Padovan 2002

Written with editorial input from Maria Padovan

1.1   Organisation

IPEMA – Instituto de Pesquisas da Mata Atlântica (Atlantic Rainforest Research Institute)

1.2   Primary reference

Padovan, M.P (2002c)Parâmetros e procedimento para a certificação de unidades de conservação. In: III Congresso Brasileiro de Unidades de Conservação. Anais. Pp 33-43.

1.3   Purposes

   ✓ **to improve management (adaptive management)**

1.4   Brief description of methodology

This methodology was developed to improve management of protected areas and to help to identify management weaknesses as well as ways to overcome them. It has a wide application and is flexible, allowing protected area representatives to suggest changes to the indicators used. This system uses both primary and secondary information obtained from different sources.

The management effectiveness assessment is based on the use of a hierarchy of scopes, principles, criteria and indicators. It is based on comparing the current status with defined 'optimum management'.

1.5   Objectives and application

This methodology aims to improve gradually the management conditions through periodic assessments. These assessments will help to identify management weaknesses and potentialities and also to define the means to overcome the weaknesses.

The methodology was used for the assessment of the National Monument Guayabo and the Biological Reserve Monteverde, in Costa Rica; the National Park Tikal, in Guatemala; and the Biosphere Reserve Rio Plátano, in Honduras (Padovan 2001). In Brazil, the method was applied on the assessment of the National Forest of Tapajós, in the state of Pará (Padovan 2004) and in 12 protected areas in the state of Espírito Santo.

1.6   Origins

This system is based on the combination of the methodologies developed by Cifuentes *et al.*, 2000; on the adaptation of the method for the development of standards of CIFOR (Prabhu *et al.* 1999) and the Hierarchical Framework developed by Lammerts Van Bueren and Blom (1997).

1.7   How the methodology is implemented

The assessment cross-checks the information obtained from various sources such as technical documents, field observations, interviews with people involved with protected area management, staff, local community, community leaders, school teachers, visitors, researchers and representatives of local social organizations.

The first stage is to select and train the technical assessment team. The selection of those involved is based on their theoretical knowledge and expertise in the protected area

management. Also, the assessment team has to be multidisciplinary, including professionals with different backgrounds. In order to consider different points of view and reduce the subjectivity of the process, it has also to involve people with experience in the public and private sector as well as with NGOs.

The methodology is then applied through three steps: data collection, consensus meetings and report development, for each protected area assessed. The data collection is based on the review or the available secondary information, interviews with representatives of sectors directly or indirectly related to the protected area management as well as field observation. The consensus meetings are held after each assessment and at the end of the process, in order to giver uniformity to the results.

1.8 Elements and indicators

This system uses four levels of analysis: scope, principles, criteria and indicators. The scopes are defined based on the sustainability triangle: environmental, social and economical. It also considered the relevance of the institutional aspects, adding this other scope to the assessment process.

The principles are the fundamental laws that need to be respected so the area can meet its conservation objectives. A total of seven principles were established which encompass the necessary conditions for the achievement of management sustainability.

The seven principles were organised in 25 criteria – nine environmental, one social, six economic, and nine institutional. The criteria correspond to the essential elements for meeting the principles. The measurement of these criteria is made through the use of indicators.

The indicators present the characteristics or attributes that allow the measurement of the criteria. Therefore, they have to be relevant, measurable, reliable, efficient and available. A total of 64 indicators for the established criteria were defined in this system, as **Error! Reference source not found.** shows:

Source: Leverington *et al.,* 2008. 'Management Effectiveness evaluation in protected areas – a global study. Supplementary Report No1: Overview of approaches and methodologies.' The University of Queensland, Gatton, TNC, WWF, IUCN-WCPA, AUSTRALIA.

