LIFE CYCLE EVALUATION IN THE NATIONAL PARK MURÁŇ PLAIN (SLOVAKIA)

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Abstract:
The article presents the evaluation results of „life cycle" of the National Park Muráň Plain (Slovakia) based on self-assessment of stakeholders by IPAM methodology (Integrative Protected Area Management). Based on this methodology, we identified areas of management that should be targeted for improvement also recommendations are proposed to streamline management. Based on the results of evaluations, we can state that Basic Planning Phase in life cycle of evaluated area is least effective developed. For improvement of other phases is first of all necessary to improve communication and to ensure transparency in the process of providing information. In terms of relevant documents, which will contribute to more effective integrated management of nature and landscape protection in the NP Muráň Plain, we suggest a high attention to the most expeditious approval of the proposed zoning of the national park.

Key Words: National Park Muran Plain, life cycle protected area, integrated management, protected area, IPAM

Introduction

The role of protected areas (PAs) is the protection of biodiversity and the most valuable natural and landscaping parts of nature and landscape. Concurrently, the mission of protected areas has expanded from biodiversity conservation to improving local socioeconomic benefits in the context regional sustainable development. Many best practice examples show that nature protection can be a good prerequisite for local and regional economic development such as in the Bavarian Forest national park. With effective and efficient management, sustainable development – economic, ecological and social – can be promoted for the *advantage* of the region and the whole economy (Getzner, Jungmeier, Lange, 2010, Vološčuk, 2008). Naughton-Treves, Buck Holland & Brandon (2005) also state that by global mandates, protected areas are now supposed to do far more than conserve biological diversity. These areas are charged with improving social welfare, guarding local security, and providing economic benefits across multiple scales, objectives traditionally relegated to the development sector. Managers of protected areas, although often accused of being unconcerned with social issues, have significantly altered their approach in an attempt to meet the new role for protected areas. In many cases, conservation organizations formed new partnerships with development agencies and institutions, as well as citizens' groups. Together they have pursued an array of strategies linking conservation with development that generally fall into three broad groups: community-based natural resource management, community-based conservation, and integrated conservation and development. Švajda (2008a) states that by the evaluation of protected areas management in our conditions (Eastern Europe) every important role plays the fact that our protected areas mostly came into existence in the period of communist regime which was characterized by absence of or by very low level of discussion with all relevant stakeholders. At the same time he claims that to the key reasons for generally low support for local communities and local inhabitants to conservation of nature belongs also complicated and different land ownership.

Based on international experience, guidance, expert assessment and our evaluation is the best way Integrated Protected Area Management on the base IPAM, which inclusive the design and development of a protected area during the "life cycle".

Material and Methods

The National Park Muráň Plain with its wild mountain karstic landscape and minimum human interventions is located between central and eastern parts of Slovakia. It lies in the Spiš-Gemer Karst, in the Slovenské Rudohorie Mountains (part of the Western Carpathian Mountains). National park Muráň Plain is one of the youngest national parks in Slovakia declared in October 1997 and opened on 27 May 1998.

We have been evaluating the „life cycle" in the National Park Muráň Plain (Slovakia) in years 2011 – 2012 by methodology integrative protected area management (IPAM). IPAM can divide the "life cycle" of each PA into four principal phases (Planning Phase is split in two periods – Basic Planning Phase and Detailed Planning Phase) (Fig. 1) and 29 related "Fields of Activity" (FoA) (Tab. 1) (Jungmeier et al., 2005, Getzner et al., 2012).

