

# Protected Areas Management Effectiveness Information Module

## Methodology Description

### WWF-CATIE

#### 1.1 Organisation

Central American Office of WWF and the Agricultural Center of Tropical Investigation and Teaching (CATIE)

#### 1.2 Primary reference

Cifuentes M, Izurieta, A and Faira, H (2000a) 'Measuring protected area management effectiveness.' (WWF,GTZ,IUCN)

Cifuentes M, Izurieta, A and Faira, H (2000b) 'Medición de la efectividad del manejo de áreas protegidas.' (WWF,GTZ,IUCN)

#### 1.3 Brief description of methodology

The WWF-CATIE methodology is designed to measure protected area management effectiveness on three levels: individual protected areas, systems (or subsystems) of protected areas, and the performance of the protected area administration within its zones of influence. Indicators are chosen across a wide range of management fields concentrating on context, planning, inputs and processes. As the methodology was developed in the 1990s, the IUCN WCPA framework is not formally used. The concept used is to measure current status against a defined 'optimum' state. A lot of thought is put into making sure that these measures are consistent across different aspects of management.

'The methodology is neither static nor dogmatic. On the contrary, it has been prepared and validated visualizing a broad spectrum of management situations and categories, for which new indicators, adjusted to the reality of any particular protected area, can be incorporated and evaluated with the same basic tools'. (Cifuentes *et al.*, 2000a, p.22)

#### 1.4 Purposes

- ✓ to improve management (adaptive management)
- ✓ to improve management (adaptive management)
- ✓ for accountability/ audit

#### 1.5 Objectives and application

The instrument is designed to improve the management of protected areas in Central America, and to document progress made in management.

It was designed to allow a general assessment of management, a comparison of the relative strengths of different aspects of management, and identification of specific aspects of management requiring further attention (Cifuentes *et al.*, 2000a)

The methodology has been trialled in a number of parks but there is no record of widespread or repeated applications. However, its ideas have been adapted and incorporated into a number of other methodologies, such as those used in Ecuador.

# Protected Areas Management Effectiveness Information Module

## Methodology Description

### 1.6 Origins

The methodology was developed based on the work of de Faria (1993). The origins of the system are described in detail by Izurieta (2000b) and the following text is extracted from this reference.

‘The WWF/CATIE methodology grew out of several protected area planning exercises, which involved selecting and appraising key indicators for each category of management in a given country or region.’

‘The first study of effective management, undertaken by CATIE in 1993 (de Faria, 1993), under the direction of the WWF-Central American Office, involved a systematic and methodological selection of management indicators. (As part of an academic study) Faria carried out an extensive bibliographic review of the critical components and definitions for management of protected areas. He then developed a survey, which was sent to experts to determine the most important management indicators or variables. The indicators were grouped into management fields (*ambitos*): administrative, political, legal, planning, knowledge, present uses, management programmes, biographical characteristics and threats.’ (Izurieta, 2000b, p.82)

‘The methodology was trialled in Costa Rica, the Galapagos and procedure was validated in 1997, when it was used to evaluate the management effectiveness of a subsystem of protected areas, in the Osa Conservation Area in southern Costa Rica (Izurieta, 1997). It was then applied in Guatemala and private protected areas in Latin America.’ (Izurieta, 2000b, p.82)

### 1.7 How the methodology is implemented

The manual outlines steps for implementation of the methodology:

- Selecting the protected area/s to be evaluated;
- Selecting the core evaluation team and key actors from the community;
- Collecting primary and secondary information;
- Defining indicators and optimum scenarios;
- Conducting the evaluation;
- Calculating scores.

‘The evaluation should be carried out by the body in charge of the protected area through its technical, administrative and operative personnel with the active participation of key actors from the communities surrounding the protected area.’ (Cifuentes *et al.*, 2000a, p.25).

### 1.8 Elements and indicators

The indicators are grouped into a series of "criteria", each series of criteria are grouped within a series of "factors" and those factors are grouped within 5 "fields" (social, administrative, natural and cultural resources, political-legal, and economic-financial). The procedure has recently been modified so that the rating of each indicator is summed, with the percentage of the total optimum value calculated in a process similar to, but less developed than, the Faria procedure (Cifuentes *et al.*, 2000a).

- Fields are indicators of the highest level that reflect broad management activities, characteristics, context, or uses of a Protected Area.;
- Variables are indicators that describe the actions, activities or situations relative to a determined field;
- Subvariables are indicators of certain specificity, focused on one action or situation relative to a determined variable;

# Protected Areas Management Effectiveness Information Module

## Methodology Description

- Parameters are the lowest indicators in the hierarchy and therefore are the most specific in the system, relative to a subvariable and its respective variable.

The evaluation can include, eliminate or modify indicators according to the characteristics and requirements of each protected area.

