.

The evaluation was the first-ever verification of a PAN parks candidate and thus an important learning process.

The PAN Parks Initiative aims to:

(1) create a European network of wilderness protected areas ("European Yellowstones"),
(2) improve nature conservation by sustainable tourism development and
(3) provide a reliable trademark which guarantees nature protecteion and is recognised by all Europeans.

The iniative thus includes both tourism and conservation in its verification principles and criteria. It also emphasises the minimum size criterion, which is significant with respect to both conservation and tourism. The initiative was developed by WWF and Molecaten Group from the Netherlands. For more information on PAN parks initiative, see the website of the PAN Parks organisation www.pan-parks.org

2. How was it conducted?

Evaluation was carried out by a verification team consisting of three trained foreign verifiers (Alexander Zinke, lead verifier, Gordon Miller, Jernej Stritih) and one independent Finnish expert (Pekka Borg).
The host team of the Oulanka National Park represented the Natural Heritage Services of Metsähallitus (for more information of the host organisation, see http://www.metsa.fi/natural/index.htm).

Prior to the verification visit, the host team sent the following documents to the verifiers: completed self-assessment questionnaire, shot background texts on hunting arrangements and fishing regulations in the national park, a list of documents available, background texts of the Finnish nature conservaton legislation and the everyman's right of access, and the Oulanka National Park Strategy Leading to PAN Parks Verification. The material proved to be insufficient for a sound desk study, and consequently, this was communicated and discussed with the host team, resulting in the supply of a few more ducuments. In addition, some more material (e.g. principles of protected area management in Finland, and principles of environmental construction work and various leaflets on nature trails, visitor behaviour, tourism infrastructure, maps etc.) was collected during the verification visit and after it.

The verification was conducted between 29th May and 2rd June 2002. The evaluation process included the meeting of the verification team and the PAN Parks regional coordinator (Harri Karjalainen), several on-site meetings with the local staff of the Natural Heritage Services and partners and other stakeholders, accommodation and discussions at the Oulanka Biological Station of Oulu University, as well as guided field trips to various parts of the Oulanka National Park.

3. Who was involved and why?

The lead verifier and two other trained verifiers were involved in both evaluation and reporting, whereas the
Finnish expert was mainly involved translations of the material and also in the evaluation.
The host team of the evaluation consisted of the director of the national park (Matti Tapaninen), a conservation biologist, a senior ranger, a project manager, and a director of a visitor centre. The idea was to give to the verifiers a comprehensive picture of the state of national park: e.g. governance, ecological state, research and monitoring, visitor management, and various activities allowed in the national park, as well as of the threats and challenges to the park. The process included discussions with and commenting from the

staff of the local Kuusamo Tourism Office, the local foreman of the Reindeer Owners' Association, and the representatives of the local tourism companies.

4. How was the evaluation process developed?

The original process model was developed by PAN Parks organization, which has produced specific guidelines for verification. The guidelines were followed in the evaluation process. However, since this was the first-ever verification, several lessons were learned and the process was further developed during the evaluation. The verification team included in their report an attachment of general findings on the process to trigger amendments/improvements of upcoming verification missions.

5. What was covered in the evaluation and why?

The evaluation covered the PAN Parks principles and criteria 1-3 required by the certification:

(1) Natural values (PAN Parks are large protected areas, representative of Europe's natural heritage and of international importance for wildife and ecosystems).
(2) Habitat management (design and management of the PAN Parks aims to maintain and, if necessary, restore the natural ecological processes and biodiversity of the area).
(3) Visitor management (visitor management safeguards the natural values of the PAN Parks and aims to provide visitors with a high-quality experience based on the appreciation of nature).

PAN Parks criteria include many detailed principles and indicators.

6. Which elements of the WCPA framework were covered in your evaluation process?

The evaluation covered most, if not all, elements of the WCPA framework, even though there is no formal connection between the PAN Parks verification and the WCPA framework. However, the PAN Parks certification focused especially to conservation and sustainable tourism development. For example, as regards to 'planning', the evaluation paid special attention to the strategic approach in the development of sustainable tourism and visitor management. And as to 'input', the partnership with the tourism business was evaluated in depth, and as to 'output', the tourism services and products were investigated in detail.