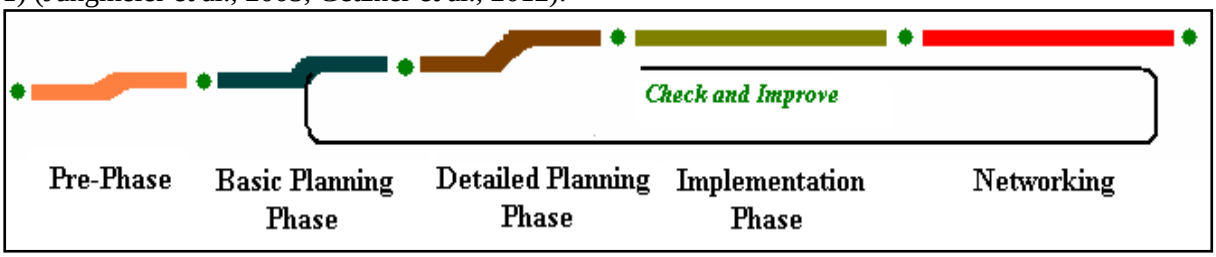

Fig. 1 The principal phases of protected area management life cycle (*Modified by*: Wagner et al., 2005)

This methodology secures interactive communication focused on identification of problems together with finding of the optimal solutions for the protected areas management in the middle and east of Europe. Expert system IPAM consists of three components: **self-assessment, standardized measures and knowledge basis,** which are designed to provide any information needed for the development of particular protected area. For the evaluation of individual activities in every phase of protected area management by stakeholders (groups involved) was used the method of questionnaire survey. Each question of the questionnaire enables three-scale evaluation (not yet started – started - finished), that forms input data for computer software processing. By the detailed evaluation of protected area management the methodology concentrates on the detailed evaluation of individual phases of protected area life cycle, whereas in the planning phase the basic and detailed planning is evaluated separately. Expert system warns about placement of control and improvement before the actual phase of implementation of the integrated management (Jungmeier et al., 2005). The overview of the evaluated areas of activity in individual phases of protected area management life cycle is described in Tab. 1.

Tab. 1 The evaluated areas of activity in individual phases of protected area management life cycle (*Source*: Jungmeier et al., 2005)

Phase		**Fields of the activity**
Pre-Phase		Development of ideas and visions
		Realisability controlling
		Communication and participation I.
		Integration into the system of protected areas
Planning Phase	*Basic Planning Phase*	Planning guide
		Communication and participation II.
		Basic research
		Planning
		Determination and introduction
	Detailed Planning Phase	Keynote address and essential papers
		Management plans based on ecosystems
		Proposal of (regional) economical plans
		Specific planning (subsidiary plans)
		Personal and organizational development
		Region development of protected area

Implementation Phase	Evaluation of management efficiency
	Framework of research and monitoring
	Management of data and information
	Optimization of financial situation
	Information, interpretation, education
	Visitors management, services and infrastructure
	Marketing and communication with public
	Cooperation scheme
	Communication and participation III.
	Evaluation of influence and limits
Networking	Universal integration into the net
	Integration into economical net
	Integration into social net
	Integration into ecological net

We used the Three-aspectual system of classification for the identification of stakeholders (Fig. 2) By the term *stakeholder* we label all persons, institutions or organizations, that influence management running or they are somehow influenced by its running (Zelený, 2008).

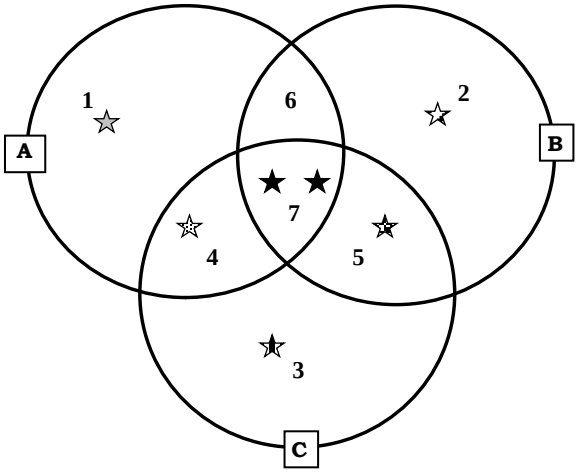

Fig. 2 Three-aspectual system of stakeholder classification (*Source*: Zelený et al., 2010)

Combination of the aspects: **A –** power of the influence, **B –** legitimacy (of requirements), **C –** evaluation of awaited stakeholder´s approach to potential co-operation.