**Table 1: Indicators for the WWF-CATIE methodology**

Field	Variable	Sub-variable
administrative	Personnel	<ul style="list-style-type: none"> <li>• Administrator</li> <li>• Technical Personnel</li> <li>• Administrative Personnel</li> <li>• Operative Personnel</li> <li>• Capacity for additional contracting</li> </ul>
	finances	<ul style="list-style-type: none"> <li>• Operational budget</li> <li>• Regularity of budget preparation and delivery</li> <li>• Extraordinary and/or special funding</li> <li>• Capacity to manage own resources</li> <li>• Financial-accounting system (parameters in document)</li> </ul>
	organisation	<ul style="list-style-type: none"> <li>• Files</li> <li>• Organizational chart</li> <li>• Internal communication</li> <li>• Structuring of activities</li> </ul>
	Infrastructure	<ul style="list-style-type: none"> <li>• Equipment and tools</li> <li>• Facilities for basic management</li> <li>• Facilities for specific management</li> <li>• Condition of facilities</li> <li>• Security of facilities</li> <li>• Boundary demarcation</li> <li>• Access</li> </ul>
policy	Community support and participation	
	Intra-institutional support	<ul style="list-style-type: none"> <li>• Mother institution</li> <li>• PA system administration</li> </ul>
	Inter-institutional support	
	External support	
legal	Land tenure	<ul style="list-style-type: none"> <li>• Domain/Possession</li> <li>• Conflicts</li> </ul>
	Set of general laws and regulations	<ul style="list-style-type: none"> <li>• Clarity</li> <li>• Application</li> </ul>
	Law creating the PA	
planning	PA management plan	<ul style="list-style-type: none"> <li>• Plans exist and are up-to-date</li> <li>• Characteristics of the planning team</li> <li>• Plan implementation</li> </ul>
	Compatibility of management plan with other plans and organizations	
	Annual Operational Plan	<ul style="list-style-type: none"> <li>• Plans exist and are up-to-date</li> <li>• Plan implementation</li> </ul>
	Level of Planning	
	Zoning	
	Boundaries	
knowledge	Socio-economic information	Subvariables for each variable could be defined depending on the level of available information
	Biophysical information	
	Cartographic information	
	Legal information	
	Research	

# Protected Areas Management Effectiveness Information Module

## Methodology Description

Field	Variable	Sub-variable
	Monitoring and feedback	
	Traditional knowledge	
management programs	Research	Each program is evaluated according to the following variables: <ul style="list-style-type: none"> <li>• Design</li> <li>• Implementation</li> <li>• Co-ordination</li> <li>• Follow-up and evaluation</li> </ul>
	Environmental education	
	Environmental interpretation	
	Protection	
	Maintenance	
	Outreach to the community	
illegal uses	Timber extraction	
	Extraction of nonrenewable natural resources	
	Extraction of flora and fauna	
	Vandalism of cultural resources	
	Squatting	
	Poaching	
	Agriculture and cattle ranching	
	Fishing	
	Recreation and tourism	
	Building of infrastructure	
legal uses	Timber extraction	
	Extraction of mineral resources	
	Extraction of flora and fauna	
	Hunting	
	Agriculture and cattle ranching	
	Fishing	
	Recreation and tourism	
	Education	
	Building construction	
biogeographical characteristics	Form	
	Size	
	Isolation	
	Vulnerability	
threats	Visitor impact	
	Pollution	
	Fires	
	Advance of human settlements	
	Migration	
	Exotic organisms	
	Natural disasters	
	Development infrastructure	
	Subversive political movements or violent conflicts	
	Drug trafficking and related	

### 1.9 Scoring and analysis

The rating scale adopted for the procedure has five rating levels (0-4) associated with a percentage weighting that expresses the level of management from unsatisfactory to very satisfactory (Table 2). The percentage weighting is adapted from the ISO 1004 standard, tested in the evaluation of quality of services offered by private and public enterprise.

# Protected Areas Management Effectiveness Information Module

## Methodology Description

Rating	% of optimum	significance
0	<35	Unsatisfactory
1	36-50	Minimally satisfactory
2	51-75	Moderately satisfactory
3	76-90	Satisfactory
4	91-100	Very satisfactory

### **Definition of Scenarios**

‘To evaluate variables, subvariables and parameters, an optimum management scenario must be defined for the protected area. This optimum scenario will be compared to the current situation in order to rate protected area functions. The optimum scenario refers to the optimum conditions for a protected area to develop its activities and achieve its management objectives. The current scenario is an "image" of the situation at the time of the evaluation.

The optimum scenario can be determined from the information contained in the management plan and other existing planning instruments. Because the plans frequently do not reflect reality, it is essential that the propositions contained in these documents be reviewed and complemented with information provided by those who know the protected area being evaluated. This ensures that the optimum scenario is an accurate reflection of the best feasible management.’ (Cifuentes *et al.*, 2000a, p.33)

### **Calculating overall effectiveness – the matrix**

The management effectiveness is based on analysis of the variables, with the indicators and parameters informing this ratings.

For each variable, and field, the protected area is rated from unsatisfactory to very satisfactory based on the scale above.

Management effectiveness matrices and bar graphs can then be constructed to show which aspects of management are most in need of attention,. When the methodology is applied across a number of protected areas, the matrices and bar charts can also show relative needs of different protected areas.