7. How was the evaluation reported?

The verification team prepared a verification report for the PAN Parks organisation in August 2002. The report included several recommendatons stated in case of a need to improve national park management within a time frame, and a minor correction action requirement, especially for forestry and reindeer management. On the basis of the report (and some minor subsequent changes in the management), Oulanka National Park was awarded the PAN parks certificate on 17th September 2002 among the first three PAN Parks, the other two being Fulufjället National Park in Sweden and Bieszcsady National Park in Poland.

8. What changes in management resulted?

The evaluation lead only to some minor changes in the management of the national park, but some significant modifications are likely to take place in the future. It was also encouraging for the host team and the park agency that the present management regime and plans were in most cases found to be of high international quality by independent external verifiers.

The verification report suggested some research work to be conducted e.g. on the winter carrying capacity of the national park for reindeer, particularly aiming at a recovery of lichen in the area. The verification report also included a monitoring plan with a time frame.

After the certification, the main emphasis was put on updating the Sustainable Tourism Development Strategy (STDS; the former one from 1999) for Oulanka National Park and its surroundings. Better cooperation between the national park and tourism businesses was one of the immediate results of the process. As a result of the certification the local Executive PAN parks Organization (EPPO) has been established on the basis of a stakeholder analysis. It has members from the park agency (Natural Heritage Services of Metsähallitus), the municipalities, tourism industry, local villages, a local NGO and the local regional environment centre. EPPO is in charge of developing the STDS.

9. What did you learn about the process of assessment?

The PAN Parks verification was a considerable lesson as such but the learning process will continue during the implementation of the monitoring plan and development of deeper partnership between the national park and the tourism businesses. The long-term process is probably more important than the short-term assessment. However, already the observations and recommendations of the assessment can be used as a lobby tool.

The immediate lessons learned from the evaluation itself included the fact that linguistic problems may considerably complicate the assessment by an international verification team. The role of local, independent expert is essential mediating and building trust between the verification team and the host team and other local stakeholders. The local expert can help the team to understand 'context', to keep the focus on key issues (instead of interesting cultural peculiarities) and to guarantee quick, comprehensive and transparent flow of information to the verification team. The evaluation clearly indicated that the background work prior to visit must be done sufficiently well and enough time should be allocated both to the desk study and discussions and field investigations on site.

From the point of view of the management agency, the PAN Parks certification seems to be a very promising case of certification of protected areas, although the approach is apparently suitable only to a limited number of parks. Similar initiatives with main emphasis on the development of sustainable tourism in protected areas include Charter of Sustainable Tourism developed by the EUROPARC Federation. In these cases, the costs of the certification can probably be transferred from the park agency to paying customers or visitors of the paks. Certification can under such (special) circumstances help to improve sustainable tourism and to improve management effectiveness of the parks. However, the certification will require considerable marketing efforts to reach the expected goals.

10. What have you done differently (or what would you do differently) based on what you learned about evaluation?

The self-asessment questionnaire was revised after the verification visit on the basis of the experiences of the verification team. The desk study would have required more time and more comprehensive background information (detailed maps, photographs, lists of stakeholders etc.) for the preparation of a really efficient site visit.

IUCN WCPA-Marine/WWF MPA Management Effectiveness Initiative

Case study by:	Lani Watson
Institutional affiliation:	NOAA/National Ocean Service – International Program Office World Commission on Protected Areas – Marine
Address:	1315 East-West Highway, MD 20910 USA
Telephone:	+301-713-3078 x223
Fax:	+301-713-4263
Email:	Lani.Watson@noaa.gov

The Case Context

Broad expectations have been placed on MPAs to protect marine biodiversity and ecosystem function, to reduce poverty, and to provide for healthier coastal communities with a strong foundation for economic growth. MPAs are severely challenged in achieving their objectives, for example, insufficient financial and technical resources, lack of trained staff, or lack of data for management decisions. Performance evaluation plays a critical role in providing for and demonstrating long-term positive impacts on biodiversity and the human communities that depend on these resources. Management effectiveness is the degree to which a protected area is managed to achieve it's goals and objectives. Assessing management effectiveness is a way to document how the management of a protected area meets goals and objectives. Evaluating management effectiveness should ultimately lead to improved project planning, accountability, and adaptive management.