Groups of stakeholders: **1**. Stakeholders with the possible influence on management, but with relatively low level of legitimacy and insistency on fulfilling own requirement, **2**. Stakeholders with requirements legitimacy in some way, but with relatively low level of influence and insistency on their fulfilling, **3**. Stakeholders relatively insisting on fulfilling of their own requirements, but with relatively low level of their legitimacy and influence, **4**. Relatively "dangerous" stakeholders thanks to the combination of their influence and insistency, with which they are demanding the fulfilling of their requirements and rights, but which have a relatively low level of legitimacy, **5**. Stakeholders with the combination of legitimate requirements and rights, which they are demanding to be fulfilled, but with a relatively low level of influence, **6**. Stakeholders with the combination of legitimate requirements and rights, with a relatively high rate of influence, but with a lower demanding of their fulfilling, **7**. Key stakeholders.

Results

Evaluation of management effectiveness is one of really important part, even essential part in the life cycle of a protected area, because it makes a space for continuous improvement. Group of environmental stakeholders was the most suited to our set criteria (according to sphere of interests) for evaluation of the protected area using expert system IPAM. Along the life-cycle of Muráň Plain were evaluated 29 areas of management at intervals of three scalable evaluation of life-cycle phases

evaluated PA made by key stakeholders. We present complex assessment of whole life – cycle after assessment by expert system IPAM in the following graph (Fig. 3). From the management analysis results follows that is important to improve Base Planning Phase, Detailed Planning Phase and also the Networking. Efficiency improvement of communication and participation in every phase of life cycle of National Park Muráň Plain has a priority. For its improvement is necessary to work out a stakeholders mind map and also a project on communication, which should come from the specification of target groups, determination of order and the way of communication with help of existing nets, structures and media and it shouldn´t forget about the difference between core information for all of them and specific detailed information.

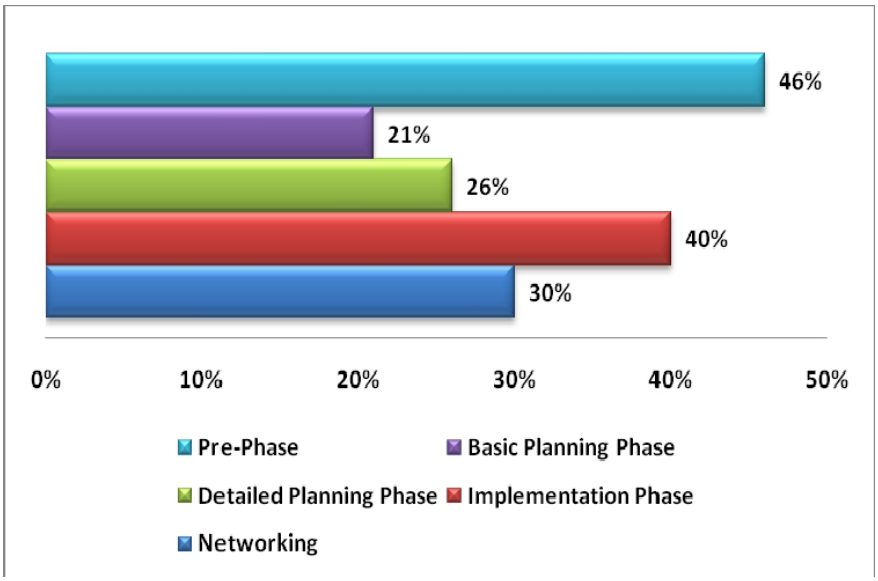

Fig. 3 Complex evaluation of basic phases of life – cycle by expert system IPAM

The weakest part in the managent of evaluated Nationam Park is Basic Planning Phase (Fig. 4). Very important recommended step of this phase to take action for immediate kick-off of the fields of activities: Planning Handbook and Implementation Planning.