Protected Areas Management Effectiveness Information Module

Methodology Description

Indicators in the Padovan methodology

Scope	Principle	Criteria	Indicators
Environmental	1. The management category was designated based on an adequate technical analysis.	1.1. There is coherence between the intrinsic characteristics, the conservation objectives and the management categories.	1.1.1. Correspondence of the management categories with the area characteristics 1.1.2. Compatibility between the management objectives and the area characteristics 1.1.3. Correspondence between the management objectives and the defined management category.
		1.2. The PA uses are compatible with its category.	1.2.1. Compatibility between the PA uses and the management category
	2. The area conserves biological and cultural diversities relevant to the region.	2.1. The area conserves representatives samples of the ecosystems relevant to the region.	2.1.1. The relevant ecosystems are found within the PA. 2.1.2. The ecosystems found within the PA are not representatives.
		2.2. The area conserves natural and cultural attractions that are relevant for the region.	2.2.1. The natural and/or cultural attractive are conserved within the PA.
		2.3. The area contributes to biodiversity conservation.	2.3.1. Indicators species are identified and monitored 2.3.2. Species of special interest for conservation are protected by the PA
	3. The area has appropriate conditions to keep ecological viability.	3.1. The spatial characteristics of the PA favour the ecological viability.	3.1.1. Total optimum PA surface 3.1.2. Adequacy of PA shape to favour ecological viability. 3.1.3. Connectivity between the PA and other areas with the same characteristics. 3.1.4. The PA zoning favour the ecological viability.
		3.2. The ecosystems have their health or vitality improved or maintained.	3.2.1. The vegetal coverage or other fundamental ecosystem structure is maintained. 3.2.2. The degraded ecosystems can recover themselves with time.
		3.3. The uses of the PA don't prejudice the ecological viability.	3.3.1. The practices and the intensity of use don't prejudice the environmental viability.
		3.4. The threats to the ecosystem health and vitality are identified and controlled.	3.4.1. The threats to the ecosystems or habitats are prevented and controlled. 3.4.2. The PA limits are well known and respected.
Social	4. There is integration between the area and the population within and surrounding it.	4.1.There are strategies and these are applied to integrate communities to the PA management.	4.1.1.The Pa has a management board that facilitates the integration of the civil society with the PA management. 4.1.2. Strategies for integration of the population and the PA. 4.1.3. The strategies incorporate different social actors and their particularities. 4.1.4. The target population is kept informed and involved with the strategies' implementation. 4.1.5. The PA and the local communities administrate joint actions. 4.1.6. There are positive manifestations towards the PA management and its surrounding areas.
Economic	5. The PA has positive influence on the economic development of the population that live inside and surrounding it.	5.1. The population that live inside or surrounding the PA receive benefits, either monetary not, direct or indirect, from the PA.	5.1.1. The PA contributes for the improvement of local people's income. 5.1.2. The Infrastructure or services of interest of local people are being provided by the PA. 5.1.3. The community development projects are being promoted by the PA administration.
		5.2. There are effective measures for mitigating or compensating the economic negative impacts that are originated by the PA management activities.	5.2.1. Mechanisms for effective mitigation and compensation of negative impact originated by the PA management activities.
	6. The PA receives enough financial resources for its	6.1. The real costs of the PA management are well known.	6.1.1. Mechanisms for organising the financial information.

Source: Leverington *et al.,* 2008. 'Management Effectiveness evaluation in protected areas – a global study. Supplementary Report No1: Overview of approaches and methodologies.' The University of Queensland, Gatton, TNC, WWF, IUCN-WCPA, AUSTRALIA.