IUCN World Commission on Protected Areas (WCPA) Marine and the World Wide Fund for Nature (WWF) are collaborating to improve the management of marine protected areas (MPAs) by working with managers, planners and other decision-makers to develop methods for assessing the effectiveness of MPA sites. This tool is aimed to enhance the capability for adaptive management in MPAs. The initiative builds on the IUCN Management Effectiveness Framework (Hockings, et al. 2002) developed by the WCPA Management Effectiveness Theme. The initiative is in the final phase of a 3-year project to produce a guidebook for evaluating MPA management effectiveness, by a) selecting biophysical, socioeconomic, and governance indicators for MPAs, b) developing a process for implementing effectiveness evaluations in MPAs, and c) field-testing the draft guidebook in diverse pilot sites around the world. The guidebook and examples from pilot sites will be released at the Management Effectiveness stream at the Worlds Park Congress in Durban, South Africa, in September 2003.

1. Why was the evaluation done?

IUCN World Commission on Protected Areas – Marine and the World Wide Fund for Nature are collaborating on an initiative to address evaluating management effectiveness in Marine Protected Areas (MPAs). The initiative builds on the IUCN Management Effectiveness Framework (Hockings, et al. 2002) by applying an evaluation process to MPAs and focuses on indicators that are specific to marine protected areas, the marine environment and coastal communities. The main tool developed is the guidebook: "How is Your MPA Doing? Evaluating Management Effectiveness in MPAs" (draft December 2002). The guidebook aims to enhance the capacity for adaptive management in MPAs by providing a method to measure whether the management of a MPA meets its goals and objectives.

2. How was it conducted?

The initiative is in the final phase of a 3-year project to produce a guidebook for evaluating MPA management effectiveness, by:

- Conducting background research on assessments or programs looking at effectiveness in MPAs to determine the best product for MPA practitioners
- Conducting a survey of goals and objectives of MPAs from around the world
- Conducting a literature review of existing indicators used in the marine environment and coastal communities
- Selecting biophysical, socioeconomic and governance indicators for MPAs
- Operationalizing the indicators and developing a process for implementing evaluations in MPAs
- Field-testing the draft guidebook in diverse pilot sites around the world
- Disseminating the guidebook and examples from pilot sites at the World Parks Congress in Durban, South Africa, in September 2003.

3. Who was involved in why?

- IUCN WCPA-Marine: To carry out the mission of WCPA to promote effectively managed protected areas and to provide expertise from the WCPA-Marine network of MPA practitioners.
- WWF: To provide expertise from the WWF network of protected areas and technical assistance at MPA sites.
- Packard Foundation: To provide funding based on interest in developing methods for identifying the effectiveness of investments in MPAs.
- NOAA/NOS International Program Office: To support WCPA-Marine and provide technical assistance, project management, technical assistance and lessons learned between the U.S. and international MPA community.
- Pilot sites: To ensure the guidebook is user-friendly, practical, and applicable in a wide range of MPAs. The sites span a diverse range of geographic and regional representation, marine ecosystems, protected systems, size, and management experience.
- External reviewers: To ensure the accuracy of the guidebook and to obtain valuable feedback throughout development of the guidebook.

4. How was the evaluation process developed?

The guidebook was developed to be a flexible approach applicable to a wide range of MPA types. It outlines a process for MPA managers and staff to choose indicators that are most appropriate to their sites based on site goals and objectives and site needs and resources. The guidebook is founded on five key principles to ensure that the evaluation process is: useful, practical, balanced, flexible and holistic.

The guidebook centers on indicators that are linked to management goals and objectives of MPAs. A study was conducted to review goals and objectives of MPAs around the world. The result was three categories of goals and objectives: biophysical, socioeconomic, and governance. Next, research was done to identify indicators linked to those MPA goals and objectives. Draft matrices were put together for the three categories of goals and objectives and reviewed by MPA experts. To select the most relevant and effective indicators, a workshop was held with 35 MPA experts from 17 countries to evaluate, prioritize and refine the goals, objectives and indicators. A profile was developed for each indicator to capture a range of information on measuring the indicator. Each indicator was further refined and made operational by developing

definitions, methods of measurement, and providing guidance on analysis and use of results. The 'operational' indicators were peer reviewed. The draft guidebook was completed to provide a process of conducting evaluations in MPAs and implementing the indicators.