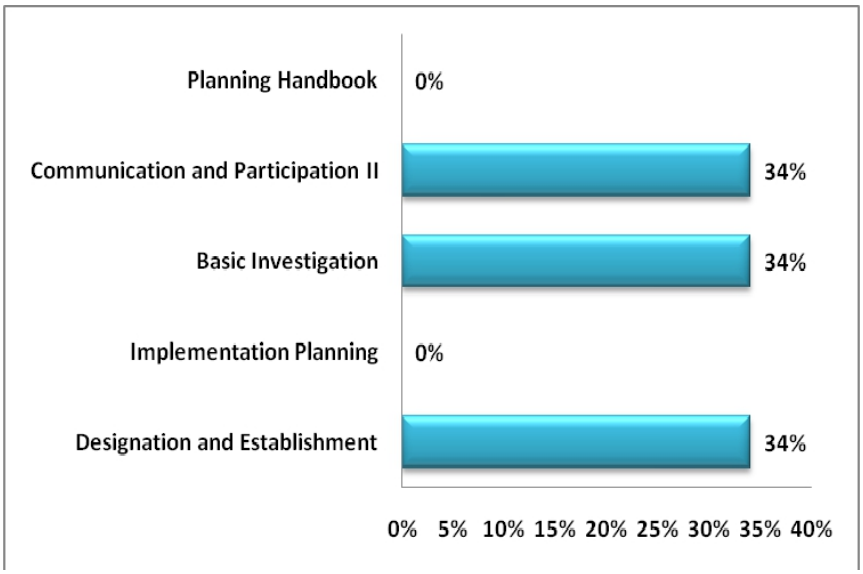

Fig. 4 Evaluation of Basic Planning Phase

We propose to elaborate „Plan puzzle“ to get a picture of all questions, disciplines and planning issues and identify core aspects for streamlining of this phase. Define and set up the planning process using professional project management tools. Very important is specify the content and

dimension of the planning, the procedure, the methodologies applied and technical details (like specifying planning documents). To streamline the management of FoA Implementation Planning is necessary to pay attention to the development of Zonation Plan. In this phase, top management of national park must be prepared for a difficult procedure and intensive discussions with all stakeholders. Depending on the management category of the Protected Area, a set of minimum requirements needs to be considered when fixing the outer boundaries and the inner zones (e.g. size of Protected Area, types of zones, management objectives, type and extent of land use etc.). This planning task is extremely complex as it nowadays basically means reaching an agreement on a sovereign act by applying participatory methods.

The boundaries and zonation planning is embedded in the contradictory context of:

- Public / sovereign versus private / participatory act
- Individual versus collective decision
- Self-determination versus heteronomy
- Conservation requirement versus land use

To overcome these contradictory aspects set up a multiple-stage process with the landowners providing repeated exit opportunities. This process should contain the following steps:

- Outline the process (define the steps, the timing, the responsibilities etc.)
- Find out name and contact details of all landowners involved
- Define conservation requirements
- Present the PA idea / planning process to all the landowners (e.g. an information evening assuring that everyone involved gets the same information at the same time)
- Hold conversations with each landowner (individual or on a group level)
- Go ahead with in this iterative procedure up until you achieve an agreement on an individual level
- Aggregate and fix the boundaries and zonation

Top management must bear in mind that the minimum criteria as requested by the management categorisation system need to be met and reflected in the final version of the boundaries and zonation planning.

On the basis of this complex analysis we state the recommended steps that are necessary to be taken in every FoAs of NP Muráň Plain life cycle for a purpose of efficiency improvement of its management (Tab. 2).

Tab. 2 High priority recommendations of Fields of Activity for National park Muráň Plain

Field of Activity	Recommended Action
Feasibility Check	Chance-risk-analysis
	Acceptance zoning
Communication and Participation I	Communication design
Planning Handbook	Plan puzzle
Communication and Participation II	Checklist transparency
Implementation Planning	Boundaries and Zonation plan
Designation and Establishment	(Intern)National application
Ecosystem-based Management Plans	Priorities and measures
	Calculation of costs and finances
Design of (Regional) Economic Programmes	Product / Service - Portfolio
	Product / Service - Platform
Personnel and Organisational Development	Personal development plan
Evaluating Management Effectiveness	Management cycle
	Monitoring and benchmarking
Financing (Business Plan)	List of benefits
	New incomes
Communication and Participation III	Permanent communication
Development of Protected Area's Region	Regional Economic Program
	Info-Platform
Networking General	Action plan on network optimization
Networking Ecological	Ecological profile