Protected Areas Management Effectiveness Information Module

Methodology Description

Scope	Principle	Criteria	Indicators
	management.	6.2. The PA receives enough financial support to cover the management costs.	6.2.1. The money received by the PA covers the management costs.
		6.3. The sources of funding are adequate and diverse enough to ensure a long term management.	6.3.1. Strategies for obtaining enough financial resources. 6.3.2. Sell of goods and services provided by the PA. 6.3.3. Sell of environmental services.
		6.4. The mechanisms for financial management are adequate and efficient.	6.4.1. Institutional financial management capacity 6.4.2. Transfer of financial resources is adjusted to what requested. 6.4.3. The resources generated are applied on the improvement of the PA management. 6.4.4. Audit and control mechanisms.
Institutional	7. The PA has institutional conditions for its effective management.	7.1. The complementary mechanisms for the PA planning on the different levels are adequate.	7.1.1. The strategic PA planning relates to the policies established for the PA system.. 7.1.2. Coherence between the necessary plans and projects. 7.1.3. Monitoring, assessment and adjustment.
		7.2. The management plan is adequate.	7.2.1. Existence and update of the management plan. 7.2.2. The management plan considers the initiatives for local or regional development. 7.2.3. Execution of the management programmes.
		7.3. The PA staff is qualified enough to pursue the management activities.	7.3.1. Optimum staff quantity 7.3.2. Optimum staff quality
		7.4. The area offers adequate working conditions.	7.4.1. Adequate security and hygiene conditions. 7.4.2. Competitive salary scales and other benefits.
		7.5. The existing structure, infrastructure and equipments satisfies the PA management needs,	7.5.1. The existing structure corresponds to the management objectives. 7.5.2. The structure characteristics and conditions are adequate. 7.5.3.The infrastructure is adequate. 7.5.4. The accesses are adequate to achieve the management objectives. 7.5.5. The equipments and tools are enough and effective.
		7.6. The PA administration receives necessary political support for its management.	7.6.1. Intrainstitutional support 7.6.2. Interinstitutional support
		7.7. The legislation, technical norms and administrative dispositions are being fulfilled.	7.7.1. Legal status of the PA creation. 7.7.2. Rules for natural resources use. 7.7.3. Rules for financial management. 7.7.4. Administrative rules. 7.7.5. Laws related to PA planning and management.
		7.8. The mechanisms for solving conflicts related to domain, land tenure and use of natural resources are effective.	7.8.1. Effective strategy for solving conflicts related to the use of the PA resources.
		7.9. The PA has an organizational structure adequate for its management.	7.9.1. Organizational structure. 7.9.2. Definition of positions and roles. 7.9.3. Clear and functional internal communication system. 7.9.4. Mechanisms for information organization and register.

Protected Areas Management Effectiveness Information Module

Methodology Description

1.9   Scoring and analysis

The methodology considers five levels of rating (from 0 to 4), where the highest value corresponds to the 'optimum management'. The definition of this 'optimum' management scenario is based on the management category, on the biophysical characteristics and the management conditions in the regional context. The 'optimum' scenario has to be achievable. The scale used is specific for each indicator, but the values correspond to those presented in the following table.

The scoring system used on the assessment process (based in de Faria, 1997) is:

Score	% of the 'optimum'	Meaning
0	0 < 35	Unsatisfactory
1	36-50	Barely satisfactory
2	51-75	Regular
3	76-89	Satisfactory
4	90-100	Very Satisfactory

A relative weight is assigned to all indicators, i.e., the method considers that all assessed aspects have the same level of importance for a good management.

The final management rating is defined based on an arithmetic average of the values obtained for each scope. The scope score is the result of the arithmetic average of the values obtained by the criteria. To evaluate the value for each criterion same procedure is used based on the scores of the indicators.

The interpretation of results considers the same rating scale used for the indicators qualification.
Here, indexes equal or lower than 35% of the optimum are considered as unsatisfactory management, which indicates that the protected area does not have the minimum resources to ensure its basic management. Its long-term permanence is not guaranteed and with such conditions it is not possible to meet the protected area's conservation goals.

Values between 36 – 50% correspond to the 'little satisfactory' management conditions, i.e., the protected area has certain resources fundamental for its management, although still not minimally acceptable. The protected area is highly vulnerable to internal and external factors and its long term permanence is not guaranteed.

Results between 52-75% of the total optimum represent regular management conditions. This means that the area is provided with minimum requirements for its management but still has essential deficiencies that undermine an effective management. The management conditions can compromise the integrity of the resources and the fulfilment of the management objectives might be partial.

Management conditions between 76-89%, or satisfactory management, indicate that the management activities are adequately being met. The permanence of the protected area is guaranteed with these conditions.

Values between 90 – 100% are considered as a very satisfactory management, i.e., the area is currently receives all support necessary for its efficient management. Also, it ensures that the protected area can deal with future requirements without compromising the resource conservation.

1.10   Further reading and reports

(Cifuentes *et al.* 2000a; Lammerts Van Bueren and Blom 1997; Padovan 2001; 2002a; b; c; Prabhu *et al.* 1999)