A diverse set of sites was selected to field-test and review the draft guidebook. The draft was peer reviewed and revised based on comments. A workshop was held with representatives from each pilot site to launch the pilot projects and to select indicators most appropriate to each site based on their goals and objectives. The field-testing is a crucial step to obtain input to revise the guidebook and provide examples to compliment the guidebook. A final public review is also being done to ensure that the guidebook is accurate, user-friendly and applicable.

5. What was covered in the evaluation and why?
The guidebook describes a 4-part process:

Part 1: Selecting the appropriate set of indicators to measure based on site goals and objectives.

Part 2: Planning for how to evaluate the indicators that were selected

- Assess relevant resource needs to do the evaluation
- Develop and Evaluation Workplan
    - Why is the evaluation being done?
    - Who are the results for?
    - Who is going to be involved?
    - What indicators will be measured and how?
    - What is needed to do this?
    - When will it be done (timeline)?
    - What happens to the data after they are collected?
    - What happens to the results after they are generated?

Part 3: Implementing the evaluation and collecting and analyzing the data.

- Each description of the indicators includes:
    - The number and name of the indicator
    - Which goals/objectives relate to the indicator?
    - How difficult is it to measure this indicator? A "difficulty rating" (1-5) based on time, skills, logistics.
    - Brief description of the indicator.
    - The purpose and rational of why the indicator should be measured
    - What is required to measure the indicator? Resources (people, equipment) needed to collect and analyze the information.
    - How are the data collected on the indicator? The method and approach used to collect the information on the indicator.
    - How are the results interpreted and shared? The methods and procedures to analyze the data and suggestions on how to present the results.
    - What are the outputs? What are the results and how can they be used.
    - What are the strengths and limitations of the indicator?

Part 4: Sharing and adapting to the results generated.

6. Which elements of the WCPA framework were covered in your evaluation process?

The 44 indicators span all six indicator categories identified in the IUCN WCPA Framework, however, the indicators in the guidebook are largely oriented toward measuring MPA outputs (such as products or raw results) and outcomes (such as impacts and learning). This focus is for two reasons: First, context, planning, input and process indicators for general protected area use appear to be highly universally applicable across biomes and protection approaches, and as they are already well documented in other literature, they are not repeated in the guidebook (a list of citations and indicators will be in an appendix). Second, government, MPA practitioners, and the public need to strengthen MPA management and better understand the conservation and socioeconomic impacts and benefits of marine and coastal area management, therefore the guidebook is heavily oriented toward output and outcome indicator measurement.

7. How was the evaluation reported?

To improve the guidebook and make sure it is applicable in the field – the pilot sites will submit a report on their experiences. The sites have been given a template report form with a range of questions, including:

- Number and type of people involved and hours of work
- Disciplines, degrees, skills of people required
- Estimated cost
- Effort per indicator
- Methods and instruments used in gathering data
- Difficulty rating as compared to that given in the guidebook
- Strengths and limitations of the indicators
- Results of the project; interpretation, analysis
- Process of using the guidebook; expectations, challenges; usefulness of indicators
- Will results lead to implementation of an adaptive management program
- How will results used in management strategies
- What are the lessons learned

The guidebook recommends ways to communicate results of an evaluation depending on the intended users and audience of the information. This will vary for each site in how they determine the best way to communicate results.

8. What changes in management resulted?

To be determined!!

9. What did you learn about the process of assessment?

Some of the things learned so far in developing MPA specific guidelines and indicators:

- Many MPAs need to define clear, measurable objectives
- In MPAs, much more work has been done on biophysical monitoring and evaluation then on socioeconomic monitoring and evaluation. Many sites have biologists on staff and do not have economists/social scientists on staff.
- Sites want help in determining priority indicators to measure

The following are some of the questions we are interested in answering with this project:

- Can generic indicators work for all types of MPAs? Can they be easily adapted?
- Can the guidebook by itself be useful to MPA managers and staff? Is additional regional or onsite training needed?
- How can evaluations be applied at system levels and for networks of MPAs?
- What is required by a site to begin a successful evaluation?

10. What have you done differently (or what would you do differently) based on what you learned about evaluation?

- Had more first hand knowledge and understanding of existing methodologies on evaluating effectiveness – gone back to initial research on various projects and programs during the development to check on lessons learned.
- Provided more time for the pilot sites to fully 'try-out' the guidebook and account for various project delays.
- Get more regional efforts involved in looking at management effectiveness of MPAs