Discussion and Conclusion

It is indisputable that protected areas have many positive benefits. Their benefits extend from local people who live near this beautiful and healthy landscapes, to nations that depend on their environmental services (for example clear water, fresh air, regulate the climate, regulate the water, erosion control, biofiltration, recreation, etc.). They are not only ecological but also socio-economic benefits. Stockmann (2007), Diller, (2008), Švajda (2008b) state that evaluations of PAs management in general may fulfil several aims and objectives in modern societies. It is not only necessary to evaluate products (outputs) but to assess also outcomes in terms of legitimacy of public activities, and to provide steering mechanisms for public decision-makers. We agree with Pfleger (2008) who state that during the life-cycle of a protected area (PA), the evaluation of management effectiveness of the PA administrating and managing authorities including the whole PA context becomes increasingly important, both for securing and improving the conservation of biodiversity, but also for the acceptance of stakeholders and funding bodies. Currently, there are numerous approaches to evaluating management effectiveness of parks; many international institutions have drafted and implemented such evaluation instruments. At the beginning of any evaluation exercise, PA management and policy makers have to be convinced of the usefulness of the evaluation to increase the probability that recommendations will indeed be implemented. The implementation of the evaluation results is crucial since the evaluation might lead to higher costs than benefits since the frustration of those involved in the evaluation process might be significant (Hockings et al., 2006). However, the lack of implementing evaluation results is, at the moment, one of the biggest problems in assessing protected area management effectiveness. Evaluations are carried out, but recommendations are not implemented in daily management (Steindlegger, 2007).

Widely publishes the results of life-cycle evaluation of PAs, brings far more benefits than just management recommendations. The debate on appropriate indicators and evaluation tools, has intensified in the last decade. However, any learning and progress in and about protected areas management is clearly connected to the intensity of the public debate provoked by the evaluation process.

Effectively implemented integrated protected area management in the whole life cycle brings the following expected effects:

Expected Effects

- Integration of protected area management into regional economy and rural development
- Improving the quality of protected area management
- Raising public awareness of the complex tasks of protected area management
- Providing an effort to link protected area management with the tasks, instruments and tools of spatial planning
- Support to implement European standards, policies, procedures and technologies

There will be a need to reconsider the organisational structure in National park Muráň Plain, not necessarily with a view to changing for its own sake, but to determine whether it is fit for delivering the strategic re-orientation and the engagement of staff with a range of skills to cope with partnership working, stakeholder engagement and delivering societal benefit. The ideal structural model is shown in Fig. 5.

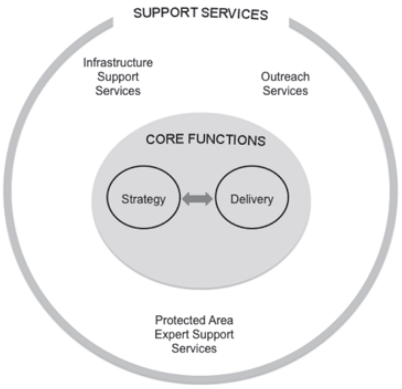

Fig. 5 Ideal structural model of a PA *(Source*: Authors' draft based on Croft , 2010)

It is not a structural diagram as there is no ideal structure. Managers should ensure that the key functions perform by the organisation distinguish between the 'core functions' and 'support services'. The former are those that directly achieve the mission by developing the strategy and ensuring the ability to review performance, and delivering the strategy on the ground within the PA and in cooperation with the 'communities of interest'. Support services are those that ensure the organisation is operated as efficiently as possible:

- PA Expert Support Services are natural and social scientific expertise on all aspects of knowledge gathering, analysis, information provision for management of the PA and for dissemination to the public and community of interests;

- Infrastructure Support Services include information technology, information management, human resources, and financial management; and - Outreach Services include partnership working, education and communication, commerce and business development, and fund raising (Getzner, Jungmeier, Lange, 2010).

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